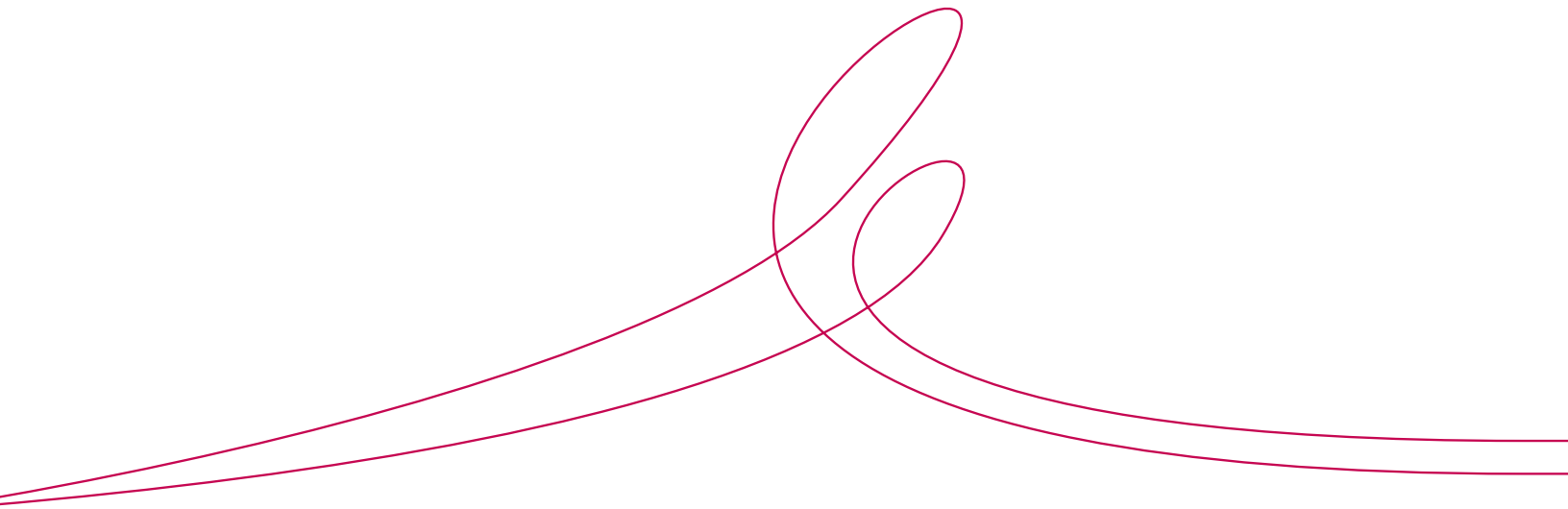
Health and Safety

TRAINING COURSE

BarberCosmo

Board of Barbering & Cosmetology



2016

Health and Safety

TRAINING COURSE

California Board of Barbering and Cosmetology
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www.barbercosmo.ca.gov

BarberCosmo
Board of Barbering & Cosmetology

Foreword

The California Board of Barbering and Cosmetology (Board) is very proud to provide instructors and students within the barbering and beauty industry this newly revised training curriculum, Health and Safety Training Course. This training course includes up-to-date and topical information important to the well-being of barbers, cosmetologists, manicurists, estheticians, and the millions of consumers they serve.

The occupational health professionals from the Labor Occupational Health Program, based at the School of Public Health, University of California, Berkeley, worked extensively to research, create, and test the first edition of the *Health and Safety for Hair Care and Beauty Professionals — A Curriculum on Hazards at Work*. This revised publication has incorporated much of their original research.

The Board requires completion of this training course by all students who wish to sit for the licensing exam. The publication can be used in a classroom setting (instructor-led) or as a self-study guide. The Board requires completion of the quizzes within the publication, with a pass rate of 70 percent before a certificate of completion can be given to the student by the instructor. Course completion must be verified by the designated school administrator on the Proof of Training document, prior to the student being allowed to sit for the licensing exam.

Although there is a wealth of information in the pages that follow, the training course is intended to be used as only a guide, a starting point. By using the information the students acquire from this training course, they will be able to follow safe practices at work and hopefully have a long and healthful career.

California Board of Barbering and Cosmetology

November 2016

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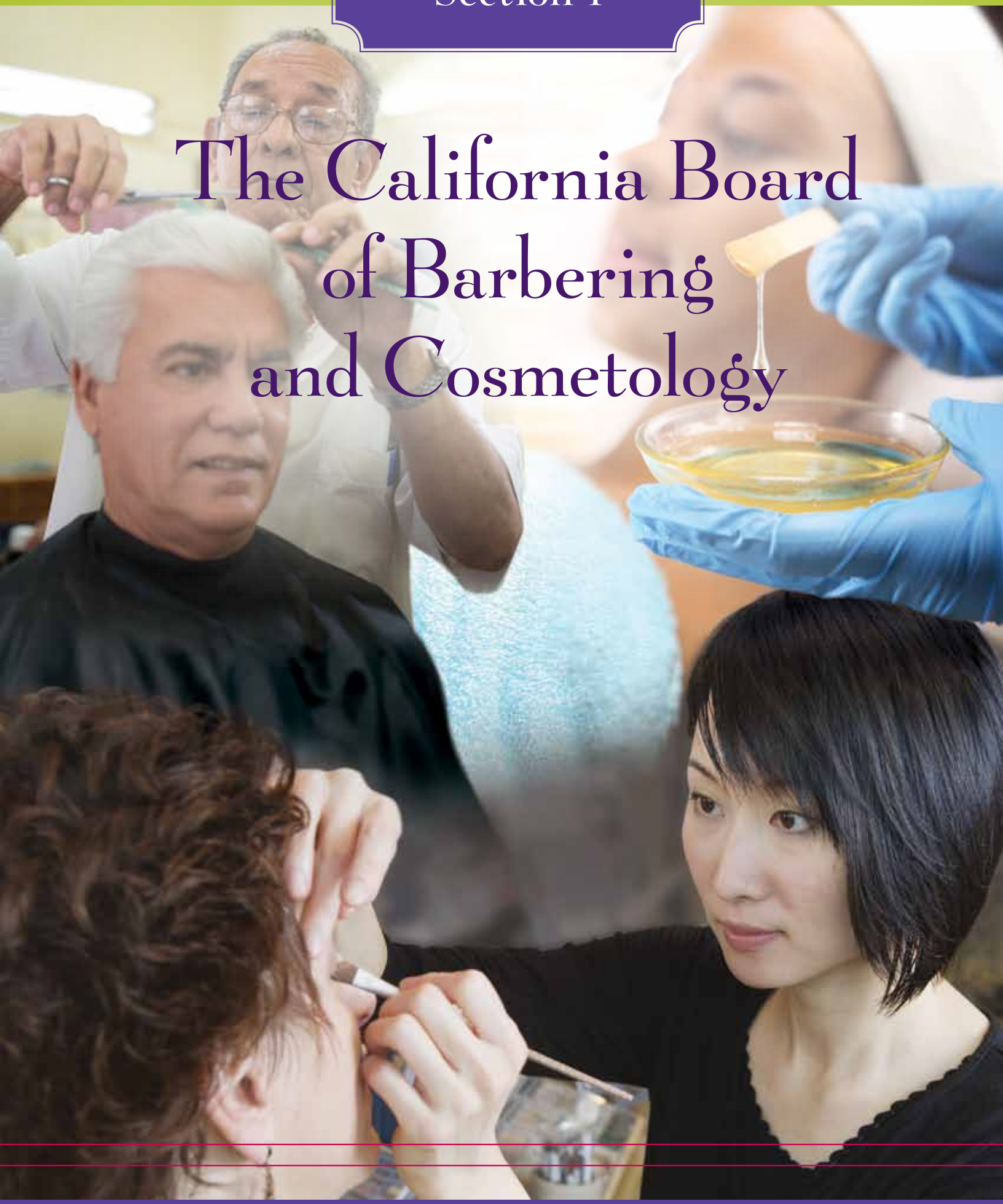
Section 1



The California Board of Barbering and Cosmetology

LEARNING OBJECTIVES

Section 1

Welcome to the Board of Barbering and Cosmetology

After completing this section, you will be able to:

- Identify the Board's mission.
- Access the Board's website and have a general understanding of what is available to you on the website.
- Understand the purpose of the Health and Safety Training Course.

Congratulations on your decision to enter the barbering and beauty industry. You will no doubt find it both rewarding and fulfilling. So, welcome!

The California Board of Barbering and Cosmetology (Board) is very proud to provide you with a Health and Safety Training Course. This curriculum includes up-to-date and topical information important to the well-being of barbers, cosmetologists, estheticians, manicurists, electrologists, and the millions of consumers they serve. Occupational health professionals from the Labor Occupational Health Program, University of California, Berkeley, representatives from the California Department of Public Health and the Department of Consumer Affairs, in conjunction with the Board, have worked to research, create, test, and revise text material for this training course.

What Does the Board Do?

The Board regulates barbering, cosmetology, skin care, nail care, and electrology services in California as well as the salon, shops, studios, and spas where these services are performed. Our highest priority is protecting and educating consumers who use barbering, cosmetology, manicuring, esthetic, and electrology services. Anyone who provides the following services to a consumer for a fee must be licensed by the Board and work only in state-licensed shops:

- Hairdressing and styling
- Haircutting
- Shaving
- Manicuring
- Skin care
- Electrology

The Board of Barbering and Cosmetology regulates the school curriculum, minimum equipment held in the school, and health and safety violations.

The Board also regulates health and safety and coursework in barbering, cosmetology, and electrology schools. The Board shares dual oversight of approved schools with the Bureau of Private Postsecondary Education (Bureau). The Bureau administers student services and the Student Tuition Recovery Fund, and conducts outreach and education activities for private postsecondary educational institutions and students within the state. The Board regulates the school curriculum, minimum equipment held in the school, and health and safety violations.

The Bureau of Private Postsecondary Education administers student services and the Student Tuition Recovery Fund, and conducts outreach and education activities for private postsecondary educational institutions and students within the state.

These two regulatory entities work closely together to make sure that students and consumers alike are safe in the school environment. Understanding what each entity does can save you, the student, frustration as questions arise during your schooling. **For instance, if you have a question regarding your grant or the student tuition recovery program, or problems with the repayment of your loan, you should contact the Bureau of Private Postsecondary Education. They can be reached at www.bppe.ca.gov or by calling (888) 370-7589. However, if you have concerns that your school isn't providing the proper equipment for your training, there is a health and safety concern on the campus, or the school isn't teaching you Board-required curriculum, you should contact the Board.** The Board wants to make sure you start your career

off right by learning good, sound health and safety practices. To help reinforce that objective, the Board makes it a practice to regularly inspect schools for health and safety violations. Schools with repeated health and safety violations can have their school codes revoked, which means the Board will not accept training hours from these schools.
To see if your school is Board-approved, you will want to go to www.barbercosmo.ca.gov/schools/approved_schools.pdf. In order to sit for a Board examination, you **must** be receiving training from a school with a valid school code issued from the Board.

The www.barbercosmo.ca.gov homepage.

How Can I Stay Current With What the Board Requires?

Staying current and cutting edge is essential to success in the barbering and beauty industry. In recent years, the Board has made several changes to its official informational gateway, the website **www.barbercosmo.ca.gov**. As a future professional, you will want to be a frequent visitor to this site and take advantage of the many tools made available to you.

I Don't Speak or Read English. Now What?

Earnest effort has been made to make the material presented on the website in an understandable, easy-to-read format. You can find most publications translated in English, Spanish, Vietnamese, and Korean. If you speak a different language, you may use the Google translator button found at the bottom of the Board's website homepage.

What is Available to Me on the Board's Website?

The Board's **Mission** is proudly displayed on the website's opening banner: "To ensure the health and safety of California consumers by promoting ethical standards and by enforcing the laws of the barbering and beauty industry." This mission reflects the dedication of every Board employee.

Take time to notice the different sections on the home page. You will want to pay close attention to the **"What's New"** box. Information appearing in this box will have a definite impact on either you or your clients and will keep you current on any Board campaigns, changes in regulations, changes to the exam, or other pertinent information.

The **"Upcoming Events"** section gives information on where the Board will be at any given time, whether it's a trade show, a Board meeting, a disciplinary review hearing, or an invitation to the public to express their opinions on any proposed regulatory changes. It's very important to this Board that you stay involved. Most of the changes that happen with regulation start with you, the future licensee, by coming to a Board meeting and expressing your viewpoint. Why not make it a goal to come to at least one Board meeting and one Disciplinary Review Committee hearing before you graduate from school?

What is BreEZe and How Do I Use It?

On the home page, you will see the BreEZe icon. After clicking on the icon, you will want to register so that you can create a user ID and password with BreEZe. Registering will allow you, when ready, to renew your license online without hassle or worry. And if you receive a fine, you can pay for it online using the BreEZe system.

Consumers can use the **"License Search"** button to view your license status and disciplinary actions, or file a complaint.

BreEZe button on the Board's website.

How Can I Stay Current With the Industry?

On the home page, you will see **"Industry News."** As a future professional, you will want to pay close attention to this section. Periodically, the Board will post **"Industry Bulletins."** These bulletins address common trends or services that may be within the scope of practice for licensees. For instance, the esthetic field is bursting with cutting-edge machinery designed for everything from treating scars and lesions to improving product penetration. Why not check out the Industry Bulletin on machine use and find out what you should be considering before you purchase that expensive piece of equipment?

Where Can I Find the Rules and Regulations?

At the top of the home page you will see the **"Law & Regs"** tab. You will want to make sure you always have a copy of the current laws and regulations. Make sure to review them periodically so that you will not run into compliance difficulties. The Board has numerous tools to help you stay in compliance. For instance, click on the red **"CASafeSalon"** button on the home page and click on **"Salon Sense."** Scroll until you see the Self-Inspection worksheet. This worksheet was designed to be used by you, to make sure your establishment and workspace is violation free. Print a copy and keep it close by, so that you can always feel comfortable when visited by a Board Inspector. Ever wonder what to expect when it's your turn to be inspected? The Board has an informational brochure you can print out that covers the inspection process from A to Z. The Board has provided a list of the most commonly cited violations and how to avoid being cited for these violations. Make sure you take a moment to review this important information.

Barbering and Cosmetology facebook page

Let's Stay in Touch!

The Board would like to stay connected with you as you journey through this fabulous career. If you would like to receive an e-mail message or notification when the Board is holding a meeting, you will want to be sure to sign up on the Board's interested party list. It is on the home page under **"Quick Hits."** Also, take a moment to "like" us on **Facebook** or follow us on **Twitter** to keep in touch with what is going on with the Board and the laws that affect you.

Thinking of a Career Change but Want to Stay in the Industry?

Have you decided that working behind the chair is just not quite right for you? Why not check out the **"Job Opportunities"** available at the Board? Just look under **"Quick Hits"** for **"Job Opportunities."**

You Have Questions, We Have Answers!

There is a wealth of information at your disposal. Be sure to take time and view all that the Board has made available to you. If you have still have questions you can e-mail the Board at **Barbercosmo@dca.ca.gov**. This is the fastest and easiest way to get a direct response from us.

Now Let's Talk Health and Safety!

Now that you have had a brief introduction to the Board and the Board's website, let's discuss the Health and Safety Training Course. Each member who served on the revision of this course is passionate about the barbering and beauty industry and wants to make sure that you have the tools you will need to be able to have a long and healthy career. The training can either be viewed in a written format or online and is divided into nine courses. The courses are:

Section 1 - The California Board of Barbering and Cosmetology

You are almost done with your very first course. We do hope that you will use the resources featured in this training session.

Section 2 - Chemicals and Your Health

You will learn about chemicals in the shop or salon that have the potential to harm your health. We will discuss why chemicals may be harmful, how they may harm you, how they may get into your body, and how much exposure is just too much.

Section 3 - Safety Data Sheets: What You Need to Know

We will discuss one of the very best ways to get information on chemicals used in the shop or salon: the Safety Data Sheet (SDS). We will review each of the sections of the SDS and make sure you understand just what you're looking for when you look at the SDS.

Section 4 - Protecting Yourself From Hazardous Chemicals

You will learn how to prevent injuries when you work with chemicals.

Section 5 -
Ergonomics: Fitting the Job to the Person

We will discuss ergonomics, common ergonomic problems in shops or salons, and how to reduce these problems.

Section 6 -
Communicable Diseases

As a future professional you will be working with people constantly. This course will discuss specific diseases that you might be exposed to on the job and how this exposure may occur. Protective strategies will be discussed.

Section 7 -
Health and Safety Laws and Agencies

We will look into the many agencies that regulate health and safety in the workplace. By the end of this course, you will know whom to contact when you are faced with a health and safety concern at work.

Section 8 -
Solving Health and Safety Problems

We will discuss possible health and safety problems in the workplace and how to solve them.

Section 9 -
Workers' Rights

We will summarize the basic rights California workers are entitled to and what action you should take if you are not receiving these rights.

You will engage in interactive exercises, case studies, and short quizzes. Each session has Training Materials for you to keep as resources to use in your career. At the end of each session, you will be required to pass a quiz before you are able to move on to the next course. Once you have completed each respective course, you will either be provided with a certificate of completion from your school instructor, or if you are completing the training online, you will be able to print your certificate right from the computer. These completion certificates will need to be presented to your school instructor for verification of completion of training on your Proof of Training document, submitted to the Board for the licensing exam entrance.

So, let's get started! It is the Board's hope you have a long and healthy career in the barbering and beauty industry.

Notes

Section 1
Training Materials

1.1 Introduction to the Board

1.2 What to Expect When You Are Inspected

1.3 10 Most Common Violations Cited During an Inspection Fact Sheet

1.4 Self-Inspection Worksheet

The Board's highest priorities are protecting and educating consumers who use barbering, cosmetology, electrology, esthetic, and manicuring services.

BarberCosmo

Board of Barbering & Cosmetology

The Board of Barbering and Cosmetology regulates barbering, cosmetology (including skin and nail care), and electrology services in California, as well as the establishments (salons, shops, studios, spas, etc.) where these services are performed.

The Board's highest priorities are protecting and educating consumers who use barbering, cosmetology, electrology, esthetic, and manicuring services.

Anyone who provides the following services to consumers for a fee must be licensed by the Board and work only in State-licensed shops:

- Hairdressing and styling.
- Haircutting.
- Shaving.
- Manicuring.
- Electrolysis.
- Skin care.

The Board also regulates health and safety and coursework in barber, cosmetology, and electrology schools. The Board does not regulate permanent cosmetics, body piercing, tattooing, body massage, aroma therapy, hair threading, hair braiding and the sale, fitting, or styling of wigs.

COMPLAINTS

The Board receives and responds to more than 1,600 consumer and industry complaints each year. Each complaint is carefully reviewed to determine if the matter is within the jurisdiction of the Board and to determine possible violations of law.

Issues that should be reported to the Board include:

- Consumer harm, such as an infection, following a service.
- Unlicensed activity.
- Unsanitary conditions in an establishment.
- Misrepresentation or false advertising of services.
- Gross negligence and/or incompetence.

All complaints must be in writing and may be submitted online.

INSPECTIONS

Board Inspectors visit shops to verify that licensees are following current health and safety laws and the Board's rules and regulations.

For more information

BOARD OF BARBERING AND COSMETOLOGY
2420 DEL PASO ROAD, SUITE 100
SACRAMENTO CA 95834
www.barbercosmo.ca.gov
800-952-5210

STATE OF CALIFORNIA
dca
DEPARTMENT OF CONSUMER AFFAIRS

BarberCosmo
Board of Barbering & Cosmetology

09-012 (02/09)

Here's a look at the types of licenses issued by the Board

ESTABLISHMENT

The Board licenses the salons and barbershops where barbering and cosmetology services are performed. You will need to apply for a new establishment license if you:

- Open a new shop.
- Take ownership of an existing shop.
- Move to a new location (even to a new suite number).
- Add or remove partners.

If you close your shop, you'll need to return your establishment license to the Board with a brief statement that you are closing your shop. Include the effective date.

TIP: When the Board inspects a shop, the owner(s) of the establishment will be issued a citation for all violations in the salon. Operators will be issued a citation if violations are found at his or her workstation.

BARBER

Licensed barbers are trained in shaving or trimming the beard or cutting hair. Barbers are also trained in shampooing, styling, arranging, dressing, curling, waving, relaxing, or dyeing the hair and in applying cosmetic preparations, antiseptics, powders, oils, clays, or lotions to the scalp, face, or neck.

Certain services, such as shaving, can be performed only by barbers.

TIP: Barbers must disinfect electric clippers prior to each use.

COSMETOLOGIST

Here are the services that cosmetologists are licensed to perform.

HAIR

Arranging, dressing, curling, waving, cleansing, cutting, shampooing, relaxing, singeing, bleaching, tinting, coloring, straightening, dyeing, and the beautifying the hair of any person.

HAIR REMOVAL

Removing superfluous hair using tweezers, chemicals, or devices/appliances of any kind, except light waves, commonly known as rays.

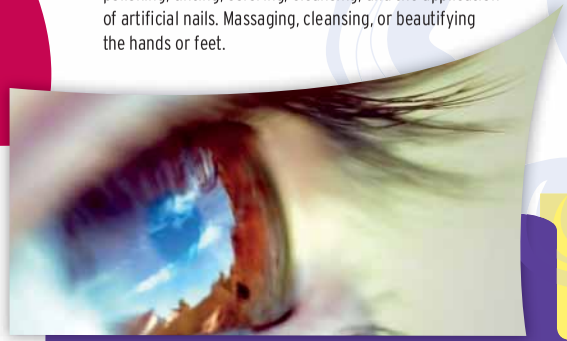
SKIN CARE

Massaging, cleaning, or stimulating the scalp, face, neck, arms, or upper part of the body (from the shoulders up), using the hands, devices, apparatus or appliances, with or without cosmetic preparations, antiseptics, tonics, lotions, or creams. Beautifying the face, neck, arms, or upper part of the body by using cosmetic preparations, antiseptics, tonics, lotions, or creams.

TIP: Massaging the entire body for a fee is not within the scope of the cosmetologist's license.

NAILS

Manicuring the nails, including cutting, trimming, polishing, tinting, coloring, cleansing, and the application of artificial nails. Massaging, cleansing, or beautifying the hands or feet.



MANICURIST

Manicuring is the practice of cutting, trimming, polishing, and cleansing the nails. It also includes massaging, cleansing, or beautifying the hands and feet, and the application of artificial nails.

TIP: All manicuring instruments must be cleaned and disinfected before use on each client. All non-disinfectable items (e.g. cotton pads, sponges, emery boards, and neck strips) must be disposed of immediately after use. Licensees must wash their hands before serving each client.

ESTHETICIAN

Esthetics is the practice of giving facials, applying makeup or eyelashes, hair removal (by tweezing or waxing), and providing skin care. It also includes beautifying the face, neck, arms, or upper part of the human body (from the shoulders up) by using cosmetic preparations, antiseptics, tonics, lotions, or creams.

Some services that estheticians **cannot** provide are:

- **Skin piercing.**
- **Laser treatments.**
- **Giving medication.**
- **Removal of moles, skin tags, etc.**

TIP: A person who demonstrates, recommends, or sells skin care products or cosmetics does not need to be licensed by the Board.

ELECTROLOGIST

Electrolysis is the permanent removal of unwanted facial and/or body hair by use of a tiny needle or probe that conducts electric current.

Some services that electrologists cannot provide are:

- Using needles to cauterize spider veins.
- Laser treatments.
- Giving medication.

TIP: No other license types are permitted to perform electrolysis.

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Board of Barbering & Cosmetology

For questions, comments, or complaints, contact the Board.

BOARD OF BARBERING AND COSMETOLOGY
2420 DEL PASO ROAD, SUITE 100
SACRAMENTO, CA 95834
www.barbercosmo.ca.gov
800-952-5210

STATE OF CALIFORNIA
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DEPARTMENT OF CONSUMER AFFAIRS

13-154

What to Expect

WHEN YOU ARE INSPECTED

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Board of Barbering & Cosmetology

WHAT TO EXPECT WHEN YOU ARE INSPECTED

Inspecting establishments to be sure they are complying with the law is one way the Board of Barbering and Cosmetology fulfills its mission to "Ensure the health and safety of California consumers by promoting ethical standards and by enforcing the laws of the barbering and beauty industry."

As a licensee of the Board, what should you expect when you are inspected?

UNDERSTAND THE PURPOSE OF THE VISIT

The Board wants to protect the safety and welfare of the consumer and, therefore, must ensure that all establishments and schools within its jurisdiction are adhering to State laws.

WHAT THE INSPECTION INVOLVES

Upon arrival, the Board inspector will show you a State Identification and let you know that he or she is there to inspect your salon. During the inspection, you can continue to provide services to your clients! The inspector does not wish to interrupt the client's service.

The inspector will ask to speak to the licensee in charge. The licensee in charge could be the establishment owner, a manager, or a licensed employee who would be responsible for unlocking the cabinets, doors, or drawers, so that the inspector can do a thorough inspection of the establishment. The licensee in charge is not responsible for the violations of the establishment owner. In addition, the inspector will ask to see a valid picture identification of every employee.

The inspector will compare the identification to the State Board license that should be displayed at the primary workstation to ensure that the employees working are licensed through the Board. The Inspector will also be checking to see if the establishment license is posted in the reception area of the salon and can be seen by clients.

THE INSPECTION REPORT

After the inspection, the inspector will review the results and explain any noted violations. One of the primary goals of the inspection will be to make sure you understand how to get into compliance so that any health and safety issues will be resolved. So ask questions! Our inspectors want to help you to get into compliance.

After the review, you will be asked to sign the inspection report. This does not mean that you agree with the inspection; it is merely a way for the Board to know that you have seen the report. If violations are found, the Board may send you a citation about 45 to 60 days after the inspection.

Ask Questions

ABOUT CITATION

The Board issues a citation to establishments or individuals identified as out of compliance with California law. Once you receive the citation and review the violations listed, you have two choices:

- You can agree with the citation and pay the fine.

–OR–

- You can disagree with the citation and appeal it.

If you decide to appeal your citation, please make sure you read the instructions on the citation. The appeal process is very time-sensitive and you must follow California law to participate in this process.

BE PREPARED FOR YOUR INSPECTION

Preparation plays a significant role in a successful inspection. You can prepare your establishment and team members by doing the following:

- Stay up-to-date by regularly visiting the Board's website: **www.barbercosmo.ca.gov**
- Perform random self-inspections of your establishment. A sample inspection form is available online at **www.barbercosmo.ca.gov/forms_pubs/selfinsp_worksheet.pdf**
- Educate your employees. Hold team meetings that include discussion of the potential for an inspection. Make sure your team knows the procedures involved in an inspection.

5 IMPORTANT INSPECTION GUIDELINES

1. Show the inspector your valid State-issued identification.
2. Make sure all licenses are current and up-to-date and displayed where regulated by law.
3. Keep foot-spa cleaning logs easily accessible.
4. Properly label all disinfected/soiled tools.
5. Keep your establishment and work areas clean, neat, and orderly.

LET'S WORK TOGETHER FOR A SAFE, HEALTHY SALON EXPERIENCE.

Ensuring the health and safety of California consumers by promoting ethical standards and by enforcing the laws of the barbering and beauty industry.

www.barbercosmo.ca.gov

10 Most Common Violations Cited During an Inspection

Title 16, Division 9, California Code of Regulations (CCR) and Business and Professions Code (BPC)

CCR §979. Disinfection Non-Electrical Instruments and Equipment:

How to avoid violation:

- Before use upon a client, properly clean tools. Remove all visible debris, clean with soap or detergent and water, dry tools, totally immerse instruments in an EPA-registered disinfectant solution, and use gloves or tongs to remove the tools from the disinfectant.
- Always keep disinfectant solution covered and change disinfectant when it is cloudy, contains debris, or according to the manufacturer's instructions.
- Store all soiled non-electrical items (example: combs, brushes, nail clippers) in a container labeled "Dirty", "Soiled", or "Contaminated".
- Store all disinfected non-electrical items in a clean covered place which is labeled "Clean" or "Disinfected".

CCR §988. Liquids, Creams, Powders and Cosmetics:

How to avoid violation:

- Store all liquids, creams, waxes, powders, gels and other cosmetic preparations in clean and closed containers. Powders may be kept in clean shakers.
- Distinctly label all bottles and containers of their contents (example: water, gel, oil, etc.).
- When only using a portion of a cosmetic preparation, remove from container in such a way as to not contaminate the remaining portion. Example: When removing wax from a wax pot, avoid "double dipping" the same wax stick applicator.

CCR §981(a). No Disposal of Tools and Supplies That Cannot Be Disinfected:

How to avoid violation:

- After use on a single client, immediately dispose of tools and supplies that cannot be disinfected (example: buffers, sponges, wax sticks, gloves) in a waste receptacle.

BPC §7317. Unlicensed Establishment/Persons:

How to avoid violation:

- Always keep your personal and/or establishment license current.
- Be sure that the establishment you work at is licensed and current.
- Be sure that employees are all licensed and current.

CCR §965. Display of Licenses:

How to avoid violation:

- Conspicuously post individual licenses at the licensee's primary workstation.
- Conspicuously post the establishment license in the reception area.
- Do not display an expired or invalid license.

CCR §987. Towels:

How to avoid violation:

- After a towel has once been used once, place it in a closed container to be laundered.
- Launder towels commercially in water at least 160 degrees for no less than 25 minutes, or using chemicals and cold water.
- Keep clean towels stored in clean, closed cabinets or containers.

CCR §994. Cleanliness and Repair:

How to avoid violation:

- Keep all floors, walls, woodwork, ceilings, furniture, furnishing, and fixtures clean and in good repair.
- Do not permit an accumulation of waste, hair clippings, or refuse in establishment.

CCR §978(a)(5). Insufficient Disinfectant in Container for Total Immersion:

How to avoid violation:

- When disinfecting tools, ensure there is enough disinfectant solution in the container to allow for total immersion of tools. If tools do not completely fit in the container (example: handle of a brush sticks out), use a different container.

CCR §986. Neck Dusters/Brushes Not Clean or Sanitary:

How to avoid violation:

- Properly clean neck, nail, facial, or makeup dusters and brushes before use on a client.
- Place clean dusters and brushes in a clean, covered place labeled "Clean".
- Place soiled dusters or brushes in a container labeled "Dirty", "Soiled", or "Contaminated".

CCR §990. Headrests and Treatment Tables:

How to avoid violation:

- Keep the headrest of chairs covered with a clean towel or paper sheet for each client.
- Clean shampoo trays and bowls with soap and water or other detergent after each shampoo.
- Keep shampoo trays and bowls in good repair and in a sanitary condition at all times.
- Cover treatment tables with clean treatment table paper, a clean towel, or a clean sheet after each use.
- Remove a towel or sheet immediately after used and deposit it in a closed container to be laundered. Immediately dispose of treatment paper after a single use.

Business, Consumer Services, and Housing Agency– Governor Edmund G. Brown Jr.
BOARD OF BARBERING AND COSMETOLOGY
P.O. Box 944226, Sacramento, CA 94244-2260
P (800) 952-5210 F (916) 575-7280 www.barbercosmo.ca.gov

INSPECTIONS

Self-Inspection

Conducting occasional self-inspections will help you remain in compliance with the Board of Barbering and Cosmetology (Board), regulations and the laws of California. It will also reduce the number of violations cited during an inspection. The owner of the salon, and licensees working in the salon, will be cited if violations exist during the time of inspection. The following guidelines will assist with self-inspections.

(B&P) Business and Professions Code
(CCR)Title 16, Division 9, California Code of Regulations

ESTABLISHMENT LICENSE

All answers should be "Yes"

1.	Do you have an establishment license? *(B&P 7317)*	o Yes	o No
2.	Is your establishment license current and valid? *Only current, valid licenses may be displayed. The Inspector will confiscate invalid licenses. Photocopies are illegal. (B&P 7347, 7317, 119(f) CCR 965(c))*	o Yes	o No
3.	Is the current owner and address on the license correct? *If not, you need to apply for a new establishment license. (B&P 7347)*	o Yes	o No
4.	Is the most current Health and Safety Rules poster conspicuously posted in the reception area? *Contact the Board if you need one. (CCR 904(a))*	o Yes	o No
5.	Do you have a licensee in charge? *There must be a licensee in charge for purposes of the inspection. (B&P 7348)*	o Yes	o No
6.	If your establishment is in a private residence, does it have an entrance separate from the entrance of the private living quarters? *(B&P 7350)*	o Yes	o No

PERSONAL LICENSES

All answers should be "Yes"

7.	Do all of the employees have a current, valid license? *Only current, valid licenses may be displayed. The Inspector will confiscate all others. Photocopies are illegal. (B&P 7349, 119(f), CCR 965(c))*	o Yes	o No
8.	Is each license conspicuously posted in the licensee's primary work area? *The license must be posted whenever the licensee is working. (CCR 965(a))*	o Yes	o No
9.	Does each licensee have valid government-issued photo identification during work hours? *(CCR 904(d))*	o Yes	o No

SANITATION / HEALTH & SAFETY

All answers should be "Yes"

10.	Do you have containers large enough for proper disinfecting? *All non-electrical items being disinfected must be fully immersed in solution. The container must be continuously covered. (CCR 978(a)(5),979(b)(1))*	o Yes	o No
11.	Do you have a sufficient supply of disinfectant? *Label on the disinfectant must show EPA-registered with demonstrated bactericidal, virucidal, and fungicidal activity. (CCR 978(c))*	o Yes	o No
12.	Is the manufacturer labeled container on the premises for verification? *(CCR 978(c))*	o Yes	o No
13.	Are the correct disinfection procedures being followed on both non-electrical and electrical equipment? *(CCR 979, CCR 980)*	o Yes	o No
14.	Is the disinfectant used according to manufacturer's instructions? *(CCR 978(b))*	o Yes	o No
15.	Are all supplies that cannot be disinfected, disposed of in a waste receptacle immediately after use? *(CCR 981(a))*	o Yes	o No
16.	Are neck strips or towels used to protect each client's neck? *(CCR 985)*	o Yes	o No

SANITATION / HEALTH & SAFETY

All answers should be "Yes"

17. Are clean instruments stored separately from soiled instruments? Are the soiled instruments stored in a container labeled "dirty","soiled" or "contaminated"? *(CCR 979(c))*	*o* Yes	*o* No
18. Are the clean instruments stored in a covered container labeled "clean" or "disinfected"? *(CCR 979(d))*	*o* Yes	*o* No
19. Are all whirlpool and air-jet basins, pipe-less footspas (footplates, impellers, impeller assemblies and propellers), foot basins or tubs (any basin, tub, footbath, sink, bowl, and all non-electrical equipment that holds water for a pedicure service), being properly cleaned and disinfected after use upon each client, at the end of the day, weekly and properly logged? *(CCR 980.1, 980.2, 980.3)*	*o* Yes	*o* No
20. Are all single use, disposable, recyclable, liners that are designed specifically and manufactured for use as a foot basin or tub liner, disposed of immediately after each use? Is there is a supply of at least 5 liners per foot tub basin on the premises at all times? *(CCR 980.4)*	*o* Yes	*o* No
21. Are the floors, walls, ceilings, furniture, furnishings, and fixtures clean and in good condition? *(CCR 994(a))*	*o* Yes	*o* No
22. Is there hot and cold running water in the establishment, if hair dressing services are being performed? *(CCR 995(b))*	*o* Yes	*o* No
23. Is there a public toilet room? Is it clean? *(B&P 7351)*	*o* Yes	*o* No
24. Are there hand washing facilities with hot and cold running water in, or adjacent to, the toilet room? Is soap (liquid or powder, not "community" bar, soap) provided? *(B&P 7352)*	*o* Yes	o No
25. Is the toilet room clear of all storage? *No storage of supplies, mops, buckets, etc., are allowed in the toilet room. (B&P 7351)*	*o* Yes	*o* No
26. Is potable drinking water available? *(CCR 995(c))*	*o* Yes	*o* No
27. Is there at least one covered waste receptacle for disposal of hair? *(CCR 978(a)(1))*	*o Yes*	*o No*
28. Are clean towels, sheets, robes, linens and smocks stored in a clean, closed cabinet or container? *(CCR 987(c), 978(a)(3))*	*o* Yes	*o* No
29. Are soiled towels, robes, gowns, smocks, linens and sheets stored in a closed container? *(CCR 987(a), 978(a)(2))*	*o* Yes	*o* No
30. Is all waste, hair clippings or refuse, disposed of promptly without accumulation? *(CCR 994(b))*	*o* Yes	*o* No
31. Do all employees wash their hands or use an equally effective alcohol based product before providing services to each client? *(CCR 983(b))*	*o* Yes	*o* No
32. Are headrests and/or treatment tables covered with a clean towel, sheet, or paper for each client? *(CCR 990(a)(c))*	*o* Yes	*o* No
33. Are shampoo bowls and sinks clean and in good repair? Has the hair trap been emptied? *(CCR 990(b))*	*o* Yes	*o* No
34. Are all containers and spray bottles correctly labeled? *(CCR 988(b))*	*o* Yes	*o* No
35. Are poisonous substances labeled? *(CCR 988(b))*	*o* Yes	*o* No
36. If only a portion of a cosmetic preparation is used, is it removed from the container so as not to contaminate the remaining portion? *(CCR 988(c))*	*o* Yes	*o* No

OTHER

All answers should be "No"

37. Do employees carry supplies or instruments on or in their garments? *This includes scissors, holsters, and pouches.(CCR 981(c))*	*o* Yes	*o* No
38. Are prohibited services being offered? *(CCR 991, B&P 7320)*	*o* Yes	*o* No
39. Are there any supplies, equipment, or instruments in the establishment, which can be considered a practice of medicine for the type of services being offered, e.g., chemicals, scalpels, medical supplies, needles, devices, etc.? *(B&P 7320.2, 7320.1)*	*o* Yes	*o* No
40. Is the establishment used for sleeping or residential purposes? *(B&P 7350)*	*o* Yes	*o* No
41. Are there any illegal metal instruments being used or stored in the establishment, such as razor callous shavers (credo blades), metal scrapers (graters), etc.? *(CCR 993(a), 993(b))*	*o* Yes	*o* No

Section 2

Chemicals and Your Health

LEARNING OBJECTIVES

Section 2

Chemicals and Your Health

After completing this section, you will be able to:

- Identify chemical products commonly used in the workplace.
- Explain why some chemicals may be harmful to your health and what makes them harmful.
- Describe how chemicals get into the body.
- Identify some health problems that may be caused by chemicals.

This lesson is about chemicals in a shop and salon that may harm your health. We will discuss why chemicals may be harmful, how they may harm you, how they may get into your body, and how much exposure is too much. First, we will discuss where chemicals are in the workplace.

Where Are Chemicals Found in the Shop or Salon?

Many products used by barbers, cosmetologists, manicurists, estheticians, and electrologists contain chemicals. Can you name some of these products? It's not important whether you know the names of the particular chemicals in the product or even the exact product name. For now, let's name some of the types of products:

- Shaving cream
- Nail polish
- Permanent wave solution
- Artificial nails
- Chemical hair relaxer or chemical straightening products
- Hair spray
- Hair coloring
- Makeup
- Chemical peels
- Shampoo

As you can see, chemicals can be found in many products that are commonly used in the shop or salon.

What Form Can a Chemical Take?

Chemicals can take different forms. A chemical can be:

- Solid
- Gas
- Liquid
- Vapor

A solid chemical has a definite shape. It includes dusts, fibers, and powders, which consist of small particles. An example of a solid chemical is facial powder.

A liquid chemical is one that flows, like water. An example of a liquid chemical is acetone, which is commonly found in nail polish remover. When a liquid is pumped or sprayed into the air (like hairspray), it may be broken up into small droplets. Then it is called a mist.

A gas floats and moves freely in the air. Often you cannot see or smell a gas, but you can still inhale it along with the air you breathe.

Vapors are like gases because they also float freely in the air. However, vapors come from liquids that evaporated into the air. For example, the acetone liquid in an open bottle of nail polish remover can evaporate into the air. The result is acetone vapor.

What Makes a Chemical Hazardous to Your Health?

Chemicals used for hair treatments..

Let's consider what makes a chemical hazardous to your health. How hazardous a chemical is to your health depends on several factors:

- The **toxicity** of the chemical. Is it toxic or nontoxic? Will it harm your body?
- The amount of the chemical you are exposed to. Sometimes this is called **concentration**.
- The **length of time** you are exposed to the chemical.
- Your **individual sensitivity** to the chemical. People can react differently to chemical exposure.
- The chemical's **interaction** with other chemicals you are exposed to.
- The **way you are exposed** to the chemical. How did the chemical get into your body?

Let's discuss what all of this means for you, the future professional.

Toxicity is the ability of a chemical to cause harm to the body. With toxic chemicals, even a very small amount can cause harm. With relatively harmless chemicals, even a large amount will have little or no effect to your health. When considering the use of chemicals and the toxicity of the chemical, it is important to determine the concentration of the chemical.

The more chemicals you get into your lungs and on your hands, the more your health is at risk.

Concentration is the amount of a particular chemical in the air you breathe, the amount you get on your skin, or the amount you swallow. In chemistry classes you learned that concentration is the strength of a chemical, but when discussing health and safety hazards, concentration refers to the amount of a chemical you are exposed to.

The **length of time** you are exposed to the chemical, the more the chemical gets into or on your body. For example, if you spend six hours every day doing chemical services like perms, chemical blowouts, or acrylic nails, you are exposed to chemicals much longer than someone who does chemical services only two hours a day. The more chemicals you get into your lungs and on your hands, the more your health is at risk.

Different people react differently to the same chemical. Your **individual sensitivity** to a chemical is how your own body reacts to a particular chemical. Some people may have a reaction when exposed to a small amount of a chemical, while others do not until exposed to a large amount. Different factors contribute to individual sensitivity, including:

- **Heredity.** No one knows why but some people seem to inherit a higher sensitivity to chemicals.
- **Age.** Some chemicals have more serious effects on the very young or elderly.
- **Pregnancy.** With certain chemicals, pregnant women are more at risk. These chemicals may harm the mother, the fetus, or both.

- **Alcohol use.** Alcoholic beverages may increase the effects of some toxic chemicals on your liver and possibly on other organs.
- **Tobacco use.** Smoking can harm your lungs' ability to protect themselves against chemicals and it can increase the harmful effects of other chemicals.
- **General health.** Exposure to certain chemicals can cause more effects for people who are already in poor health. For example, someone with lung disease who breathes in vapors will probably suffer worse symptoms than someone who is healthy.
- **Gender.** Some chemicals can affect males more than females or females more than males.
- **Use of medications or other drugs.** Certain chemicals may interact with drugs you have taken and produce effects more serious than the chemical alone would cause.

Chemicals may cause watery eyes, a burning feeling on your skin, irritation of your nose or throat, dizziness, or a headache.

If You Are Exposed to Several Different Chemicals Every Day, Are You More at Risk?

This depends on what particular chemicals are on or inside you and whether there is an **interaction** between them. Two chemicals may create an effect much worse when combined together than either of them alone would produce. You may be familiar with an example of this if you have ever taken medication. Your doctor or the medicine label warns you not to mix the medication with alcohol as the interaction can produce negative effects such as internal bleeding and or organ damage. Exposure to one chemical may also weaken your body's defenses against another chemical. For example, while methyl ethyl ketone (found in some nail polish removers) does not cause nerve damage itself, it increases n-hexane's (found in some cleaning products) ability to cause this effect.

Lastly, when several chemicals produce similar health effects, you could react as if exposed to a large dose of one chemical. For instance, since numerous chemicals can cause dizziness, exposure to several of these chemicals at once could cause dizziness much quicker and more severely than one chemical would.

How Do Chemicals Get Into Your Body?

Chemicals can get into your body three main ways, sometimes referred to as **routes of exposure**. They are:

- **Breathing.** Once you breathe a chemical into your lungs, it will stay there or your bloodstream can carry it to other parts of your body.
- **Skin and eye contact.** Some chemicals can harm the skin directly. They can cause burns, irritation, or dermatitis. Examples of chemicals that may harm the skin are perm solutions, chemical blowout solutions, and hair relaxers. Some chemicals can pass right through the skin and enter into your bloodstream. This can occur if your skin is cut, cracked, or dry. Some chemicals may seriously burn or irritate your eyes. Your eyes may

Notice if a product you are working with has an odor.

be at risk if chemicals splash, if you touch your eyes when your fingers have chemicals on them, or if chemicals produce vapors that get into your eyes.

- **Swallowing.** Most people do not swallow harmful chemicals on purpose. However, you could swallow them unintentionally if you eat or drink after you have been working around chemical products. Chemicals on your hands or in the air can get on your food or drink and you can ingest these chemicals. Therefore, if you have been working with chemicals, it is important to leave your work area when you eat or drink. In addition, always thoroughly wash your hands with soap and water for at least 20 seconds after handling any chemical product.

What Can I do to Stay Safe?

It is always safest to keep exposure to any harmful chemical as low as possible. In California, California Division of Occupational Safety and Health (Cal/OSHA) sets Permissible Exposure Limits (or PELs) – laws that dictate the maximum amount of chemical exposure you can experience on the job. These exist for chemicals commonly used in the shop or salon, in addition to hundreds more. You can view the list of Cal/OSHA/PELs at Cal/OSHA's webpage for Title 8 Section 5155, Permissable Exposure Limits for Chemical Contaminants Table AC-1. **http://dir.ca.gov/Title8/5155table_ac1.html**

It should be noted that Section 5155 requires the employer to monitor the exposure of any employees who may be exposed above the permissible exposure limits.

In addition to reading the PEL list, you can watch for a few things to determine if exposure to chemicals has occurred.

Is Chemical Exposure Occurring?

Notice if a product you are working with has an **odor**. If you smell a chemical, you are breathing it in and it is entering your body. However, since not all harmful chemicals produce a smell, do not rely solely on your sense of smell to warn you of exposure.

Secondly, if you breathe or swallow a chemical, it may leave a **taste** in your mouth. However, not all chemicals that leave a taste in your mouth are harmful. Do not rely solely on your sense of taste to warn you.

In addition, if you cough up mucus with **particles** in it or you blow your nose and see particles, you know you have inhaled a chemical in particle form.

Furthermore, the likelihood of inhaling dust, powder, or mist is higher if you see it **collecting on surfaces** in your workplace. Watch for collection on tables, chairs, shelves, and even on your own hair and clothes.

Lastly, chemicals may cause **symptoms** you are experiencing. These can include watery eyes, a burning feeling on your skin, irritation of your nose or throat, dizziness, or a headache. While the flu or other diseases may cause many of these symptoms, they can also be clues to chemical exposure at work.

Other clues or signs of exposure can be if your co-workers have similar symptoms at the same time, if your symptoms get worse near the end of your work shift, or if your symptoms are better when you are away from work.

Of course, the best way to know for sure if exposure is occurring is by air testing. Professionals can use special instruments to find out how much of what particular chemicals are in the air at your workplace.

The likelihood of inhaling dust, powder, or mist is higher if you see it collecting on surfaces in your workplace.

Questions for Review

What are the forms that a chemical can take?

A) Gases, solids, liquids

B) Liquids, mist, vapors, gases

C) Solids, liquids, gases, vapors

D) Vapors, liquids, mist

What should you consider when determining how hazardous a chemical is?

A) If you are allergic to the chemical

B) Heredity, age, gender, general health

C) Toxicity, concentration, length of time, individual sensitivity, interaction, route of exposure

D) All the above

What are the three main routes of exposure in a shop or salon?

A) Eating, drinking, smoking

B) Breathing, skin and eye contact, swallowing

C) Injecting, inhaling, infection

D) Spilling, spraying, shaking

What governmental agency in California sets the Permissible Exposure Limits (PELs) of chemicals?

A) The Board of Barbering and Cosmetology

B) U.S. Food and Drug Administration

C) U.S. Department of Labor

D) California Occupational Safety and Health Administration

What should you watch for to determine if chemical exposure is occurring?

A) Smell, taste, touch, sight, hear

B) Symptoms, residue, smell, irritation

C) Odor, taste, particles, surfaces, symptoms

D) Dust, formaldehyde, acetone vapor, gas

For answers to all questions, please refer to your exam booklet.

Nail tech in salon doing a manicure.

Chemical Health Hazards

Working in a shop or salon can present you with several challenges in keeping yourself heathy. We call potential threats to your health, "health hazards." Some examples of health hazards that you may find in a shop or salon include exposure to harmful chemicals, vapors, or dust, exposure to viruses or bacteria, excessive noise, heat, or cold. In this portion of your training, we are going to consider health hazards related to the chemicals you use at work.

It is often difficult to see the connection between your own health symptoms and particular chemicals on your job because chemicals may cause effects that take a long time to show up. It could be years before exposure to a chemical causes serious health problems. In addition, some symptoms of exposure to chemicals, like itchy eyes or a runny nose, are so common that it may be hard to determine if the chemical caused the problem or something else. Furthermore, different people can react in different ways to the same chemical. Some people may notice health effects when they work with the chemical, and others may never have a problem.

What Are We Going to Learn?

In this lesson, we will look at the symptoms you may get when you are exposed to certain chemicals in the shop or salon. We will also discuss how chemicals can affect the various organs of your body.

Take a Moment

Think of some health problems that might be caused by chemicals. For now, don't think about the particular chemicals that might cause them, only the health problems themselves. Also, don't worry about whether it's likely licensees will suffer from these problems. Instead, consider any health effects caused by chemical exposure that you may have heard about on TV, online, or in the news.

What Did You Come Up With?
Some health problems you may be thinking of could include asthma, skin rash, miscarriage, dizziness, sore throat, watery eyes, sneezing, birth defects, dermatitis, headache, allergies, tiredness, runny nose, wheezing, or cancer.

Let's Discuss

Now, let's discuss the two types of health effects chemicals could have on you, the future professional.

If exposed to a reactive chemical, you may experience an **acute effect** from the chemical. Acute effects may be minor, like nose or throat irritation from breathing ammonia, or they could be serious, like eye damage from a splash of hair relaxer or passing out from chemical vapors. What all these acute effects have in common is that they happen immediately.

On the other hand, you could experience a **chronic effect** from chemical exposure. A chronic effect may take years to show up. Chronic effects are usually caused by regular exposure to a harmful substance over a long period. These effects are typically permanent. For example, you may develop asthma after years of inhaling hairspray.

What both acute and chronic effects have in common is that irritants cause them. Irritants are chemicals that cause irritation. Your skin, nose, throat, or lungs will immediately react when exposed to irritants. Many of the products you use at work contain irritants. For example, some shampoos contain chemicals added to produce a frothy lather, but they may cause irritation on the scalp.

What Are Irritants?

An irritant can be described as a substance that causes slight inflammation or other discomfort to the body. Some examples of products that licensees use on a daily basis that may irritate the eyes, nose, throat, and lungs include disinfectants, skin exfoliation products, permanent wave solutions, chemical blowout solutions, chemical hair relaxers, acrylic nail products, and hairsprays.

Continuous exposure to irritants may cause you to develop an allergy to a particular chemical.

What is an Allergy?

An allergy is a reaction some people have when they become overly sensitive to a particular chemical. You will have a reaction every time exposure to that particular chemical occurs—no matter how small the amount.

Allergens are chemicals that cause allergies. If you are not allergic to a chemical the first time you use it, you may develop an allergy after using it several times or it may take years. Allergies develop at different rates for different people. Common symptoms of allergies are a stuffy nose, watery eyes, sneezing, wheezing, and coughing.

Symptoms of dermatitis include flaking, dryness, redness, itching, and burning of the skin.

How Does All of This Affect Me?

As you progress in your career, you may become aware of certain conditions that seem to be more prevalent within the barbering and beauty industry. You may hear terms like contact dermatitis, allergic dermatitis, or skin rash. Dermatitis is an inflammation of the skin. A skin rash is a general term used to describe many forms of dermatitis. If contact with a skin irritant caused the dermatitis, it is contact dermatitis. If an allergic reaction caused the dermatitis, it is allergic dermatitis.

Symptoms of dermatitis include flaking, dryness, redness, itching, and burning of the skin. Licensees are especially at risk of contracting dermatitis on their hands and arms as there are several products they use daily that could irritate the skin. Continued exposure to disinfectants, skin exfoliation products, permanent wave solutions, blow out straightening solutions, chemical hair relaxers, and shampoo have to potential to cause dermatitis.

What Are Some Other Chemicals I Should be Aware Of?

MMA

Methyl Methacrylate (MMA), is a chemical that can be found in some acrylic nail products and it is a chemical of concern. Dust from acrylic nails containing MMA can get onto your skin, face, eyelids, nose, and fingers. MMA can cause red, itchy, swollen skin with tiny blisters. It can also cause a scratchy throat, runny nose, and cough. You may experience headaches, dizziness, and drowsiness, or have difficulty concentrating or paying attention. You may even experience numbness and muscle weakness. The Board of Barbering and Cosmetology prohibits the use of MMA in nail salons in California. Safeguard your health and do not use products that contain MMA.

The Toxic Trio

The toxic trio is a highly publicized chemical combination consisting of toluene, formaldehyde, and dibutyl phthalate. These harmful chemicals commonly appear in nail products and can produce several concerns.

Toluene can cause dry or cracked skin and irritated, burning, itchy eyes, nose, and throat. You could experience headaches and dizziness. It can directly affect the brain, and you may not be able to concentrate, remember, or recognize words. It can harm a developing fetus or pregnant woman, and it is suspected to cause miscarriages.

Formaldehyde can cause watery, burning eyes, skin rashes, and breathing problems such as asthma, coughing, and wheezing. It can even cause cancer. (Formaldehyde can also be found in some shampoos, blow out, and hair straightening products.)

Dibutyl phthalate can cause birth defects in male fetuses.

As with the toxic trio, some chemicals can affect your central nervous system. Your brain and spinal cord make up the central nervous system. Getting headaches, dizziness, nausea, drowsiness, restlessness, and lack of coordination are all symptoms that your central nervous system is under attack.

Breathing the vapors of certain chemicals most likely causes central nervous system effects, but sometimes chemicals are also absorbed through the skin.

Hair Coloring Products

Some hair coloring products contain coal tar dyes. Common terms for coal tar dyes are:

4-methoxy-m-phenylenediamine (4-MMPD)
Paraphenylenediamine
2-nitro-phenlenediamine
2, 4-diaminoaniside
2, 4 –diaminoaniside sulfate

Coal tar and products made from it may cause cancer, especially cancer of the bladder.

The U.S. Food and Drug Administration (FDA) requires products with coal tar dyes to have a label saying, "Caution – This product contains ingredients which may cause skin irritation on certain individuals and a preliminary test according to accompanying directions should first be made. This product must not be used for dyeing the eyelashes or eyebrows; to do so may cause blindness." Unfortunately, this label does not warn people that the product may also cause cancer.

Chemical Blow Outs

Chemical hair straightening treatments sometimes called "chemical blow outs" are a method of temporarily straightening hair by sealing liquid keratin and a preservative solution into the hair with a flat iron. Many of these solutions contain the chemical methylene glycol (formaldehyde, formalin), which when heated may release formaldehyde gas into the air. The FDA has this to say:

"Skin sensitivity can develop after repeated contact with formaldehyde-related ingredients. When formaldehyde is released into the air, it can cause serious irritation of your eyes, nose, and lungs. The greater the exposure, in terms of both duration and concentration, to products that contain formaldehyde-related ingredients, the higher the health risks."

The warning letters issued by FDA address products that contain methylene glycol, which, when heated, releases formaldehyde into the air. Because these products must be applied with heat, formaldehyde is released when people use them following directions on the label. For FDA's complete statement, see **www.fda.gov/cosmetics/productsingredients/products/ucm228898.htm**.

OSHA states that formaldehyde presents a health hazard if workers are exposed. It can irritate the eyes and nose; cause allergic reactions of the skin, eyes, and lungs; and is linked to nose and lung cancer. For OSHA's complete statement, see **www.osha.gov/SLTC/formaldehyde/hazard_alert.html**.

Shampoos and Conditioners

Some shampoos and conditioners contain chemicals called TEA, or triethanolamine, or DEA, or diethanolamine. If TEA or DEA are in a product that also contains the chemical BNPD, they can react with it to produce nitrosamines. The chemical name for BNPD is 2-bromo-2-nitroprone-1, 3-diol. Nitrosamines are classified as suspected human carcinogens by the state and federal governments. They cause cancer in animals, and some scientists believe that they may also cause cancer in humans.

Liquid Disinfectants

The use of disinfectants is vital for the protection of the consumers you serve. However, continual exposure to liquid disinfectants may cause skin irritation. Therefore, for your safety and protection, the Board's regulations state that a licensee must use gloves or tongs when removing their disinfected tools from the disinfectant. This requirement is put in place to protect your skin from exposure to this chemical.

Parabens

Parabens are a commonly found in makeup, moisturizers, shaving products, and hair care products. Common ingredient names used for parabens are: methylparaben, propylparaben, and butylparaben. Parabens are often used as a preservative to control microbial growth in cosmetic products as they prevent the growth of fungi, bacteria, and yeast.

Some have speculated whether there is a connection between parabens and cancer, with some suggesting that parabens can cause cancer by acting like estrogen, a common hormone, through a process called endocrine disruption. See more at: **www.cosmeticsinfo.org/paraben-information#sthash.IIaJovpF.dpuf**.

The FDA believes that at the present time there is no reason for consumers to be concerned about the use of cosmetics containing parabens. However, the agency will continue to evaluate new data in this area. If the FDA determines that a health hazard exists, the agency will advise the industry and the public, and will consider its legal options under the authority of the Federal Food, Drug, and Cosmetic Act in protecting the health and welfare of consumers. See more at: **www.fda.gov/cosmetics/productsingredients/ingredients/ucm128042.htm**.

Will My Career Choice Affect My Ability to Have Children?

You may wonder if exposure to chemicals in the shop or salon could affect your ability to have children. While obstetricians may prefer to err on the side of caution, several studies have shown there is no statistically significant association between being a cosmetologist and poor pregnancy outcomes (such as miscarriage, stillbirth, and premature delivery). As long as licensees have proper working conditions, their risks of reproductive complications should not be higher than that of any other profession.

Other studies have shown that some chemicals in manicuring and sculptured nail products, like glycol ethers, can cause birth defects and infertility in laboratory animals.

Although such studies suggest that the same might happen in humans, it is not certain.

Questions for Review

What is dermatitis?

A) Dry hands and arms

B) An inflammation of the skin

C) Irritated and watery eyes

D) Flaky scalp

What comprises your central nervous system?

A) Muscles and brain

B) Spinal cord and nerves

C) Nerves and muscles

D) Brain and spinal cord

What is a symptom that your nervous system is under attack?

- **A)** Headache
- **B)** Dizziness
- **C)** Lack of coordination
- **D)** All of the above

The toxic trio can cause multiple health problems. True or False?

Methyl methacrylate monomer (MMA) can be safely used in nail salons. True or False?

Smoking increases the harmful effects of other chemicals. True or False?

For answers to all questions, please refer to your exam booklet.

Let's take a closer look at some specific chemicals found in barbering and cosmetology products. To do that you need to know:

How You Can Find Out What Chemicals a Product Contains

First, always **check the label** of a product as it may tell you the ingredients. However, unlike consumer products, many products you use are for "professional use" only and do not require a list of ingredients on the label. Now what can you do? **Check the Safety Data Sheet, or SDS**. Reading the product's SDS is probably the best way to find out which chemicals the product contains. We will be discussing SDSs in more detail in Section 3 of your training.

You can get the SDS from your employer, or if you are an establishment owner, you can request an SDS directly from the manufacturer or supplier. You should know which chemicals are in the products you use, their possible health effects, and how to use the products safely.

Case Studies

In these exercises you will read case studies that reflect "real life" problems you might encounter when you use a particular chemical product at work. Using the *Chemicals in the Shop/Salon* handout located in the Training Materials file, do your best to answer the questions presented regarding products, their typical ingredients, and health problems that various chemicals can cause. Also, take time to consider the question, "What can I do to protect myself?" Let's begin.

For answers to all questions, please refer to your exam booklet.

CASE STUDY #1

You just started to work in a nail salon. You do about seven full sets of sculptured nails each day and three manicures with polish. Your eyes and throat feel irritated at the end of each day.

What are some specific chemicals in sculptured nail products and nail polish that might be causing these problems?

During which steps of the work process can these chemicals get into your body?

What can you do to protect yourself?

CASE STUDY #2

You have been working in a very busy salon for three years. Recently, every time you give a chemical blow out you start feeling dizzy, you get a headache, and you have difficulty breathing.

What could be the chemical in the blow out causing this problem?

During which steps of the process can this chemical get into your body?

What can you do to protect yourself?

In Review

In this lesson, you learned about some of the chemicals found in products you use at work and their health effects. Take a moment and review the materials located in the trainings material file. You will want to keep these materials close at hand for easy reference. In our next lesson, we will consider Safety Data Sheets—what they are, where to find them, and how to read them.

Notes

Notes

Section 2
Training Materials

2.1 What's in That Product?

2.2 Understanding Toxic Substances – An Introduction to Chemical Hazards in the Workplace

2.3 Artificial Fingernail Products – A Guide to Chemical Exposures in the Nail Salon

BarberCosmo
Board of Barbering & Cosmetology

Chemicals in the Shop / Salon

WHAT'S IN THAT PRODUCT?

The chart below shows chemicals sometimes found in hair care and beauty products, as well as their possible health effects. Your risk of health effects depends on several factors, including the amount of the chemical in the product, the toxicity, the length of time you are exposed, the route of exposure, and your own individual sensitivity. Read each product's Safety Data Sheet (SDS) for more information.

PRODUCT	MAY CONTAIN THESE CHEMICALS	POSSIBLE HEALTH EFFECTS
BLEACHES	**Alcohol (ethyl or isopropyl)**	• Eye, nose, throat, and lung irritation • Central nervous system effects* • Skin irritation and dermatitis
	Ammonium hydroxide	• Eye, nose, throat, and lung irritation • Skin and eye burns • Skin irritation and dermatitis
	Ammonium persulfate or potassium persulfate	• Eye irritation • Skin irritation and dermatitis • Allergies, including asthma • Possible fire hazard
	Hydrogen peroxide	• Eye, nose, throat, and lung irritation • Skin and eye burns • Severe irritation of the mouth, throat, and stomach if swallowed
	Sodium peroxide	• Eye and nose irritation • Skin and eye burns • Skin irritation and dermatitis

* Central nervous system effects include headache, dizziness, nausea, drowsiness, and restlessness.

CHEMICAL HAIR RELAXERS AND BLOW OUT SMOOTHING PRODUCTS	**Alcohol (isopropyl)**	• Eye, nose, throat, and lung irritation • Central nervous system effects • Skin irritation and dermatitis
	Ammonium hydroxide	• Eye, nose, throat, and lung irritation • Skin and eye burns • Skin irritation and dermatitis
	Ammonium thioglycolate or glycerol monothioglycolate	• Eye, nose, throat, and lung irritation • Skin irritation and dermatitis • Allergies, including asthma
	Boric acid, perborate or borate	• Central nervous system effects* • Kidney damage, if swallowed
	Bromates	• Eye, nose, throat, and lung irritation • Central nervous system effects* • Skin and eye burns • Skin irritation and dermatitis • Severe irritation of mouth, throat, and stomach, if swallowed • Kidney damage, if swallowed
	Butylated hydroxyanisole (BHA)	• Immune system toxicity • Cancer • Hormone disruption
	DMDM hydantoin (releases formaldehyde)	• See Formaldhyde (Formalin)
	Formaldehyde (Formalin)	• Eye, nose, throat, and lung irritation • Skin irritation and dermatitis • Cancer
	Hydrogen peroxide	• Eye, nose, throat, and lung irritation • Skin and eye burns • Severe irritation of mouth, throat, and stomach, if swallowed
	Sodium hydroxide	• Eye, nose, throat, and lung irritation • Skin and eye burns • Skin irritation and dermatitis • Severe irritation of mouth, throat. and stomach, if swallowed

*Central nervous system effects include headache, dizziness, nausea, drowsiness, and restlessness.

HAIR COLORING PRODUCTS	**Alcohol (ethyl, isopropyl, or propyl)**	• Eye, nose, throat, and lung irritation • Central nervous system effects* • Skin irritation and dermatitis
	Aminophenols	• Eye, nose, throat, and lung irritation • Skin irritation and dermatitis • Severe allergic reaction in some people
	Ammonium hydroxide	• Eye, nose, throat, and lung irritation • Skin and eye burns • Skin irritation and dermatitis
	Coal tar dyes(aniline derivatives (examples: 4- methoxy-m-phenylenediamine (4-MMPD), paraphenylenediamine, 2-nitro-phenylenediamine, 2,4 diaminoaniside, and 2,4 diaminoaniside sulfate	• Severe eye irritation and blindness • Skin irritation and dermatitis • Severe allergic reaction in some people • Cancer if absorbed through the skin during long time use
	Hydrogen peroxide	• Eye, nose, throat, and lung irritation • Skin and eye burns • Severe irritation of mouth, throat, and stomach if swallowed
	Hydroquinone	• Immune system/skin toxicity • Cancer • Reproductive harm
	Lead acetate	• Lead poisoning if absorbed in large amount
	Monoethanolamine (MEA)	• Organ toxicity • Skin irritation
	Octoxynol-40	• Eye, skin, and lung irritation • Immune system toxicity

*Central nervous system effects include headache, dizziness, nausea, drowsiness, and restlessness.

HAIRSPRAYS	**Alcohol (denatured ethyl or terbutyl)**	• Eye, nose, throat, and lung irritation • Central nervous system effects* • Skin irritation and dermatitis
	Isobutane	• Fire hazard
	Polyvinylpyrrolidone (PVP)	• Lung and other respiratory problems • Thesaurosis (storage disease) causes a chronic cough and breathing problems, including shortness of breath
	Propane	• Central nervous system effects* • Fire hazard
MANICURING	**Acetone**	• Eye, nose, and throat irritation • Central nervous system effects* • Skin irritation and dermatitis
	Acetonitrile	• Eye, nose, and throat irritation • Central nervous system effects* • Skin irritation and dermatitis
	Ethyl acetate or butyl acetate	• Eye, nose, and throat irritation • Central nervous system effects* • Breathing problems • Skin irritation and dermatitis
	Ethyl methacrylate	• Eye, nose, and throat irritation • Coughing and/or shortness of breath • Skin irritation and dermatitis • Central nervous system effects* • Fire hazard
	Formaldehyde	• Eye, nose, and throat irritation • Watery, burning eyes • Central nervous system effects* • Skin irritation and dermatitis • Breathing problems (such as asthma, coughing, and wheezing) • Cancer with long-term use
	Glycol ethers (a generic term for a group of chemicals)	• Reproductive problems (birth defects and infertility shown in lab animal tests) • Possible other effects depending on the specific chemical

* Central nervous system effects include headache, dizziness, nausea, drowsiness, and restlessness.

MANICURING (CONTINUED)	**Lanolin**	• Skin irritation and dermatitis
	Methyl ethyl ketone (MEK)	• Eye, nose, and throat irritation • Central nervous system effects*
	Methyl methacrylate (MMA)	• Red, itchy, and swollen skin with tiny blisters • Scratchy throat, runny nose, and cough • Numbness and muscle weakness • Central nervous system effects*
	Ortho-phenylphenol (OPP)	• Eye, nose, and throat irritation • Abdominal pain • Coughing and/or shortness of breath
	Phthalates (such as dibutyl phthalate)	• Reproductive birth defects
	Quaternary ammonium compounds (such as benzalkonium chloride)	• Eye, nose, and throat irritation • Breathing problems, such as asthma and shortness of breath
	Sodium hydroxide or potassium hydroxide	• Eye, nose, throat, and lung irritation • Skin and eye burns • Skin irritation and dermatitis • Severe irritation of mouth, throat, and stomach if swallowed
	Toluene	• Eye, nose, and throat irritation • Skin irritation and dermatitis • Central nervous system effects* • Reproductive problems
	Xylene	• Eye, nose, and throat irritation • Central nervous system effects* • Skin irritation and dermatitis • Reproductive problems
SHAMPOOS	**Selenium sulfide**	• Cancer • Neurotoxicity • Developmental harm

* Central nervous system effects include headache, dizziness, nausea, drowsiness, and restlessness.

Understanding Toxic Substances

An Introduction to Chemical Hazards in the Workplace

State of California
Department of Public Health
Department of Industrial Relations

2008 edition

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Understanding Toxic Substances

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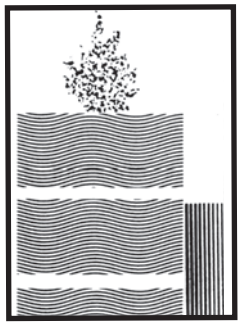
Introduction

Hazardous substances are used in many workplaces today. Working people are discovering that they need to know more about the health effects of chemicals they use or may be exposed to on the job. Textbooks, fact sheets, and Material Safety Data Sheets (MSDSs) provide important information, but they are often written in technical language.

To help you better understand technical information about hazardous workplace chemicals, this booklet explains:

- how chemicals can affect the body,
- what to look for when reading health information,
- the different types of exposure limits for chemicals in the workplace,
- how to know if you are exposed and what you can do to reduce exposure, and
- where to go for additional information.

What makes a chemical toxic?



Toxicity is the ability of a substance to cause harmful health effects. These effects can strike a single cell, a group of cells, an organ system, or the entire body. A toxic effect may be visible damage, or a decrease in performance or function measurable only by a test.

All chemicals can cause harm at a certain level. When a small amount can be harmful, the chemical is considered toxic. When only a very large amount of the chemical can cause damage, the chemical is considered to be relatively non-toxic.

The toxicity of a substance depends on three factors: its chemical structure, the extent to which the substance is absorbed by the body, and the body's ability to detoxify the substance (change it into less toxic substances) and eliminate it from the body.

"Toxic" and "hazardous" are not the same

The toxicity of a substance is the potential of that substance to cause harm, and is only one factor in determining whether a hazard exists. The hazard of a chemical is the practical likelihood that the chemical will cause harm. A chemical is determined to be a hazard depending on the following factors:

toxicity: how much of the substance is required to cause harm,

route of exposure: how the substance enters your body,

dose: how much enters your body,

duration: the length of time you are exposed,

multiple exposures: other chemicals you are exposed to, and

individual susceptibility: how your body reacts to the substance, compared to other individuals.

Some chemicals are hazardous because of the risk of fire or explosion. These are important dangers, but are considered to be safety hazards. Toxic hazards are more fully explained in this booklet.

Toxicity

Why are some chemicals more harmful than others?

A product's toxicity is determined by its chemical composition – how the atoms and molecules it is made of interact with living tissues. Substances with similar chemical structures often cause similar health problems. For example, many organic (carbon-based) solvents can cause dizziness, affecting the brain in a similar way.

However, sometimes a slight difference in chemical structure can lead to important differences in the type of health effect produced. For example, certain organic solvents can cause cancer.

The way the atoms and molecules cause harm to living tissues is called the mechanism of toxicity. The mechanism of hydrocarbon toxicity to the brain is not fully understood. Some mechanisms, such as the action of carbon monoxide on hemoglobin in red blood cells, are well understood.

Route of exposure

How can chemicals enter the body?

Exposure normally occurs through inhalation, skin or eye contact, and ingestion. These are known as the routes of exposure.

Inhalation. A very important type of workplace exposure occurs when you breathe a substance into the lungs. The lungs consist of branching airways (called bronchi) with clusters of tiny air sacs (called alveoli) at the ends of the airways. The alveoli absorb oxygen and other chemicals into the bloodstream. The surface area of a person's alveoli is roughly equal to that of half of a tennis court.

Some chemicals are irritants and cause eye, nose, and throat irritation. They may also cause discomfort, coughing, or chest pain when they are inhaled and come into contact with the bronchi (chemical bronchitis). Other chemicals may be inhaled without causing such warning symptoms, but they still can be dangerous.

Sometimes a chemical is present in the air as small particles (dust or mist). Some of these particles, depending on their size, may be deposited in the bronchi and/or alveoli. Many of them may be coughed out, but others may stay in the lungs and may cause lung damage. Some particles may be absorbed into the bloodstream, and have effects elsewhere in the body.

Skin Contact. The skin is a protective barrier that helps keep foreign chemicals out of the body. However, some chemicals can easily pass through the skin and enter the bloodstream. If the skin is cut or cracked, chemicals can penetrate through the skin more easily. Also, corrosive substances, like strong acids and alkalis, can chemically burn the skin. Others can irritate the skin. Many chemicals, particularly organic solvents, dissolve the oils in the skin, leaving it dry, cracked, and susceptible to infection and absorption of chemicals.

Eye Contact. Some chemicals may burn or irritate the eye. The eyes are easily harmed by chemicals, so any eye contact with chemicals (particularly liquids) should be taken as a serious incident.

Ingestion (swallowing). Chemicals can be ingested if they are left on hands, clothing, or beard, or when they accidentally contaminate food, drinks, or cigarettes. Metal dusts, such as lead or cadmium, are often ingested this way. Also, particles trapped in nasal or lung mucus can be swallowed.

How much is too much?

In general, the greater the amount of a substance that enters your body, the greater is the effect on your body. This connection between amount and effect is called the *dose-response relationship*.

For example, solvents such as toluene, acetone, and trichloroethylene all affect the brain in the same way, but to different degrees at different doses. The effects of these solvents are similar to those which result from drinking alcoholic beverages. At a low dose, you may feel nothing or a mild, sometimes pleasant ("high") sensation. A larger dose may cause dizziness or headache. With an even larger dose you may feel as if you are drunk, pass out, or even stop breathing.

When you inhale a toxic chemical, the dose you receive depends on four factors:

- the level (concentration) of chemical in the air,
- how hard (fast and deep) you are breathing, which depends on your degree of physical exertion,
- how much of the chemical that is inhaled stays in your lungs or is absorbed into your bloodstream, and
- how long the exposure lasts.

It is safest to keep exposure to any toxic substance as low as possible. Since some chemicals are much more toxic than others, it is necessary to keep exposure to some substances lower than others. Some toxic effects appear to have a "threshold" of exposure, below which effects are unlikely to occur. Others, such as increased risk of cancer, are believed to be without a threshold.

Duration

How long is too long?

The longer you are exposed to a chemical, the more likely you are to be affected by it. Chemical exposure which continues over a long period of time can be particularly hazardous because some chemicals can accumulate in the body or because the health damage does not have a chance to be repaired.

The body has several systems, most importantly the liver, kidneys, and lungs, which change some chemicals to a less toxic form (detoxify) or eliminate them. If your rate of exposure to a chemical exceeds the rate at which you can eliminate it, some of the chemical will accumulate in your body. Illness that affects the organs for detoxification and elimination, such as hepatitis (inflammation of the liver), can also decrease their ability to eliminate chemicals from the body.

Accumulation may not continue indefinitely. There may be a point where the amount in the body reaches a maximum and remains the same as long as your exposure remains the same. This point will be different for each chemical. Some chemicals, such as ammonia and formaldehyde, leave the body quickly and do not accumulate at all. Other chemicals are stored in the body for long periods. For instance, lead is stored in the bone, cadmium is stored in the liver and kidneys, and polychlorinated biphenyls (PCBs) are stored in the fat. There are a few substances, such as asbestos fibers, that can remain in the body forever.

How long does it take for a toxic effect to occur?

The effects of toxic substances may appear immediately or soon after exposure, or they may take many years to appear. An acute exposure is a single exposure or a few exposures. Acute effects are those which occur following acute exposures. Acute effects can occur immediately, or be delayed and occur hours or days after exposure. Chronic exposure is repeated exposure that occurs over months and years. Chronic effects are those which occur following chronic exposures, and so are always delayed.

A toxic chemical may cause acute effects, chronic effects, or both. For example, if you inhale high levels of solvents on the job, you may experience acute effects such as headaches and dizziness which go away at the end of the day. Over months, you may begin to develop chronic effects such as liver and kidney damage.

The delay between the beginning of exposure and the appearance of disease caused by that exposure is called the latency period. For example, the latency period of lung injury after exposure to nitrogen dioxide gas may be a few hours. Cancers due to chemical exposure have very long latency periods. Most types of cancer develop following a latency period of many years after a worker's first exposure.

The length of the latency period for chronic effects can make it difficult to establish the cause-and-effect relationship between the exposure and the illness. Since chronic diseases develop gradually, you may have the disease for some time before it is detected. It is, therefore, important for you and your physician to know what chronic effects might be caused by the substances with which you work.

What are the differences between acute and chronic effects?

Acute	*Chronic*
Occurs immediately or soon after exposure (short latency).	Occurs over time or long after exposure (long latency)
Often involves a high exposure (large dose over a short period).	Often involves low exposures (small and repetitive doses) over a long period.
Can be minor or severe. For example, a small amount of ammonia can cause throat or eye irritation; higher concentrations can cause serious or even fatal lung damage.	Often involve inflammation and scarring of organs, such as the lung or kidney. Chronic effects are still unknown for many chemicals. For example, most chemicals have not been tested in experimental animals for cancer or reproductive effects.
Relationship between chemical exposure and symptoms is generally, although not always, obvious.	It may be difficult to establish the relationship between chemical exposure and illness because of the long time delay or latency period.
Knowledge often based on human exposure.	Knowledge often based on animal studies.

Chemical combinations

What if you're exposed to more than one chemical?

Many jobs expose workers to several chemicals. There may be several ingredients in one mixture or product, or there may be several separate chemicals used for different parts of the job. There may also be non-occupational toxic exposures from polluted air, from contaminated food and water, or from alcohol, drugs, and tobacco use. Many toxic chemicals can be found in the body at the same time.

Normally we think of each chemical as having a separate toxic effect inside the body. When some chemical combinations are present, however, the reality is more complicated. For instance, one chemical may interfere with

the body's defenses against another chemical, resulting in an increased toxic impact. Combination toxic effects may be additive, synergistic, or potentiating types.

Combination toxic effects

Additive effects. If several chemicals are similar in their toxic effects, the health effect is usually like being exposed to a larger dose of one chemical. A common example is exposure to several solvents, each of which affects brain function in a similar way, causing acute dizziness, drowsiness, and difficulty concentrating. When the results simply add up in this way, the combination is called "additive."

Synergistic effects. Sometimes a chemical combination produces a health effect that is greater than the sum of the individual effects. This kind of interaction is called synergism. An example of synergism is the increased risk of developing lung cancer caused by exposures to both cigarette smoking and asbestos. By either smoking one pack of cigarettes per day or being heavily exposed to asbestos, you may increase your risk of lung cancer to five to ten times higher than someone who does neither. But if you smoke a pack a day and are heavily exposed to asbestos, your risk may be 50 times higher than someone who does neither.

Potentiating effects. Another type of interaction occurs when an effect of one substance is increased by exposure to a second substance, even though the second substance does not cause that effect by itself. For example, although the solvent methyl ethyl ketone does not damage the nerves of the arms and legs by itself, it increases n-hexane's ability to cause this kind of nerve damage.

Unfortunately, few chemicals have been tested to determine if interactions occur with other chemicals.

Susceptibility

Are some people more affected than others?

Yes. People vary widely in their susceptibility to the effects of a chemical. Many things determine how an individual will react to a chemical. These include age, sex, inherited traits, diet, pregnancy, state of health, and use of medication, drugs, or alcohol. Depending on these characteristics, some people will experience the toxic effects of a chemical at a lower (or higher) dose than other people.

People may also become allergic to a chemical. These people have a different type of response than those who are not allergic. This response frequently occurs at a very low dose. Not all chemicals can cause allergic reactions. Substances that are known to cause allergies are called allergens, or sensitizers.

For example, formaldehyde gas has irritating effects, and is also a sensitizer. Everyone will experience irritation of the eyes, nose, and throat, with tears in the eyes and a sore throat, at some level of exposure. All people will experience irritation if exposed to high enough levels. A person may be more sensitive to formaldehyde and have irritation at low levels of exposure. Formaldehyde also occasionally causes allergic reactions, such as allergic dermatitis. People who are allergic to formaldehyde may develop these reactions at very low levels, although most people will not get allergic reactions no matter how much they are exposed to formaldehyde.

How can toxic substances harm the body?

When a toxic substance causes damage at the point where it first contacts the body, that damage is called a local effect. The most common points at which substances first contact the body are the skin, eyes, nose, throat, and lungs. Many toxic substances can also enter the body and travel in the bloodstream to internal organs. Effects that are produced this way are called systemic. The internal organs most commonly affected are the liver, kidneys, heart, nervous system (including the brain), and reproductive system.

A toxic chemical may cause local effects, systemic effects, or both. For example, if ammonia gas is inhaled, it quickly irritates the lining of the respiratory tract (nose, throat, and lungs). Almost no ammonia passes from the lungs into the blood. Since damage is caused only at the point of initial contact, ammonia is said to exert a local effect. An epoxy resin is an example of a substance with local effects on the skin. On the other hand, if liquid phenol contacts the skin, it irritates the skin at the point of contact (a local effect) and can also be absorbed through the skin, and may damage the liver and kidneys (systemic effects).

Sometimes, as with phenols, the local effects caused by a chemical provide a warning that exposure is occurring. You are then warned that the chemical may be entering your body and producing systemic effects which you can't yet see or feel. Some chemicals, however, do not provide much warning, so they are particularly hazardous. For example, some toxic solvents can pass through the skin and cause serious internal damage without producing any observable effect on the skin.

Do all toxic chemicals cause cancer?

No. Cancer, the uncontrolled growth and spread of abnormal cells in the body, can be caused by some chemicals but not by others. It is not true that "everything causes cancer" when taken in large enough doses. In fact, most substances do not cause cancer, no matter how high the dose. Only a relatively small number of the many thousands of chemicals in commercial use today cause cancer.

Chemicals that can cause cancer are called carcinogens, and the ability to cause cancer is called carcinogenicity. Evidence for carcinogenicity comes from either human or animal studies. As of 2008, there is enough evidence for about 500 chemicals to be considered carcinogenic in humans by the California Environmental Protection Agency. Determining the causes of cancer in humans is difficult. There is a long latency period (12 to 25 years or more for most tumors) between the start of exposure to a carcinogen and the diagnosis of cancer. Thus, a substance must be used for many years before enough people will be exposed to it long enough for researchers to see a pattern of increased cancer cases. It is often difficult to determine if an increase in cancer in humans is due to exposure to a particular substance, since exposure may have occurred many years before, and people are exposed to many different substances.

Since the study of cancer in humans is difficult and requires that people be exposed to carcinogenic chemicals and possibly get cancer, chemicals are sometimes tested for carcinogenicity using laboratory animals. If animals were exposed to the low levels typical of most human exposure, many hundreds of animals would be required for only a few to get cancer. To avoid this expense, animal cancer tests use large doses of chemicals in order to be able to detect an increase in cancer in a reasonable number of animals, such as 25-50. However, animal tests are still expensive, take about three years to perform, and are often inconclusive. When an animal cancer test is positive, the risk to a small number of animals at high doses must be used to try to predict the risk to humans at much lower doses. Chemicals that cause cancer in animals are

considered likely to cause cancer in humans, even if the degree of risk is uncertain.

The issue of whether there is a safe dose for a carcinogen is complex. Some scientists believe that any exposure to a carcinogen, no matter how small, carries some risk. However, at very low exposures, the risk may be so small that it cannot be distinguished from "background" (naturally occurring) risk. Most carcinogens appear to require either exposure over a number of years or very high doses before the risk of developing cancer from exposure to them becomes of serious concern.

Mutagens

Toxic chemicals can also cause genetic damage. The genetic material of a cell consists of DNA, which is organized into genes and chromosomes. DNA contains the information that tells the cell how to function and how to reproduce (form new cells).

Some chemicals may change or damage the genes or chromosomes. This kind of change, or damage in a cell, is called a mutation. Anything that causes a mutation is called a mutagen. Mutations may affect the way the cell functions or reproduces. The mutations can also be passed on to new cells that are formed from the damaged cell. This can lead to groups of cells that do not function or reproduce the same way the original cell did before the mutation occurred.

Some kinds of mutation result in cancer. Most chemicals that cause cancer also cause mutations. However, not all chemicals that cause mutations cause cancer.

Tests for the ability of a chemical to cause a mutation take little time and are relatively easy to perform. These tests are often performed on microorganisms or cell cultures. If testing shows a chemical to be a mutagen, additional testing must be done to determine whether or not the chemical also causes cancer.

Can future generations be affected?

Exposure to chemical substances may affect your children or your ability to have children. Effects of chemicals on reproduction include a decreased ability to conceive children (infertility, sterility, abnormal sperm, or a

longer wait for conception), lowered sex drive, menstrual disturbances, spontaneous abortions (miscarriages), low birth weight, stillbirths, and defects in children that are apparent at birth or later in the child's development. Developmental problems detected after infancy may involve the brain or reproductive system.

Teratogens are chemicals which cause malformations or birth defects by altering the development of tissues in the fetus in the mother's womb. Other chemicals that harm the fetus are called fetotoxins. If a chemical causes health problems in the pregnant woman herself, the fetus may also be affected.

Endocrine disruptors are chemicals that can upset the balance of hormones in workers, possibly affecting reproductive function. It is believed that some endocrine disruptors may affect development of the reproductive organs of the fetus.

For purposes of regulating exposures, there is insufficient information available on the reproductive toxicity of most chemicals. In fact, most chemicals have not been tested for reproductive effects in animals. Even for those chemicals that have been tested in animals, it is difficult to predict risk in humans using animal data. Despite these data gaps, as of 2008, approximately 275 drugs and industrial chemicals are considered to be reproductive risks by the California Environmental Protection Agency.

For more information, see the HESIS booklet, *Workplace Chemical Hazards to Reproductive Health*.

What are the different forms of toxic materials?

Toxic materials can take the form of solids, liquids, gases and vapors, as well as particles of various sizes, including very small, or nanoparticles. Particles, in turn, occur as dusts, fumes, fibers, and mists. How a substance gets into the body and what damage it causes depends on the form or the physical properties of the substance.

A toxic material may take different forms under varying conditions, and each form may present a different type of hazard. For example, lead solder as wire (solid) is not hazardous because it is not likely to enter the body. If the solid solder is rubbed with a file or an abrasive, this forms small particles (dust) that may be inhaled or ingested and absorbed. If lead is heated to a very high temperature (for example, in brazing), a fume may be created; a fume consists of very small particles which are extremely hazardous as they are easily inhaled and absorbed. It is thus important to know what form or forms a given substance takes in the workplace. A description of each of the forms follows.

Solid. A solid is a material that retains its form, like stone. Solids are generally not hazardous since they are not likely to be absorbed into the body, unless present as small particles such as dust, fumes, fibers, and nanoparticles.

Liquid. A liquid is a material that flows freely, like water. Many hazardous substances are in liquid form at normal temperatures. Some liquids can damage the skin. Some pass through the skin and enter the body, and may or may not cause skin damage. Liquids may also evaporate, producing vapors or gases which can be inhaled.

Gas. A gas is a substance composed of unconnected molecules, such that it has low density and no shape of its own, like air. Gases mix easily with air (air itself is a mixture of nitrogen, oxygen, and other substances). Some gases, like carbon monoxide, are highly toxic. Others, like nitrogen, are not toxic but can displace the air in a confined space, causing suffocation due to lack of oxygen; these are called asphyxiant gases.

Vapor. A vapor is the gas form of a substance that can also exist as a liquid at normal pressure and temperature. Most organic solvents evaporate and produce vapors. Vapors can be inhaled into the lungs, and in some cases may irritate the eyes, skin, or respiratory tract. Some are flammable, explosive, and/or toxic. The terms vapor pressure and evaporation rate are used to indicate the tendency for different liquids to evaporate.

Dust. A dust consists of small solid particles in the air or on surfaces. Dusts may be created when solids are pulverized or ground. Dusts may be hazardous because they can be inhaled into the respiratory tract. Larger particles of dust are usually trapped in the nose where they can be expelled, but smaller particles (respirable dust) can reach and may damage the lungs. Some, like lead dust, may then enter the bloodstream through the lungs. Some dusts, such as grain dust, may explode when they reach high concentrations in the air.

Fume. A fume consists of very small, fine solid particles in the air which form when solid chemicals (often metals or plastics) are heated to very high temperatures, evaporate to vapor, and combine with oxygen. The welding or brazing of metal, for example, produces metal fumes. Fumes are hazardous because they are easily inhaled, and have a large surface area in contact with body tissues. Some metal fumes can cause an illness called metal fume fever, consisting of fever, chills, and aches like the "flu." Inhalation of other metal fumes, such as lead, can cause poisoning without causing metal fume fever.

Fiber. A fiber is a solid particle whose length is at least three times its width. The degree of hazard is affected by the size of the fiber. Smaller fibers, such as asbestos, can reach the lungs and cause serious harm. Larger fibers may be trapped in the upper respiratory tract, and are expelled without reaching the lung.

Mist. A mist consists of liquid particles of various sizes which are produced by agitation or spraying of liquids. Mists can be hazardous when they are inhaled or sprayed on the skin. The spraying of pesticides and the machining of metals using metal working fluids are two situations

where mists are commonly produced.

Nanoparticles. These extremely small particles, measuring 1 - 100 nanometers in diameter (a nanometer is 1 billionth of a meter), are engineered for useful properties that differ from ordinary materials. They include highly structured forms such as carbon nanotubes (hollow fibers), and unstructured nano-sized versions of familiar materials, such as metals. Airborne nanoparticles are easily inhaled and absorbed into the bloodstream, nervous system, and other organs. Absorption through the skin is also possible. Because of their relatively large surface area, nanoparticles have a high hazard potential relative to their weight.

What are exposure limits?

Exposure limits are established by health and safety authorities to control exposure to hazardous substances. In California the most important exposure limits are the Permissible Exposure Limits (PELs). These are set forth in California regulations. By law, California employers who use regulated substances must control exposures to be below the PELs for these substances. An employer can be cited and fined if employees are exposed over the PEL.

Exposure limits usually represent the maximum amount (concentration) of a chemical which can be present in the air without presenting a health hazard. However, exposure limits may not always be completely protective, for the following reasons:

1. Although exposure limits are usually based on the best available information, this information, particularly for chronic (long-term) health effects, may be incomplete. Often we learn about chronic health effects only after workers have been exposed to a chemical for many years, and then as new information is learned, the exposure limits are changed.

2. Exposure limits are set to protect most workers. However, there may be some workers who will be affected by a chemical at levels below these limits. For instance, employees performing heavy physical exertion breathe in more air and more airborne chemicals, and so may absorb an excessive amount.

3. Exposure limits do not take into account chemical interactions. When two or more chemicals in the workplace have the same health effects, industrial hygienists use a mathematical formula to adjust the exposure limits for those substances in that workplace. This formula applies to chemicals that have additive effects.

4. Limiting the chemical concentration in air may not prevent excessive exposure through skin contact or ingestion. Chemicals that may produce health effects as a result of absorption through the skin have an “S”

designation next to their numerical value in the Cal/OSHA PEL table. Workers exposed to these chemicals must be provided with protective clothing to wear when overexposure through the skin is possible.

In California, Permissible Exposure Limits (PELs) are set by the Occupational Safety and Health Standards Board, and enforced by the Division of Occupational Safety and Health (known as DOSH or Cal/OSHA). PELs have been set for about 850 chemicals. They are periodically revised when new information on toxicity becomes available. California PELs can be the same as federal OSHA PELs, or may be more protective.

These are three types of Cal/OSHA PELs:

1. The 8-Hour Time Weighted Average (TWA) is the average employee exposure over an 8-hour period, based on chemical measurements close to the worker. The measured level may sometimes go above the TWA value, as long as the 8-hour average stays below it. Most chemicals with PELs have a TWA value. Some chemicals have Ceiling or Short Term Exposure Limits in addition to – or instead of – TWA values.

2. The Ceiling Limit (C) is the maximum allowable level. It must never be exceeded, even for an instant.

3. The Short Term Exposure Limit (STEL) is a level that must not be exceeded when averaged over a specified short period of time (usually 15 minutes).

When there is an STEL for a substance, exposure still must never exceed the Ceiling Limit, and the 8-hour average still must remain at or below the TWA.

Recommended exposure limits

An independent professional organization, the American Conference of Governmental Industrial Hygienists (ACGIH), recommends exposure limits. These are called Threshold Limit Values (TLVs). TLVs are reviewed and updated each year as new information becomes available, and published each year in a booklet. Suggested changes are first published as proposals and are given two years for review before being adopted by ACGIH. TLVs are not enforceable standards; however, applying them is

considered by many occupational health professionals as good work practice. The Documentation of the Threshold Limit Values summarizes the information on which each TLV is based.

NIOSH, the National Institute for Occupational Safety and Health, publishes recommended exposure limits (RELs) for some chemicals. RELs are usually highly protective to health. Neither RELs nor TLVs are enforceable by Cal/OSHA.

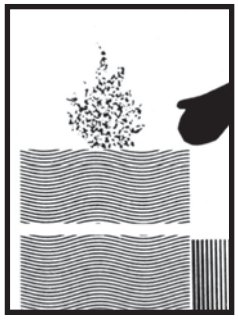
How can exposure be measured and monitored?

Air sampling

When toxic chemicals are present in the workplace, your exposure can be estimated by measuring the concentration of a given chemical in the air and the duration of exposure. This measurement is called air or environmental monitoring or sampling and is usually done by industrial hygienists, using various types of instruments. Laboratory analysis may be required. The air is collected from your breathing zone (the air around your nose and mouth) so that the concentrations measured will accurately reflect the concentration you are inhaling. The exposure levels calculated from this monitoring can then be compared to exposure limits for that chemical.

Biological monitoring

Environmental monitoring is the most accurate way to determine your exposure to most chemicals. However, for chemicals that are absorbed by routes other than inhalation, such as through the skin and by ingestion, air monitoring may underestimate the amount of chemical you absorb. The levels of the chemical (or its breakdown products) in the body can sometimes be measured in the blood, urine, or exhaled air. Such testing is called biological monitoring, and the results provide an estimate of the actual dose absorbed into the body. For several substances, biological monitoring is required by law when air monitoring results are above a certain level. The American Conference of Governmental Industrial Hygienists (ACGIH) has recommended test methods, and the acceptable range of test results, for biological monitoring for some chemicals. There are approximately 50 of these Biological Exposure Indices (BEIs); they are published together with TLVs. For most workplace chemicals, however, biological monitoring is neither practical nor informative.



Odor. If you smell a chemical, you are inhaling it. However, some chemicals can be smelled at levels well below those that are harmful, so that detecting an odor does not mean that you are inhaling harmful amounts. On the other hand, some chemicals cannot be smelled even at levels that are harmful.

The *odor threshold* is the lowest level of a chemical that can be smelled by most people. If a chemical's odor threshold is lower than the amount that is hazardous, the chemical is said to have good warning properties. One example is ammonia. Most people can smell it at 5 ppm, below the PEL of 25 ppm. It is important to remember that for most chemicals, the odor thresholds vary widely from person to person. In addition, some chemicals, like hydrogen sulfide, cause you to rapidly lose your ability to smell them; this is called olfactory fatigue. With these cautions in mind, knowing a chemical's odor threshold may serve as a rough guide to your exposure level.

Don't depend on odor to warn you. Remember that your sense of smell may be better or worse than average, that some very hazardous chemicals have no odor (carbon monoxide), some chemicals of low toxicity have very strong odors (for example, mercaptans added to natural gas), and other chemicals produce olfactory fatigue.

Taste. If you inhale or ingest a chemical, it may leave a taste in your mouth. Of course, you should not taste toxic or unknown chemicals on purpose to identify them.

Particles in Nose or Mucous. If you cough up mucous (sputum or phlegm) with particles in it, or blow your nose and see particles or discoloration, then you have inhaled some chemical in particle form. Unfortunately, most particles which are inhaled into the lungs are too small to see.

Settled Dust or Mist. If chemical dust or mist is in the air, it will eventually settle on work surfaces or on your skin, hair, and clothing. It is likely that you inhaled some of this chemical while it was in the air.

Immediate Symptoms. If you or your co-workers experience symptoms known to be caused by a chemical during or shortly after its use, you may have been overexposed. Symptoms might include irritation and tearing of the eyes, a burning sensation of skin, nose, or throat, and cough, dizziness, or headache.

Can you be tested for health effects of exposure?

Sometimes. Medical surveillance is a program of medical examinations and tests designed to detect early warning signs of disease. A medical surveillance program may discover small changes in health before severe damage occurs. Testing for health effects is called medical monitoring. The type of testing needed in a surveillance program depends upon the particular chemical involved. Unfortunately, medical monitoring tests that accurately measure early health effects are available only for a small number of chemicals. A complete occupational surveillance program should consist of industrial hygiene monitoring, medical monitoring, and biological monitoring when appropriate. Tests for health effects when you are already sick are not part of medical surveillance, and must be selected by your physician on a case-by-case basis.

When there is employee exposure to certain chemicals, such as asbestos, arsenic, cadmium, formaldehyde, hexavalent chromium, and lead, employers are required by Cal/OSHA regulations to establish medical surveillance programs. You have the right under Cal/OSHA regulations (CCR, Title 8, Section 3204) to see and copy your own medical records and records of exposure to toxic substances. Your employer must keep these records for at least 30 years after the end of your employment.

How can exposure be reduced?

The surest way to prevent toxic chemicals from causing harm is to minimize or prevent exposure. Below are some methods of controlling exposure.

Training

Everyone who works with toxic substances should know the names, toxicity, and other hazards of the substances they use. Employers are required by law to provide this information, along with training in how to use toxic substances safely. A worker may obtain information about a chemical's composition, physical characteristics, and toxicity from the Material Safety Data Sheet (MSDS). Under California law manufacturers are required to supply an MSDS for products that contain toxic substances. Employers obtain the MSDS when they purchase the product and must make the MSDS available to employees. Unfortunately, the precise chemical composition may be proprietary (trade secret) information, and the toxicity information on an MSDS may be incomplete and unreliable. HESIS can help you interpret the information on an MSDS.

Engineering controls

Limiting exposure at the source is the preferred way to protect workers. The types of engineering controls, in order of effectiveness, are listed below.

Substitution is using a less hazardous substance. But before choosing a substitute, thoroughly consider its physical and health hazards. For example, mineral spirits (Stoddard solvent) is less of a health hazard than perchloroethylene for dry cleaning, but is more of a fire hazard. Also consider environmental aspects such as air pollution and waste disposal.

Process or equipment enclosure is the isolation of the source of exposure, often through automation. This completely eliminates the routine exposure of workers. For example, handling of radioactive materials is often done by mechanical arms or robots.

Local exhaust ventilation is a hood or intake close to the source of exposure to capture or draw contaminated air from its source before it spreads into the room and into

your breathing zone. All ventilation systems require careful engineering design and regular maintenance.

General or dilution ventilation is continual replacement and circulation of fresh air sufficient to keep concentrations of toxic substances diluted below hazardous levels. However, concentrations will be highest near the source, and overexposure may occur in this area. If the dilution air is not well mixed with the room air, pockets of high concentrations may exist.

Work practices

Work practices are behaviors performed by workers in order to reduce exposures. Controlling dust dispersion by spraying water (or dust suppressant products), closing containers of volatile chemicals when not in use, and labeling containers of hazardous substances, are common and effective chemical control work practices.

Personal protective equipment

The following devices should be used only when engineering controls are not possible or are not sufficient to reduce exposure.

Respiratory protective equipment consists of devices that cover the mouth and nose to prevent substances in the air from being inhaled. A respirator is effective only when used as part of a comprehensive program established by the employer, which includes measurement of concentrations of hazardous substances, selection of the proper respirator, training the worker in its proper use, fitting of the respirator to the worker, maintenance, and replacement of parts when necessary. A health care professional must first determine whether the individual worker can wear a respirator safely.

Protective clothing includes gloves, aprons, goggles, boots, face shields, and any other materials worn as protection. It should be made of material designed to resist penetration by the particular chemical being used. Such material may be called impervious to that chemical. However, most materials do not remain impervious for very long. The manufacturer of the protective clothing usually can provide some information regarding the substances that are effectively blocked and how often replacement is necessary.

Checklist for researching toxic substances used on the job

In order to determine the health risks of substances, and to find out how to work with them safely, you need to obtain information from many sources including Material Safety Data Sheets (MSDSs), medical and monitoring records, and reference materials. The law requires your employer to make much of this information available to you. The following checklist will help you gather facts which you can use along with the information in this pamphlet to get the answers you need.

1. What is the substance? What's in it? How toxic is it? Are potential health effects acute, chronic, or both?
2. Is there evidence based on studies of animals or humans that the substance is a carcinogen? A mutagen? A teratogen or reproductive toxin?
3. How does this substance enter the body (routes of entry): inhalation, skin absorption, ingestion?
4. What is the legal exposure limit (PEL) or recommended TLV?
5. How much of the substance are you being exposed to? Has the concentration of the substance in the workplace air been tested? How long are you exposed?
6. Are you exposed to other chemicals at the same time? Can they have a combined effect?
7. What symptoms, if any, are you or your co-workers experiencing?
8. Do you have any medical conditions or take any drugs that might interact with chemicals?
9. What controls are recommended to prevent overexposure?
10. Is any type of medical testing recommended?

The glossary in this booklet explains the terms that you are likely to see when you use various reference materials to answer these questions.

Resources

Cal/OSHA (California Division of Occupational Safety and Health)

Cal/OSHA is California's workplace health and safety agency. Cal/OSHA enforces rules to protect workers. You can make a complaint or ask questions about unsafe working conditions, including toxic substances. Your name will remain confidential.

There are Cal/OSHA offices throughout the state. To find a local office, call headquarters at (510) 286-7000, link to **www.dir.ca.gov/DOSH/DistrictOffices.htm**, or see the blue Government Pages of your phone book under: State Government Offices, Industrial Relations Dept., Occupational Safety and Health – Cal/OSHA Enforcement. See **www.dir.ca.gov** for workplace health and safety rules and publications. For chemical exposure limits in general industry, see **www.dir.ca.gov/title8/ac1.pdf**

The Cal/OSHA Consultation Service helps employers who want free, non-enforcement help to evaluate the workplace and improve the health and safety conditions. Employers can call (800) 963-9424.
www.dir.ca.gov/dosh/consultation.html

HESIS (Hazard Evaluation System and Information Service)

HESIS provides information to California workers, employers, and health professionals about the health effects of toxic substances, and ways to prevent work-related injuries and illnesses.
www.cdph.ca.gov/programs/hesis

NIOSH (National Institute for Occupational Safety and Health)

NIOSH is the federal agency for education and research on occupational safety and health. Use their Topics indexes to look up chemicals, safety hazards, diseases, or occupations. (800) 356-4674
www.cdc.gov/niosh/topics

Federal OSHA (Occupational Safety and Health Administration)

Use the OSHA indexes to find information on chemicals, other hazards, or industries.
www.osha.gov/SLTC/index.html

LOHP (Labor Occupational Health Program)

LOHP provides training and technical assistance to employees and labor groups on occupational safety and health in Northern California. (510) 642-5507
www.lohp.org

LOSH (Labor Occupational Safety and Health Program)

LOSH provides training and technical assistance to employees and labor groups on occupational safety and health in Southern California. (310) 794-5964
www.losh.ucla.edu

Internet Resources

The California Department of Public Health has up-to-date links to helpful, reliable information on:

- Workplace hazards
- Worker rights
- Workers' compensation
- Spanish-language resources
- Resources for employers
- Information for health care providers
- Finding workplace health and safety specialists
- Cal/OSHA regulations

www.cdph.ca.gov/healthinfo/workplace

Find HESIS and Occupational Health Branch publications, news, and project reports:

www.cdph.ca.gov/programs/ohb

Glossary

This glossary defines terms used on Material Safety Data Sheets (MSDSs) and other reference materials about toxic chemicals.

ACGIH American Conference of Governmental Industrial Hygienists, a professional organization which recommends exposure limits (*TLV, BEI*) for toxic substances.

acid A substance which dissolves in water and releases hydrogen ions (H+). Acids cause irritation, burns, or other tissue damage, depending on the strength of the acid, which is measured by *pH*.

alkali A substance which dissolves in water and releases a hydroxyl ion (OH-); it has the ability to neutralize an acid and form a salt. Alkalis can be *irritants* or even *caustic* to body tissues. A solution of alkali is often described as alkaline.

allergen A substance that can cause an allergy. Many plant materials, and some industrial chemicals, are allergens.

allergy A reaction to a specific substance, developed by an individual's immune system. Allergies are usually experienced by a minority of people exposed to an *allergen*. Allergic reactions in the workplace tend to affect the skin (see *dermatitis*) and lung (see *asthma*).

ANSI American National Standards Institute, a private organization that recommends safe work practices and engineering designs.

asphyxiant A vapor or gas that can cause loss of consciousness and death due to lack of oxygen, or a chemical that can interfere with the body's use or transport of oxygen.

asthma A lung disease characterized by increased reactivity of the airways to various stimuli. Symptoms include wheezing, coughing, and shortness of breath. It is a chronic inflammatory condition with acute exacerbations (periods when it is more severe). Exacerbations can be due to *irritant* chemicals, *allergens*, and other factors.

base	See *alkali*.
BEI	Biological Exposure Index, recommended by the *ACGIH* as the maximum recommended value of a substance in blood, urine, or exhaled air, at which most workers would not experience an adverse health effect.
boiling point	The temperature at which a liquid boils and changes rapidly to a vapor (gas) state at a given pressure. Expressed in degrees Fahrenheit (F) or Centigrade (C) at sea level pressure.
Cal/OSHA	A State of California agency which enforces worker health and safety regulations and provides consultative assistance to employers. Also known as the Division of Occupational Safety and Health (DOSH).
carcinogen	A chemical or physical agent capable of causing cancer. Such an agent is often described as carcinogenic. The ability to cause cancer is termed carcinogenicity. Words having similar meaning include oncogenic and tumorigenic.
CAS number	The Chemical Abstracts Service Registry Number is a numeric designation which is given to identify a specific chemical compound.
caustic	Something alkaline that strongly irritates, corrodes, or destroys living tissue.
ceiling limit	The maximum concentration of a material in air that must never be exceeded, even for an instant.
cell	The structured unit of which the body's tissues are made. There are many types of cells, such as nerve cells, muscle cells, blood cells. Each type of cell performs a special function.
chromosome	The part of a cell that contains genetic material (see *gene*).
combustible	Able to catch on fire and burn. The National Fire Protection Association and the U.S. Department of Transportation generally define a "combustible liquid" as having a *flash point* of l00 F° (37.8 C°) or higher (see also, *flammable*).
concentration	The amount of a specific substance mixed into a given volume of air or liquid. For workplace exposures, concentration usually refers to the amount of a toxic substance mixed into air.

corrosive A chemical that causes visible destruction or irreversible alterations in human skin tissue, or other material, at the place of contact.

cubic meter (m^3) A metric unit of volume, commonly used when expressing concentrations of a chemical in a volume of air. One cubic meter equals 35.3 cubic feet or 1.3 cubic yards. One cubic meter also equals 1000 liters or one million cubic centimeters (cc).

decomposition Breakdown of a chemical into simpler parts, compounds, or elements.

dermal Refers to the skin.

dermatitis Inflammation of the skin; redness (rash) and often swelling, pain, itching, cracking. Dermatitis may be caused by an *irritant* or *allergen*, or by other factors.

dose The amount of a chemical that enters, or is absorbed by, the body. Dose is usually expressed in milligrams of chemical per kilogram of body weight (mg/kg).

edema A swelling of body tissues due to water or fluid accumulation.

endocrine disruptors Substances that change the way natural hormones are produced or work in our bodies to maintain a balanced internal environment, including growth and development, reproduction, behavior, and other functions. When normal hormonal balance is changed, birth defects, reduced fertility, behavioral problems, cancer, and other adverse health effects are possible.

epidemiology The scientific study of the pattern of disease in a population of people.

evaporation The process by which a liquid is changed into a vapor and mixed into the surrounding air.

evaporation rate The rate at which a liquid is changed to a vapor; usually compared to the rate of another substance that evaporates very quickly, such as ether.

explosive limits The range of concentrations (% by volume in air) of a flammable gas or vapor that can result in an explosion from ignition. Usually given as Upper and Lower Explosive Limits (*UEL* and *LEL*).

exposed, exposure	Being in a position of risk from a chemical or other hazard. The noun *exposure* often refers to a chemical to which a person is exposed.
flammable	Catches on fire easily and burns rapidly. The National Fire Protection Agency and the U.S. Department of Transportation define a flammable liquid as having a flash point below l00 F° (37.8 C°).
flash point	The lowest temperature at which a liquid gives off enough flammable vapor to ignite and produce a flame when an ignition source is present.
gene	The part of the chromosome that carries a particular inherited characteristic.
g	Gram, a metric unit of mass. One U.S. ounce equals 28.4 grams; one U.S. pound equals 454 grams. There are 1000 milligrams (mg) in one gram.
IDLH	Immediately Dangerous to Life or Health. Describes an environment which is very hazardous due to a high concentration of toxic chemicals or insufficient oxygen.
ignition temperature	The lowest temperature at which a substance will catch on fire and continue to burn.
incompatible	Materials which could cause dangerous reactions, such as fire or explosion, from direct contact with one another.
industrial hygienist	An occupational health professional who can recognize, assess, and control workplace health hazards.
inflammation	When tissues are injured by chemicals or other causes, they usually respond by swelling, reddening, and leaking fluids. This is called the inflammatory response. Although inflammation can help defend the body and promote healing, excessive or chronic inflammation can cause additional health problems.
ingestion	Taking in and swallowing a substance through the mouth.
inhalation	Breathing in a substance.
irritant	A substance which can cause an inflammatory response or reaction of the eye, skin, or respiratory system.
kg	Kilogram, a metric unit of mass, equal to 1000 grams. Also equal to approximately 2.2 pounds.

latency	The time between exposure and the first appearance of an effect.
LEL	Lower Explosive Limit (see *Explosive Limits*).
LC50 , LC_{50}	(Lethal Concentration-50%) A concentration of chemical in air that will kill 50% of the test animals inhaling it. It is a rough measure of acute toxicity by inhalation.
LD50, LD_{50}	(Lethal Dose-50%) The dose of a chemical that will kill 50% of the test animals receiving it. The chemical may be given by mouth (oral), applied to the skin (dermal), or injected (parenteral). It is a rough measure of acute toxicity.
liter	A metric unit of volume. One U.S. quart is about 0.9 liter. One liter equals 1000 cubic centimeters.
melting point	The temperature at which a solid substance changes to the liquid state.
mg/kg	A way of expressing *dose*: milligrams (mg) of a substance per kilogram (kg) of body weight.
mg/m^3	A measure of concentration: weight of substance (mg) in a volume of air (m^3), often used to express PELs and TLVs, or to report air sampling results.
mg	Milligram, a metric unit of mass. One gram equals 1000 mg. One U.S. ounce equals 28,375 mg.
mmHg	A unit of measurement for pressure, expressed in millimeters (mm) of liquid mercury (Hg) in a tube apparatus. At sea level, the earth's atmosphere exerts 760 mmHg of pressure.
monomer	See *polymerization*.
MSDS	Material Safety Data Sheet, a form which lists the properties and hazards of a product or a substance.
MSHA	Mine Safety and Health Administration, an agency in the U.S. Department of Labor which regulates safety and health in the mining industry.
mutagen	A chemical or physical agent able to change or damage the genetic material in cells.
NFPA	National Fire Protection Association. NFPA has developed a scale of 0 (no hazard) to 4 (severe hazard) for rating the severity of fire, reactivity, and health hazards of

substances. The ratings are often displayed in a divided diamond shape.

NIOSH National Institute for Occupational Safety and Health, a federal agency which conducts research on occupational safety and health questions. NIOSH tests and certifies respirators.

odor threshold The lowest concentration of a substance in air that can be smelled. For a given chemical, different people usually have very different odor thresholds.

organic chemicals A large, important class of chemical compounds. The molecules of organic compounds contain carbon atoms. (Not related to organic agriculture.)

OSHA Federal Occupational Safety and Health Administration, an agency in the U.S. Department of Labor which establishes workplace safety and health regulations. Many states, including California, have their own OSHA programs. State OSHA programs are monitored by federal OSHA to ensure they are "at least as effective" as the federal OSHA program.

PEL Permissible Exposure Limit, a maximum allowable exposure level under OSHA or Cal/OSHA regulations.

pH Expresses how acidic or how alkaline a solution or chemical is, using a scale of 0 to 14. For example, a pH of 1 indicates a strongly acidic solution, a pH of 7 indicates a neutral solution, and a pH of 14 indicates a strongly alkaline solution.

polymerization A chemical reaction in which small molecules (monomers) combine to form much larger molecules (polymers) such as plastics. A hazardous polymerization is a reaction that occurs at a fast rate, and releases large amounts of energy. Many monomers are toxic in the liquid and vapor states, but form much less toxic polymers.

ppb Parts per billion, a measure of concentration, such as parts of a chemical per billion parts of air or water (one thousandth of one ppm).

ppm Parts per million, a measure of concentration, such as parts of a chemical vapor or gas substance per million parts of air. PELs and TLVs are often expressed in ppm.

psi Pounds per square inch, a unit of pressure. At sea level, the earth's atmosphere exerts 14.7 psi.

pulmonary edema Filling of the lungs with fluid, which produces coughing and difficulty breathing.

reaction A chemical transformation or change.

reactivity The ability of a substance to undergo a chemical reaction, such as combining with another substance. Substances with high reactivity are often hazardous, due to the generation of pressure, heat, or toxic products.

reproductive Refers to the ability of males and females to produce healthy offspring.

respirator A device that a person wears to reduce inhalation of hazardous substances.

respiratory Refers to breathing.

solubility The degree to which a chemical can dissolve in a *solvent*, forming a *solution*.

solution A mixture in which the components are uniformly dispersed. All solutions consist of some kind of a *solvent* (such as water or other liquid) which dissolves another substance, usually a solid.

solvent A substance, usually a liquid, into which another substance is dissolved. Often refers to organic solvents, not to water.

STEL Short-Term Exposure Limit, the maximum average concentration allowed for a continuous 15 minute exposure period.

teratogen Something that can increase the risk of birth defects in humans or animals. The ability to cause birth defects is called teratogenicity.

TLV Threshold Limit Value, an exposure limit recommended by the ACGIH.

trade name The trademark name or commercial name given to a product by its manufacturer or supplier. The trade name on the product label should be on the *MSDS*.

TWA Time Weighted Average, the average concentration of a chemical in air over the total exposure time, usually an 8-hour work day.

UEL	Upper Explosive Limit. See *Explosive Limits*.
vapor pressure	A measure of the tendency of a liquid to evaporate and become a gas; usually expressed in *mmHg*. The higher the vapor pressure, the greater the tendency of the substance to evaporate.
volatility	A measure of how quickly a substance forms vapors at ordinary temperatures. The more volatile the substance is, the faster it evaporates, and the higher the concentrations of vapor in the air.

On the Web…

Do you want to learn more about workplace health and safety?

The California Department of Public Health has up-to-date links to helpful, reliable information on:

- Workplace hazards
- Worker rights
- Workers' compensation
- Spanish-language resources
- Resources for employers
- Information for health care providers
- Finding workplace health and safety specialists
- Cal/OSHA regulations

www.cdph.ca.gov/healthinfo/workplace

Find HESIS and Occupational Health Branch publications, news, and project reports:

www.cdph.ca.gov/programs/ohb

Hazard Evaluation System and Information Service, HESIS
Occupational Health Branch
California Department of Public Health
(510) 620-5757
CA Relay Service: (800) 735-2929 or 711
www.cdph.ca.gov/programs/hesis

ARTIFICIAL FINGERNAIL PRODUCTS

A Guide to Chemical Exposures in the Nail Salon

State of California
Gray Davis, Governor
Department of Health Services
Diana M. Bontá, RN, Dr.PH, Director
Department of Industrial Relations
Stephen J. Smith, Director

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A Guide to Chemical Exposures in the Nail Salon

Hazard Evaluation System and Information Service
850 Marina Bay Parkway
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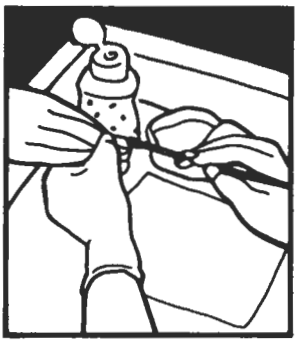

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INTRODUCTION

Without chemicals there would be no artificial fingernails. Some of the chemicals found in artificial nail products can be harmful to your health. However, you can still do nail work safely if you take steps to protect yourself.

This booklet tells you how to work safely with artificial nail products. It explains how to find out what chemicals are in the products you use and describes the typical chemical ingredients of the more common products. This booklet also lets you know how those ingredients can affect your health, and suggests some measures you can take to reduce your exposure.

HOW TO IDENTIFY HAZARDOUS CHEMICAL INGREDIENTS

The products you use as a manicurist or nail technician are made up of many different chemicals. Whether you do your artificial nail work as part of a large business, rent a station within a small shop, or work at home, you need to know the ingredients of the products you are using.

Getting information about the chemical contents of products can be difficult. The labels on bottles and jars don't always tell you much. The companies that make artificial nails don't have to publish the formulas they use. This information may be considered a "trade secret" and be carefully guarded so that no rival can get it. How can you find out what chemicals are in the products you use?

Your Right To Know

The California Hazard Communication Standard (*GISO 5194*) gives you the right to know the health and safety hazards of the products you use on the job. This standard requires chemical manufacturers and importers to provide hazard information to employers by means of Material Safety Data Sheets (MSDSs). It is the employer's responsibility to obtain the MSDSs from the manufacturer or the distributor and to make them readily available to employees. These laws are enforced by California's Division of Occupational Safety and Health (Cal/OSHA).

Material Safety Data Sheets

An MSDS should list the hazardous ingredients of a product, discuss any health and safety hazards, and suggest ways to use the product safely. The MSDS should also tell you about any fire and explosion hazards, first aid, and procedures for cleaning up leaks and spills.

If you think you are exposed to a chemical which might be affecting your health, ask your supervisor for the MSDS for that product. If you are self-employed or if you are an employer, ask your supplier or manufacturer for the MSDS. Appendix 5 provides an example of a

letter requesting MSDSs. Be sure to list the products you want MSDSs for.

Sometimes MSDSs can be hard to understand. They can also be incomplete or just plain wrong. If you have difficulty getting an MSDS, or come across an MSDS that you don't understand, or that you think may be wrong, contact your local Cal/OSHA office, listed on page 18.

Worker Education Program

In addition to an MSDS, employers are required to have an education program to tell employees how to work safely with toxic substances.

This pamphlet is an aid for worker training. It does not take the place of an MSDS or a written education program.

Trade Secrets

Under the Hazard Communication Standard, manufacturers can withhold certain ingredient information as trade secrets. This right sometimes prevents a product's user from learning exactly what the ingredients are. However, there is a limit to this right of the manufacturer. By law, the company must give a complete list of ingredients to any physician or other health professional who is calling in regard to a patient. In these circumstances, health professionals are required to keep the ingredient information confidential and cannot share it with you.

Kinds of Chemicals Present in Artificial Nail Products

The type of artificial nail product you use is a clue to the chemicals found in it. Most artificial nail products belong to a few product types: acrylics, gels, fiberglass, porcelains, tips, and wraps. Most brands within a specific product type are likely to contain similar chemicals and involve similar exposures.

Appendices 1 and 2 briefly describe the various types of artificial nail products and list many of the chemicals typically found in them. However, you still need to read the label and get an MSDS in order to be certain about the ingredients of the brands you use.

HOW CAN THE CHEMICALS IN ARTIFICIAL NAIL PRODUCTS ENTER AND AFFECT YOUR BODY?

The chemicals in artificial nail products can enter your body through the air you breathe, through your skin, or through your digestive system if you accidentally swallow them. Whether they affect your health depends on several factors:

- The kinds of harm a specific chemical can cause;
- How the chemicals enter your body;
- The amount of the chemicals in the air or on your skin; and
- How often and how long you are exposed to the chemicals.

Chemicals can have either *local* or *systemic* effects. Local effects are effects which occur in the area of contact with a chemical. Irritation of the eyes, nose, throat, or skin is an example of a local effect. Systemic effects are effects which can occur if a chemical is absorbed into the bloodstream, so that it can reach and affect other parts of the body. The dizziness, headaches, and nausea caused by many solvents are examples of systemic effects.

The most common health effects caused by the chemicals in artificial nail products are described below. Some of the chemicals which can cause these effects are listed in Appendix 3.

Skin

Artificial nail products can irritate your skin and cause a rash called *irritant dermatitis* (usually just known as dermatitis). Symptoms of dermatitis include dryness, flaking, and cracking of the skin. If you have dermatitis, your skin is more likely to develop infections and to be penetrated by chemicals. Some of the chemicals which can cause dermatitis are acetone, toluene, ethyl ether, and methacrylic acid. Dermatitis gradually heals when exposure to the irritant stops.

If your skin comes into repeated contact with certain of the chemicals in nail products, you may develop *allergic contact dermatitis*. This allergic reaction is similar to the reaction caused by poison oak. It results in redness, itching, hives, and sometimes blisters. Products which contain the methacrylates, formaldehyde, or benzoyl peroxide are the ones most likely to cause allergic contact dermatitis.

Once you have developed an allergy to a chemical, exposure to even a tiny amount can cause an allergic reaction. It usually takes 6 to 24 hours for a rash to develop. If your allergic dermatitis is severe, you may no longer be able to work with the chemicals that caused it. A doctor can test you to see if you have allergic dermatitis. (See "Are there tests for possible health effects of exposure?" on page 10.)

Some products can cause an allergic reaction of the fingernail. This reaction is uncommon and is unlikely to occur unless you have your own nails done. The nail plate may thicken and separate from the nail bed. Some parts may become white and discolored. Bleeding may occur under the nail plate, showing up as dark areas as small as a pinpoint or large enough to cover the nail bed. Although these effects usually heal completely, it may take weeks or months. In extreme cases, the natural nail may have to be removed.

Eyes

Eye contact with vapors and airborne dusts can cause irritation and redness, burning, itching, or discomfort. Your eyes may water and your vision may briefly become distorted. Once you stop being exposed, these effects usually go away fairly quickly. Chemicals which can cause these effects include acrylates (ethyl methacrylate, butyl methacrylate, isobutyl methacrylate, methacrylic acid, and ethyl cyanoacrylate), and many solvents, such as methyl ethyl ketone and acetone.

Nose, Throat, and Lungs

These same chemicals can also irritate your nose, throat, and lungs. Symptoms include irritation or soreness of the nose and throat, hoarseness, coughing, lung congestion, chest tightness, and shortness of breath. Cigarette smoking can worsen these symptoms. These effects are temporary and should disappear soon after exposure to an irritating vapor ends.

Chronic bronchitis can result from repeated exposure to irritant chemicals. Symptoms of this condition include lung congestion, cough with phlegm, difficulty in breathing, and greater susceptibility to respiratory infections.

Repeated exposure to certain chemicals found in some artificial nail products can cause allergic reactions in the respiratory tract. One type of allergy mainly affects the nose and throat, causing sneezing and other symptoms similar to hay fever. Another type of allergic reaction affects the lungs, causing asthma. Symptoms of asthma include difficulty breathing, wheezing, coughing, shortness of breath, and tightness in the chest. Once you have become sensitized to a chemical, very small amounts of that chemical can cause an allergic reaction.

Exposure to irritant chemicals that would not affect most people can provoke an asthma attack in a person who already has asthma.

Methyl methacrylate dust can cause asthma. All of the other acrylates (methacrylates and methacrylic acid) and ethyl cyanoacrylates can cause asthma.

Nervous System

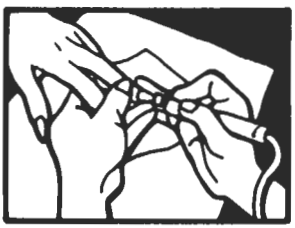
Breathing in the vapors of certain chemicals can affect your brain the same way as drinking too much alcohol does. The technical term for this intoxication is central nervous system (CNS) depression. Overexposure to these vapors can cause headaches, nausea, and dizziness as well as making you feel irritable, confused, or drunk. These feelings should go away soon after you stop working with the chemicals.

Many of the chemicals which cause these effects are organic solvents. Some organic solvents often found in nail products are methyl ethyl ketone, acetone, toluene, xylene, and ethyl ether. Large amounts of vapors from the methacrylates can also cause the same problems.

Can These Chemicals Cause Cancer?

Most of the substances used in artificial nail products have not been adequately tested to see whether they can cause cancer. Methylene chloride and formaldehyde, two chemicals occasionally found in artificial nail products, cause cancer in test animals. It is not known whether they can cause cancer in people. Products that contain these substances should be avoided.

Benzoyl peroxide, a common ingredient of acrylic and porcelain products, causes cancer when large doses are painted on the skin of laboratory animals. It is not known whether it can cause cancer in people. However, the amount of benzoyl peroxide in nail products is very small, and very little of the chemical comes into contact with the skin. It is not expected to be a health problem.



Fiberglass *dust* is created when you file or grind wraps made of fiberglass. Some recent studies have suggested that fiberglass *fibers* can cause lung cancer. However, the *dust* from grinding fiberglass wraps probably does not contain many fiberglass *fibers*, and is probably not dangerous.

Reproductive System

Most of the chemicals found in artificial nail products have not been adequately tested to find out whether they could harm a developing baby or affect the fertility of either men or women. The little information that is available is largely based on studies of test animals. There is almost no information from studies of humans.

Here are some of the facts that are known:

Solvents: Organic solvents are used in artificial nail products to keep them in liquid form. These chemicals can be absorbed into the body of the mother by inhalation of their vapors or by skin contact with the liquid. Once absorbed, most organic solvents can reach the fetus or enter breast milk.

Organic solvents can probably affect the fetus or the nursing infant in much the same way as they affect the woman. The solvents used in artificial nails can affect the brain (see "Nervous System," page 7). Levels of exposure that affect the mother are also likely to similarly affect the fetus. We recommend that pregnant and nursing women minimize their exposure to organic solvents, just as they should minimize their exposure to alcohol, tobacco, and other drugs. Some specific solvents you should know about are:

Glycol ethers: Certain glycol ethers cause birth defects in test animals. They also damage the testes of male laboratory animals. Recent studies of exposed workers indicate that glycol ethers can reduce sperm counts in men. These effects can occur at low exposure levels that have no other health effects, so you can be exposed to harmful levels of the glycol ethers without any immediate warning symptoms.

Glycol ethers are occasionally found in artificial nail products. Appendix 4 on page 26 lists the glycol ethers for which there is evidence of effects on human or animal reproduction. Not all glycol ether compounds have been adequately tested. **Do not use products which contain the glycol ethers listed in Appendix 4.**

Ethyl alcohol: This is the alcohol found in liquor. Ethyl alcohol has caused birth defects and nervous system damage in children of women who drank only moderately during pregnancy. However, it is very unlikely that the levels of alcohol vapors that you are exposed to at work are high enough to harm an unborn child.

Toluene: Toluene has been reported to cause birth defects and nervous system damage in the children of mothers who abused toluene by glue-sniffing during their pregnancy. However, such effects are not likely to occur unless exposures are high enough to make the mother feel dizzy or sick.

Acetonitrile: Many artificial nail *removers* are almost pure acetonitrile, a very toxic chemical. Acetonitrile can cause birth defects in animals exposed to large amounts. It is absorbed very quickly through human skin. For your own health and for the health of your customers, you should try to avoid using nail removers made of acetonitrile.

Methacrylates: Exposures high enough to cause sickness or death in lab animals also cause birth defects. The effects in human beings are not known, but we do not expect harm to pregnancy at levels likely to be found in cosmetology shops.

Can You Work Safely During Pregnancy?

In general, if you feel well while you are working with artificial nail products and you are not experiencing any symptoms related to their use, there is no reason to think that your workplace exposures will harm your baby. However, the surest way to prevent chemicals from harming you or your unborn children is to minimize your exposure. You should read the section "How can your exposure be controlled?" beginning on page 13, and take steps to keep your exposure low.

If you have symptoms that suggest that your use of artificial nail products is affecting your health, you need to take steps to reduce your exposure, for your baby's sake as well as your own. These steps are described in the section "How can your exposure be controlled?"

ARE THERE TESTS FOR POSSIBLE HEALTH EFFECTS OF EXPOSURE?

The chemicals found in artificial nail products do not stay in your body very long. There is no test that can determine the overall amount of "chemicals" that your body has absorbed. There are tests for only a few of the *specific* chemicals to which you may be exposed. We do not recommend that these tests be used on a routine basis.

If you think you may have allergic dermatitis or asthma, see your doctor. The specific chemical to which you are allergic needs to be identified so that you can avoid products which contain it. Dermatologists and allergists can do patch testing to identify the chemicals to which your skin is allergic. This test involves placing patches containing the suspected materials on the skin and watching for signs of an allergic reaction. Inhalation challenge testing can be performed by a pulmonary specialist to diagnose occupational asthma and identify the chemicals which caused it.

WHAT ARE THE LEGAL EXPOSURE LIMITS?

Cal/OSHA regulates exposure to chemicals in the workplace. Cal/OSHA sets Permissible Exposure Limits (PELs) — eight-hour average air concentrations up to which a worker can be legally exposed. There are PELs for many of the chemicals found in artificial nail products. Some of these PELs are listed in Table 1, on page 12.

Your employer is required to protect you from being exposed to levels of any chemical above its PEL. If you are self-employed and have no employees, you are not covered by these regulations. However, for the sake of your own health, it would be wise to follow them.

If you think that you may be overexposed, talk to your employer. Your employer should have an industrial hygienist or other knowledgeable person measure the levels of the chemicals in your workplace air. If you are self-employed, these measurements are your responsibility. Information on how these measurements are done may be available from your local Cal/OSHA Consultation office. The phone numbers are given on page 19.

If your employer tests the air in your workplace for chemicals, Cal/OSHA regulation *GISO 3204* gives you the right to see and copy the results of those measurements. You also have the right to see and copy your medical records or to file a complaint against your employer for any violations of Cal/OSHA health and safety regulations.

Table 1
Cal/OSHA Permissible Exposure Limits for Some Chemicals Found in Artificial Nail Products

Chemical	Cal/OSHA Permissible Exposure Limit
acetone	750 ppm
acetonitrile	40 ppm
benzoyl peroxide	5 mg/m^3
ethyl acetate	400 ppm
ethyl ether	400 ppm
hydroquinone	2 mg/m^3
methacrylic acid	20 ppm
4-methoxyphenol	5 mg/m^3
methylene chloride	25 ppm
methyl ethyl ketone	200 ppm
titanium dioxide	10 mg/m^3
toluene	50 ppm
1,1,2-trichloro-1,2,2-trifluoroethane	1000 ppm

Chemicals found in artificial nail products for which there are no PELs include:

butyl methacrylate
dimethyl *p*-toluidine
ethyl cyanoacrylate
ethyl methacrylate
ethylene glycol dimethacrylate
isobutyl methacrylate

Note: One ppm is one part of chemical per million parts of air, by volume.

One mg/m^3 is one milligram (mg) of chemical per cubic meter (m^3) of air. An adult inhales about one cubic meter of air in an hour.

HOW CAN YOUR EXPOSURE BE CONTROLLED?

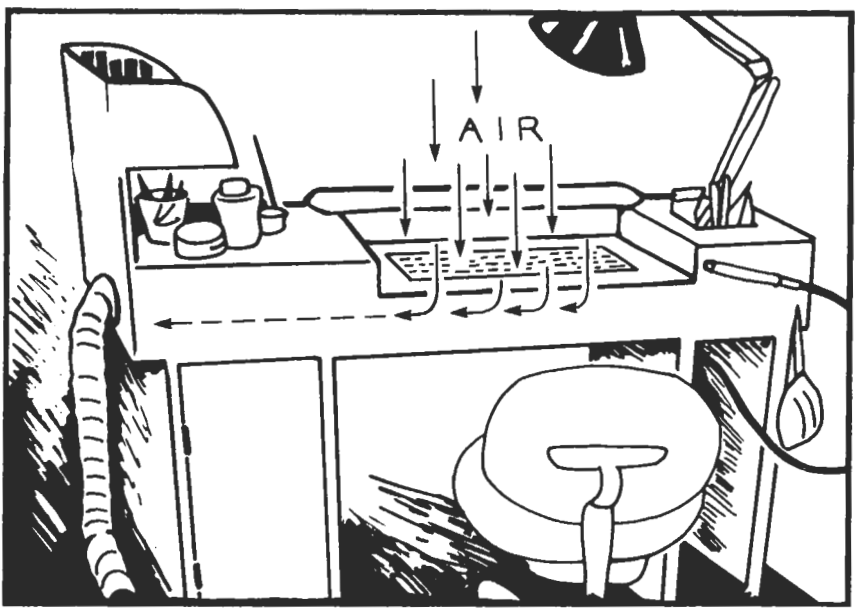
There are many ways to reduce or eliminate exposures.

Substitution

Replace products containing harmful chemicals with safer ones. The wide variety of artificial nail products on the market today gives you many choices. Try to find a product that does not produce irritating vapors or damage your skin. Avoid products that contain glycol ethers. Look for a nail remover that does not contain acetonitrile.

Engineering Controls

Install ventilation systems which keep the air you breathe clean of contaminants. When properly designed and installed, local exhaust systems (such as vented table systems) capture and remove contaminants before they reach the air you breathe. The ventilation system should be designed to vent contaminated air to the *outside*, not inside the shop; otherwise, the system should have a charcoal filter *and* a dust filter which should both be changed frequently. Ordinary dust filters do not remove toxic vapors from the air.



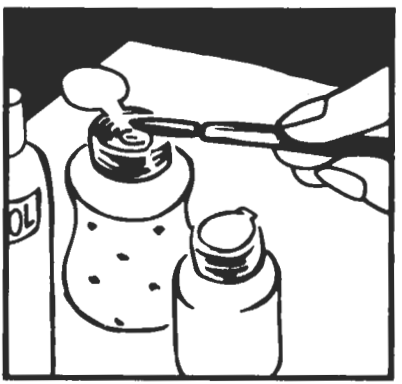
If local exhaust systems are not in place, it is especially important to have good room ventilation systems which bring in fresh, outside air. Table-top fans which simply blow vapors and dusts around a room are not adequate.

Work Practices

Keep containers closed when not in use. Special dispensers are available which let you wet brushes without overexposing yourself.

Personal Protective Equipment

If using a local exhaust system is not practical, wear a dust mask to reduce your inhalation of the different dusts created by filing and sanding nails made of fiberglass, acrylates, and other materials. However, dust masks do not protect against vapors. It would require a vapor cartridge respirator or "gas mask" to provide protection from vapors.



WHAT IS THE CONCERN ABOUT METHYL METHACRYLATE?

The Food and Drug Administration banned the use of methyl methacrylate (MMA) in artificial nail products in 1974. MMA was banned because it caused severe irritation and allergic dermatitis in both customers and manicurists.

Despite the ban, MMA is still in use illegally. A 1982 study found that MMA was used in eight of 29 artificial nail products. A 1986 study still found MMA in the air of some nail salons. Because MMA is approved for use in dental manufacturing, it can still be found.

Do not use MMA instead of the liquid in your acrylic products. Prolonged skin contact with MMA can cause tingling, numbness, and whitening of the fingers. It causes skin allergy in *many* people. An allergy to MMA can make you allergic to the other methacrylates as well. If you develop a severe skin allergy, you may have to stop working with artificial nail products.

Protect your career, your health, and the health of your clients by using only the materials supplied by the manufacturers of your products. And remember to check any product you use to be sure it doesn't contain methyl methacrylate.

HOW CAN ULTRAVIOLET (UV) LAMPS BE USED SAFELY?

The lamps used in UV-gel systems generate UV-A light. The type of ultraviolet light especially associated with sunburn, premature aging of the skin, skin cancer, and eye damage is UV-B light. Exposure to UV-A light is generally much less hazardous. If used correctly, UV-A lamps are generally considered safe.

To use your UV lamps safely, follow the manufacturer's guidelines. Some lamps come with special filters to block out the UV rays that can harm your eyes or skin. Check to make sure the filters are properly placed. Do not look directly at the UV lamps when they are turned on, and discourage your clients from doing so.

UV-gel systems require 5-20 minutes of ultraviolet light exposure to activate the curing process that turns the gel to a solid nail. The brief and intermittent nature of this exposure further reduces any health hazard.

In some UV-gel systems, only the nails are exposed to the curing light, so that there is practically no exposure except of the hand itself.

Photosensitivity

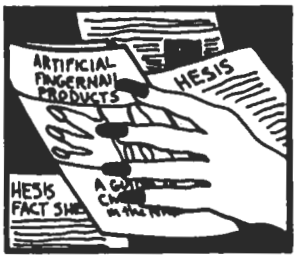
Some creams, medications, or other preparations can cause a person to become photosensitive. People who are photosensitive may suffer a severe "sunburn" from even a brief exposure to UV light. If you are using a medication that is a photosensitizer, see your doctor before using UV gels.

IS A CHEMICAL'S ODOR A GOOD WARNING OF HAZARD?

No. Many chemicals used in artificial nail products have a strong smell at levels well below those which cause harm. Other chemicals have very little smell. Measuring the amount of a substance in the air is the only reliable way to determine an exposure level and the degree of hazard.

A strong smell by itself can cause headaches or nausea, even if the substance is not dangerous. It is very difficult to distinguish between a headache caused by central nervous system effects and one caused simply by odor. Pregnant women are sometimes especially sensitive to odor.

WHERE CAN YOU GET MORE INFORMATION?



Request our publications. HESIS publishes booklets and fact sheets which are available free. Some publications are available in Spanish or other languages. For copies of any of our publications or our publications list, call our publications message service at 866/624-1586 and leave your name, address, phone number, and the names of the publications you want to receive.

Ask us a question. This booklet contains information on the chemicals commonly found in artificial nails products. If you have questions not covered in this booklet, call us for more information. Please phone HESIS toll free at 866/282-5516.

Contact Cal/OSHA. Employees who need information or assistance concerning workplace health and safety regulations, or who want to file a complaint, can contact the nearest office of Cal/OSHA:

Anaheim
Chico
Concord
Eureka
Fresno
Los Angeles
Modesto
Oakland
Pico Rivera
Redding
Sacramento
San Bernardino
San Diego
San Francisco
San Jose
San Mateo
Santa Rosa
Torrance
Van Nuys
Ventura
West Covina

For the address and telephone number of the Cal/OSHA office nearest you, look in the government section near the front of the telephone book, under "California, Department of Industrial Relations, Division of Occupational Safety and Health."

Use the Cal/OSHA Consultation Service. Employers who want free assistance to evaluate and improve workplace health and safety may contact the Cal/OSHA Consultation Service at 1-800-963-9424 or:

Anaheim	714/935-2750
Fresno	209/454-1295
Oakland	510/622-2891
Sacramento	916/263-2855
San Bernardino	909/383-4567
San Diego	619/467-4048
Santa Fe Springs	562/944-9366
Van Nuys	818/901-5754

In a Medical Emergency: Dial 9-1-1. Always keep Material Safety Data Sheets handy. The person taking your call will need to know the chemical ingredients. MSDSs also frequently have emergency numbers so that emergency personnel can contact the manufacturer if they need more information.

Appendix 1
Types Of Artificial Nail Products

Artificial nails products can be grouped into five main types, which are described below. Appendix 2 lists some of their typical chemical ingredients.

Acrylic Systems

In acrylic systems, powdered polymer and liquid monomer are mixed together. The powder and liquid react to form a plastic paste. This paste is smoothed onto the nail, where it "cures," or hardens, at room temperature. Sometimes benzoyl peroxide is included to make the plastic harden faster.

A tiny amount (1% to 2%) of the liquid monomer remains unreacted after curing. In sensitized individuals, this remaining monomer can cause the allergic reaction of the fingernail described on page 5.

"Porcelain" Nails

Porcelain nails are like acrylic nails, except that they use a finely ground, glass-like material in the powder.

Porcelain nails were popular many years ago, but became "illegal" when methyl methacrylate, a chemical then used as an ingredient, was banned by the Food and Drug Administration. (See "What is the concern about methyl methacrylate?" on page 15.)

Since then, new formulas without methyl methacrylate have been designed, and porcelain nails are regaining popularity.

Gel Systems

In gel systems, layers of resin are applied to the nail; these layers combine to form a solid nail. There are several different kinds of gels; all of them harden when exposed to light. The original formulas were hardened with ultraviolet light; newer ones harden under ordinary room lighting (called "white light"). Some gel systems use layers of different resins, while others use layers of a single resin.

Wraps Fiberglass, linen, and silk wraps are all based upon the same process. A fabric mesh is fixed in place with an adhesive; then a sealant is applied to help keep out moisture and discourage lifting.

Tips Nails can be extended by applying plastic nail shapes of varying lengths to the natural nail plate. These extensions are called "tips." Sometimes they cover the nail from the cuticle to the end, but, more frequently, they are applied midway down the nail plate. A cyanoacrylate glue is used to adhere the plastic shape to the nail. Acrylics, gels, or wraps may then be applied to smooth and strengthen the final form. The entire shape is then sanded and filed to the desired shape and length.

Appendix 2
Nail Products, Components, and Chemicals

See Appendix 3 for a description of the health effects of the chemicals listed below.

Nail Product	Component	Chemical
ACRYLICS	◊liquid	ethyl methacrylate butyl methacrylate isobutyl methacrylate ethylene glycol dimethacrylate 4-methoxyphenol dimethyl *p*-toluidine
	◊ powder	poly(ethyl/methyl)methacrylate benzoyl peroxide titanium dioxide
	◊ primer	methacrylic acid (2-methyl-2-propenoic acid) methyl ethyl ketone (MEK) hydroquinone (HQ) 4-methoxyphenol
TIPS	◊ adhesive	ethyl cyanoacrylate ethylene glycol dimethacrylate
	◊ adhesive remover	acetone ethyl ether 1,1,2-trichloro-1,2,2-trifluoroethane
PORCELAIN	◊ liquid	ethyl methacrylate butyl methacrylate
	◊ powder	poly(ethyl/methyl)methacrylate glass-like "porcelain" material (silica)
	◊ primer	methacrylic acid hydroquinone (HQ)

WHITE-LIGHT GELS	gel	acrylic oligomers acrylic monomers modified cellulose photo-initiators amine co-initiators titanium dioxide
WRAPS		
fiberglass	◊ fabric overlay	fiberglass
	◊ adhesive	information not available
silk/linen	◊ fabric	silk fibers linen fibers cotton fibers nylon fibers
	◊ adhesive	ethyl cyanoacrylate
snakeskin	◊ adhesive	ethyl cyanoacrylate
SOLID GOLD NAILS	◊ adhesive	neoprene ethyl acetate toluene methylene chloride
	◊ adhesive remover	acetone ethyl ether 1,1,2-trichloro-1,2,2-trifluoroethane

Appendix 3
Nail Product Ingredients And Their Health Effects

Each chemical found in an artificial nail product can affect your health differently if you are overexposed to it. If you work with a chemical listed below, use this table to find out some of its more important potential health effects.

ENT = Eye, Nose, and Throat

CNS (Central Nervous System) depression = headache, nausea, dizziness, and drowsiness, similar to alcohol intoxication

Chemical	Health Effects
acetone	ENT irritation CNS depression dermatitis
acetonitrile	reproductive
benzoyl peroxide	allergic dermatitis cancer in animals
butyl methacrylate	ENT irritation CNS depression allergic dermatitis
dimethyl *p*-toluidine	ENT irritation
ethyl acetate	ENT irritation dermatitis CNS depression
ethyl alcohol	CNS depression
ethyl cyanoacrylate	ENT irritation asthma
ethylene glycol dimethacrylate	no information

ethyl ether	CNS depression dermatitis
ethyl methacrylate	ENT irritation CNS depression allergic dermatitis
fiberglass	cancer in animals
formaldehyde	allergic dermatitis asthma cancer in animals
hydroquinone	ENT irritation allergic dermatitis
isobutyl methacrylates	ENT irritation CNS depression allergic dermatitis
methacrylic acid	ENT irritation dermatitis
4-methoxyphenol	dermatitis
methylene chloride	CNS depression cancer in animals
methyl ethyl ketone	ENT irritation CNS depression
neoprene	dermatitis
titanium dioxide	lung irritation
toluene	CNS depression dermatitis reproductive
1,1,2-trichloro- 1,2,2-trifluoroethane	dermatitis CNS depression
xylene	CNS depression reproductive

Appendix 4
The Glycol Ethers Known To Cause Birth Defects Or Infertility In Test Animals

Common name	Synonyms
ethylene glycol methyl ether	EGME 2-methoxyethanol Methyl Cellosolve®
ethylene glycol methyl ether acetate	EGMEA 2-methoxyethyl acetate Methyl Cellosolve Acetate®
ethylene glycol ethyl ether	EGEE 2-ethoxyethanol Cellosolve®
ethylene glycol ethyl ether acetate	EGEEA 2-ethoxyethyl acetate Cellosolve Acetate®
ethylene glycol dimethyl ether	EGDME 1,2-dimethoxyethane
ethylene glycol diethyl ether	EGDEE 1,2-diethoxyethane
diethylene glycol methyl ether	DEGME 2-(2-methoxyethoxy)ethanol
diethylene glycol ethyl ether	DEGEE 2-(2-ethoxyethoxy)ethanol
diethylene glycol dimethyl ether	DEGDME bis(2-methoxyethyl)ether
triethylene glycol dimethyl ether	TEGDME

Appendix 5
Sample Letter For Requesting Material Safety Data Sheets

Date
Manufacturer
Address

Attention: MSDS Request

Dear Sir/Madam:

The Cal/OSHA Hazard Communication Standard (Section 5194 of the General Industry Safety Orders of Title 8 of the California Administrative Code) requires employers to have in their possession up-to-date Material Safety Data Sheets (MSDSs) for all hazardous substances used in their workplaces. In general, an MSDS should list the hazardous ingredients of a product, describe its health and safety hazards, and suggest ways to use the product safely. It should also contain information about any fire and explosion hazards, first aid, and procedures for cleaning up leaks and spills.

The state requires manufacturers of hazardous substances to prepare and provide MSDSs to their purchasers, either directly or through their suppliers (California Labor Code Division 5, Chapter 2.5, Section 6390).

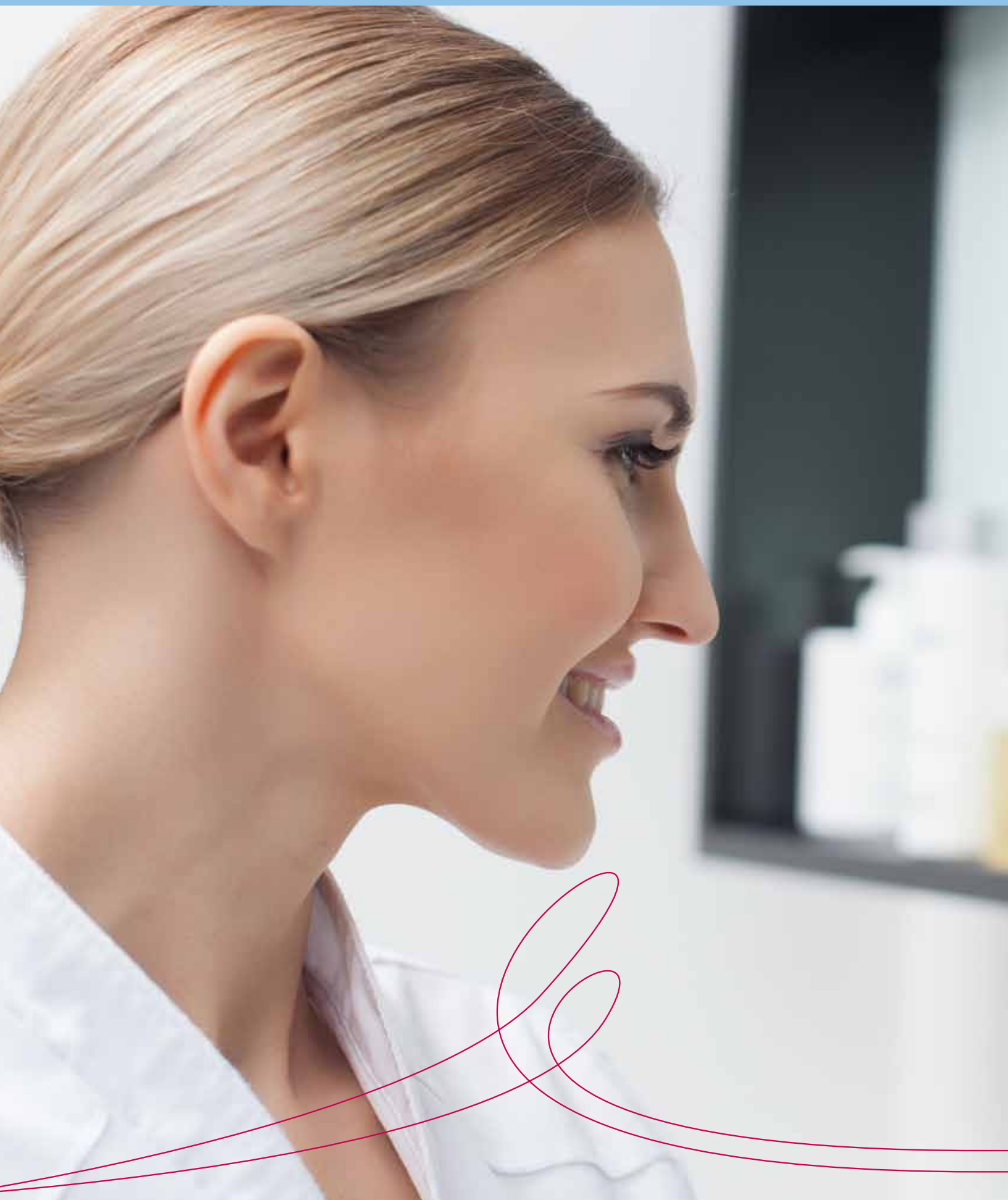
Accordingly, we request that you either provide us with current MSDSs for each product which we purchase from your company (see attached list), or provide us with a statement explaining why a product is exempt from these regulations. Also, please certify that your MSDS meets the requirements of GISO Section 5194.

An early reply will be very much appreciated.

Sincerely,

Purchaser's Name
Title
Address

(Note: Copies of the Director's List of Hazardous Substances, the above-mentioned regulations, and general information may be available from Cal/OSHA Consultation Service.)



Safety Data Sheets: What You Need to Know

LEARNING OBJECTIVES

Section 3

Safety Data Sheets: What You Need to Know

After completing this section, you will be able to:

- Explain what a Safety Data Sheet (SDS) is and where to get them.
- Recognize the sections of the SDS.
- Demonstrate how to use an SDS to find information about a cosmetic product.

In this lesson we will discuss one of the best ways you can get information about chemicals used in the salon or shop: the Safety Data Sheet (SDS).

What is an SDS?

An SDS is a bulletin that gives useful information about a chemical product and its hazards. This includes:

- The names of any dangerous ingredients
- Health and safety hazards of the chemicals
- Precautions to take when using the product
- Emergency procedures if there is an accident, such as a spill or fire
- Information on the flammability of the product

SDSs are required by law for many chemical products and replaced Material Safety Data Sheets, or MSDSs, effective December 1, 2013. (Reference your Section 3 Training Materials file for a sample copy of a Safety Data Sheet.)

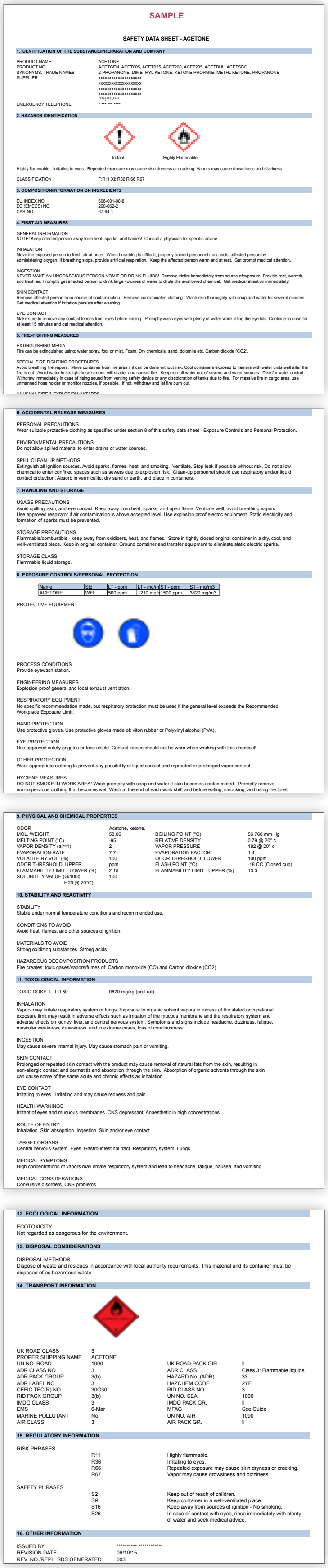
Where Can I Get an SDS?

The simple answer is from your employer. According to Cal/OSHA, employers should keep SDSs readily accessible to employees for all hazardous chemicals in the salon or shop. If there is not an SDS in the establishment for a particular product, the employer must ask the manufacturer or distributor for it. In the Training Materials file you will find a sample letter to a manufacturer or distributor requesting an SDS that you can use, if needed. If a manufacturer or distributor has not responded to your repeated attempts to request the SDS, you may contact a Cal/OSHA office and file a complaint. A list of offices can be found in the materials training file, "Resource Groups, Agencies, Databases, and Publications."

In addition, employers are required to provide training to their staff on the SDS. Employers should be diligent with their own training so that they will have the correct information to offer to their employees when requested.

Independent Contractors

If you meet the qualifications for independent contractor status, as defined by the Internal Revenue Service (IRS), you are considered an employer and must comply with Cal/OSHA requirements. A copy of the IRS trifold, *Independent Contractor or Employee?* has been provided in the materials training file. Take a moment to review this information so that you will know if you are truly classified as an independent contractor or an employee. Knowing this information will affect your responsibilities when dealing with laws and regulations from the many entities you will work with during your career. For additional information in determining your worker status, please see Section 9 of this training manual.


SAMPLE

SAFETY DATA SHEET - ACETONE

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT NAME ACETONE
PRODUCT NO. ACETGEN, ACET005, ACET025, ACET200, ACET205, ACETBUL, ACETSBC
SYNONYMS, TRADE NAMES 2-PROPANONE, DIMETHYL KETONE, KETONE PROPANE, METHL KETONE, PROPANONE
SUPPLIER xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx (***)***-****
EMERGENCY TELEPHONE * *** *** ****

2. HAZARDS IDENTIFICATION

Irritant   Highly Flammable

Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

CLASSIFICATION F;R11 Xi; R36 R 66 R67

3. COMPOSITION/INFORMATION ON INGREDIENTS

EU INDEX NO 606-001-00-8
EC (EInECS) NO. 200-662-2
CAS-NO. 67-64-1

4. FIRST-AID MEASURES

GENERAL INFORMATION
NOTE! Keep affected person away from heat, sparks, and flames! Consult a physician for specific advice.

INHALATION
Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION
NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source ofexposure. Provide rest, warmth, and fresh air. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention immediately!

SKIN CONTACT
Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Get medical attention if irritation persists after washing.

EYE CONTACT
Make sure to remove any contact lenses from eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
Fire can be extinguished using: water spray, fog, or mist. Foam. Dry chemicals, sand, dolomite etc. Carbon dioxide (CO2).

SPECIAL FIRE FIGHTING PROCEDURES
Avoid breathing fire vapors. Move container from fire area if it can be done without risk. Cool containers exposed to flamers with water units well after the fire is out. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Wear suitable protective clothing as specified under section 8 of this safety data sheet - Exposure Controls and Personal Protection.

ENVIRONMENTAL PRECAUTIONS
Do not allow spilled material to enter drains or water courses.

SPILL CLEAN UP METHODS
Extinguish all ignition sources. Avoid sparks, flames, heat, and smoking. Ventilate. Stop leak if possible without risk. Do not allow chemical to enter confined spaces such as sewers due to explosion risk. Clean-up personnel should use respiratory and/or liquid contact protection. Absorb in vermiculite, dry sand or earth, and place in containers.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS
Avoid spilling, skin, and eye contact. Keep away from heat, sparks, and open flame. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use explosion proof electric equipment. Static electricity and formation of sparks must be prevented.

STORAGE PRECAUTIONS
Flammable/combustible - keep away from oxidizers, heat, and flames. Store in tightly closed original container in a dry, cool, and well-ventilated place. Keep in original container. Ground container and transfer equipment to eliminate static electric sparks.

STORAGE CLASS
Flammable liquid storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m	ST - ppm	ST - mg/m3
ACETONE	WEL	500 ppm	1210 mg/n	1500 ppm	3820 mg/m3

PROTECTIVE EQUIPMENT

PROCESS CONDITIONS
Provide eyewash station.

ENGINEERING MEASURES
Explosion-proof general and local exhaust ventilation.

RESPIRATORY EQUIPMENT
No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit.

HAND PROTECTION
Use protective gloves. Use protective gloves made of: viton rubber or Polyvinyl alcohol (PVA).

EYE PROTECTION
Use approved safety goggles or face shield. Contact lenses should not be worn when working with this chemical!

OTHER PROTECTION
Wear appropriate clothing to prevent any possibility of liquid contact and repreated or prolonged vapor contact.

HYGIENE MEASURES
DO NOT SMOKE IN WORK AREA! Wash promptly with soap and water if skin becomes contaminated. Promptly remove non-impervious clothing that becomes wet. Wash at the end of each work shift and before eating, smocking, and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR	Acetone, ketone.		
MOL. WEIGHT	58.06	BOILING POINT (°C)	56 760 mm Hg
MELTING POINT (°C)	-95	RELATIVE DENSITY	0.79 @ 20° c
VAPOR DENSITY (air=1)	2	VAPOR PRESSURE	182 @ 20° c
EVAPORATION RATE	7.7	EVAPORATION FACTOR	1.4
VOLATILE BY VOL. (%)	100	ODOR THRESHOLD, LOWER	100 ppm
ODOR THRESHOLD. UPPER	ppm	FLASH POINT (°C)	-18 CC (Closed cup)
FLAMMABILITY LIMIT - LOWER (%)	2.15	FLAMMABILITY LIMIT - UPPER (%)	13.3
SOLUBILITY VALUE (G/100g H20 @ 20°C)	100		

10. STABILITY AND REACTIVITY

STABILITY
Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID
Avoid heat, flames, and other sources of ignition.

MATERIALS TO AVOID
Strong oxidizing substances. Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS
Fire creates: toxic gases/vapors/fumes of: Carbon monoxide (CO) and Carbon dioxide (CO2).

11. TOXOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 9570 mg/kg (oral rat)

INHALATION
Vapors may irritate respiratory system or lungs. Exposure to organic solvent vapors in excess of the stated occupational exposure limit may result in adverse effects such as irritation of the mucous membrane and the respiratory system and adverse effects on kidney, liver, and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases, loss of conciousness.

INGESTION
May cause severe internal injury. May cause stomach pain or vomiting.

SKIN CONTACT
Prolonged or repeated skin contact with the product may cause removal of natural fats from the skin, resulting in non-allergic contact and dermatitis and absorption through the skin. Absorption of organic solvents through the skin can cause some of the same acute and chronic effects as inhalation.

EYE CONTACT
Irritating to eyes. Irritating and may cause redness and pain.

HEALTH WARNINGS
Irritant of eyes and mucuous membranes. CNS depressant. Anaesthetic in high concentrations.

ROUTE OF ENTRY
Inhalation. Skin absoprtion. Ingestion. Skin and/or eye contact.

TARGET ORGANS
Central nervous system. Eyes. Gastro-intestinal tract. Respiratory system. Lungs.

MEDICAL SYMPTOMS
High concentrations of vapors may irritate respiratory system and lead to headache, fatigue, nausea, and vomiting.

MEDICAL CONSIDERATIONS
Convulsive disorders, CNS problems.

12. ECOLOGICAL INFORMATION

ECOTOXICITY
Not regarded as dangerous for the environment.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS
Dispose of waste and residues in accordance with local authority requirements. This material and its container must be disposed of as hazardous waste.

14. TRANSPORT INFORMATION

UK ROAD CLASS	3		
PROPER SHIPPING NAME	ACETONE		
UN NO. ROAD	1090	UK ROAD PACK GIR	II
ADR CLASS NO.	3	ADR CLASS	Class 3: Flammable liquids
ADR PACK GROUP	3(b)	HAZARD No. (ADR)	33
ADR LABEL NO.	3	HAZCHEM CODE	2YE
CEFIC TEC(R) NO.	30G30	RID CLASS NO.	3
RID PACK GROUP	3(b)	UN NO. SEA	1090
IMDG CLASS	3	IMDG PACK GR.	II
EMS	6-Mar	MFAG	See Guide
MARINE POLLUTANT	No.	UN NO. AIR	1090
AIR CLASS	3	AIR PACK GR.	II

15. REGULATORY INFORMATION

RISK PHRASES
R11 Highly flammable.
R36 Irritating to eyes.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapor may cause drowsiness and dizziness.

SAFETY PHRASES
S2 Keep out of reach of children.
S9 Keep container in a well-ventilated place.
S16 Keep away from sources of ignition - No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

16. OTHER INFORMATION

ISSUED BY ********** ************
REVISION DATE 06/10/15
REV. NO./REPL. SDS GENERATED 003

Samples of Safety Data Sheets (SDSs).

SDS Limitations

While SDSs provide a lot of useful information not always found on the product label, there is also a major drawback. SDSs can be difficult to read, as you may be unfamiliar with the technical or scientific words used on the document. In those instances, you may wish to search the Internet, do research with a chemical reference book, or consult with one or more of the agencies listed on the "Resource Groups, Agencies, Databases and Publications" list provided in the Training Materials file.

Now, let's review what you've learned so far.

Questions for Review

Important information on the identity and hazards of a chemical are on the container label. True or False?

How can you get information about the chemicals in a product?

A) Chemical reference books

B) Safety Data Sheets

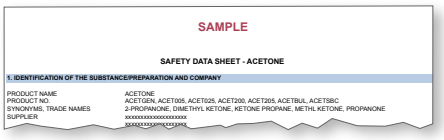
C) Asking your employer

D) Consulting a state agency

E) All of the above

For answers to all questions, please refer to your exam booklet.

Now let's review the sections of the SDS while looking at a sample SDS for acetone (a product commonly used to remove nail polish). You can find a sample of the Acetone SDS in the Training Materials file. Take it out and use it to refer to when covering the following sections.


SAMPLE

SAFETY DATA SHEET - ACETONE

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PRODUCT NAME	ACETONE
PRODUCT NO.	ACETGEN, ACET005, ACET025, ACET200, ACET205, ACETBUL, ACETSBC
SYNONYMS, TRADE NAMES	2-PROPANONE, DIMETHYL KETONE, KETONE PROPANE, METHL KETONE, PROPANONE
SUPPLIER	xxxxxxxxxxxxxxxxxx
	xxxxxxxxxxxxxxxxxx

SDS Section 1: Identification

SDS Sections 1 though 8

Sections 1 through 8 contain general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures. This information should be helpful to those who need to get the information quickly.

Section 1: Identification

The first section of the SDS identifies the chemical as well as the manufacturer or distributor. The information you will find in this section includes:

- The product name used on the label and other means of identification.

- Information about the supplier of the chemical, including name, address, and phone number.
- An emergency phone number for obtaining information about spills and other accidents 24 hours a day, seven days a week.

Properly identifying a product and its recommended uses is an important part of working safely with the chemical. Information about the supplier and an emergency number is critical, especially in the event of an accident involving the product.

On the SDS sample, the product name you are most likely familiar with is acetone, but as you can see, there are many other names for it. The supplier information has been omitted in the sample, but this is where you would find the address and phone numbers on the SDS.

Section 2: Hazard(s) Identification

SDS Section 2: Hazard(s) Identification

The second section of the SDS identifies hazards of the chemical and the warning information associated with those hazards. Hazard classification can include physical hazards such as if the product is flammable, health hazards such as if the product is toxic or cancer-causing, or environmental hazards. Consulting this section helps you understand the risks of the hazards associated with the products used in the salon or shop.

On the sample SDS, notice the term "CLASSIFICATION" underneath the listed hazards. These classifications are risk phrases—basically, a shorthand way to list the hazards. For example, F stands for "highly flammable," R36 stands for "irritating to eyes," R66 stands for "repeated exposure may cause skin dryness and cracking," and R67 stands for "vapors may cause drowsiness and dizziness." To view a complete list of risk phrases, go to the Training Materials file.

When working with chemicals, it is important to know what the hazard icons represent. Let's examine a few icons that you may see on an SDS.

The **Flame** icon is associated with products and chemicals that are flammable or combustible. When you see this icon, you will want to refer to the products label for additional hazardous statements, such as, "Keep away from heat or flames" or "Do not store by sources of high heat." This icon will help you quickly identify potential fire or explosion hazards.

The **Flame Over Circle** icon is specific to solids, liquids, or gases that are classified as oxidizers. Oxidizers are gases that cause materials to burn much more intensely and rapidly than normal. An example would be gasoline on wood.

The **Corrosion** icon refers to chemicals that have a corrosive (damaging) effect on skin and/or membranes.

The **Skull and Crossbones** icon indicates the chemical is highly toxic or fatal if swallowed, inhaled, or absorbed through skin contact.

The **Health Hazard** icon identifies chemicals and products that could lead to chronic or acute health problems.

The **Exclamation Mark** icon indicates that while the chemical may potentially harm your health or safety, it represents the lower end of the scale for specific hazards. This would include symptoms such as irritation, dizziness, and allergic reaction.

The **Environment** icon represents that the chemicals/products could be toxic to aquatic life with long-lasting effects. Products with this symbol should not be dumped down drains.

In the Training Materials file, you will find flash cards to help you learn and remember what these icons represent.

Section 3: Composition/Information on Ingredients

Section 3 contains information regarding the chemical composition and ingredients. This can include the chemical name, Chemical Abstract Service (CAS) number, European Inventory of Existing Commercial Chemical Substances index number (EU Index No), concentration, and other unique identifiers. This information would be helpful if you had to research a specific chemical substance.

Irritant Highly Flammable

Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

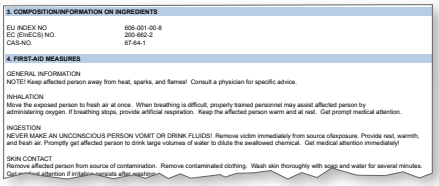
CLASSIFICATION F,R11 Xi; R36 R 66 R67

3. COMPOSITION/INFORMATION ON INGREDIENTS

SDS Section 3: Composition/Information on Ingredients

Section 4: First-Aid Measures

Section 4 should be of particular importance to those working in the shop or salon as it describes the initial care that may be administered. First-aid measures are categorized by the routes of exposure—inhalation, ingestion, and skin and eye contact. You will also find common symptoms, health effects, and whether you should seek immediate medical attention.



3. COMPOSITION/INFORMATION ON INGREDIENTS

EU INDEX NO. 606-001-00-8
EC (EINECS) NO. 200-662-2
CAS-NO. 67-64-1

4. FIRST-AID MEASURES

GENERAL INFORMATION
NOTE! Keep affected person away from heat, sparks, and flames! Consult a physician for specific advice.

INHALATION
Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Keep the affected person warm and at rest. Get prompt medical attention.

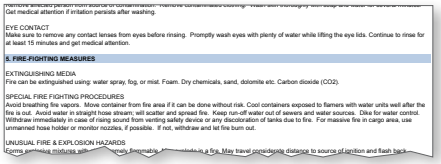
INGESTION
NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source ofexposure. Provide rest, warmth, and fresh air. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention immediately!

SKIN CONTACT
Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Get medical attention if irritation persists after washing.

SDS Section 4: First-Aid Measures

Section 5: Fire-Fighting Measures

Section 5 provides recommendations for fighting a fire caused by the chemical.



Get medical attention if irritation persists after washing.

EYE CONTACT
Make sure to remove any contact lenses from eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
Fire can be extinguished using: water spray, fog, or mist. Foam. Dry chemicals, sand, dolomite etc. Carbon dioxide (CO_2).

SPECIAL FIRE FIGHTING PROCEDURES
Avoid breathing fire vapors. Move container from fire area if it can be done without risk. Cool containers exposed to flames with water units well after the fire is out. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

UNUSUAL FIRE & EXPLOSION HAZARDS

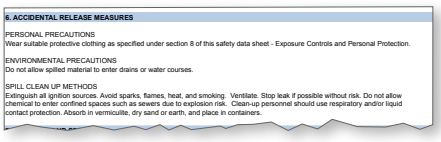
SDS Section 5: Fire-Fighting Measures

Section 6: Accidental Release Measures

Section 6 recommends the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. For example, it outlines:

- Personal precautions and personal protective equipment
- Environmental precautions
- Spill cleanup methods

Under personal precautions, on the sample Acetone SDS, you see that the SDS is directing you to another section—Section 8, which deals with exposure controls and personal protection. The writers of SDSs try to be concise, so they will not always repeat information that can be found in another section.



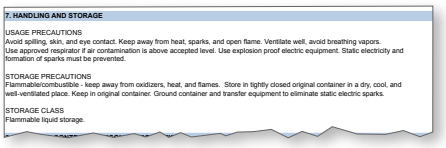
6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Wear suitable protective clothing as specified under section 8 of this safety data sheet - Exposure Controls and Personal Protection.

ENVIRONMENTAL PRECAUTIONS
Do not allow spilled material to enter drains or water courses.

SPILL CLEAN UP METHODS
Extinguish all ignition sources. Avoid sparks, flames, heat, and smoking. Ventilate. Stop leak if possible without risk. Do not allow chemical to enter confined spaces such as sewers due to explosion risk. Clean-up personnel should use respiratory and/or liquid contact protection. Absorb in vermiculite, dry sand or earth, and place in containers.

SDS Section 6: Accidental Release Measures



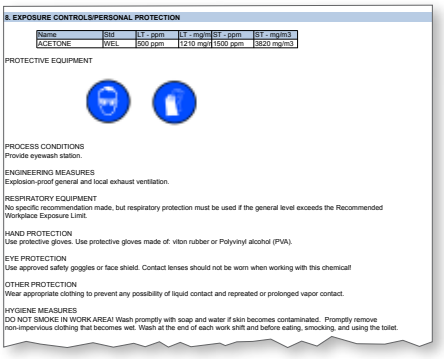
7. HANDLING AND STORAGE

USAGE PRECAUTIONS
Avoid spilling, skin, and eye contact. Keep away from heat, sparks, and open flame. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use explosion proof electric equipment. Static electricity and formation of sparks must be prevented.

STORAGE PRECAUTIONS
Flammable/combustible - keep away from oxidizers, heat, and flames. Store in tightly closed original container in a dry, cool, and well-ventilated place. Keep in original container. Ground container and transfer equipment to eliminate static electric sparks.

STORAGE CLASS
Flammable liquid storage.

SDS Section 7: Handling and Storage



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
ACETONE	WEL	500 ppm	1210 mg/m3	1500 ppm	3620 mg/m3

PROTECTIVE EQUIPMENT

PROCESS CONDITIONS
Provide eyewash station.

ENGINEERING MEASURES
Explosion-proof general and local exhaust ventilation.

RESPIRATORY EQUIPMENT
No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit.

HAND PROTECTION
Use protective gloves. Use protective gloves made of: viton rubber or Polyvinyl alcohol (PVA).

EYE PROTECTION
Use approved safety goggles or face shield. Contact lenses should not be worn when working with this chemical!

OTHER PROTECTION
Wear appropriate clothing to prevent any possibility of liquid contact and repreated or prolonged vapor contact.

HYGIENE MEASURES
DO NOT SMOKE IN WORK AREA! Wash promptly with soap and water if skin becomes contaminated. Promptly remove non-impervious clothing that becomes wet. Wash at the end of each work shift and before eating, smocking, and using the toilet.

SDS Section 8: Exposure Controls/Personal Protection

Section 7: Handling and Storage

Section 7 provides guidance on the safe handling practices and conditions for safe storage of chemicals, such as identifying incompatibilities and what substances need to be stored elsewhere.

Section 8: Exposure Controls/Personal Protection

Section 8 is an important section of the SDS as it instructs you on how to minimize harmful exposures through exposure limits, engineering controls, and personal protection. The section details control parameters, such as occupational exposure limit values. For example, here you will find the permissible exposure limit (PEL) and the threshold limit value (TLV). You can also find the appropriate engineering controls such as ventilation and enclosed processes required when working with the substance, replacing a toxic substance with a less hazardous one, or limiting the amount of time a worker is exposed to a hazardous substance. Lastly, Section 8 discusses individual protection measures, such as required personal protective equipment.

The blue icons indicate that safety glasses and gloves should be used when handling acetone. Here are other personal protective equipment icons that you may come across:

Now, let's test your understanding of Sections 1 through 8 of SDSs.

Questions for Review

SDSs should be consulted only after an emergency such as a spill, fire, or explosion. True or False?

Water is the best way to extinguish a fire. True or False?

If you see a chemical spill, you should not clean it immediately. True or False?

For answers to all questions, please refer to your exam booklet.

SDS Sections 9 through 11

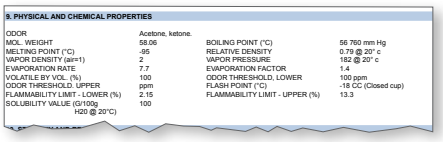
Sections 9 through 11 and 16 contain other technical and scientific information, such as physical and chemical properties, stability and reactivity information, toxicological information, exposure control information, and other information, including the date of preparation or last revision.

Section 9: Physical and Chemical Properties

Section 9 identifies physical and chemical properties associated with the substance. This can include information such as:

- Appearance—that is, the substance's physical state—solid, liquid, gas, and color
- Odor
- pH, which tells you whether the chemical is an acid or alkaline base
- Flash point
- Evaporation rate
- Flammability and upper and lower flammability or explosive limits

You may have heard of these terms in your chemistry classes. If you are unfamiliar with some of these terms, it would benefit you to research the meanings.



9. PHYSICAL AND CHEMICAL PROPERTIES

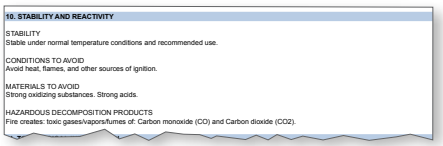
ODOR	Acetone, ketone.		
MOL. WEIGHT	58.06	BOILING POINT (°C)	56.760 mm Hg
MELTING POINT (°C)	-95	RELATIVE DENSITY	0.79 @ 20° c
VAPOR DENSITY (air=1)	2	VAPOR PRESSURE	182 @ 20° c
EVAPORATION RATE	7.7	EVAPORATION FACTOR	1.4
VOLATILE BY VOL. (%)	100	ODOR THRESHOLD. LOWER	100 ppm
ODOR THRESHOLD. UPPER	ppm	FLASH POINT (°C)	-18 CC (Closed cup)
FLAMMABILITY LIMIT - LOWER (%)	2.15	FLAMMABILITY LIMIT - UPPER (%)	13.3
SOLUBILITY VALUE (G/100g H20 @ 20°C)	100		

SDS Section 9: Physical and Chemical Properties

Section 10: Stability and Reactivity

In Section 10 you can find the substance's stability and reactivity. These are two important things to know. You need to know how a substance might become unstable or react with air, water, or other substances and thus become hazardous to you and your co-workers. In this section, you'll read about:

- The chemical's stability or reactivity
- The possibility of hazardous reactions



10. STABILITY AND REACTIVITY

STABILITY
Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID
Avoid heat, flames, and other sources of ignition.

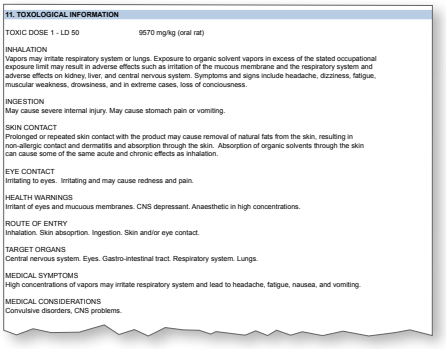
MATERIALS TO AVOID
Strong oxidizing substances. Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS
Fire creates: toxic gases/vapors/fumes of: Carbon monoxide (CO) and Carbon dioxide (CO2).

SDS Section 10: Stability and Reactivity

- Conditions to avoid such as heat or flames
- Incompatible materials that must be kept away from the substance
- Hazardous decomposition products

Think about the importance of this section. What if you didn't know the conditions under which a substance is stable or unstable? What if you didn't know what might cause a hazardous reaction? You and your co-workers could be in grave danger. On the sample Acetone SDS you see that when working with acetone, you should avoid heat, flames, and other sources of ignition. You may remember this from Sections 2 and 7 of the SDS, which stated acetone is flammable.



11. TOXOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 9570 mg/kg (oral rat)

INHALATION
Vapors may irritate respiratory system or lungs. Exposure to organic solvent vapors in excess of the stated occupational exposure limit may result in adverse effects such as irritation of the mucous membrane and the respiratory system and adverse effects on kidney, liver, and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases, loss of conciousness.

INGESTION
May cause severe internal injury. May cause stomach pain or vomiting.

SKIN CONTACT
Prolonged or repeated skin contact with the product may cause removal of natural fats from the skin, resulting in non-allergic contact and dermatitis and absorption through the skin. Absorption of organic solvents through the skin can cause some of the same acute and chronic effects as inhalation.

EYE CONTACT
Irritating to eyes. Irritating and may cause redness and pain.

HEALTH WARNINGS
Irritant of eyes and mucuous membranes. CNS depressant. Anaesthetic in high concentrations.

ROUTE OF ENTRY
Inhalation. Skin absorption. Ingestion. Skin and/or eye contact.

TARGET ORGANS
Central nervous system. Eyes. Gastro-intestinal tract. Respiratory system. Lungs.

MEDICAL SYMPTOMS
High concentrations of vapors may irritate respiratory system and lead to headache, fatigue, nausea, and vomiting.

MEDICAL CONSIDERATIONS
Convulsive disorders, CNS problems.

SDS Section 11: Toxicological Information

Section 11: Toxicological Information

Section 11 describes the various health effects of the substance as well as the available data used to identify those effects, including:

- Information on the likely routes of exposure—inhalation, ingestion, skin and eye contact
- Symptoms related to the physical, chemical, and toxicological characteristics
- Immediate and delayed health effects and chronic health effects from short- and long-term exposure
- Numerical measures of toxicity
- Whether the chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens or International Agency for Research on Cancer (IARC) Monographs, or by OSHA

If you work with harmful substances, you want to know all there is to know about how and why to avoid exposures. For example, since the sample SDS states prolonged or repeated skin contact with acetone can result in dermatitis, you should minimize exposure as much as possible.

SDS Sections 12 through 15

SDSs must also contain Sections 12 through 15 to be consistent with the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS), but OSHA will not enforce the content of these sections because they concern matters handled by other agencies.

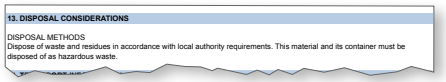
12. ECOLOGICAL INFORMATION

ECOTOXICITY
Not regarded as dangerous for the environment.

SDS Section 12: Ecological Information

Section 12: Ecological Information

Section 12 provides information about how the substance could affect the environment if released.



13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS
Dispose of waste and residues in accordance with local authority requirements. This material and its container must be disposed of as hazardous waste.

SDS Section 13: Disposal Considerations

Section 13: Disposal Considerations

Section 13 provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. Think about the substances you work with and the proper procedures for disposing of these substances and of any contaminated materials.

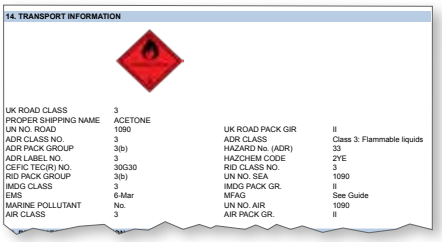
On the sample SDS you will notice that acetone and its container must be disposed of as a hazardous waste. It should be taken to a hazardous waste treatment, storage, disposal, or recycling facility. To find a hazardous waste disposal facility in your regional area, visit the Environmental Protection Agency website at **www.epa.gov**.

Section 14: Transport Information

Section 14 explains requirements for the safe transportation of the chemical by road, air, rail, or sea.

Since you are not a manufacturer and will not be transporting chemical products, you will not need to reference this section in detail. In this section of the SDS on the sample SDS, you can see acetone is not a marine pollutant, and it is a flammable liquid.

As you know by now, acetone is a flammable liquid. The flammable hazard symbol is found in Section 14. Here are other self-explanatory hazard symbols you may come across:



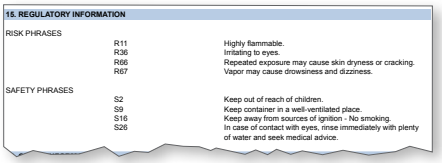
14. TRANSPORT INFORMATION

UK ROAD CLASS	3		
PROPER SHIPPING NAME	ACETONE		
UN NO. ROAD	1090	UK ROAD PACK GIR	II
ADR CLASS NO.	3	ADR CLASS	Class 3: Flammable liquids
ADR PACK GROUP	3(b)	HAZARD No. (ADR)	33
ADR LABEL NO.	3	HAZCHEM CODE	2YE
CEFIC TEC(R) NO.	30G30	RID CLASS NO.	3
RID PACK GROUP	3(b)	UN NO. SEA	1090
IMDG CLASS	3	IMDG PACK GR.	II
EMS	6-Mar	MFAG	See Guide
MARINE POLLUTANT	No.	UN NO. AIR	1090
AIR CLASS	3	AIR PACK GR.	II

SDS Section 14: Transport Information

Section 15: Regulatory Information

Section 15 identifies the safety, health, and environmental regulations specific for the product that may not be indicated anywhere else on the SDS. On the sample SDS you can see safety phrases that specifically warn workers to keep out of reach of children. For a full list of safety phrases, see the Training Materials file.



15. REGULATORY INFORMATION

RISK PHRASES

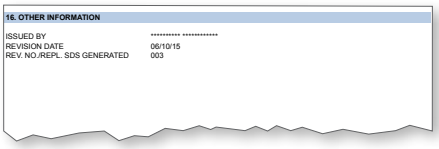
R11	Highly flammable.
R36	Irritating to eyes.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapor may cause drowsiness and dizziness.

SAFETY PHRASES

S2	Keep out of reach of children.
S9	Keep container in a well-ventilated place.
S16	Keep away from sources of ignition - No smoking.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

SDS Section 15: Regulatory Information

SDS Section 16


16. OTHER INFORMATION

ISSUED BY ********** **********
REVISION DATE 06/10/15
REV. NO./REPL. SDS GENERATED 003

SDS Section 16: Other Information

Section 16: Other Information

Section 16 contains other relevant information, such as when the SDS was prepared, when the last known revision was made, where the changes were made to the previous version, or other useful information that did not fall under the other sections. As you see on the sample SDS, the Acetone SDS was revised on June 10, 2015.

Now that you understand the importance of SDSs and how to read them, let's review everything from today's lesson.

Questions for Review

Which of the following will you find on an SDS?

A) Hazard information

B) Physical properties

C) Handling and storage

D) A and C

E) All of the above

The exclamation mark icon indicates:

A) A chemical is combustible under high temperatures

B) A chemical is toxic when swallowed, inhaled, or absorbed through the skin

C) A chemical may cause cancer, target organ toxicity, and aspiration toxicity

D) A chemical may cause irritation, dizziness, or allergic reaction

E) All of the above

If a chemical product is flammable, you should:

A) Smoke near it as long as the lid is on

B) Store it under water to keep it cool

C) Store it away from heat or flames

D) Pour it into a different container

Cal/OSHA requires SDSs to state when the revisions were made. True or False?

For answers to all questions, please refer to your exam booklet.

In our next lesson, we will consider safety practices, precautions, storage and disposal methods, and cleanup procedures to prevent chemical injuries.

DID YOU KNOW?

Having access to the SDS is your right. It is one gateway to having knowledge on how to protect yourself from chemicals used regularly in the barbering and beauty industry. Although you may use some sections of the SDS more frequently than other sections, it is always valuable to know that you have this information at your fingertips.

Notes

Section 3
Training Materials

3.1 Safety Data Sheet (Sample)

3.2 Risk Phrases –
Designated Hazardous Substances

3.3 Sample Letter – To Request an SDS

3.4 SDS Flash Cards

3.5 Resource Groups, Agencies, Databases,
and Publications Informational Sheet

3.6 Working Safely in Nail Salons Fact Sheet

3.7 Independent Contractor or
Employee Trifold

SAFETY DATA SHEET - ACETONE

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT NAME	ACETONE
PRODUCT NO.	ACETGEN, ACET005, ACET025, ACET200, ACET205, ACETBUL, ACETSBC
SYNONYMS, TRADE NAMES	2-PROPANONE, DIMETHYL KETONE, KETONE PROPANE, METHL KETONE, PROPANONE
SUPPLIER	xxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxx (***)***-****
EMERGENCY TELEPHONE	* *** *** ****

2. HAZARDS IDENTIFICATION

Irritant

Highly Flammable

Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.

CLASSIFICATION	F;R11 Xi; R36 R 66 R67

3. COMPOSITION/INFORMATION ON INGREDIENTS

EU INDEX NO	606-001-00-8
EC (EInECS) NO.	200-662-2
CAS-NO.	67-64-1

4. FIRST-AID MEASURES

GENERAL INFORMATION
NOTE! Keep affected person away from heat, sparks, and flames! Consult a physician for specific advice.

INHALATION
Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION
NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source ofexposure. Provide rest, warmth, and fresh air. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention immediately!

SKIN CONTACT
Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water for several minutes. Get medical attention if irritation persists after washing.

EYE CONTACT
Make sure to remove any contact lenses from eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
Fire can be extinguished using: water spray, fog, or mist. Foam. Dry chemicals, sand, dolomite etc. Carbon dioxide (CO_2).

SPECIAL FIRE FIGHTING PROCEDURES
Avoid breathing fire vapors. Move container from fire area if it can be done without risk. Cool containers exposed to flamers with water units well after the fire is out. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

UNUSUAL FIRE & EXPLOSION HAZARDS
Forms explosive mixtures with air. Extremely flammable. May explode in a fire. May travel considerate distance to source of ignition and flash back. Vapor explosion and poison hazard indoors, outdoors, and in sewers.

PROTECTIVE MEASURES IN FIRE
Wear self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Wear suitable protective clothing as specified under section 8 of this safety data sheet - Exposure Controls and Personal Protection.

ENVIRONMENTAL PRECAUTIONS
Do not allow spilled material to enter drains or water courses.

SPILL CLEAN UP METHODS
Extinguish all ignition sources. Avoid sparks, flames, heat, and smoking. Ventilate. Stop leak if possible without risk. Do not allow chemical to enter confined spaces such as sewers due to explosion risk. Clean-up personnel should use respiratory and/or liquid contact protection. Absorb in vermiculite, dry sand or earth, and place in containers.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS
Avoid spilling, skin, and eye contact. Keep away from heat, sparks, and open flame. Ventilate well, avoid breathing vapors.
Use approved respirator if air contamination is above accepted level. Use explosion proof electric equipment. Static electricity and formation of sparks must be prevented.

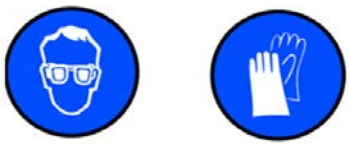
STORAGE PRECAUTIONS
Flammable/combustible - keep away from oxidizers, heat, and flames. Store in tightly closed original container in a dry, cool, and well-ventilated place. Keep in original container. Ground container and transfer equipment to eliminate static electric sparks.

STORAGE CLASS
Flammable liquid storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m	ST - ppm	ST - mg/m3
ACETONE	WEL	500 ppm	1210 mg/r	1500 ppm	3820 mg/m3

PROTECTIVE EQUIPMENT



PROCESS CONDITIONS
Provide eyewash station.

ENGINEERING MEASURES
Explosion-proof general and local exhaust ventilation.

RESPIRATORY EQUIPMENT
No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit.

HAND PROTECTION
Use protective gloves. Use protective gloves made of: viton rubber or Polyvinyl alcohol (PVA).

EYE PROTECTION
Use approved safety goggles or face shield. Contact lenses should not be worn when working with this chemical!

OTHER PROTECTION
Wear appropriate clothing to prevent any possibility of liquid contact and repreated or prolonged vapor contact.

HYGIENE MEASURES
DO NOT SMOKE IN WORK AREA! Wash promptly with soap and water if skin becomes contaminated. Promptly remove non-impervious clothing that becomes wet. Wash at the end of each work shift and before eating, smocking, and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR	Acetone, ketone.		
MOL. WEIGHT	58.06	BOILING POINT (°C)	56 760 mm Hg
MELTING POINT (°C)	-95	RELATIVE DENSITY	0.79 @ 20° c
VAPOR DENSITY (air=1)	2	VAPOR PRESSURE	182 @ 20° c
EVAPORATION RATE	7.7	EVAPORATION FACTOR	1.4
VOLATILE BY VOL. (%)	100	ODOR THRESHOLD, LOWER	100 ppm
ODOR THRESHOLD. UPPER	ppm	FLASH POINT (°C)	-18 CC (Closed cup)
FLAMMABILITY LIMIT - LOWER (%)	2.15	FLAMMABILITY LIMIT - UPPER (%)	13.3
SOLUBILITY VALUE (G/100g H20 @ 20°C)	100		

10. STABILITY AND REACTIVITY

STABILITY
Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID
Avoid heat, flames, and other sources of ignition.

MATERIALS TO AVOID
Strong oxidizing substances. Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS
Fire creates: toxic gases/vapors/fumes of: Carbon monoxide (CO) and Carbon dioxide (CO2).

11. TOXOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 9570 mg/kg (oral rat)

INHALATION
Vapors may irritate respiratory system or lungs. Exposure to organic solvent vapors in excess of the stated occupational exposure limit may result in adverse effects such as irritation of the mucous membrane and the respiratory system and adverse effects on kidney, liver, and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases, loss of conciousness.

INGESTION
May cause severe internal injury. May cause stomach pain or vomiting.

SKIN CONTACT
Prolonged or repeated skin contact with the product may cause removal of natural fats from the skin, resulting in non-allergic contact and dermatitis and absorption through the skin. Absorption of organic solvents through the skin can cause some of the same acute and chronic effects as inhalation.

EYE CONTACT
Irritating to eyes. Irritating and may cause redness and pain.

HEALTH WARNINGS
Irritant of eyes and mucuous membranes. CNS depressant. Anaesthetic in high concentrations.

ROUTE OF ENTRY
Inhalation. Skin absoprtion. Ingestion. Skin and/or eye contact.

TARGET ORGANS
Central nervous system. Eyes. Gastro-intestinal tract. Respiratory system. Lungs.

MEDICAL SYMPTOMS
High concentrations of vapors may irritate respiratory system and lead to headache, fatigue, nausea, and vomiting.

MEDICAL CONSIDERATIONS
Convulsive disorders, CNS problems.

12. ECOLOGICAL INFORMATION

ECOTOXICITY
Not regarded as dangerous for the environment.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS
Dispose of waste and residues in accordance with local authority requirements. This material and its container must be disposed of as hazardous waste.

14. TRANSPORT INFORMATION

UK ROAD CLASS	3		
PROPER SHIPPING NAME	ACETONE		
UN NO. ROAD	1090	UK ROAD PACK GIR	II
ADR CLASS NO.	3	ADR CLASS	Class 3: Flammable liquids
ADR PACK GROUP	3(b)	HAZARD No. (ADR)	33
ADR LABEL NO.	3	HAZCHEM CODE	2YE
CEFIC TEC(R) NO.	30G30	RID CLASS NO.	3
RID PACK GROUP	3(b)	UN NO. SEA	1090
IMDG CLASS	3	IMDG PACK GR.	II
EMS	6-Mar	MFAG	See Guide
MARINE POLLUTANT	No.	UN NO. AIR	1090
AIR CLASS	3	AIR PACK GR.	II

15. REGULATORY INFORMATION

RISK PHRASES

R11	Highly flammable.
R36	Irritating to eyes.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapor may cause drowsiness and dizziness.

SAFETY PHRASES

S2	Keep out of reach of children.
S9	Keep container in a well-ventilated place.
S16	Keep away from sources of ignition - No smoking.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

16. OTHER INFORMATION

ISSUED BY	********** **********
REVISION DATE	06/10/15
REV. NO./REPL. SDS GENERATED	003

RISK PHRASES
DESIGNATED HAZARDOUS SUBSTANCES
NOHSC:10005(1999)

R01	Explosive when dry.
R02	Risk of explosion by shock, friction, fire or other sources of ignition.
R03	Extreme risk of explosion by shock, friction, fire or other sources of ignition.
R04	Forms very sensitive explosive metallic compounds.
R05	Heating may cause an explosion.
R06	Explosive with or without contact with air.
R07	May cause fire.
R08	Contact with combustible material may cause fire.
R09	Explosive when mixed with combustible material.
R10	Flammable.
R11	Highly Flammable.
R12	Extremely Flammable.
R14	Reacts violently with water.
R15	Contact with water liberates extremely flammable gases.
R16	Explosive when mixed with oxidising substances.
R17	Spontaneously flammable in air.
R18	In use may form flammable/explosive vapour air mixture.
R19	May form explosive peroxides.
R20	Harmful by inhalation.
R20/21	Harmful by inhalation and in contact with skin.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R20/22	Harmful by inhalation and if swallowed.
R21	Harmful in contact with skin.
R21/22	Harmful in contact with skin and if swallowed.
R22	Harmful if swallowed.
R23	Toxic by inhalation.
R23/24	Toxic by inhalation and in contact with skin.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R23/25	Toxic by inhalation and if swallowed.
R24	Toxic in contact with skin.
R24/25	Toxic in contact with skin and if swallowed.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R26/27	Very toxic by inhalation and in contact with skin.
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R26/28	Very toxic by inhalation and if swallowed.
R27	Very toxic in contact with skin.
R27/28	Very toxic in contact with skin and if swallowed.
R28	Very toxic if swallowed.
R29	Contact with water liberates toxic gas.
R31	Contact with acids liberates toxic gas.
R32	Contact with acids liberates very toxic gas.
R33	Danger of cumulative effects.
R34	Causes burns.
R35	Causes severe burns.
R36	Irritating to eyes.

R36/37	Irritating to eyes and respiratory system.
R36/37/38	Irritating to eyes, respiratory system and skin.
R36/38	Irritating to eyes and skin.
R37	Irritating to respiratory system.
R37/38	irritating to respiratory system and skin.
R38	Irritating to skin.
R39	Danger of very serious irreversible effects.
R39/23	Toxic: danger of very serious irreversible effects through inhalation.
R39/23/24	Toxic: danger of very serious irreversible effects through inhalation and in contact with skin.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R39/23/25	Toxic: danger of very serious irreversible effects through inhalation and if swallowed.
R39/24	Toxic: danger of very serious irreversible effects in contact with skin.
R39/24/25	Toxic: danger of very serious irreversible effects in contact with skin and if swallowed.
R39/25	Toxic: danger of very serious irreversible effects if swallowed.
R39/26	Very toxic: danger of very serious irreversible effects through inhalation.
R39/26/27	Very toxic: danger of very serious irreversible effects through inhalation and in contact with skin.
R39/26/27/28	Very toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R39/26/28	Very toxic: danger of very serious irreversible effects through inhalation and if swallowed.
R39/27	Very toxic: danger of very serious irreversible effects in contact with skin.
R39/27/28	Very toxic: danger of very serious irreversible effects in contact with skin and if swallowed.
R39/28	Very toxic: danger of very serious irreversible effects if swallowed.
R40	Possible risks of irreversible effects.
R40/20	Harmful: possible risk of irreversible effects through inhalation.
R40/20/21	Harmful: possible risk of irreversible effects through inhalation and in contact with skin.
R40/20/21/22	Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
R40/20/22	Harmful: possible risk of irreversible effects through inhalation and if swallowed.
R40/21	Harmful: possible risk of irreversible effects in contact with skin.
R40/21/22	Harmful: possible risk of irreversible effects in contact with skin and if swallowed.
R40/22	Harmful: possible risk of irreversible effects if swallowed.
R41	Risk of serious damage to eyes.
R42	May cause sensitisation by inhalation.
R42/43	May cause sensitisation by inhalation and skin contact.
R43	May cause sensitisation by skin contact.
R45	May cause cancer.
R46	May cause heritable genetic damage.
R48	Danger of serious damage to health by prolonged exposure.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R48/20/2l.	Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.
R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin.
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R48/23/24	Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.
R48/23/24/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R48/23/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R48/24	Toxic: danger of serious damage to health by prolonged exposure in contact with skin.
R48/24/25	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.
R48/25	Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R49	May cause cancer by inhalation.
R50:	Very toxic to aquatic organisms.
R51:	Toxic to aquatic organisms.
R52:	Harmful to aquatic organisms.
R53:	May cause long term adverse effects in the aquatic environment.
R54:	Toxic to flora.
R55:	Toxic to fauna.
R56:	Toxic to soil organisms.
R57:	Toxic to bees.
R58:	May cause long term adverse effects in the environment.
R59:	Dangerous for the ozone layer.
R60	May impair fertility
R61	May cause harm to the unborn child.
R62	Possible risk of impaired fertility.
R63	Possible risk of harm to the unborn child.
R64	May cause harm to breastfed babies.
R65	Harmful: May cause lung damage if swallowed.

SAFETY PHRASES
DESIGNED HAZARDOUS SUBSTANCES
NOHSC:10005(1999)

S01	Keep locked up.
S010/2	Keep locked up and out of the reach of children.
S02	Keep out of the reach of children.
S03	Keep in a cool place.
S03/07	Keep container tightly closed in a cool place.
S03/09/14	Keep in a cool well ventilated place away from (incompatible materials to be indicated by manufacturer).
S03/09/14	Keep only in the original container in a cool well ventilated place away from (incompatible materials to be indicated by the manufacturer).
S03/09/49	Keep only in the original container in a cool well ventilated place.
S03/14	Keep in a cool place away from (incompatible materials to be indicated by the manufacturer).
S04	Keep away from living quarters.
S05	Keep contents under (there follows the name of a liquid).
S06	Keep under (there follows the name of an inert gas).
S07	Keep container tightly closed.
S07/47	Keep Container tightly closed and at a temperature not exceeding *C (to be specified by manufacturer).
S07/8	Keep container tightly closed and dry.
S07/9	Keep container tightly closed and in a well ventilated place.
S08	Keep container dry.
S09	Keep container in a well-ventilated place.
S12	Do not keep the container sealed.
S13	Keep away from food, drink and animal foodstuffs.
S14	Keep away from (a list of incompatible materials will follow).
S15	Keep away from heat.
S16	Keep away from sources of ignition.
S17	Keep away from combustible material.
S18	Handle and open container with care.
S20	When using, do not eat or drink.
S20/21	When using do not eat, drink or smoke.
S21	When using do not smoke.
S22	Do not breathe dust.
S23	Do not breathe vapour.
S24	Avoid contact with skin.
S24/25	Avoid contact with skin and eyes.
S25	Avoid contact with eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S27	Take off immediately all contaminated clothing.
S28	After contact with skin, wash immediately with plenty of soap-suds.
S29	Do not empty into drains.
S29/56	Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.
S30	Never add water to this product.
S33	Take precautionary measures against static discharges.

S35	This material and its container must be disposed of in a safe way.
S36	Wear suitable protective clothing.
S36/37	Wear suitable protective clothing and gloves.
S36/37/39	Wear suitable protective clothing, gloves and eye / face protection.
S36/39	Wear suitable protective clothing and eye/face protection.
S37	Wear suitable gloves.
S37/39	Wear suitable gloves and eye/face protection.
S38	In case of insufficient ventilation, Wear suitable respiratory equipment.
S39	Wear eye / face protection.
S40	To clean the floor and all objects contaminated by this material, use – (there follows suitable cleaning material).
S41	In case of fire and / or explosion do not breathe fumes.
S42	During fumigation / spraying wear suitable respiratory equipment.
S43	In case of fire use (there follows the type of fire fighting equipment to be used.)
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.).
S46	If swallowed, seek medical advice immediately and show this container or label.
S47	Keep at temperature not exceeding.
S47/49	Keep only in the original container at temperature not exceeding *C (to be specified by manufacturer).
S48	To be kept wet with (there follows a material name).
S49	Keep only in the original container.
S50	Do not mix with.
S51	Use only in well ventilated areas.
S52	Not recommended for interior use on large surface areas.
S53	Avoid exposure - obtain special instructions before use.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S57	Use appropriate container to avoid environmental contamination.
S59	Refer to manufacturer / supplier for information on recovery recycling.
S60	This material and its container must be disposed of as hazardous waste.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.
S62	If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Sample Letter For Requesting Safety Data Sheets

Date
Manufacturer
Address

Attention: SDS Request

Dear Sir/Madam,

The Cal/OSHA Hazard Communication Standard (Section 5194 of the General Industry Safety Orders of Title 8 of the California Administrative Code) requires employers to have in their possession up-to-date Safety Data Sheets (SDSs) for all hazardous substances used in their workplaces. In general, an SDS should list the hazardous ingredients of a product, describe its heath and safety hazards, and suggest ways to use the product safely. It should also contain information about any fire and explosion hazards, first aid, and procedures for cleaning up leaks and spills.

The State requires manufacturers of hazardous substances to prepare and provide SDSs to their purchasers, either directly or through their suppliers (California Labor Code Division 5, Chapter 2.5, Section 6390).

Accordingly, we request that you either provide us with the current SDSs for each product that we purchase from your company (see attached list), or provide us with a statement explaining why a product is exempt from these regulations. Also, please certify that your SDS meets the requirements of GISO Section 5194.

Sincerely,

Purchaser's Name
Title
Address

Safety Icons Flash Cards

Cut out these flash cards and use them to help you memorize the different symbols you might see on a typical Safety Data Sheet.

INSTRUCTIONS: Cut on red dotted lines and fold in half to create flash cards.

Fold here

Cut here

Cut here

BarberCosmo
Board of Barbering & Cosmetology

This icon is associated with products and chemicals that are flammable or combustible.

www.barbercosmo.ca.gov

BarberCosmo
Board of Barbering & Cosmetology

This icon is specific to solids, liquids, or gases that are classified as oxidizers.

www.barbercosmo.ca.gov

BarberCosmo
Board of Barbering & Cosmetology

This icon refers to chemicals that have a corrosive effect on skin and/or membranes.

www.barbercosmo.ca.gov

Safety Icons Flash Cards

Cut out these flash cards and use them to help you memorize the different symbols you might see on a typical Safety Data Sheet.

INSTRUCTIONS: Cut on red dotted lines and fold in half to create flash cards.

Fold here

Cut here

Cut here

BarberCosmo
Board of Barbering & Cosmetology

This icon identifies chemicals and products that could lead to acute health problems.

www.barbercosmo.ca.gov

BarberCosmo
Board of Barbering & Cosmetology

This icon identifies potentially fatal toxicity hazards.

www.barbercosmo.ca.gov

BarberCosmo
Board of Barbering & Cosmetology

This icon identifies products with compressed gases, dissolved gases, liquified gases, and refrigerated gases.

www.barbercosmo.ca.gov

Safety Icons Flash Cards

Cut out these flash cards and use them to help you memorize the different symbols you might see on a typical Safety Data Sheet.

INSTRUCTIONS: Cut on red dotted lines and fold in half to create flash cards.

Fold here

Cut here

Cut here

BarberCosmo
Board of Barbering & Cosmetology

This icon indicates that the product contains an explosive substance or mixture that can cause damage to the surroundings.

www.barbercosmo.ca.gov

BarberCosmo
Board of Barbering & Cosmetology

This icon indicates that this product/chemical represents the lower end of the danger scale for specific hazards when compared to products bearing some of the other icons.

www.barbercosmo.ca.gov

BarberCosmo
Board of Barbering & Cosmetology

This icon represents that the chemicals/products could be hazardous to aquatic life.

www.barbercosmo.ca.gov

Resource Groups, Agencies, Databases, and Publications

California Division of Occupational Safety and Health (Cal/OSHA)

Cal/OSHA is a state agency that enforces health and safety regulations, inspects workplaces, and offers free publications on various hazards, including chemicals. Cal/OSHA will also assist you if you cannot get a Safety Data Sheet (SDS) from a chemical manufacturer or distributor. There are many Cal/OSHA offices throughout the state.

REGIONAL OFFICES (Contact to File a Complaint)

Call the regional office closest to you when you need to file a complaint regarding a violation of Cal/OSHA law.

San Francisco District Office
Carlton Jones, District Manager
455 Golden Gate Ave., Room 9516
San Francisco, CA 94102
Phone: (415) 557-0100
Fax: (415) 557-0123
E-mail: DOSHSF@dir.ca.gov

Fremont District Office
Eddie Miranda, District Manager
39141 Civic Center Dr., Suite 310
Fremont, CA 94538
Phone: (510) 794-2521
Fax: (510) 794-3889
E-mail: DOSHFremont@dir.ca.gov

Foster City District Office
Barbara Kim, District Manager
1065 East Hillsdale Blvd., Suite 110
Foster City, CA 94404
Phone: (650) 573-3812
Fax: (650) 573-3817
E-mail: DOSHFC@dir.ca.gov

Oakland District Office
David Hornung, District Manager
1515 Clay Street, Suite 1303
Oakland, CA 94612
Phone: (510) 622-2916
Fax: (510) 622-2908
E-mail: DOSHOAK@dir.ca.gov

American Canyon District Office
Kathy Lynn Garner, District Manager
3419 Broadway Street, Suite H8
American Canyon, CA 94503
Phone: (707) 649-3700
Fax: (707) 649-3712
E-mail: DIRDOSHAmericanCanyon@dir.ca.gov

Sacramento District Office
Jon Weiss, District Manager
2424 Arden Way, Suite 165
Sacramento, CA 95825
Phone: (916) 263-2800
Fax: (916) 263-2798
E-mail: DOSHSAC@dir.ca.gov

Modesto District Office
VACANT, District Manager
4206 Technology Dr., Suite 3
Modesto, CA 95356
Phone: (209) 545-7310
Fax: (209) 545-7313
E-mail: DOSHMOD@dir.ca.gov

Fresno District Office
Jerry Walker, District Manager
2550 Mariposa Street, Room 4000
Fresno, CA 93721
Phone: (559) 445-5302
Fax: (559) 445-5786
E-mail: DOSHFRE@dir.ca.gov

REGIONAL OFFICES continued

Redding District Office
John Wendland, District Manager
381 Hemsted Dr.
Redding, CA 96002
Phone: (530) 224-4743
Fax: (530) 224-4747
E-mail: DOSHRED@dir.ca.gov

Santa Ana District Office
Richard Fazlollahi, District Manager
2000 E. McFadden Ave., Suite 122
Santa Ana, CA 92705
Phone: (714) 558-4451
Fax: (714) 558-2035
E-mail: DOSHSA@dir.ca.gov

San Diego District Office
Kathy Derham, District Manager
7575 Metropolitan Dr., Suite 207
San Diego, CA 92108
Phone: (619) 767-2280
Fax: (619) 767-2299
E-mail: DOSHSD@dir.ca.gov

San Bernardino District Office
Ayman Shiblak, District Manager
464 W. 4th Street, Suite 332
San Bernardino, CA 92401
Phone: (909) 383-4321
Fax: (909) 383-6789
E-mail: DOSHSB@dir.ca.gov

CAL/OSHA CONSULTATION OFFICES (Salon Owners)

Offers advice to salon owners on correcting health and safety hazards.

San Francisco Bay Area
1515 Clay Street, Suite 1103
Oakland, CA 94612
(510) 622-2891

Northern California
2424 Arden Way, Suite 410
Sacramento, CA 95825
(916) 263-0704

Central Valley
1901 North Gateway Blvd., Suite 102
Fresno, CA 93727
(559) 454-1295

San Fernando Valley
6150 Van Nuys Blvd., Suite 307
Van Nuys, CA 91401
(818) 901-5754

Los Angeles, Orange
1 Centerpointe Dr., Suite 150
La Palma, CA 90623
(714) 562-5525

San Bernardino
464 W. 4th Street, Suite 339
San Bernardino, CA 92401
(909) 383-4567

San Diego
7575 Metropolitan Dr., Suite 204
San Diego, CA 92108
(619) 767-2060

OSHA Occupational Chemical Database

OSHA maintains a chemical database as a convenient reference for the occupational safety and health community. It compiles information from several government agencies and organizations. Information available in the report includes:

- Physical properties
- Exposure guidelines
- NIOSH Pocket Guide
- Emergency response information, including the DOT Emergency Response Guide.

Database: **www.osha.gov/chemicaldata/**

California Department of Public Health (CDPH)

The California Department of Public Health is dedicated to optimizing the health and well-being of the people in California.

Occupational Health Branch (Headquarters for HESIS, OHSEP, and CSCP)
California Department of Public Health
850 Marina Bay Parkway, Building P, 3rd Floor
Richmond, CA 94804
Phone: (510) 620-5757
Fax: (510) 620-5743
Website: **www.cdph.ca.gov**
E-mail: occhealth@cdph.ca.gov

The CDPH offers the following programs:

- **Hazard Evaluation System and Information Service (HESIS)**
  HESIS is a program that uses scientific, medical, and public health expertise to help prevent workplace illness and disease. The program provides information to employers and employees on the health effects of toxic substances, and precautions for their safe use.

  Website: **www.cdph.ca.gov/programs/hesis**
  Workplace Hazard Helpline: (866) 282-5516
  Free publications on workplace hazards:
  (866) 627-1586

- **Occupational Health and Surveillance and Evaluation Program (OHSEP)**
  OHSEP is a program that tracks work-related injuries and diseases, conducts workplace studies about occupational exposures and health effects, and makes prevention recommendations to employers and employees. Information from OHSEP can be used to improve required workplace Injury and Illness Prevention Programs (IIPP) and assist healthcare providers in early identification and treatment of work-related injuries and disease.

  Website: **www.cdph.ca.gov/programs/ohsep**

- **California Safe Cosmetics Program (CSCP)**
  The primary purpose of CSCP is to collect information on hazardous and potentially hazardous ingredients in cosmetic products sold in California and to make this information available to the public.

  Website: www.cdph.ca.gov/programs/cosmetics
  E-mail: cosmetic@cdph.ca.gov

Center for Occupational and Environmental Health (COEH)

A University of California program. conducts research on occupational illnesses and injuries, and offers degree programs and continuing education courses related to health and safety.

Center for Occupational & Environmental Health
50 University Hall #7360
University of California, Berkeley
Berkeley, CA 94720-7360

Website: **http://coeh.berkeley.edu**
Administrator contact information:
http://coeh.berkeley.edu/people/admin.htm

Labor Occupational Health Program (LOHP)

LOHP is part of the University of California, Berkeley. It offers information and advice on chemicals and other workplace hazards.

University of California
2223 Fulton St, 4th Floor
Berkeley, CA 94720-5120
Phone: (510) 642-5507
Fax: (510) 643-5698
Website: **www.lohp.org**
E-mail: lohp@berkeley.edu

UCLA Labor Occupational Safety and Health Program (LOSH)

LOSH is part of the University of California, Los Angeles. It is a nationally recognized center promoting safe workplaces through teaching and education, research, and policy advocacy.

UCLA-LOSH
10945 Le Conte Ave., Suite 2107
Box 951478
Los Angeles, CA 90095-1478
Phone: (310) 794-5964
Fax: (310) 794-6403
Website: **www.losh.ucla.edu**

National Institute for Occupational Safety and Health (NIOSH)

NIOSH is a federal agency that offers free publications and an online database of chemicals. It provides information on chemicals and other workplace hazards. In some cases, NIOSH will send investigators to your workplace to evaluate health hazards.

NIOSH
4676 Columbia Parkway
Cincinnati, OH 45226-1996
Phone: (800) 356-4674
Fax: (513) 533-8573
Website: **www.cdc.gov/niosh**
E-mail: pubstaft@cdc.gov

Right to Know Hazardous Substance List

The Right to Know Hazardous Substance List contains over 2,000 hazardous substances, including those on the Special Health Hazard Substance List (SHHSL). The SHHSL consists of over 1,000 hazardous substances that are defined as carcinogens, mutagens, teratogens, corrosive, flammables, and reactives.

Website: **http://web.doh.state.nj.us/rtkhsfs/rtkhsl.aspx**
E-mail: rtk@doh.state.nj.us
Phone: (609) 984-2202
Fax: (609) 984-7407

Provided by: Department of Health
P. O. Box 360
Trenton, NJ 08625-0360
Website: **http://nj.gov/health/ohs**

Toxnet

An online resource for searching databases on toxicology, hazardous chemicals, environmental health, and toxic releases. It is managed by the Toxicology and Environmental Health Information Program (TEHIP) in the Division of Specialized Information Services (SIS) of the National Library of Medicine (NLM).

Website: **https://toxnet.nlm.nih.gov**

NIOSH Pocket Guide to Chemical Hazards

The *NIOSH Pocket Guide to Chemical Hazards* is intended as a source of general industrial hygiene information for workers, employers, and occupational health professionals.

Website: **www.cdc.gov/niosh/npg/pgintrod.html**

Cosmetics Info Website

Cosmeticsinfo.org is your source for information on cosmetics and personal care products—how they work, their safety, and the science behind their ingredients. Maintained by expert scientists.

Website: **www.cosmeticsinfo.org**

Safety Data Sheet Collection

There are several free online SDS databases. For your convenience, Portland State University has compiled a list:

Website: **https://msdsmanagement.msdsonline.com/153a8720-16a4-43c3-a4e9-3b1feb7cca02/ebinder/?nas=True**

Publications

A Consumer's Dictionary of Cosmetic Ingredients. 7th edition.

Ruth Winter. New York, Crown Publishers, 2009

Helpful Websites

State Site
www.ca.gov

California Department of Public Health
www.cdph.ca.gov/Pages/DEFAULT.aspx

Department of Industrial Relations
www.dir.ca.gov/dosh

United States Department of Labor
https://www.dol.gov

Chemical Hazard and Alternatives Toolbox
www.chemhat.org

Safety & Health Fact Sheet

Cal/OSHA Consultation Services
Division of Occupational Safety and Health

Working Safely in Nail Salons

All employers in California, including nail salons, are responsible for providing a safe and healthy work environment for their employees. This fact sheet provides information on:

- Requirements to develop and implement an Injury & Illness Prevention Program (IIPP).
- Common topics and resources for nail salons.

Developing and Implementing IIPP

Employers must develop and implement a comprehensive Injury and Illness Prevention Program that includes eight (8) required elements. The program must be in writing.

Cal/OSHA has provided a model program and a guide that can be used by nail salon employers to develop their own written IIPP.

The model program and guide are available online:
www.dir.ca.gov/dosh/dosh_publications/iipnonhigh.html
www.dir.ca.gov/dosh/dosh_publications/iipp.pdf

What are the Eight Elements of an IIPP?

1. Identification of the person responsible for implementing the program.
2. A system for effectively communicating with employees about health and safety matters.
3. A system for ensuring that employees comply with safe and healthy work practices. This should include providing positive reinforcement for employees who follow the rules and appropriate action for employees who violate the rules.
4. Procedures for conducting workplace inspections. The written IIPP should explain how often inspections are conducted and who does the inspections.
5. Methods for correcting unsafe conditions quickly.
6. A procedure for conducting an investigation if an employee is injured on the job or has an occupational illness.
7. Training and instruction for employees. Some of the topics and hazards most commonly found in nail salons are listed below under “Common Topics and References.”
8. Records of employee training and workplace inspections. These records should be on file and available for review.

Common Topics and References

(Only selected information is provided. Listing is not comprehensive)

Work Safely with Chemicals

- Choose safer products
- Read labels
- Read Safety Data Sheet
- Evaluate & identify hazards
- Use gloves & other equipment
- Use eye wash as needed
- Follow emergency procedures
- Dispose of leftover chemicals properly

Helpful Resources:

T8CCR for HAZCOM: http://www.dir.ca.gov/title8/5194.html
OSHA’s Nail Salon site: https://www.osha.gov/SLTC/nailsalons/
Board of Barbering and Cosmetology (BBC): www.barbercosmo.ca.gov
DTSC site: www.dtsc.ca.gov/InformationResources/DTSC_Overview.cfm
NIOSH Guide for Chemical Hazard: www.cdc.gov/niosh/docs/99-112/
CDPH –artificial nail: www.cdph.ca.gov/programs/hesis/documents/artnails.pdf
EPA site: www.epa.gov/dfe/pubs/projects/salon/nailsalonguide.pdf
HESIS booklet:
www.cdph.ca.gov/programs/hesis/Documents/introtoxsubstances.pdf
CA Safe Cosmetics Program Product Database:
https://safecosmetics.cdph.ca.gov/search/

Provide Ventilation to Bring In Fresh Air

- Open doors & windows when needed
- Turn on fans
- Maintain ceiling vents
- Use ventilated stations
- Run A/C to bring in new air
- No smoking
- Keep nail salon's exhaust system on

Helpful Resources:

Massachusetts publication: www.mass.gov/lwd/docs/dos/mwshp/hib418.pdf
Board of Barbering and Cosmetology: www.barbercosmo.ca.gov
Nails Magazine - Ventilation: www.nailsmag.com/list/topic/ventilation
NIOSH site: www.cdc.gov/niosh/topics/manicure/
T8CCR Permissible Exposure Limit: www.dir.ca.gov/title8/5155.html

Avoid Pain and Improve Ergonomics

- Provide and use proper lighting
- Eliminate awkward body postures and hand postures
- Take frequent breaks
- Provide and receive training
- Use ergonomic tools
- Avoid excessive repetitive motions

Helpful Resources:

Cal/OSHA's Easy Ergo: www.dir.ca.gov/dosh/dosh_publications/EasErg2.pdf
OSHA's Nail Salon Ergo: www.osha.gov/SLTC/nailsalons/musclestrains.html
PBA site: www.probeauty.org/docs/nmc/Ergonomic_Basics-10-9-2012.pdf
Nails Magazine -Ergonomics: www.nailsmag.com/list/topic/ergonomics

Prevent Heat Illness

- Watch for symptoms
- Drink water frequently
- Use air conditioning
- Provide and receive training
- Use rest periods
- Watch one another
- Know your emergency response plan

Helpful Resources:

Cal/OSHA eTool: www.dir.ca.gov/dosh/etools/08-006/index.htm
Cal/OSHA Heat Illness site: www.dir.ca.gov/DOSH/HeatIllnessInfo.html
Employer Training Kit: www.99calor.org/for-employers/index.html
National Weather Service: www.weather.gov/
T8CCR for Heat Illness: www.dir.ca.gov/title8/3395.html

Prevent Exposure to Infectious Diseases

- Use disinfectants
- Know how diseases spread
- Provide and receive training
- Be aware of HIV, HEP-B, HEP-C
- Use PPE (Personal Protective Equipment) and maintain good sanitation
- Dispose of biohazard waste properly

Helpful Resources:

OSHA site: www.osha.gov/SLTC/nailsalons/biohazards.html
EPA site: www.epa.gov/dfe/pubs/projects/salon/nailsalonguide.pdf
BBC site: www.barbercosmo.ca.gov/enforcement/disinfection.shtml
Asian Law Caucus: nailsalonalliance.org/storage/ALC%20factsheet.pdf
Nevada SBC site: cosmetology.nv.gov/Consumers/Nail_Salon_Guide/
T8CCR for BBP: www.dir.ca.gov/title8/5193.html

Prevent Electrical and Other Safety Hazards

- Water & electricity don't mix
- No exposed live parts
- No overloading of outlets
- No damaged extension cords
- Use ground fault circuit interrupter in wet areas
- No slippery floors; no tripping hazards
- Maintain fire extinguishers & first-aid kits
- Provide and receive training

Helpful Resources:

Cal/OSHA Guide: www.dir.ca.gov/dosh/dosh_publications/Electrical_Safety.pdf
BBC site: www.barbercosmo.ca.gov/laws_regs/regulations.shtml
T8CCR for Fire Extinguisher: www.dir.ca.gov/title8/6151.html
T8CCR for First Aid: www.dir.ca.gov/title8/3400.html
T8CCR for GFCI: www.dir.ca.gov/title8/2300.html

Prevent Workplace Violence

- Know your site security
- Understand posted signs
- Provide and receive training
- Talk with law enforcement
- Use secure cash management
- Minimize cash transactions
- Post emergency phone numbers
- Be aware of foot traffic entering through front and back doors

Helpful Resources:

Model IIPP: www.dir.ca.gov/dosh/dosh_publications/iipsecurity.pdf
CalOSHA Guidelines: www.dir.ca.gov/dosh/dosh_publications/worksecurity.html
Board of Barbering and Cosmetology: www.barbercosmo.ca.gov
NHNBS Alliance: nailsalonalliance.org/
OSHA site: www.osha.gov/SLTC/nailsalons/

Contacting Cal/OSHA Consultation Services

Publications: www.dir.ca.gov/dosh/PubOrder.asp

Consultation Programs:
www.dir.ca.gov/dosh/consultation.html

Toll-free Number: **1-800-963-9424**

On-Site Assistance Program Area Offices:

Central Valley: 559-454-1295 San Diego / Imperial: 619-767-2060
No. California: 916-263-0704 San Bernardino: 909-383-4567
SF / Bay Area: 510-622-2891 San Fernando Valley: 818-901-5754
La Palma / LA / Orange: 714-562-5525

This document is not meant to be either a substitute for or a legal interpretation of the occupational safety and health regulations. Readers shall refer directly to Title 8 of the California Code of Regulations and the Labor Code for detailed information regarding the regulation's scope, specifications, and exceptions and for other requirements that may be applicable to their operations.

California Department of Industrial Relations

CONSULTATION CAL OSHA SERVICES

SEP 2014

IRS Tax Publications

If you are not sure whether you are an employee or an independent contractor, get Form SS-8, Determination of Worker Status for Purposes of Federal Employment Taxes and Income Tax Withholding. Publication 15-A, Employer's Supplemental Tax Guide, provides additional information on independent contractor status.

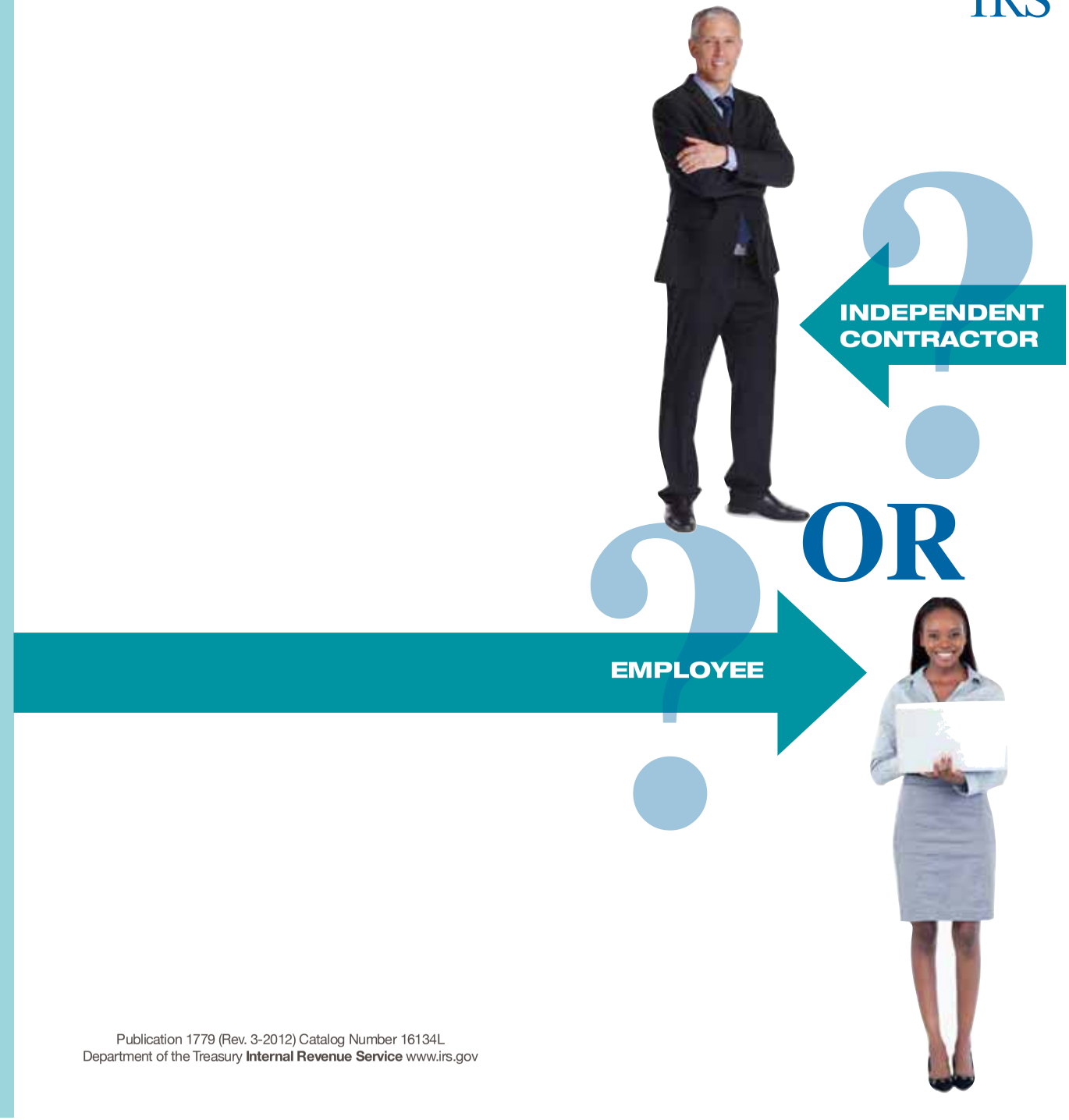
IRS Electronic Services

You can download and print IRS publications, forms, and other tax information materials on the Internet at www.irs.gov. You can also call the IRS at 1-800-829-3676 (1-800-TAX-FORM) to order free tax publications and forms.

Publication 1796, 2007 IRS Tax Products CD (Final Release), containing current and prior year tax publications and forms, can be purchased from the National Technical Information Service (NTIS). You can order Publication 1796 toll-free by calling 1-877-233-6767 or via the Internet at www.irs.gov/cdorders.

Call 1-800-829-4933, the Business and Speciality Tax Line, if you have questions related to employment tax issues.

IRS



Publication 1779 (Rev. 3-2012) Catalog Number 16134L
Department of the Treasury **Internal Revenue Service** www.irs.gov

Independent Contractor *or* Employee

Which are you?

For federal tax purposes, this is an important distinction. Worker classification affects how you pay your federal income tax, social security and Medicare taxes, and how you file your tax return. Classification affects your eligibility for social security and Medicare benefits, employer provided benefits and your tax responsibilities. If you aren't sure of your work status, you should find out now. This brochure can help you.

The courts have considered many facts in deciding whether a worker is an independent contractor or an employee. These relevant facts fall into three main categories: behavioral control; financial control; and relationship of the parties. In each case, it is very important to consider all the facts – no single fact provides the answer. Carefully review the following definitions.

Behavioral Control

These facts show whether there is a right to direct or control how the worker does the work. A worker is an employee when the business has the right to direct and control the worker. The business does not have to actually direct or control the way the work is done – as long as the employer has the right to direct and control the work. For example:

Instructions – if you receive extensive instructions on how work is to be done, this suggests that you are an employee. Instructions can cover a wide range of topics, for example:

- how, when, or where to do the work
- what tools or equipment to use
- what assistants to hire to help with the work
- where to purchase supplies and services

If you receive less extensive instructions about what should be done, but not how it should be done, you may be an independent contractor. For instance, instructions about time and place may be less important than directions on how the work is performed.

Training – if the business provides you with training about required procedures and methods, this indicates that the business wants the work done in a certain way, and this suggests that you may be an employee.

Financial Control

These facts show whether there is a right to direct or control the business part of the work. For example:

Significant Investment – if you have a significant investment in your work, you may be an independent contractor. While there is no precise dollar test, the investment must have substance. However, a significant investment is not necessary to be an independent contractor.

Expenses – if you are not reimbursed for some or all business expenses, then you may be an independent contractor, especially if your unreimbursed business expenses are high.

Opportunity for Profit or Loss – if you can realize a profit or incur a loss, this suggests that you are in business for yourself and that you may be an independent contractor.

Relationship of the Parties

These are facts that illustrate how the business and the worker perceive their relationship. For example:

Employee Benefits – if you receive benefits, such as insurance, pension, or paid leave, this is an indication that you may be an employee. If you do not receive benefits, however, you could be either an employee or an independent contractor.

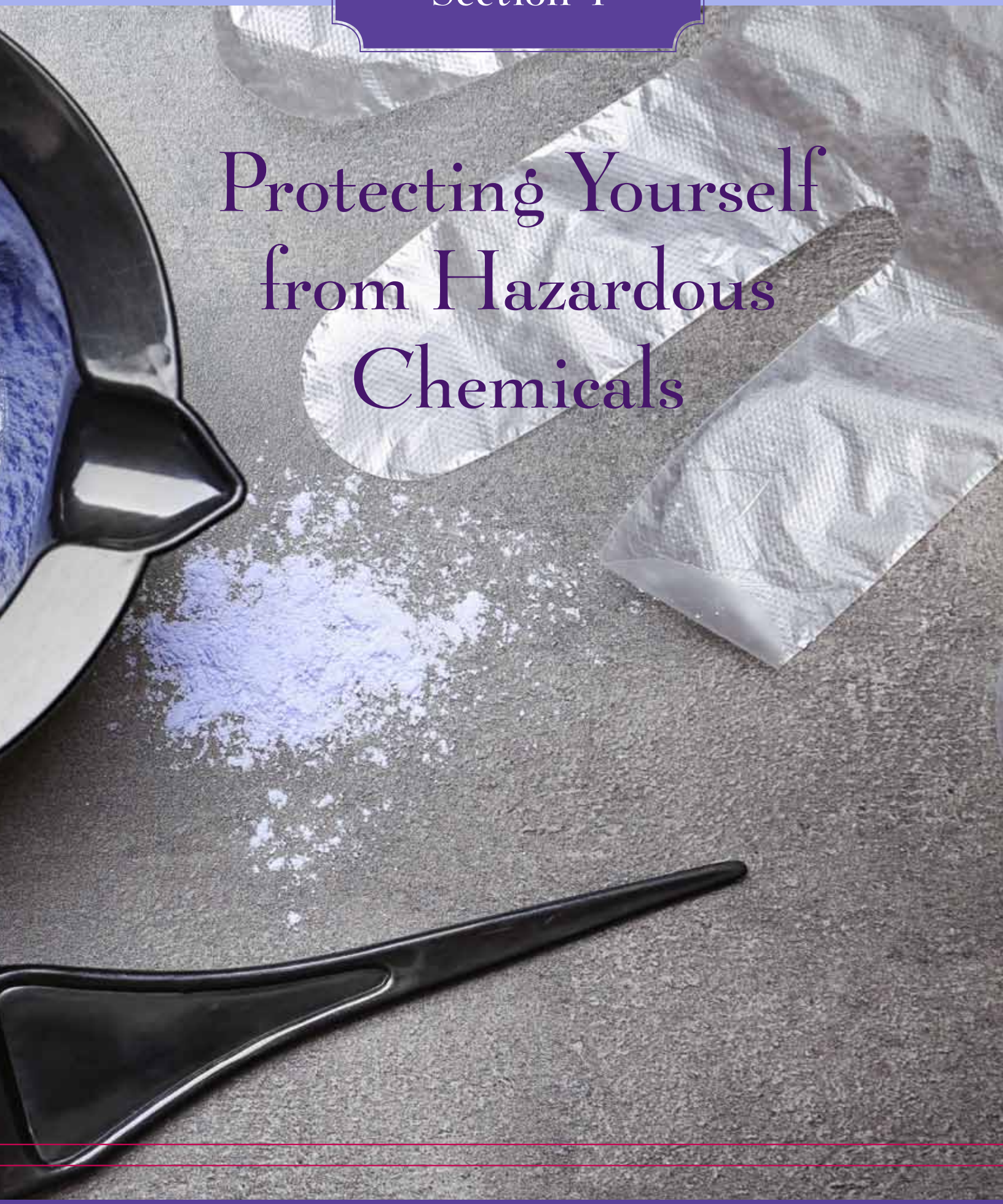
Written Contracts – a written contract may show what both you and the business intend. This may be very significant if it is difficult, if not impossible, to determine status based on other facts.

When You Are an Employee...

- Your employer must withhold income tax and your portion of social security and Medicare taxes. Also, your employer is responsible for paying social security, Medicare, and unemployment (FUTA) taxes on your wages. Your employer must give you a Form W-2, Wage and Tax Statement, showing the amount of taxes withheld from your pay.
- You may deduct unreimbursed employee business expenses on Schedule A of your income tax return, but only if you itemize deductions and they total more than two percent of your adjusted gross income.

When You Are an Independent Contractor...

- The business may be required to give you Form 1099-MISC, Miscellaneous Income, to report what it has paid to you.
- You are responsible for paying your own income tax and self-employment tax (Self-Employment Contributions Act – SECA). The business does not withhold taxes from your pay. You may need to make estimated tax payments during the year to cover your tax liabilities.
- You may deduct business expenses on Schedule C of your income tax return.



Protecting Yourself from Hazardous Chemicals

LEARNING OBJECTIVES

Section 4

Protecting Yourself from Hazardous Chemicals

After completing this section, you will be able to:

- Recognize chemical safety hazards.
- List ways to reduce chemical hazards.
- Identify and list safe work practices.

This section is about how to prevent injuries when you work with chemicals. If they are not used, stored, and disposed of properly, some chemicals in the shop or salon can cause accidents that injure you, your co-workers, or your clients.

Chemical Accidents

Can you think of some examples of chemical accidents?

- Chemicals spilling or leaking
- Chemicals catching fire or exploding
- Chemicals accidentally mixing together causing an unexpected reaction
- Chemicals harming people or the environment if not disposed of correctly

When you work with chemicals, safety precautions are just as important as health precautions. A fire, explosion, spill, leak, or other chemical accident can have tragic results for you, co-workers, and your clients. Accidents can happen quickly—in just a few seconds or a few minutes—so it's important to be prepared by knowing how to prevent chemical accidents and what to do if they occur.

Flammable or Combustible Chemicals

Chemicals that are flammable and combustible catch on fire and burn easily. They can ignite when they are near a flame (like a candle), spark (like from an electric plug), or a hot object (like a curling iron). The difference between a flammable chemical and a combustible chemical is how easily the chemical catches on fire. A flammable chemical will catch fire and burn faster and more easily than a combustible one, but both kinds will burn.

Some examples of fire hazards in a typical shop or salon are acetone, alcohol, nail polish, hairspray, styling gel, straightener solution, and aerosol cosmetics. In the past, salon clients were severely burned after they had curl activator and aerosol products applied to their hair and went near candles, matches, or cigarettes. While manufacturers often change their formulas and ingredients, products used today still have dangerous chemicals in them that should be avoided or used with caution. If a product or any ingredient in it is a fire hazard, the product's label may tell you, but don't rely on the label. As discussed in the previous lesson, always check the product's Safety Data Sheet (SDS).

Safety Precautions

There are many precautions you can take to work safely around chemicals that are flammable or combustible, including:

- Always be aware which chemicals you use may be fire hazards
- Avoid using flammable or combustible chemicals (use a safer chemical if possible)

- Don't allow a flammable or combustible chemical to come near a flame, spark, or hot object
- Check your electrical equipment to make sure there are no broken or frayed cords that might spark or get hot
- Don't try to warm up chemicals by putting them into a microwave or using a hot blow-dryer on them (you should never warm up any chemicals, even if they're not flammable or combustible)

Be Prepared

Though chemical fires are preventable, there are several ways to prepare in case one does occur. First, make sure your salon has a fire extinguisher available and ensure everyone in the shop or salon knows where it is and how to use it. If your shop or salon does not have a fire extinguisher, ask your employer to purchase and install one. Also, check the SDS sheet before there is a fire to see if there are any special firefighting instructions. As we discussed in our previous lesson, you should not use water on some kinds of chemical fires. Additionally, know how to call for emergency help and what to do until help arrives. Furthermore, have first aid supplies available in the shop or salon at all times.

FIRE EXTINGUISHERS

Did you know you cannot use just any kind of fire extinguisher on a fire? Portable fire extinguishers are classified according to the type of fire they are designed to fight. The label on the extinguisher indicates what kind of fire it should be used for. There are four classes of fires:

You can get a multipurpose extinguisher in most hardware stores or from companies that sell safety equipment.

- Class A fires are ordinary combustibles; fires involving ordinary combustible materials like wood, cloth, and paper.
- Class B fires are flammable liquids; fires involving flammable liquids, gases, and greases.
- Class C fires are electrical equipment; fires involving energized electrical equipment and electrical wiring.
- Class D fires are combustible metal; fires involving combustible metals like magnesium, titanium, and zinc.

It is very important to use the correct extinguisher on a fire. For example, you wouldn't use an extinguisher that's rated for Class A on a Class C fire. There is a fire extinguisher available that is effective against Class A, B, and C fires—it is called a multipurpose extinguisher. You can get it in most hardware stores or from companies that sell safety equipment.

CHEMICAL STORAGE

So, how should chemical products be safely stored? There are many guidelines you should follow:

- Always store chemical products in their original labeled containers. It could be dangerous if someone doesn't know what product is in a container. For example, what if you decided to store bleach in a plastic water bottle? You could get thirsty and forget that it's bleach in your

bottle, resulting in accidental ingestion and health problems. This guideline also ensures that the chemical is stored in the proper kind of container. For example, acetone shouldn't be kept in certain kinds of plastic bottles as it will melt them.

- As we discussed earlier, always check the label and the SDS for any special storage instructions. This will be a clear indicator of proper storing measures.
- Store chemical products out of direct sunlight in a cool, dark place with good ventilation. Chemicals can react or change with heat, so a storage room or cabinet is best.
- Make sure chemical containers are in good condition. Check that the containers do not have any holes as this will cause leaks and spills.
- Never store chemical products near food or near areas where people eat. This can cause contamination and accidental ingestion.
- Store all chemicals, especially flammables and combustibles, away from flames, sparks, heat, and hot objects. There are even fireproof metal cabinets you can use for highly flammable chemicals.
- After you use a product, close the container tightly. This helps prevent spills and keeps vapors from getting into the air.
- Store chemicals in a secure place where their containers will not fall and spill. Use guards along the front of shelves to keep containers from falling.
- Do not store large or heavy containers on high shelves where you will have to reach awkwardly to get them. You could drop them and they might break or spill.
- Do not store chemicals with acids in them near chemicals with bases. These are called incompatible chemicals. They can mix if their containers break, leak, or spill and cause a dangerous reaction.

Always check the label and the SDS for any special storage instructions.

PREVENTION

The most important rule for spills and leaks is to prevent them in the first place. But if a chemical does spill or leak, you should first check the SDS for any special cleanup instructions. Remember that cleanup procedures may be different for different chemicals. Once you know the proper instructions and gather the appropriate supplies, clean it up. If you get a hazardous chemical on your clothes, on your skin, or in your eyes, remove affected clothing and flush your skin or eye with water for at least 15 minutes. It's a good idea to have an emergency eye wash station in the establishment. Depending on the chemical, you may also need medical help.

CHEMICAL DISPOSAL

You may be wondering, how should I throw a chemical away when I'm through using it? What to do depends upon the particular chemical. Look at the product's label and SDS for disposal instructions. You have to be especially careful when disposing of certain products. For example, there are some chemicals that you should never pour down the drain or throw in the trash. Remember that chemicals could hurt people outside the shop or salon, or harm the environment.

DID YOU KNOW?

Hazardous waste is waste that is dangerous or potentially harmful to our health and the environment. Improper disposal of hazardous wastes can harm the health of humans, as well as animals and plant life. It can also contaminate soil and the local water supply and pollute the air.

If you do not know the proper way to discard chemicals you are using in the shop or salon, the Board of Barbering and Cosmetology suggests the following:

- Read and follow the disposal instructions printed on the label of the product.
- Call or check online for instruction on how to properly dispose of hazardous waste through your local business/small generator program.
- Call or check online for your county's Environmental Health Department.
- Call or check online for your local or county Hazardous Waste Department.

Contact the California Department of Toxic Substances Control for advice call (800) 728-6942 or e-mail **RAO@dtsc.ca.gov**. Be prepared to explain what chemical you want to discard and how much.

Case Study

Now you will read a case study that reflects a real life problem you might run into when working in a shop or salon. Do your best to answer the questions presented.

For answers to all questions, please refer to your exam booklet.

CASE STUDY

One day you go into your shop's storeroom to have lunch. The table where workers eat is next to a rack of open metal shelves. On the shelves are many bottles with different chemical products. You notice three old brown bottles on one shelf that have no markings or labels, but inside there is a liquid. You wonder what it is. You also see some other bottles on a high shelf. They are big and heavy, and very close to the edge. You worry that they might fall. It's a warm day, and the storeroom is hot and stuffy. You change your mind and decide to go outdoors to eat your lunch.

What rules for chemical storage are being broken in this shop?

What suggestions would you make to improve this situation?

How Can You Protect Yourself From the Chemicals You Use?

Think about equipment and methods you can use to protect yourself from both health and safety hazards as you work with chemicals.

You may have thought of:

- Gloves
- Respirator
- Dust mask
- Safety glasses
- Storage cabinet
- Using safer chemicals
- Apron
- Ventilation
- Goggles
- Fire extinguisher
- Training

The best way to protect yourself is to stop your exposure to dangerous chemicals and their hazards altogether, or to reduce your exposure as much as possible. Remember from our previous lessons that just because something has little or no odor does not mean it is safe.

Five Key Ways to Reduce Chemical Hazards

There are different methods to help stop or reduce exposure, usually grouped into five categories:

1. **Avoid Harmful Chemicals**
2. **Isolate the Work Process**
3. **Use Good Ventilation**
4. **Work in a Safe Way**
5. **Use Personal Protective Equipment**

1. Avoid Harmful Chemicals

First, avoid harmful chemicals by using a safer product or safer process. For example, if you stop using nail polish with formaldehyde and use formaldehyde-free nail polish instead, you avoid exposing yourself and your clients to that dangerous chemical. However, you should make sure that the formaldehyde-free nail polish does not contain other harmful chemicals like toluene and dibutyl phthalate. You would not want to switch from using a product with one chemical to another that is just as dangerous or more dangerous than the original one. To avoid hazardous chemicals, many salons and shops across America are "going green" by choosing safer products that are free from harmful chemicals. In addition to using safer products, look for ways to improve your processes. For example, a safe process is using tongs or gloves instead of your bare hands to remove disinfected tools from the disinfectant solution. This process is required by the California Code of Regulations. Every service you perform and every product you use in the shop or salon has a different health or safety risk, so you must determine which route is best for you.

2. Isolate the Work Process

A second way to reduce chemical hazards is to isolate the work process—in other words, work away from other people. For example, you could mix developer and hair color in a separate room with good ventilation so co-workers and clients in the main service area won't be exposed to the fumes while they are being mixed. Another example is doing artificial nails in a separate area of the establishment to minimize exposure of vapors and dusts.

Mix developer and hair color in a separate room with good ventilation so co-workers and clients in the main service area won't be exposed to the fumes.

3. Use Good Ventilation

The third way to reduce chemical hazards is to use a good ventilation system. Ventilation is a system that either removes harmful chemicals from the air before you can breathe them in or supplies enough fresh air to dilute the harmful chemicals in the air. There are two main types of ventilation: local exhaust ventilation and general dilution ventilation.

Local Exhaust Ventilation

Local exhaust ventilation is the most effective type of ventilation as it removes harmful chemicals from the air at the place where they are being used. It pulls chemical vapors away before they spread into the room and into your breathing space. A local exhaust ventilation system consists of hoods, ducts, and fans to move the air, and sometimes an air cleaner.

One type of local exhaust ventilation system used in salons is the vented manicure table. These tables are used when working on a client's nails because many nail processes create chemical vapors and nail dust. Local exhaust ventilation is built into the table and protects both workers and clients. An internal fan creates suction that pulls chemical vapors and dust away from the client's hand and out through a duct. Whenever possible, a system like this should be set up to vent the vapors outdoors. It should not exhaust them back inside the establishment. Sometimes all that's needed is to run the duct through a window.

A special type of vented table is able to circulate the air back into the establishment safely. It contains filters that clean the air before it is re-circulated. Separate filters located under the table are used to capture vapors (charcoal filters) and nail dust (dust fibers). Both charcoal filters and dust filters must be changed on a regular basis as they can fill with vapor and dust, and then stop working.

Another example of a local exhaust ventilation system is a fume hood. This can be used when mixing chemicals as it pulls vapors away right at the point where the mixing is done. Fume hoods are sold at safety supply stores and must be installed by a health and safety professional.

Sometimes the mixing area and fume hoods are in a separate room away from the main service area, so the shop or salon is using two kinds of protection—isolating the process as well as ventilation.

How do you decide where to place a local exhaust ventilation system? Here are some helpful hints:

- Place the system so it captures vapors and dust close to the point where they are produced.
- Place it so it draws the vapors and dust away from you, not past your nose and mouth.
- Do not place your system near a door or where there is a lot of foot traffic because people passing by can disturb the air currents and interfere with the system.
- Never place a general purpose fan in a position where it blows air across your local exhaust ventilation system as that could ruin the ability of the system to capture chemicals.
- Consult an industrial hygienist (a health and safety specialist) or a ventilation engineer before purchasing, installing, or deciding how to position a local exhaust ventilation system.

General Dilution Ventilation

Now let's discuss a another type of ventilation—general dilution ventilation. This system works by bringing fresh air into a room to keep harmful substances thinned out (diluted). This method lowers the concentration of chemical vapors in the air and it is used in most shops and salons. Dilution ventilation can be either mechanical or natural. A mechanical system uses fans and vents to remove stale air and supply replacement air, while a natural system provides fresh air by opening windows or doors. The natural system cannot always be used, such as when it is too cold, raining, or the windows and doors are not placed in the right position to bring fresh air inside. Since dilution ventilation doesn't actually remove chemicals from the air, this method does not really protect you against chemical hazards. It's only intended as a way to control temperature, humidity, and mild odors. With chemicals that are less harmful, however, dilution ventilation is better than no ventilation. Local exhaust ventilation, when it can be used, is a better way to protect yourself from chemical hazards.

4. Work in a Safe Way

The fourth way to reduce chemical hazards is to work in a safe way. Working safely with chemicals means that all future professionals should follow certain guidelines, sometimes called safe work practices. It's a good idea for the shop or salon to set up a written list of do's and don'ts for every process that uses chemicals. All licensees should then have a copy of these guidelines and understand them to protect themselves and their clients. To get you started, the Board has provided examples of some recommended safe practices guidelines you may see in your shop or salons plan:

Chemical Storage

Do:

- Do store chemicals in their original labeled containers.
- Do close containers securely when storing them.
- Do use a fireproof metal cabinet for extremely flammable chemicals.

Don't:

- Don't store chemicals where they will be exposed to heat or sunlight.
- Don't store chemicals where containers can fall and spill.
- Don't store flammable chemicals near sparks, open flames, or other possible sources of ignition.
- Don't store chemicals near food or eating areas.
- Don't store incompatible chemicals near each other (they can react with each other if mixed).

Chemical Disposal

(Depends upon the particular chemical, but generally)

Do:

- Do check the SDS for specific disposal instructions.
- Do check with the California Department of Toxic Control Substances if you have questions regarding the disposal of hazardous substances.

Don't:

- Don't pour dangerous chemicals down the sink drain.
- Don't throw dangerous chemicals in the regular trash.

Chemical Mixing

Do:

- Do set up a special area just for chemical mixing.
- Do make sure the mixing area has good ventilation.
- Do make sure the mixing area has protective equipment like aprons, gloves, and goggles or other eye protection available.
- Do make sure the mixing area has an emergency eye wash and a place nearby to wash your hands.

Don't:

- Don't mix chemicals near food or near eating areas.

Eating/Drinking

Do:

- Do have a separate area available for eating and drinking.

Don't:

- Don't eat or drink around chemicals.

Good Housekeeping

Do:

- Do keep areas where chemicals are used clean, neat, and dry.
- Do clean up all spills right away.
- Do use proper cleanup methods as listed on the SDS.
- Do keep all safety equipment in good working order.
- Do test ventilation equipment regularly to make sure it's working properly.

Work Scheduling

Space out chemical services (like perms) throughout the day so you won't be exposed to the same chemical continuously. The establishment's schedule should not require anyone to do the same process all day long.

Chemical Inventory

Employers and independent contractors are required by law to have certain information about chemicals on hand:

- An inventory that lists all hazardous chemicals used in the establishment
- A SDS sheet for each hazardous chemical

Emergency Preparedness Plan

Your establishment should have an emergency preparedness policy plan. This policy is a plan of action to be conducted in response to an emergency event, such as a fire in a shop or salon. This plan should be prepared by the salon or shop owner. The Board recommends this action plan state that every employee has a right to get information and training about the hazard at work. In fact, this training is guaranteed by law. Training should include:

- What specific hazards there are in the establishment
- How people can protect themselves
- Where SDSs are kept and how to read them
- What health and safety rules should be followed in the establishment
- What health and safety rights workers have under the law
- Signs indicating where fire exits are located
- Notices stating evacuation procedure and assembly points

This information should be given in a way that everyone can understand. If necessary, Training Materials and classes might need to be translated into different languages. To get you started, the Board has provided an example of some recommended emergency plan guidelines you may see in your shop or salons plan:

Emergency Planning

Do:

- Do keep emergency equipment in the establishment, like fire extinguishers, eye washes, and first aid kits.
- Do know what to do in an emergency. Read all directions and warnings printed on chemical products before there's an accident.
- Remove affected clothing, flush your skin with water for 15 minutes, and get medical attention, if necessary, if you get a hazardous chemical on your skin or clothes
- Do check the SDS for information on handling emergencies.

Don't:

- Don't try to fight a chemical fire unless you know how that chemical reacts.
- Don't try to fight a chemical fire unless you have the right kind of fire extinguisher for that chemical.
- Don't try to clean up a large chemical spill unless you know the proper way to clean up that chemical.

5. Use Personal Protective Equipment

The last of the five key ways to reduce chemical hazards is personal protective equipment. Personal protective equipment, sometimes called PPE, is any piece of equipment that is designed to protect you from chemicals by placing a barrier between you and the chemical. As we learned in the previous lesson, SDSs tell you what kind of PPE should be used when handling the chemical product.

Unlike some of the other methods of protection, PPE doesn't remove the hazard from the shop or salon—it only shields you from the hazard. It is always better to get rid of the hazard altogether. Besides being less effective, some PPE can also be uncomfortable and awkward to use. While PPE is not the best way to protect yourself from chemicals, it is better than no protection at all. In many shops and salons, PPE may be the only protection you have.

You must use the right gloves for the chemical you are working with.

- **Gloves**
  To protect your hands and forearms when you work with chemicals, you should use gloves specifically designed for chemicals. There are different types of gloves for different chemicals, so you must use the right glove for the chemical you are working with. For example, if you are working with a hair relaxer that contains sodium hydroxide, you must use gloves designed to keep out sodium hydroxide. The gloves'

Safety glasses offer the best protection against flying particles like nail fragments or nail dust.

package should tell you which chemicals the gloves are designed for. Nitrile gloves are superior to latex or vinyl in terms of protection from chemicals. They are also more resistant to punctures and tears. Keep in mind that gloves only keep chemicals out for a limited time—after that, they break down and the chemical can get through. The length of time the glove will work well is called the breakthrough time. When the breakthrough time is up, throw the gloves away and use a new pair. Look for the breakthrough time on the package or check with the manufacturer. Many gloves are designed to be disposable, so they should only be used once. Never wash or reuse gloves. After use, the chemical could start to get through the glove and you might not even realize it. The California State Board of Barbering and Cosmetology requires licensees to dispose of gloves immediately after use. Also, always wash your hands after you've been using gloves or when you change gloves.

- **Goggles or Safety Glasses**
  To protect your eyes you should wear chemical splash goggles or safety glasses. Chemical splash goggles protect against chemical splashes as they form a seal around your eyes. Some types have side vents to prevent them from fogging up, but they are designed so splashing chemicals still cannot get through. Safety glasses offer the best protection against flying particles like nail fragments or nail dust. These have side shields to protect your eyes from particles coming from the side, something prescription glasses or sunglasses do not.
- **Protective Clothing**
  To protect your skin from chemicals, you should wear a long-sleeved shirt and an apron or smock. If you perform nail services, long-sleeved shirts prevent acrylic dust from touching your skin and getting on your clothes. It's best to use an apron or smock made of plastic or some other liquid-resistant material that will keep chemicals off. Cloth will not do that job since it absorbs chemicals. Remember not to wear a plastic apron or smock during thermal processes, as hot equipment can melt the plastic.
- **Dust Masks**
  To protect your nose and mouth from dust, you should wear a dust mask. They may look like medical masks used in hospitals, but they are specifically designed to keep you from inhaling particles. It is best to use a round dust mask with a metal strip that you can adjust to fit the bridge of your nose. Wearing the wrong mask or a mask that does not fit or not changing the mask (when soiled) can be worse for your health. The best mask to protect against particles, such as acrylic powder, is a NIOSH-approved N95 mask. "N95" should be printed on the mask. Since dust masks only protect you from particles, you can still be exposed to chemical vapors.

To protect your skin from chemicals, you should wear a long-sleeved shirt and an apron or smock.

To protect yourself from chemical vapors, you should wear a NIOSH certified chemical cartridge respirator. These are masks with special cartridges in them to capture chemical vapors and clean the air as you breathe. These are hardly used by licensees as they are bulky, must be

individually fitted to your face, you must receive special training on how to use and maintain them, and a written respiratory protection program must be implemented. Even so, know that this equipment exists, should you want it.

Owner Responsibility

Now that you know what protective equipment you need, how do you get them? Cal/OSHA rules say that the employer is responsible for supplying all necessary protective equipment. Employers should have it available for all employees. Independent contractors should provide their own equipment. Employers and independent contractors can buy equipment from stores, catalogs, or websites, but make sure you test the equipment to see if it works for you. Is it comfortable? Is it practical? There are many different manufacturers and companies, so find something that works for you. Once you do, remember to keep an adequate supply on hand at all times.
PPE may be an extra cost and unattractive or uncomfortable to wear, but your safety should be a top priority to both you and your employer.

It is best to use a round dust mask with a metal strip that you can adjust to fit the bridge of your nose.

Safety Fact Sheets

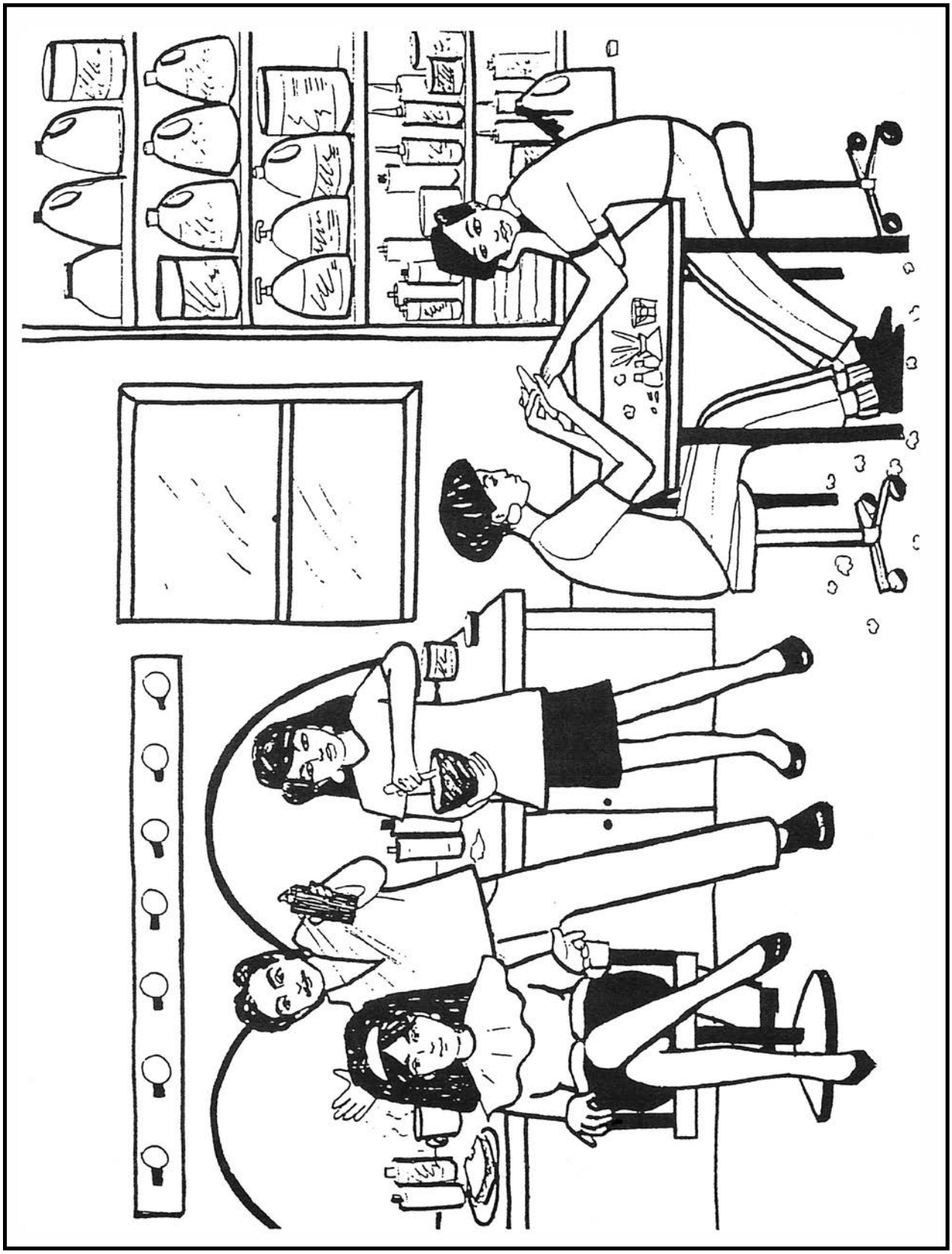
Safety fact sheets on common products used in the shop or salon have been included in your Training Materials file. These fact sheets will serve as a reminder on how these chemicals get into your body, how your body is affected by the exposure, what chemicals are contained in the product, and how you can protect yourself from the product. Take a moment to review the fact sheets. Print the safety fact sheets out and keep them close by so that you will have easy access for reviewing.

What's Wrong With This Picture?

The picture on the next page shows a typical work situation in a shop or salon. In the picture, there are several things wrong: There are chemical hazards and workers are not taking proper precautions. Using what you have learned, identify what is wrong in the picture, and think of what protective measures would make the situation safe.

For possible answers, please refer to your exam booklet.

What's Wrong With This Picture?



This picture shows a typical work situation in a shop or salon. In the picture, there are several things wrong: There are chemical hazards and workers are not taking proper precautions. Using what you have learned, identify what is wrong in the picture, and think of what protective measures would make the situation safe.

Now that you know what to look out for in the shop or salon and several ways to prevent chemical injuries, let's test your knowledge.

Questions for Review

You are safe from chemical exposure as long as the door is open. True or False?

Personal Protective Equipment (PPE) is not the best way to protect yourself from chemicals. True or False?

Which of the following are ways to reduce chemical hazards?

- **A)** Use vented manicure tables
- **B)** Transfer chemical products to smaller bottles to limit exposure
- **C)** Mix chemicals in an area away from others
- **D)** A and C
- **E)** All of the above

What does "breakthrough time" refer to?

- **A)** The length of time it takes a fire to spread from one point to another
- **B)** The length of time it should take to put out a fire
- **C)** The length of time protective gloves will work well
- **D)** The length of time it takes a chemical to breakdown and produce vapor
- **E)** The length of time a chemical takes to absorb into your skin

You can use a multipurpose extinguisher to fight:

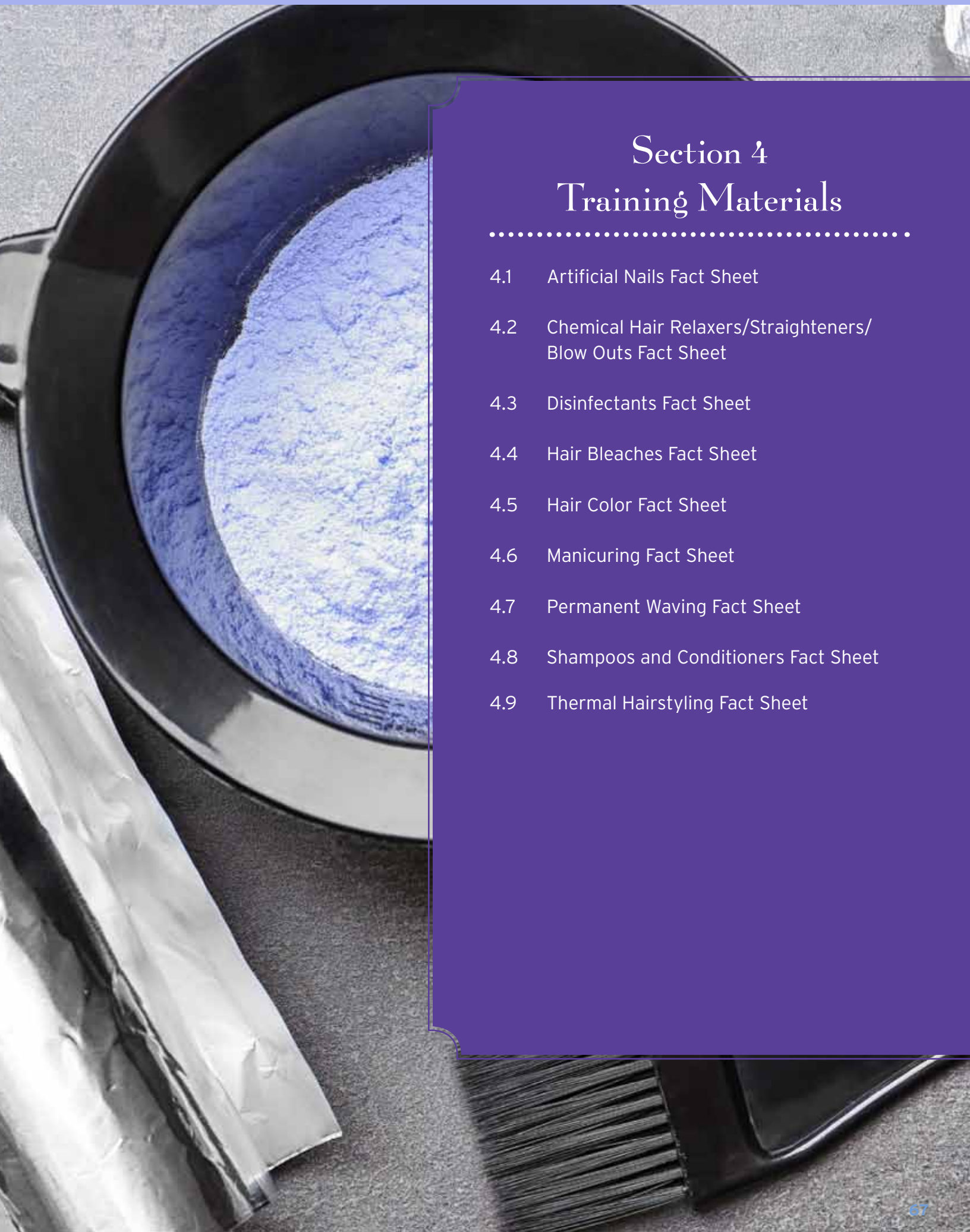
- **A)** Class A, B, and C fires
- **B)** Any fire in which water should not be used
- **C)** Insects and vermin
- **D)** Class A, B, C, and D fires
- **E)** All of the above

For answers to all questions, please refer to your exam booklet.

This concludes our lesson on protecting yourself from hazardous chemicals. In our next lesson, we will discuss ergonomics—fitting the job to the worker—and how to prevent injuries through good establishment design, equipment, and work techniques.

Notes

Notes



Section 4
Training Materials

4.1 Artificial Nails Fact Sheet

4.2 Chemical Hair Relaxers/Straighteners/ Blow Outs Fact Sheet

4.3 Disinfectants Fact Sheet

4.4 Hair Bleaches Fact Sheet

4.5 Hair Color Fact Sheet

4.6 Manicuring Fact Sheet

4.7 Permanent Waving Fact Sheet

4.8 Shampoos and Conditioners Fact Sheet

4.9 Thermal Hairstyling Fact Sheet

BarberCosmo
Board of Barbering & Cosmetology

Artificial Nails

HOW CAN CHEMICALS IN ARTIFICIAL NAIL PRODUCTS GET INTO YOUR BODY?

Skin and Eye Contact

- Some chemicals may harm your skin directly and/or be absorbed into your bloodstream.
- You may splash chemicals into your eyes.
- You may accidentally touch your eyes with chemicals on your hands.
- Chemical vapors or dust in the air may get into your eyes.

Breathing

- You may breathe in chemical vapors through your nose or mouth.
- When filing nails, you may breathe in harmful dust.

Swallowing

- If chemicals (including dust) are on your hands or in the air, they may contaminate your food or drink.

HOW CAN CHEMICALS IN ARTIFICIAL NAIL PRODUCTS AFFECT YOUR BODY?

Different chemicals affect your body in different ways, depending on the *amount* of the chemical in the product, how *harmful* it is, the *length of time* you are exposed, and other factors. Not every person has the same reaction to a chemical. Some people experience health effects when they work with a product, others never do. Health problems that may be caused by chemicals in artificial nail products include:

Central nervous system effects: Headache, dizziness, nausea, drowsiness, restlessness.

Nose and throat irritation: Runny nose, scratchy throat, burning, itching.

Skin irritation and dermatitis: Redness, itching, skin rash, or dry skin that cracks and flakes — most common on the hands and arms.

Eye irritation: Redness, burning, watering, itching.

Lung irritation: Breathing difficulty, shortness of breath, coughing, swelling of lung tissue.

Allergies: Stuffy or runny nose, sneezing, asthma, dermatitis. If you become sensitive to a particular chemical, you will have an allergic reaction every time you use it.

Cancer: Studies with laboratory animals and humans have shown that chemicals found in some artificial nail products can cause cancer. This is not a common health problem.

Reproductive problems: Studies with laboratory animals have shown that chemicals found in some artificial nail products can cause reproductive problems, such as birth defects and infertility. This is not common.

What harmful chemicals are sometimes found in artificial nail products?

WARNING! EXPOSURE TO THESE CHEMICALS MAY CAUSE:

1, 1, 2-trichloroethane or 1, 2, 2-trifluoroethane: Central nervous system effects. Skin irritation and dermatitis.

Acetone: Eye, nose, and throat irritation. Central nervous system effects. Skin irritation and dermatitis.

Acetonitrile: Eye, nose, and throat irritation. Central nervous system effects. Skin irritation and dermatitis.

Benzoyl peroxide: Skin irritation and dermatitis. Cancer in animals.

Butylated hydroxyanisole (BHA): Breathing problems. Cancer with long-term use.

Butyl methacrylate: Eye, skin, nose, mouth and throat irritation, shortness of breath, skin rash.

Dimethyl p-toluidine: Eye, nose, and throat irritation.

Ethyl acetate, butyl acetate or isopropyl acetate: Eye, nose, and throat irritation. Central nervous system effects. Breathing problems. Skin irritation and dermatitis.

Ethyl methacrylate: Eye, nose, and throat irritation. Coughing and/or shortness of breath. Asthma. Central nervous system effects. Skin irritation and dermatitis. Fire hazard.

Formaldehyde: Eye, nose, throat, and lung irritation. Watery, burning eyes. Central nervous system effects. Skin irritation and dermatitis. Breathing problems (such as asthma, coughing, and wheezing). Cancer with long-term use.

Glycol ethers (a generic term for a group of chemicals): Reproductive problems (birth defects and infertility shown in lab animal tests). Possible other effects depending on the specific chemical.

Hydroquinone: Eye, nose, and throat irritation. Skin irritation and dermatitis.

Methacrylic acid: Eye, nose, and throat irritation. Skin irritation and dermatitis.

Methylene chloride: Central nervous system effects. Causes cancer in lab animal tests.

Methyl ethyl ketone (MEK): Eye, nose, and throat irritation. Central nervous system effects.

Methyl methacrylate (MMA): Red, itchy, and swollen skin with tiny blisters. Scratch throat, runny nose, and cough. Numbness and muscle weakness. Central nervous system effects.

Ortho-phenylphenol (OPP): Eye, nose, and throat irritation. Abdominal pain. Coughing and/or shortness of breath.

Phthalates (such as dibutyl phthalate): Reproductive birth defects.

Quaternary ammonium compounds (such as benzalkonium chloride): Eye, nose, and throat irritation. Breathing problems (such as asthma and shortness of breath).

Toluene: Eye, nose, and throat irritation. Central nervous system effects. Skin irritation and dermatitis. Reproductive problems.

Xylene: Eye, nose, and throat irritation. Central nervous system effects. Skin irritation and dermatitis. Reproductive problems.

Not all artificial nail products contain these chemicals, and some may contain harmful chemicals not listed above. Always check the product's Safety Data Sheet (SDS) for more information. Other manicuring products are covered in a separate fact sheet.

HOW CAN YOU PROTECT YOURSELF FROM CHEMICAL HAZARDS?

When you work with chemicals in artificial nail products, it is important to take steps to protect your health.

Avoid harmful chemicals

- For any product used, read the label and Safety Data Sheet to know what is in the product and its health effects.
- Use products with the least harmful chemicals in them when possible.
- Don't use products that contain formaldehyde, methacrylates, or methylene chloride.

Use safe work practices

- Keep containers closed when you're not using them so the product doesn't spill or get into the air.
- Check that all containers of chemicals are properly labeled of their contents.
- Don't eat or drink in your work area as your food or drink may get contaminated.
- Wash your hands after working with chemicals, even if you wore gloves.

Ventilate the room

- Always work in a well-ventilated area. If there's no ventilation system, open windows and doors to bring in fresh air from outside.
- Use a manicuring table with a built-in ventilation system. The hood pulls dust and vapors away from your breathing area.
- Do not rely on fans. They only blow dust and vapors around the room — they don't get rid of them.

Use protective equipment

- Wear gloves designed to protect your skin from the particular chemicals you're using.
- Wear a NIOSH-approved dust mask to protect yourself from dust when you file nails.
- Wear safety glasses to protect your eyes from nail clippings.
- Wear safety goggles when mixing chemicals to protect your eyes from splashes.

Know your rights as a worker

- Employers must provide workers with Safety Data Sheets if requested.
- Employers must train workers on the hazards of the chemicals they are working with and how to protect themselves from the hazards.

Report any health problems

- Speak up if you are experiencing symptoms of health effects so your employer can help alleviate the problem and let other employees know.
- Seek advice from your doctor on how serious your issues are and how they should be handled.
- You have the right to report health hazards to Cal/OSHA by filing a complaint.

ARE GEL MANICURES SAFE?

There are many chemicals in the shop or salon that you may be exposed to during manicuring services, but there is something else you should be aware of — UV ray exposure. This occurs during gel manicures as the polish is cured under ultraviolet lamps. These lights emit UVA rays — the same rays emitted by the sun and tanning beds, which have skin-damaging effects and can lead to cancer.

While the amount of UV radiation produced by a nail-drying lamp at a single visit to a nail salon is not a serious concern, it is important to recognize that exposure is occurring. Any exposure, no matter how little, is still exposure. UVA exposure is harmful and could lead to premature skin aging (such as wrinkles) and eventually skin cancer. Because the wattage of nail lamps varies and produces different levels of radiation, even as few as eight uses of a higher-wattage lamp may produce enough exposure to cause skin damage. There is no evidence that cancer is a direct effect from using these nail-drying lamps; however, it is possible that the lamps are a contributing factor.

All UV exposure adds up over one's lifetime. Physicians and The Skin Cancer Foundation recommend playing it safe by applying broad-spectrum (UVA/UVB) sunscreen with an SPF of 15 or higher to hands before exposing them to UV light emitted from nail-drying devices. Some clients may even wear dark opaque gloves with the fingertips cut off to protect their skin.

Because manufacturers are constantly developing new technologies, there is an alternative that poses a lower risk to one's health. Many salons are now using LED lights instead of UV lamps. These lights emit a significantly smaller dose of UV radiation and there has not been one study that shows LED lights cause cancer. In fact, LED lights are often used in beautifying services, such as treating signs of sun damage. In addition, LED lights cure gel polish much faster and the bulbs never need to be replaced.

Whether you or your salon chooses to use UV lamps or LED lights, make sure you recognize the health risks of both and make the best decision for you and your client.

BarberCosmo
Board of Barbering & Cosmetology

Chemical Hair Relaxers/Straighteners/Blow Outs

HOW CAN CHEMICALS IN HAIR RELAXERS, STRAIGHTENERS, AND BLOW OUTS GET INTO YOUR BODY?

Skin and Eye Contact

- Some chemicals may harm your skin directly and/or be absorbed into your bloodstream.
- You may splash chemicals into your eyes.
- You may accidentally touch your eyes with chemicals on your hands.
- Chemical vapors in the air may get into your eyes.

Breathing

- You may breathe in chemical vapors through your nose or mouth.

Swallowing

- Chemicals on your hands or in the air may contaminate your food or drink.

HOW CAN CHEMICALS IN HAIR RELAXERS, STRAIGHTENERS AND BLOW OUTS AFFECT YOUR BODY?

Different chemicals affect your body in different ways, depending on the *amount* of the chemical in the product, how *harmful* it is, the *length of time* you are exposed, and other factors. Not every person has the same reaction to a chemical. Some people experience health effects when they work with a product, others never do. Health problems that may be caused by chemicals in relaxers, straighteners or blow outs include:

Central nervous system effects: Headache, dizziness, nausea, drowsiness, restlessness.

Nose and throat irritation: Runny nose, scratchy throat, burning, itching.

Skin irritation and dermatitis: Redness, itching, skin rash, or dry skin that cracks and flakes — most common on the hands and arms.

Allergies: Stuffy or runny nose, sneezing, asthma, dermatitis. If you become sensitive to a particular chemical, you will have an allergic reaction every time you use it.

Eye irritation: Redness, burning, watering, itching.

Lung irritation: Breathing difficulty, shortness of breath, coughing, swelling of lung tissue.

Burns: Chemicals in some hair relaxers and straightening products can cause burns if they get on your skin or in your eyes.

Chemical Hair Relaxers/Straighteners/Blow Outs

What harmful chemicals are sometimes found in chemical hair relaxers, straighteners and blow outs?

WARNING! EXPOSURE TO THESE CHEMICALS MAY CAUSE:

Alcohol (isopropyl): Eye, nose, throat, and lung irritation. Central nervous system effects. Skin irritation and dermatitis.

Ammonium hydroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Skin irritation and dermatitis.

Ammonium thioglycolate or glycerol monothioglycolate: Eye, nose, throat, and lung irritation. Skin irritation and dermatitis. Allergies, including asthma. (Ammonium thioglycolate is less likely to cause some of these symptoms.)

Boric acid, perborate, or borate: Central nervous system effects. Kidney damage if swallowed.

Bromates: Eye, nose, and throat irritation. Central nervous system effects. Skin and eye burns. Skin irritation and dermatitis. Severe irritation of mouth, throat, and stomach if swallowed. Kidney damage if swallowed.

Guanidine carbonate: Skin irritation and dermatitis. Skin and eye burns.

Hydrogen peroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Severe irritation of mouth, throat, and stomach if swallowed.

Sodium hydroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Skin irritation and dermatitis. Severe irritation of mouth, throat, and stomach if swallowed.

Formaldehyde (methylene glycol): Eye, nose, throat irritation, lung cancer, blindness, asthma, skin rashes. Note: The following chemicals are treated as formaldehyde under OSHA's Formaldehyde standard – formalin, methylene oxide, paraform, formic aldehyde, methanol, oxomethane, oxymethylene.

Not all hair relaxers, straighteners and blow outs contain these chemicals, and some may contain harmful chemicals not listed above. Always check the product's Safety Data Sheet (SDS) for more information.

Chemical Hair Relaxers/Straighteners/Blow Outs

HOW CAN YOU PROTECT YOURSELF FROM CHEMICAL HAZARDS?

When you work around chemicals in hair relaxers and straighteners, it is important to take steps to protect your health.

Avoid harmful chemicals

- For any product used, read the label and Safety Data Sheet to know what is in the product and its health effects.
- Use products that contain bisulfites instead of sodium hydroxide or thioglycolates.
- Use ammonium thioglycolate instead of glycerol monothioglycolate.
- Use products with the least harmful chemicals in them when possible.

Use safe work practices

- Use a heat pressing method for straightening hair instead of chemicals.
- Keep containers closed when you're not using them so the product doesn't spill or get into the air.
- Check that all containers of chemicals are properly labeled of their contents.
- Don't eat or drink in your work area as your food or drink may get contaminated.
- Wash your hands after working with chemicals, even if you wore gloves.

Ventilate the room

- Always work in a well-ventilated area. If there's no ventilation system, open windows and doors to bring in fresh air from outside.

Use protective equipment

- Wear gloves designed to protect your skin from the particular chemicals you're using.
- Wear safety goggles when mixing chemicals to protect your eyes from splashes.

Know your rights as a worker

- Employers must provide workers with Safety Data Sheets if requested.
- Employers must train workers on the hazards of the chemicals they are working with and how to protect themselves from the hazards.

Report any health problems

- Speak up if you are experiencing symptoms of health effects so your employer can help alleviate the problem and let other employees know.
- Seek advice from your doctor on how serious your issues are and how they should be handled.
- You have the right to report health hazards to Cal/OSHA by filing a complaint.

BarberCosmo
Board of Barbering & Cosmetology

Disinfectants

HOW CAN CHEMICALS IN DISINFECTANTS GET INTO YOUR BODY?

Skin and Eye Contact

- Some chemicals may harm your skin directly and/or be absorbed into your bloodstream.
- You may splash chemicals into your eyes.
- You may accidentally touch your eyes with chemicals on your hands.
- Chemical vapors in the air may get into your eyes.

Breathing

- You may breathe in chemical vapors through your nose or mouth.

Swallowing

- Chemicals on your hands or in the air may contaminate your food or drink.

HOW CAN CHEMICALS IN DISINFECTANTS AFFECT YOUR BODY?

Different chemicals affect your body in different ways, depending on the *amount* of the chemical in the product, how *harmful* it is, the *length of time* you are exposed, and other factors. Not every person has the same reaction to a chemical. Some people experience health effects when they work with a product, others never do. Health problems that may be caused by chemicals in disinfectants include:

Central nervous system effects: Headache, nausea.

Skin irritation and dermatitis: Redness, itching, skin rash, or dry skin.

Eye irritation, eye damage, and blindness: Redness, burning, watering, itching, loss of sight.

Nose and throat irritation: Runny nose, scratchy throat, burning, itching.

Lung irritation: Breathing difficulty, shortness of breath, coughing.

Reproductive problems: Birth defects.

What harmful chemicals are sometimes found in disinfectants?

WARNING! EXPOSURE TO THESE CHEMICALS MAY CAUSE:

2-butoxyethanol or ethylene glycol monobutyl ether: Headaches, eye and nose irritation, reproductive problems, birth defects.

Bleach: Eye irritation, skin irritation, breathing problems.

Quaternary ammonium compounds or dimethyl benzyl ammonium chloride: Skin irritation, nose irritation, asthma.

Phenol: Respiratory irritation, headaches, burning eyes, skin burns, liver damage, muscle tremors and loss of coordination.

Glutaraldehyde: Lung, eye, nose and throat irritation, asthma, dermatitis.

Not all disinfectants contain these chemicals, and some may contain harmful chemicals not listed above. Always check the product's Safety Data Sheet (SDS) for more information.

HOW CAN YOU PROTECT YOURSELF FROM CHEMICAL HAZARDS?

The California Board of Barbering and Cosmetology requires that all non-electrical tools be disinfected with an EPA registered disinfectant with demonstrated bactericidal, fungicidal, and virucidal activity; therefore, when you work around chemical disinfectants, it is important to take steps to protect your health.

Use safe work practices

- Keep containers closed when you're not using them so the product doesn't spill or get into the air.
- Check that all containers of chemicals are properly labeled of their contents.
- Don't eat or drink in your work area as your food or drink may get contaminated.
- Wash your hands after working with chemicals, even if you wore gloves.
- Remove tools from the disinfectant with tongs.

Ventilate the room

- Always work in a well-ventilated area. If there's no ventilation system, open windows and doors to bring in fresh air from outside.

Use protective equipment

- Wear gloves designed to protect your skin from the particular chemicals you're using.
- Wear safety goggles when mixing chemicals to protect your eyes from splashes.

Know your rights as a worker

- Employers must provide workers with Safety Data Sheets if requested.
- Employers must train workers on the hazards of the chemicals they are working with and how to protect themselves from the hazards.

Report any health problems

- Speak up if you are experiencing symptoms of health effects so your employer can help alleviate the problem and let other employees know.
- Seek advice from your doctor on how serious your issues are and how they should be handled.
- You have the right to report health hazards to Cal/OSHA by filing a complaint.

BarberCosmo
Board of Barbering & Cosmetology

Hair Bleaches

HOW CAN CHEMICALS IN HAIR BLEACHES GET INTO YOUR BODY?

Skin and Eye Contact

- Some chemicals may harm your skin directly and/or be absorbed into your bloodstream.
- You may splash chemicals into your eyes.
- You may accidentally touch your eyes with chemicals on your hands.
- Chemical vapors in the air may get into your eyes.

Breathing

- You may breathe in chemical vapors through your nose or mouth.

Swallowing

- Chemicals on your hands or in the air may contaminate your food or drink.

HOW CAN CHEMICALS IN HAIR BLEACHES AFFECT YOUR BODY?

Different chemicals affect your body in different ways, depending on the *amount* of the chemical in the product, how *harmful* it is, the *length of time* you are exposed, and other factors. Not every person has the same reaction to a chemical. Some people experience health effects when they work with a product, others never do. Health problems that may be caused by chemicals in hair bleaches include:

Central nervous system effects: Headache, dizziness, nausea, drowsiness, restlessness.

Nose and throat irritation: Runny nose, scratchy throat, burning, itching.

Skin irritation and dermatitis: Redness, itching, skin rash, or dry skin that cracks and flakes — most common on the hands and arms.

Eye irritation: Redness, burning, watering, itching.

Lung irritation: Breathing difficulty, shortness of breath, coughing, swelling of lung tissue.

Burns: Chemicals in some hair bleaches can cause burns if they get on your skin or in your eyes.

Allergies: Stuffy or runny nose, sneezing, asthma, dermatitis. If you become sensitive to a particular chemical, you will have an allergic reaction every time you use it.

What harmful chemicals are sometimes found in hair bleaches?

WARNING! EXPOSURE TO THESE CHEMICALS MAY CAUSE:

Alcohol (ethyl or isopropyl): Eye, nose, throat, and lung irritation. Central nervous system effects. Skin irritation and dermatitis.

Ammonium hydroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Skin irritation and dermatitis.

Ammonium persulfate or potassium persulfate: Eye irritation. Skin irritation and dermatitis. Allergies, including asthma. Possible fire hazard.

Hydrogen peroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Severe irritation of mouth, throat, and stomach if swallowed.

Sodium peroxide: Eye and nose irritation. Skin and eye burns. Skin irritation and dermatitis.

Not all hair bleaches contain these chemicals, and some may contain hazardous chemicals not listed above. Always check the product's Safety Data Sheet (SDS) for more information.

HOW CAN YOU PROTECT YOURSELF FROM CHEMICAL HAZARDS?

When you work around chemicals in hair bleaches, it is important to take steps to protect your health.

Avoid harmful chemicals

- Do hair lightening without boosters (ammonium persulfate or potassium persulfate).
- Or use non-persulfate boosters like sodium perborate, sodium percarbonate, or magnesium carbonate.
- For any product used, read the label and Safety Data Sheet to know what is in the product and its health effects.
- Use products with the least hazardous chemicals in them when possible.

Use safe work practices

- Store products with persulfates away from direct sunlight, heat, or flames. They are flammable.
- Keep containers closed when you're not using them so the product doesn't spill or get into the air.
- Check that all containers of chemicals are properly labeled of their contents.
- Don't eat or drink in your work area as your food or drink may get contaminated.
- Wash your hands after working with chemicals, even if you wore gloves.

Ventilate the room

- Always work in a well-ventilated area. If there's no ventilation system, open windows and doors to bring in fresh air from outside.

Use protective equipment

- Wear gloves designed to protect your skin from the particular chemicals you're using.
- Wear safety goggles when mixing chemicals to protect your eyes from splashes.

Know your rights as a worker

- Employers must provide workers with Safety Data Sheets if requested.
- Employers must train workers on the hazards of the chemicals they are working with and how to protect themselves from the hazards.

Report any health problems

- Speak up if you are experiencing symptoms of health effects so your employer can help alleviate the problem and let other employees know.
- Seek advice from your doctor on how serious your issues are and how they should be handled.
- You have the right to report health hazards to Cal/OSHA by filing a complaint.

BarberCosmo
Board of Barbering & Cosmetology

Hair Color

HOW CAN CHEMICALS IN HAIR COLOR GET INTO YOUR BODY?

Skin and Eye Contact

- Some chemicals may harm your skin directly and/or be absorbed into your bloodstream.
- You may splash chemicals into your eyes.
- You may accidentally touch your eyes with chemicals on your hands.
- Chemical vapors in the air may get into your eyes.

Breathing

- You may breathe in chemical vapors through your nose or mouth.

Swallowing

- Chemicals on your hands or in the air may contaminate your food or drink.

HOW CAN CHEMICALS IN HAIR COLOR AFFECT YOUR BODY?

Different chemicals affect your body in different ways, depending on the *amount* of the chemical in the product, how *harmful* it is, the *length of time* you are exposed, and other factors. Not every person has the same reaction to a chemical. Some people experience health effects when they work with a product, others never do. Health problems that may be caused by chemicals in hair color include:

Central nervous system effects: Headache, dizziness, nausea, drowsiness, restlessness.

Allergies: Stuffy or runny nose, sneezing, asthma, dermatitis. Sometimes chemicals from other products, such as thioglycolates in perm solutions or relaxers, can make you more likely to have an allergic reaction to chemicals in hair colorings.

Skin irritation and dermatitis: Redness, itching, skin rash, or dry skin that cracks and flakes — most common on the hands and arms.

Lead poisoning: Some hair coloring products contain lead. If you are exposed to a large amount of lead, you may be at risk of lead poisoning. Symptoms include muscle weakness, leg cramps, numbness, depression, and brain damage. This is not a common health problem.

Eye irritation, eye damage, and blindness: Redness, burning, watering, itching, loss of sight.

Nose and throat irritation: Runny nose, scratchy throat, burning, itching.

Lung irritation: Breathing difficulty, shortness of breath, coughing, swelling of lung tissue.

Burns: Chemicals in some hair colorings can cause burns if they get on your skin or in your eyes.

Cancer: Coal tar dyes, used in some permanent hair colorings, have been shown to cause cancer if you work with them over a long period of time. This is not a common health problem.

What harmful chemicals are sometimes found in hair color?

WARNING! EXPOSURE TO THESE CHEMICALS MAY CAUSE:

Alcohol (ethyl, isopropyl, or propyl): Eye, nose, throat, and lung irritation. Central nervous system effects. Skin irritation and dermatitis.

Aminophenols: Eye, nose, and throat irritation. Skin irritation and dermatitis. Severe allergic reaction in some people.

Ammonium hydroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Skin irritation and dermatitis.

Coal tar dyes (aniline derivatives) such as 4-methoxy-m-phenylenediamine (4-MMPD), paraphenylenediamine, 2-nitro-phenylenediamine, 2, 4-diaminoaniside, and 2, 4-diaminoaniside sulfate: Severe eye irritation and blindness. Skin irritation and dermatitis. Severe allergic reaction in some people. Cancer if absorbed through the skin during long-term use. The FDA recommends that products with coal tar dyes carry warning labels, but the labels don't mention cancer.

Hydrogen peroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Severe irritation of mouth, throat, and stomach if swallowed.

Lead acetate: Lead poisoning if absorbed in large amounts.

Paraphenylenediamine: Skin irritation, dermatitis.

Not all hair color contains these chemicals, and some may contain harmful chemicals not listed above. Always check the product's Safety Data Sheet (SDS) for more information.

HOW CAN YOU PROTECT YOURSELF FROM CHEMICAL HAZARDS?

When you work around chemicals in hair colorings, it is important to take steps to protect your health.

Avoid harmful chemicals

- Don't use products that contain coal tar dyes or lead acetate.
- Use hair coloring products that are less harmful, like henna or another vegetable coloring.
- For any product used, read the label and Safety Data Sheet to know what is in the product and its health effects.

Use safe work practices

- Alternate between using vegetable colorings and semi-permanent colors.
- Keep containers closed when you're not using them so the product doesn't spill or get into the air.
- Check that all containers of chemicals are properly labeled of their contents.
- Don't eat or drink in your work area as your food or drink may get contaminated.
- Wash your hands after working with chemicals, even if you wore gloves.

Ventilate the room

- Always work in a well-ventilated area. If there's no ventilation system, open windows and doors to bring in fresh air from outside.

Use protective equipment

- Wear gloves designed to protect your skin from the particular chemicals you're using.
- Wear safety goggles when mixing chemicals to protect your eyes from splashes.

Know your rights as a worker

- Employers must provide workers with Safety Data Sheets if requested.
- Employers must train workers on the hazards of the chemicals they are working with and how to protect themselves from the hazards.

Report any health problems

- Speak up if you are experiencing symptoms of health effects so your employer can help alleviate the problem and let other employees know.
- Seek advice from your doctor on how serious your issues are and how they should be handled.
- You have the right to report health hazards to Cal/OSHA by filing a complaint.

BarberCosmo
Board of Barbering & Cosmetology

Manicuring

HOW CAN CHEMICALS USED IN MANICURING GET INTO YOUR BODY?

Skin and Eye Contact

- Some chemicals may harm your skin directly and/or be absorbed into your bloodstream.
- You may splash chemicals into your eyes.
- You may accidentally touch your eyes with chemicals on your hands.
- Chemical vapors or dust in the air may get into your eyes.

Breathing

- You may breathe in chemical vapors through your nose or mouth.
- When filing nails, you may breathe in harmful dust.

Swallowing

- If chemicals (including dust) are on your hands or in the air, they may contaminate your food or drink.

HOW CAN CHEMICALS IN MANICURING PRODUCTS AFFECT YOUR BODY?

Different chemicals affect your body in different ways, depending on the *amount* of the chemical in the product, how *harmful* it is, the *length of time* you are exposed, and other factors. Not every person has the same reaction to a chemical. Some people experience health effects when they work with a product, others never do. Health problems that may be caused by chemicals in manicuring products include:

Central nervous system effects: Headache, dizziness, nausea, drowsiness, restlessness.

Nose and throat irritation: Runny nose, scratchy throat, burning, itching.

Skin irritation and dermatitis: redness, itching, skin rash, or dry skin that cracks and flakes — most common on the hands and arms.

Burns: Chemicals in some manicuring products can cause burns if they get on your skin or in your eyes.

Eye irritation: Redness, burning, watering, itching.

Lung irritation: Breathing difficulty, shortness of breath, coughing, swelling of lung tissue.

Allergies: Stuffy or runny nose, sneezing, asthma, dermatitis. If you become sensitive to a particular chemical, you will have an allergic reaction every time you use it.

Cancer: Studies with laboratory animals and humans have shown that chemicals found in some manicuring products can cause cancer. This is not a common health problem.

Reproductive problems: Studies with laboratory animals have shown that chemicals found in some manicuring products can cause reproductive problems, such as birth defects and infertility. This is not common.

What harmful chemicals are sometimes found in manicuring products?

WARNING! EXPOSURE TO THESE CHEMICALS MAY CAUSE:

Acetone: Eye, nose, and throat irritation. Central nervous system effects. Skin irritation and dermatitis.

Camphor: Eye, skin, nose, mouth and throat irritation, nausea, vomiting, diarrhea, headache, dizziness.

Dibutyl phthalate (DBP): Nausea and irritated eyes, skin, nose, mouth, and throat. Long-term exposures to high concentrations may cause other serious effects.

Ethyl acetate or butyl acetate: Eye, nose, and throat irritation. Central nervous system effects. Breathing problems. Skin irritation and dermatitis.

Ethyl cyanoacrylate: Eye, mucous membrane, and skin irritation.

Ethyl methacrylate: Eye, skin and respiratory tract irritation, and skin sensitization.

Formaldehyde (Formalin): Eye, nose, throat, and lung irritation. Watery, burning eyes. Central nervous system effects. Skin irritation and dermatitis. Breathing problems (such as asthma, coughing, and wheezing). Cancer with long-term use.

Glycol ethers (a generic term for a group of chemicals): Reproductive problems (birth defects and infertility shown in lab animal tests). Possible other effects depending on the specific chemical.

Isopropyl acetate: Sleepiness, and irritated eyes, nose, and throat.

Lanolin: Skin irritation and dermatitis.

Methyl ethyl ketone (MEK): Eye, nose, and throat irritation. Central nervous system effects.

Ortho-phenylphenol (OPP): Eye, nose, and throat irritation. Abdominal pain. Coughing and/or shortness of breath.

Quaternary ammonium compounds (such as benzalkonium chloride): Eye, nose, and throat irritation. Breathing problems (such as asthma and shortness of breath).

Sodium hydroxide or potassium hydroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Skin irritation and dermatitis. Severe irritation of mouth, throat, and stomach if swallowed.

Toluene: Eye, nose, and throat irritation. Central nervous system effects. Skin irritation and dermatitis. Reproductive problems, damage to liver and/or kidneys.

Xylene: Eye, nose, and throat irritation. Central nervous system effects. Skin irritation and dermatitis. Reproductive problems.

Not all manicuring products contain these chemicals, and some may contain harmful chemicals not listed above. Always check the product's Safety Data Sheet (SDS) for more information.

HOW CAN YOU PROTECT YOURSELF FROM CHEMICAL HAZARDS?

When you work with chemicals in manicuring products, it is important to take steps to protect your health.

Avoid harmful chemicals

- For any product used, read the label and Safety Data Sheet to know what is in the product and its health effects.
- Use products with the least hazardous chemicals in them when possible.
- Don't use products that contain formaldehyde, toluene, and dibutyl phthalates.

Use safe work practices

- Keep containers closed when you're not using them so the product doesn't spill or get into the air.
- Check that all containers of chemicals are properly labeled of their contents.
- Don't eat or drink in your work area as your food or drink may get contaminated.
- Wash your hands after working with chemicals, even if you wore gloves.

Ventilate the room

- Always work in a well-ventilated area. If there's no ventilation system, open windows and doors to bring in fresh air from outside.
- Use a manicuring table with a built-in ventilation system. The hood pulls dust and vapors away from your breathing area.
- Do not rely on fans. They only blow dust and vapors around the room — they don't get rid of them.

Use protective equipment

- Wear gloves designed to protect your skin from the particular chemicals you're using. There are different types of gloves for protection from different chemicals, check the gloves package to make sure you are using the right type of glove for maximum protection.
- Wear a NIOSH-approved dust mask to protect yourself from dust when you file nails. Remember: These do not protect you from chemical vapors.
- Wear safety glasses to protect your eyes from nail clippings.
- Wear safety goggles when mixing chemicals to protect your eyes from splashes.

Know your rights as a worker

- Employers must provide workers with Safety Data Sheets if requested.
- Employers must train workers on the hazards of the chemicals they are working with and how to protect themselves from the hazards.

Report any health problems to your employer and doctor

- Speak up if you are experiencing symptoms of health effects so your employer can help alleviate the problem and let other employees know.
- Seek advice from your doctor on how serious your issues are and how they should be handled.
- You have the right to report health hazards to Cal/OSHA by filing a complaint.

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Permanent Waving

HOW CAN CHEMICALS IN PERM SOLUTIONS GET INTO YOUR BODY?

Skin and Eye Contact

- Some chemicals may harm your skin directly and/or be absorbed into your bloodstream.
- You may splash chemicals into your eyes.
- You may accidentally touch your eyes with chemicals on your hands.
- Chemical vapors in the air may get into your eyes.

Breathing

- You may breathe in chemical vapors through your nose or mouth.

Swallowing

- Chemicals on your hands or in the air may contaminate your food or drink.

HOW CAN CHEMICALS IN PERM SOLUTIONS AFFECT YOUR BODY?

Different chemicals affect your body in different ways, depending on the *amount* of the chemical in the product, how *harmful* it is, the *length of time* you are exposed, and other factors. Not every person has the same reaction to a chemical. Some people experience health effects when they work with a product, others never do. Health problems that may be caused by chemicals in permanent waving solutions include:

Central nervous system effects: Headache, dizziness, nausea, drowsiness, restlessness.

Nose and throat irritation: Runny nose, scratchy throat, burning, itching.

Skin irritation and dermatitis: Redness, itching, skin rash, or dry skin that cracks and flakes — most common on the hands and arms.

Allergies: Stuffy or runny nose, sneezing, asthma, dermatitis. If you become sensitive to a particular chemical, you will have an allergic reaction every time you use it.

Eye irritation: Redness, burning, watering, itching.

Lung irritation: Breathing difficulty, shortness of breath, coughing, swelling of lung tissue.

Burns: Chemicals in some perm solutions can cause burns if they get on your skin or in your eyes.

What harmful chemicals are sometimes found in perm solutions?

WARNING! EXPOSURE TO THESE CHEMICALS MAY CAUSE:

Alcohol (isopropyl): Eye, nose, throat, and lung irritation. Central nervous system effects. Skin irritation and dermatitis.

Ammonium thioglycolate or glycerol monothioglycolate: Eye, nose, throat, and lung irritation. Skin irritation and dermatitis. Allergies, including asthma. (Ammonium thioglycolate is less likely to cause some of these symptoms.)

Boric acid, perborate, or borate: Central nervous system effects. Kidney damage if swallowed.

Bromates: Eye, nose, and throat irritation. Central nervous system effects. Skin and eye burns. Skin irritation and dermatitis. Severe irritation of mouth, throat, and stomach if swallowed. Kidney damage if swallowed.

Hydrogen peroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Severe irritation of mouth, throat, and stomach if swallowed.

Sodium hydroxide: Eye, nose, throat, and lung irritation. Skin and eye burns. Skin irritation and dermatitis. Severe irritation of mouth, throat, and stomach if swallowed.

Not all perm solutions contain these chemicals, and some may contain harmful chemicals not listed above. Always check the product's Safety Data Sheet (SDS) for more information.

HOW CAN YOU PROTECT YOURSELF FROM CHEMICAL HAZARDS?

When you work around chemicals in perm solutions, it is important to take steps to protect your health.

Avoid harmful chemicals

- Use products that contain bisulfites instead of sodium hydroxide or thioglycolates.
- Use ammonium thiglycolate instead of glycerol monothioglycolate.
- Avoid using bromates.
- For any product used, read the label and Safety Data Sheet to know what is in the product and its health effects.

Use safe work practices

- Cut and roll the client's hair before putting on solution, so you don't get solution on your hands.
- Keep containers closed when you're not using them so the product doesn't spill or get into the air.
- Check that all containers of chemicals are properly labeled of their contents.
- Don't eat or drink in your work area as your food or drink may get contaminated.
- Wash your hands after working with chemicals, even if you wore gloves.

Ventilate the room.

- Always work in a well-ventilated area. If there's no ventilation system, open windows and doors to bring in fresh air from outside.

Use protective equipment

- Wear gloves designed to protect your skin from the particular chemicals you're using.
- Wear safety goggles when mixing chemicals to protect your eyes from splashes.

Know your rights as a worker

- Employers must provide workers with Safety Data Sheets if requested.
- Employers must train workers on the hazards of the chemicals they are working with and how to protect themselves from the hazards.

Report any health problems

- Speak up if you are experiencing symptoms of health effects so your employer can help alleviate the problem and let other employees know.
- Seek advice from your doctor on how serious your issues are and how they should be handled.
- You have the right to report health hazards to Cal/OSHA by filing a complaint.

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Shampoos and Conditioners

HOW CAN CHEMICALS IN SHAMPOOS AND CONDITIONERS GET INTO YOUR BODY?

Skin and Eye Contact

- Some chemicals may harm your skin directly and/or be absorbed into your bloodstream.
- You may splash chemicals into your eyes.
- You may accidentally touch your eyes with chemicals on your hands.
- Chemical vapors in the air may get into your eyes.

Breathing

- You may breathe in chemical vapors through your nose or mouth.

Swallowing

- Chemicals on your hands or in the air may contaminate your food or drink.

HOW CAN CHEMICALS IN SHAMPOOS AND CONDITIONERS AFFECT YOUR BODY?

Different chemicals affect your body in different ways, depending on the *amount* of the chemical in the product, how *harmful* it is, the *length of time* you are exposed, and other factors. Not every person has the same reaction to a chemical. Some people experience health effects when they work with a product, others never do. Health problems that may be caused by chemicals in shampoos and conditioners include:

Central nervous system effects: Headache, dizziness, nausea, drowsiness, restlessness.

Lung irritation: Breathing difficulty, shortness of breath, coughing, swelling of lung tissue.

Skin irritation and dermatitis: Redness, itching, skin rash, or dry skin that cracks and flakes — most common on the hands and arms.

Eye irritation: Redness, burning, watering, itching.

Nose and throat irritation: Runny nose, scratchy throat, burning, itching.

Allergies: Stuffy or runny nose, sneezing, asthma, dermatitis. If you become sensitive to a particular chemical, you will have an allergic reaction every time you use it.

Cancer: Chemicals used in a few shampoos and conditioners have been shown to cause cancer if you work with them over a long period of time. This is not a common health problem.

What harmful chemicals are sometimes found in shampoos and conditioners?

WARNING! EXPOSURE TO THESE CHEMICALS MAY CAUSE:

Alcohol (ethyl or isopropyl): Eye, nose, throat, and lung irritation. Central nervous system effects. Skin irritation and dermatitis.

Cocamide diethanolamine (cocamide DEA): Skin irritation and dermatitis. Causes cancer if exposed in high doses.

Colors or fragrances: Allergies, including allergic dermatitis.

Formaldehyde: Eye, nose, throat, and lung irritation. Central nervous system effects. Skin irritation and dermatitis. Allergies, including asthma. Known to cause cancer with long-term use.

Parabens (group of chemical preservatives): Skin irritation and dermatitis. Linked to reproductive damage and cancer.

Petroleum distillates, detergents, or soaps: Eye irritation, skin irritation, and dermatitis.

Polyethylene glycol (PEG): Skin irritation and dermatitis. Liver abnormalities, kidney damage.

Quaternary ammonium compounds: Skin irritation and dermatitis.

Sodium lauryl sulfate: Skin irritation and dermatitis.

Sodium laureth sulfate: Eye and skin irritation.

Triethanolamine (TEA) or diethanolamine (DEA): These chemicals can combine with another substance in certain products to form nitrosamines, which are suspected to cause cancer. If TEA or DEA are in a product that also contains the chemical BNPD, nitrosamines may be produced. (The chemical name for BNPD is 2-bromo-2-nitroprone-1,3-diol.)

Not all shampoos and conditioners contain these chemicals, and some may contain harmful chemicals not listed above. Always check the product's Safety Data Sheet (SDS) for more information.

HOW CAN YOU PROTECT YOURSELF FROM CHEMICAL HAZARDS?

When you work with chemicals in shampoos and conditioners, it is important to take steps to protect your health.

Avoid harmful chemicals

- Don't use products that contain formaldehyde or products that can form nitrosamines.
- For any product used, read the label and Safety Data Sheet to know what is in the product and its health effects.
- Use products with the least hazardous chemicals in them when possible.

Use safe work practices

- Keep containers closed when you're not using them so the product doesn't spill or get into the air.
- Check that all containers of chemicals are properly labeled of their contents.
- Don't eat or drink in your work area as your food or drink may get contaminated by chemicals or chemical vapors.
- Wash your hands after working with chemicals, even if you wore gloves.

Ventilate the room

- Always work in a well-ventilated area. If there's no ventilation system, open windows and doors to bring in fresh air from outside.

Use protective equipment

- Wear gloves designed to protect your skin from the particular chemicals you're using.

Know your rights as a worker

- Employers must provide workers with Safety Data Sheets if requested.
- Employers must train workers on the hazards of the chemicals they are working with and how to protect themselves from the hazards.

Report any health problems

- Speak up if you are experiencing symptoms of health effects so your employer can help alleviate the problem and let other employees know.
- Seek advice from your doctor on how serious your issues are and how they should be handled.
- You have the right to report health hazards to Cal/OSHA by filing a complaint.

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Thermal Hairstyling

You may work with thermal irons to straighten, press, or curl hair. The different kinds of irons used for these services all have similar health and safety hazards. Tools and equipment used with irons, like combs, can also be dangerous if they get too hot.

WHAT ARE THE HAZARDS OF WORKING WITH THERMAL IRONS?

- Skin burns
- Electric shocks

WHEN CAN YOU GET A SKIN BURN?

- When you heat an iron
- When you use an iron on a client's hair
- When you put an iron away
- When you accidentally touch a hot iron that someone left out
- When an iron falls
- When you touch a comb that is too hot

WHEN CAN YOU GET AN ELECTRIC SHOCK?

- When an electric iron is old or worn out
- When the cord is old or worn out
- When you touch an electric iron or cord with wet hands

HOW CAN YOU PROTECT YOURSELF?

- Do not leave a hot iron where someone can accidentally touch it.
- Be careful when you set a hot iron on a countertop. Place it where it will not fall.
- Do not place a cord where someone may trip over it and make the iron fall.
- Discard or repair an electric iron when it seems defective.
- Make sure the cord is in good shape and not frayed.

- Disconnect all electrical equipment after you are done with it.
- Do not overload electric circuits.
- Use a three-prong electrical outlet that has a ground wire.
- Do not touch an electric iron or cord when your hands are wet.
- Use combs made of hard rubber or other nonflammable materials. Some combs can burn or melt. Do not use metal combs because they can get very hot.

NOTE: When using a thermal protectant spray, it should be understood that some of these products contain the chemical cyclopentasiloxane or cyclomethicone. Under the high heat of a flat iron this chemical creates formaldehyde. Formaldehyde exposure may lead to breathing problems, coughing, wheezing, skin rashes and eye, nose and throat irritation. Long-term exposure may increase the chance of cancer and/or dermatitis.

Section 5

Ergonomics: Fitting the Job to the Person

LEARNING OBJECTIVES

Section 5

Ergonomics: Fitting the Job to the Person

After completing this section, you will be able to:

- Identify common ergonomic issues within a typical workplace.
- Explain how to reduce common ergonomic issues in the workplace.

In this lesson we will discuss ergonomics, common ergonomic problems in shops and salons, and how to reduce these problems.

What is Ergonomics?

Ergonomics is a science, which looks at:

- How people do their work
- What body movements and positions they use
- What tools and equipment they use
- What effect all these things have on their health and comfort

Licensees spend a lot of time standing, bending, reaching, and repeating the same motions all day long. These activities can cause fatigue and pain in various parts of the body. Sometimes they can even cause serious injury.

Ergonomics suggests ways to design jobs and equipment so they are easier on the body. It can help us avoid movements and positions that might cause health problems. Good ergonomic design fits the job and tools to the needs of the worker's body. Ergonomics can make work more comfortable and less likely to cause injuries to the hand, wrist, shoulder, neck, back, foot, and leg.

Employers

California Occupational Safety and Health Administration (Cal/OSHA) has an Ergonomics Standard that requires employers to take action to prevent repetitive motion injuries when two or more employees doing the same type of work are diagnosed with a repetitive motion injury (RMI). Every employer subject to this regulation is required to establish and implement a program designed to minimize RMIs. The program must include a worksite evaluation, control of exposures that have caused RMIs, and training of employees.

The regulation can be found in Title 8, California Code of Regulations, General Industry Safety Orders Section 5110. For details, go to: www.dir.ca.gov/dosh/dosh1.html.

Some of the solutions we present in this lesson require only basic changes in how you move and hold your body. Others may require use of different techniques, tools, or equipment, some of which may not be readily available. It is your task to find the combination of solutions that will work best for you and for the shop or salon.

Our bodies may not feel symptoms right away. Some problems occur immediately, but others develop gradually over a long period.

We will discuss some steps you can take to prevent pain and injury now and in the future. Let's take a look at some target areas.

Hand, Wrist, and Shoulder

Most of the muscles that move your hand and fingers are actually in your forearm. Tendons, which are like cords passing through your wrist, connect the muscles to the hand and fingers. Using the fingers on your right hand, feel the muscles on the inside of your left forearm. Keep feeling them while you gently open and close your left hand into a fist. You should feel the muscles moving in your left forearm—these muscles move your left hand. Now, with the fingers of your right hand, feel the tendons on the inside of your left wrist. Keep feeling them as you open and close your left hand again. You should feel the tendons moving in your left wrist. These tendons are passing the movement from the forearm muscles to the hand.

When your wrist is bent, your muscles also have to work harder

The Problem

Two of the hand and wrist issues that can occur are **tendinitis** and **carpal tunnel syndrome**. Tendinitis is swelling and inflammation of the tendons. When you use your hand and wrist in certain ways, you can put stress on the tendons. If this stress continues over time, you may develop tendinitis. Tendinitis makes it painful to use your hand, especially to grasp things. The carpal tunnel is a tunnel in the wrist surrounded by bone and tissue. A nerve and several tendons pass through this tunnel. If you have tendinitis and your tendons swell, there is less room in the tunnel for the nerves. When the nerves are squeezed this way, the condition is called carpal tunnel syndrome. Carpal tunnel syndrome often leads to numbness and weakness in the hand. If left untreated, it can make it very difficult to grasp things or use that hand. If you start to feel numbness, tingling, or weakness in your hand, see a doctor immediately.

There are several motions that can place stress on your tendons causing tendinitis and carpal tunnel syndrome. One of the most common motions is **bending the wrist**. When you bend your wrist, the tendons must bend also, causing friction and irritation. When your wrist is bent, your muscles also have to work harder – both to support your hand and to move it. It is better if you hold your wrist relatively straight, as when making a fist. One easy way to tell if your wrist is bent backward too much is if you see wrinkles appear on the back of your wrist. Another cause of stress on your tendons is **frequent or forceful pinching or gripping motions**. The harder the muscles and tendons work, the more likely they are to become swollen. Additionally, **doing the same hand and wrist motion**

repeatedly causes stress. If you perform any motion many times without allowing the tendons to rest, they can become swollen and inflamed. Lastly, **doing more than one of the above** will greatly increase the stress on your tendons. For example, if you both bend your wrist and repeat the same motion, like when curling hair, your chance of tendinitis or carpal tunnel syndrome increases.

One example of a service in a shop or salon that makes you bend your wrist is cutting and styling hair. As you cut different sections of the hair, you may hold the shears with your wrist in a bent position. When you hold a hair dryer at the crown or frontal area of a client's head, and you stand behind or beside the client, you may bend your wrist downward. This could also be the case when using a round brush on a client. You might use forceful pinching or gripping motions when cutting with shears that have not been lubricated properly, cutting with shears that don't fit your hand well, or using a comb that doesn't glide smoothly. Repeating motions might occur if you are cutting hair and using shears all day. If they are dull, you will also have to cut more times to get the same work done. Combing and holding the hair while you cut would be repeated with every cut as well. You may not realize that all of these motions are stressful for your body, but if you do not stop to think about how to perform these services in a safer way, there could be effects on your health and comfort.

One example of a service in a shop or salon that makes you bend your wrist is cutting and styling hair.

The Solution

To prevent hand and wrist problems, you can get a better "fit" between your body and the job by either:

- Changing how you do the job or
- Changing your tools and equipment

So, using the previous example of cutting and styling hair, how can you keep from bending your wrist when you work on a client? First, adjust the height of the chair to allow your wrist to be straight. Lower the chair to work on the crown of the head, and raise it to work below ear level. To avoid bending your wrist, the chair should be a type that goes up and down at least five inches. Next, swivel the chair so you don't have to reach over or across the client. Also, tilt the client's head so you don't have to bend your arm, hand, and wrist as much. In addition, you should hold the hair dryer sideways. When drying the crown or far side of the head, change your grip on the hair dryer handle so you are holding the dryer sideways or use a hair dryer with a flexible handle so you can bend the handle instead of your wrist. Lastly, practice good hair cutting techniques.

A wrist brace can provide support.

For example, instead of keeping your wrist bent downward when cutting the sides, back, and front, use techniques that allow you to keep your wrist straight.

There are also many ways to avoid forceful pinching or gripping while cutting and styling a client's hair. First, choose shears that fit your hand. Shears come in different sizes and designs. If you have slender fingers, you may need to use plastic rings in the finger holes so your fingers fit snugly inside. The finger holes should stay near your fingertips and shouldn't "ride up" toward your hand. Next, check the lubrication, sharpness, and tension adjustment of your shears daily to reduce the effort involved in cutting hair. As stated previously, you should practice good hair cutting techniques, as proper position of the client's head will help reduce pinching and gripping. In addition, choose a comfortable comb that feels well-balanced in your hand. The comb should glide through hair with as little friction as possible. A comb with a silicone coating often glides more easily. Lastly, use tools that are ergonomically designed as they become available.

How can you reduce the number of repetitive motions when cutting and styling hair? When using a round brush, twirl the handle between your thumb and index finger, instead of continually bending your wrist. Choose a brush with a handle that allows you to do this comfortably. Additionally, keep shears sharp. Sharp shears will allow you to use fewer cuts to remove the same amount of hair.

Now that we have finished discussing hand and wrist problems using the example of cutting and styling hair, think about other hand and wrist problems you might face as a licensee. When might a manicurist bend his or her wrist? When might an esthetician use forceful pinching or gripping motions? It's better to think about these potential problems and how to avoid them before they may occur.

Shoulders

The muscles in your shoulder are connected to your arm by tendons. Between the shoulder tendons and the bones of the shoulder are small sacs of fluid called bursa. They help "lubricate" the shoulder so it moves easily. When you use or move your shoulder in certain ways, you can put stress on the muscles, tendons, and bursa. The result may be muscle aches, tendinitis, or bursitis.

Muscle aches in the shoulder usually are the result of overworking the shoulder. Shoulders tire easily as they are not designed for long periods of use without rest. For example, when you keep your arm raised above your shoulder or at shoulder height, the muscles of your shoulder and neck begin to ache after a short time. Try this experiment: hold one arm at shoulder height, straight out in front of you. Notice that after just a few seconds, your shoulder muscles start to feel tired.

The Problem

Tendinitis can occur in the shoulder as well as in the hand and wrist. The shoulder tendons become swollen and inflamed, causing pain. Frequent stress on the shoulder can cause tendinitis. You might get tendinitis in your shoulder if you:

- Often reach out or reach up
- Often hold your arm up, so your elbow is above shoulder height or
- Repeat shoulder movements

Remember that the bursa are sacs filled with fluid. They are located between the tendons and bones in your shoulder. When they get squeezed between the tendons and bones, the bursa can become inflamed, resulting in bursitis. Bursitis can make it painful, or even impossible, to raise your arm. You can get bursitis if you often raise your arm too high so that your elbow is above your shoulder. Did you notice that shoulder problems like muscle aches, tendinitis, and bursitis all have something in common? They can all be caused by holding your arm stretched away from your body, or holding your arm above shoulder height, or both. You are especially likely to have problems if you do these things often.

Some activities in the shop or salon that may cause shoulder problems include:

- Reaching to the crown of a client's head to cut, dry, or curl
- Reaching across a client's body to shampoo or dry hair
- Reaching across a table to manicure
- Reaching for shears and combs on the counter
- Reaching for supplies on a high shelf
- Holding heavy clippers, especially if your arm is stretched out

One of the activities in the shop or salon that may cause shoulder problems include holding heavy clippers, especially if your arm is stretched out.

The Solution

To avoid shoulder problems when you work on a client, always try to keep your elbow close to your body and not too high. This way, the muscles and tendons of your shoulder have better

leverage and don't have to work as hard. This will also prevent the bursa from being squeezed like they do when your arm is raised.

To prevent shoulder problems in the shop or salon you can use some of the same guidelines we discussed to prevent hand and wrist injuries. First, adjust the height of the chair when working on a client so your arms are close to your sides. In addition, swivel the chair and get as close to the client as possible when cutting, perming, coloring, styling, and shampooing. You should also tilt the client's head to a position that is comfortable for you. Next, hold your tools so you don't have to raise your arms, such as gripping a hair dryer sideways when drying the crown or far side of the head. In addition, use techniques that allow you to keep your elbows close to your sides. For instance, have the client extend his or her hand toward you when you're doing a manicure service so you don't have to reach over. Finally, use an armrest or foam pad when you do a manicure service to support your arms and cushion the table's hard surface.

To avoid shoulder problems, get as close to the client as possible when cutting, perming, coloring, styling, and shampooing.

Some Points to Consider

When performing a service, ask yourself these questions to avoid hand, wrist, and shoulder problems:

- Is my wrist bent?
- Am I making any pinching or gripping motions?
- Am I doing any motions repeatedly?
- Am I often reaching out or reaching up?
- Is my arm held in an extended position, away from my body?
- Is my arm often raised too high, above the shoulder?

If you find yourself saying "yes" to any of these questions, think of how you can improve your positions, movements, techniques, and tools. Help yourself by making a conscious effort to become aware of how to prevent ergonomic problems.

Now, let's review what we've learned so far in this lesson.

Questions for Review

Carpal tunnel syndrome is not very common among licensees. True or False?

Small sacs of fluid between the shoulder tendons and bones of the shoulder are called:

- **A)** Burs
- **B)** Nerves
- **C)** Bursa
- **D)** Carpal tunnel
- **E)** Muscles

Which motions can place stress on your tendons?

- **A)** Bending the wrist
- **B)** Forceful pinching
- **C)** Repeating motions
- **D)** Doing more than one of the above
- **E)** All of the above

For answers to all questions, please refer to your exam booklet.

We will now focus on the neck, back, foot, and leg and how space and equipment in the shop can be designed to reduce ergonomic problems.

Neck and Back

Your spine runs from the top of your neck down to your lower back. It is made up of many bones called vertebrae, one below another. Between each pair of vertebrae are joints and discs. These give your neck and back flexibility, so they can move. Discs are flexible because they have a substance like jelly inside.

The Problem

Bending forward or twisting your body can result in neck and back problems. When you stand in a normal posture, you have a small hollow in the back of your neck and another small hollow in your back. When you bend forward, these hollows disappear, resulting in the discs being squeezed. The discs are also squeezed when you twist your body, such as when you reach for something. As the discs are squeezed, they can press on different parts of the spine, including

To avoid back problems, work with your back straight, and raise the client's chair to a height that is comfortable for you and tilt the client's head to a better position.

nerves. This can cause pain in the neck or back. It can also cause pain or numbness down the arm or leg, often called a **pinched nerve** or **sciatica**.

If you spend many years bending forward or twisting your body, the constant squeezing of the discs can cause the "jelly" inside a disc to leak out. If a big blob leaks out at one time, we say that the disc is **ruptured** or **herniated**. This problem can cause a lot of pain and numbness if it irritates a nerve. If it occurs in the neck, you may feel pain or numbness down one or both of your arms. If it happens in your lower back, you may feel pain or numbness in your hip or leg.

The Solution

You may bend forward or twist your body when you give a shampoo, cut hair (especially low on the client's head, below ear level), perform a facial, give a pedicure, or cannot see clearly. To avoid bending forward or twisting, the most important rule is to work with your back straight. Bend at the hips instead of the waist, which is called the straight-back bend. Your spine is tilted, but not bent or twisted. Find procedures that allow your back to remain straight. For example, if available, use a free-standing sink to wash a client's hair. By standing behind the client, you can reach his or her hair without twisting. Also, as mentioned earlier in the lesson, raise the client's chair to a height that is comfortable for you and tilt the client's head to a better position.

Although you often hear that sitting up is good for your back, it may be difficult to do facials, manicures, or pedicures in that position. Still, try to find some way to follow the basic rule of working with your back straight. To bend at the hips instead of the waist, many licensees sit at the front edge of their chair. Some chairs have a seat that tilts forward, so the chair does the bending for you. A kneeling chair or a chair with a wedge-shaped cushion might also help. In addition, make sure you have good lighting and clear eyesight so you do not have to bend over to see.

Besides bending forward or twisting, you can hurt your back by reaching overhead, bending backward, or standing for long periods. These actions put extra pressure on the joints between vertebrae and can cause lower back pain. Sometimes you may bend backward without being aware of it, such as when you reach for supplies on a high shelf. When you stand for a long time, you might unintentionally begin to "sway" or lean backward as well. Also, you tend to bend backward when you stand or walk in high-heeled shoes.

To prevent back problems caused by reaching up or bending backward, follow these guidelines:

- Bend your knees slightly and pull in your abdominal muscles at the "belly button" when you have to reach up. This is called a pelvic tilt. It will keep you from arching your back.
- Place one foot on a small stool or on a rung under the client's chair when you have to stand for long periods of time.
- Avoid high-heeled shoes.
- Stand on a foot stool or ladder when you reach for supplies on a high shelf.
- Store supplies you use often on lower shelves.

Foot and Leg

As a future professional, you may have already realized that most of your time spent working on clients will mean standing on your feet most of the day.

The Problem

One foot and leg problem that licensees can get is **swelling of the feet and ankles**. If you stand still for a long period, the calf muscles aren't working hard enough to circulate the blood pumped to your feet. The blood will be pumped back up the legs and your feet and ankles might swell. This can cause your feet to ache and your shoes may feel tight. This may also develop into another problem, **varicose veins (swollen veins)**. If you stand for a long period, you have a higher risk of getting varicose veins. **Calluses and irritation** are another potential problem as pressure on any part of the foot reduces circulation. You can get calluses, irritation, and other problems at the "pressure point." Possible causes may be shoes with poor arch support, hard soles, or improper fit. Wearing high-heeled shoes (higher than 1½ inches) puts more pressure on your toes, especially if the shoes have pointed toes. Another cause can be standing on a hard floor as this causes pressure to build up on your heel or the "ball" of your foot.

Time spent working on clients will mean standing on your feet most of the day. Standing on a hard floor causes pressure to build up on your heel or the "ball" of your foot.

Consider using shock-absorbing insoles inside your shoes.

The Solution

To prevent these foot and leg problems, follow these guidelines:

- Do not stand for a long period without taking a break and sitting down.
- Change position frequently to rotate between standing and sitting.
- Raise your feet on a stool when you take a break. It's best if the stool is as high as your chair so your legs go out straight, but this may be uncomfortable for some people.
- Use a stool or moveable seat so you can sit and rest your feet while you work on a client. Some seats attach to the client's chair and swivel to different positions around the client as your work.
- Wear comfortable, rubber-soled shoes with good arch support. They will help spread the pressure of standing to your entire foot.
- Use shock-absorbing inserts inside your shoes. These are available at many stores. They are especially important if you are wearing shoes with hard soles.
- Avoid shoes with high heels or pointed toes.
- Use a cushioned floor mat around the client's chair so you don't have to stand on the hard floor. This way, the pressure is more evenly spread around your whole foot. The mat should have sloped edges to reduce the chance of people tripping on it.
- Use support hose or compression socks to reduce swelling in your legs. They will also help your legs feel less tired.

Shop or Salon Design

Besides changing your positions and movements, the shop or salon can be designed to make work easier on your body. Good positions and movements are easier if space and equipment are well-designed. Good design can help prevent all the different types of injuries we've discussed in our ergonomics lesson—from hand to foot and everything in between.

Poor Shop or Salon Design

Poor design can force you to bend, stoop, twist, and reach in awkward ways. Bad designs include:

- Workstations that are too close together. If there's too little space, you can't have roll-about tables for supplies in your work area. Then you may have to reach farther for supplies.
- Workstations (like countertops) that extend out too far from the wall. These force you to bend forward to get supplies near the back of the counter.
- Low cabinets above work surfaces. You might have to bend under them to avoid hitting your head.
- High cabinets. You might have to reach too high to get supplies.

Well-Designed Shop or Salon

Well-designed workstations and equipment allow you to keep your body in good positions. They make your movements easy and convenient. They also make it possible to move around and switch between sitting and standing, so you are not in either position all day.

Here are a few ideas for good workstation design:

- Hydraulic chairs for clients should be adjustable at least five inches up and down. The foot pedal should be easy to reach and use. Very short or tall licensees may need an electric lift chair, which can adjust up and down as much as 12 inches.
- Stools or rolling seats should be available. These let you sit while you work on a client.
- Manicure stations should have arm rests both for the client and the licensee. If no arm rests are available, foam pads can help support the arms and cushion them from the table's hard surface.
- Manicurists' chairs should have a seat or cushion which tilts forward toward the table. This allows you to lean forward at the hips without bending your spine.

A well-designed manicure station.

You could benefit from doing gentle stretching exercises between clients or whenever you have a break.

Some Points to Consider

When performing a service, ask yourself the following questions to avoid neck, back, foot, and leg problems:

- Am I bending my neck and back often?
- Am I twisting?
- Am I often reaching overhead?
- Am I often bending backward?
- Does this service require standing for a long time?
- Am I swaying or leaning backward?
- Am I wearing shoes with high heels, poor arch support, hard soles, or improper fit?
- Is the floor too hard?

If you say "yes" to any of these questions, think of ways to improve your position and movements so you can prevent ergonomic problems.

Stretching Exercises

Lastly, you could benefit from doing gentle stretching exercises between clients or whenever you have a break. Stretch your hands, wrists, shoulders, neck, back, feet, and legs to prevent them from becoming stiff or tense. Do not pull or push excessively and if you feel any pain or discomfort, stop immediately. On pages 10 and 11 of *Stay Healthy and Safe While Giving Manicures and Pedicures: A Guide for Nail Salon Workers* found in your Section 5 Training Materials file, you will find stretching exercises you can do to reduce aches and pains. There is also the "Work Smarter, Not Just Harder" handout by Cal/OSHA. Keep these resources easily accessible for future use as a licensee and ask your medical professional for advice if needed.

Now, let's practice recognizing ergonomic problems in the shop or salon. Find what is wrong in this picture:

Hopefully you noticed:

- The licensee is not sitting up with her back straight.
- The licensee's arm is not cushioned from the hard table surface.
- The lamp is not properly positioned to light the work area.

Now, can you list what improvements have been made?

- The licensee raised the client's hand instead of bending forward.
- The licensee is not bending her head or neck forward.
- The licensee's arm is cushioned from the table's hard surface.
- The lamp is properly positioned to light the work area.

Good job. Now, let's review the lesson.

Questions for Review

Sitting for a long period is better than standing. True or False?

To prevent neck and back injuries, the most important rule is to work with your back straight. True or False?

The shop or salon can be designed to make work easier on your body. True or False?

Which of the following is NOT a reason you should use procedures that allow your back to remain straight:

A) Constant moving can squeeze the discs in your back and cause a rupture.

B) Your spine is naturally straight and should remain that way.

C) Extra pressure on the joints between vertebrae can cause lower back pain.

D) Squeezed discs can cause a pinched nerve.

E) A and C

Why are high-heeled shoes not recommended?

A) They can cause you to bend backward.

B) They put extra pressure on your toes.

C) They can cause calluses and irritation.

D) They can cause back problems.

E) All of the above.

For answers to all questions, please refer to your exam booklet.

This concludes our lesson on ergonomics. Many hand, wrist, shoulder, neck, back, foot, and leg problems in the shop or salon can be prevented by good design, equipment, and work technique. In our next lesson, we will discuss communicable diseases in the shop or salon.

Notes

Notes

Section 5
Training Materials

5.1 Work Smarter, Not Just Harder Poster

5.2 Stay Healthy and Safe While Giving Manicures and Pedicures

WORK SMARTER, NOT JUST HARDER

Think Ergonomics–fitting the task to the person

For very small businesses–cosmetology

Avoid leaning over the shampoo bowl

1 KEEP NECK AND BACK STRAIGHT

Move in closer and face the client

Avoid raising your elbow

2 KEEP ARMS AT YOUR SIDE

Change grip on dryer and adjust chair to keep arms at your side

Avoid bending

3 ADJUST WORK HEIGHT

Stand upright, adjust chair height

Avoid awkward wrist positions

4 USE YOUR TOOLS PROPERLY

Cut palm to palm
and use shears that fit your hand

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UNION LABEL

Stay Healthy and Safe While Giving Manicures and Pedicures

A Guide for Nail Salon Workers

OSHA®

Occupational Safety and Health Administration

U.S. Department of Labor

OSHA 3542-05 2012

This booklet was adapted from *Stay Healthy and Safe While Giving Manicures and Pedicures: A Guide for Nail Salon Workers,* which was developed by the Labor Occupational Health Program (LOHP), University of California, Berkeley and the California Healthy Nail Salon Collaborative, which was produced through the Susan Harwood Grant Program, under grant number SH20864SH0 from the Occupational Safety and Health Administration, U.S. Department of Labor.

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Stay Healthy and Safe While Giving Manicures and Pedicures

A Guide for Nail Salon Workers

U.S. Department of Labor
Occupational Safety and Health Administration
OSHA 3542-05 2012

U.S. Department of Labor

With this guide, you will learn about possible hazards in nail salons and good work practices that should be used in nail salons to protect you from chemical hazards, muscle strains, and diseases. This booklet also explains your rights as a nail salon worker. For more information, see OSHA's *Health Hazards in Nail Salons* website at www.osha.gov.

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Chemical Hazards

Products used in nail salons may have chemicals in them that can harm your health.

Chemicals can get into your body if you:

- Breathe in vapors, dusts, or mists from the products;
- Get the product on your skin or in your eyes; or
- Swallow the product if it gets on your uncovered food, drink, or cigarettes.

Chemicals affect different people in different ways. How a chemical affects you also depends on how much of it you are exposed to. You can get sick right away, or you can get sick over time. Exposures can "add up," especially when many products are being used at the same time, when the products are used day after day, or when there is poor ventilation in the salon. If you use chemicals all day, every day, you are more likely to get sick than someone who uses the same chemicals once in a while. Follow the steps in this guide to help protect your health.

Hazardous Chemicals Found in Nail Salon Products

Nail products, such as polishes, strengtheners, removers, and artificial nail liquids, can contain many chemicals. Some of these chemicals are more harmful than others. Over time with repeated use or exposure to high concentrations, these chemicals could damage your body or cause an allergic reaction. Every person is different and not everyone who breathes in these chemicals or gets them on their skin will experience these effects now or in the future.

Some potentially hazardous chemicals, the types of products they can be found in, and how they can affect your body include:

- **Acetone** (nail polish remover): headaches; dizziness; and irritated eyes, skin, and throat.
- **Acetonitrile** (fingernail glue remover): irritated nose and throat; breathing problems; nausea; vomiting; weakness; and exhaustion.
- **Butyl acetate** (nail polish, nail polish remover): headaches and irritated eyes, skin, nose, mouth, and throat.
- **Dibutyl phthalate (DBP)** (nail polish): nausea and irritated eyes, skin, nose, mouth, and throat. Long-term exposures to high concentrations may cause other serious effects.
- **Ethyl acetate** (nail polish, nail polish remover, fingernail glue): irritated eyes, stomach, skin, nose, mouth, and throat; high concentrations can cause fainting.

Tip:

Make sure your doctor or healthcare provider knows what type of work you do and the chemicals you use. Tell them if you are pregnant or planning to become pregnant.

- **Ethyl methacrylate (EMA)** (artificial nail liquid): asthma; irritated eyes, skin, nose, and mouth; difficulty concentrating. Exposures while pregnant may affect your child.
- **Formaldehyde** (nail polish, nail hardener): difficulty breathing, including coughing, asthma-like attacks, and wheezing; allergic reactions; irritated eyes, skin, and throat. Formaldehyde can cause cancer.
- **Isopropyl acetate** (nail polish, nail polish remover): sleepiness, and irritated eyes, nose, and throat.
- **Methacrylic acid** (nail primer): skin burns and irritated eyes, skin, nose, mouth, and throat. At higher concentrations, this chemical can cause difficulty breathing.
- **Methyl methacrylate (MMA)** (artificial nail products, though banned for use in many states): asthma; irritated eyes, skin, nose, and mouth; difficulty concentrating; loss of smell.
- **Quaternary ammonium compounds** (disinfectants): irritated skin and nose and may cause asthma.
- **Toluene** (nail polish, fingernail glue): dry or cracked skin; headaches, dizziness, and numbness; irritated eyes, nose, throat, and lungs; damage to liver and kidneys; and harm to unborn children during pregnancy.

Report any health problems you think are from the products you use in the workplace to your employer and doctor. Employers must follow up on reports of health problems from workers.

Where to Get Information about the Chemicals Found in Nail Salon Products

You can get product information on packaging, or in printed materials delivered with the product such as its material safety data sheet.

Product Labels

At minimum, professional-use nail salon products containing hazardous chemicals must provide the following information:

- The name and address of the product manufacturer or distributer;
- Something that explains the type and use of the product, such as a name, description, or illustration;
- Facts about the product, such as directions for safe use if a product could be unsafe if used incorrectly; and
- All necessary warning and caution statements.

Material Safety Data Sheets (often called "MSDSs")

OSHA requires product manufacturers to provide salon owners with material safety data sheets (MSDSs)[1] for the products they buy that contain hazardous chemicals. Employers must make these MSDSs available to you. Your employer must also train you so that you understand the chemicals' potential hazards and how to use the products safely. In general, an MSDS must provide the following information:

- Hazardous ingredients in the product;
- How you can be exposed to the ingredients;
- Health and safety risks you face when using the product; and
- Steps for safely using and storing the product, including what to do in emergencies.

OSHA recently updated its rules about safety data sheet requirements. "Material Safety Data Sheets" will now be called "Safety Data Sheets" (SDSs). SDSs will generally list the same information as MSDSs, but all information will now be presented in a common format across products. This can help you compare the differences in hazards between products.

Be aware that MSDSs may not contain all the information needed to help protect you. For example, the manufacturer may state that you should wear "impervious gloves," but not specify the type.

Steps You Can Take to Protect Your Health

Choose Safer Products

- Whenever possible, use products with the least hazardous chemicals in them.
  - *3-free:* Some products now **claim** to be made without the "toxic trio" (toluene, formaldehyde, and dibutyl phthalate). These products are called "3-free" products.[2]
  - *Acid free:* Some primers claim to be made without chemicals like methacrylic acid. These are labeled "acid free."
- Always read product labels and MSDSs and follow manufacturers' instructions when using all nail salon products, including those labeled as "free" of hazardous chemicals.

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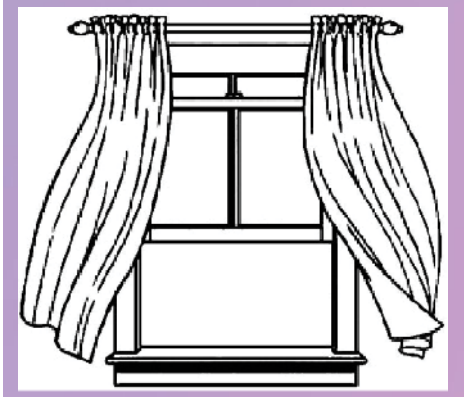
[1] OSHA's Hazard Communication standard, 29 CFR 1910.1200.

[2] On April 10, 2012 the California Department of Toxic Substances (DTSC) announced its discovery of certain nail polish and nail care products that may endanger nail salon workers and the public despite being marketed as non-toxic. In May 2011, DTSC tested 25 nail products sold by California distributors. Of the 12 claiming to be "toxic-free," 10 contained toulene and four contained dibutyl phthalate (DBP). For more information, call (800) 728-6942 or visit www.dtsc.ca.gov.

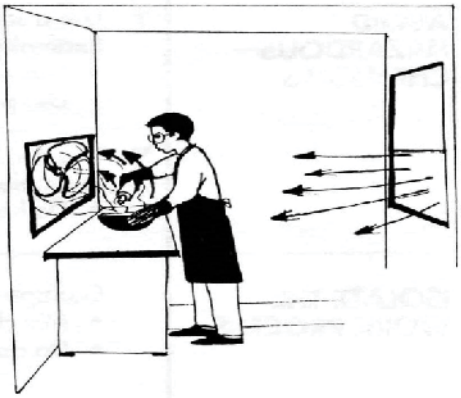


Ventilate the Room and Let in Fresh Air

Ventilation is the best way to lower the level of chemicals in the salon. These steps can really help improve your health:

- Open doors and windows when possible to let in fresh air. If the salon has a ceiling vent, it should be turned on and working.
- Always keep the nail salon's exhaust system on.
- If your salon does not have an exhaust system, always keep the heating, ventilation, and air conditioning (HVAC) system on during work hours. The HVAC thermostat fan switch should always be in the "on" position (not "auto") so that it runs even when the heat or air conditioner is off. The salon owner should have a HVAC contractor clean the HVAC system and replace the filters at least once a year.
- Place fans near open doors or windows. Fans should pull air in one end of the salon and push it out of the other end.

Bad ventilation: Outside air from the open window blows the chemicals into the worker's face before being vented out of the salon.



Good ventilation: Outside air from the open window blows the chemicals away from the worker's face before being vented out of the salon.

Photo of ventilated table courtesy of the Boston Public Health Commission.

- If the salon has ventilated tables:
  - Make sure they are turned on.
  - Change the charcoal filters at least once a month.
  - Clean out the catch basin at least once a week.
- If the salon has portable ventilation machines, use them in your work area to pull harmful vapors away from you and your clients.

Use Safe Work Practices to Avoid Regular and Accidental Exposures

- Store chemicals in small bottles with small openings and label them with the information from the manufacturer's label.
- Close bottles tightly when you are not using them so the product does not spill or get into the air.
- Use metal trashcans with tight, self-closing lids to keep the nail products soaked on cotton balls and other trash from evaporating and getting into the salon's air.
  - Put cotton balls and other soaked materials into the trashcans immediately.
  - If you do not have metal trashcans with self-closing lids, put cotton balls and soaked materials in a sealed bag before putting them in the trashcan and keep the trash covered.
  - Empty trashcans often and remove from the work area to the outside garbage at the end of each day.
- Use only the amount of product you need to perform services. When possible, do not keep extra products at a workstation.
- Follow instructions for safely disposing of used chemicals. **DO NOT** pour them down your sink or toilet, throw them on the ground or down outside drains, or pour them onto cotton balls.
  - Some chemicals must be disposed of in a specific way. For example, used liquid acetone must be saved in a fire department-approved metal container and disposed of as hazardous waste.
- Wash your hands before eating, drinking, putting on cosmetics, and smoking.
- When you have a break, go outside to get some fresh air. This will give you a chance to get away from chemicals in the salon's air.
- Keep food and drinks covered at all times, and do not store or eat food in work areas.

Ventilation off: Without a ventilation system running, chemical levels during acrylic nail removal reached very high levels (over 826 parts per million).

Ventilation on: With a ventilation system running, chemical levels dropped significantly during the same process (below 12.4 parts per million).

Images courtesy of the Local Hazardous Waste Management Program in King County, WA.

Keep Products Off of Skin and Out of Eyes

- Wear long-sleeved shirts to protect your arms and pants or skirts that are at least knee-length to protect your lap from acrylic nail and other dusts.
- Wash your hands before and after working on clients; before eating, drinking, putting on cosmetics or smoking; and after handling or transferring products.
- Wear goggles and the appropriate type of disposable gloves when handling and transferring products. For example, nitrile gloves (usually blue or purple) protect against many chemicals used in nail salon products, but latex or vinyl gloves are appropriate when handling acetone.

- Replace gloves immediately if there are cuts, tears, or holes in them.
- Cover and protect cuts or cracks in your skin. Damaged skin can increase chemical absorption and exposure.
- Do not continue to use a product if you see signs of skin irritation.
  - If your hands are red and irritated, make sure your gloves are the right type for the product you are using.

Respiratory Protection

Using the ventilation methods described above, using products without harmful chemicals, and following good work practices all reduce the level of chemicals in a nail salon. If you work in a salon that follows these practices, you may not need respiratory protection.

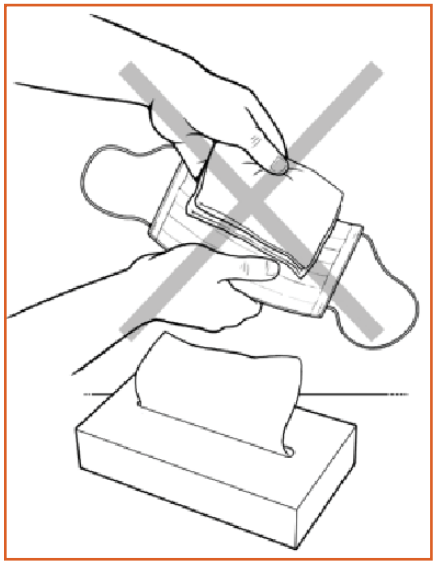
Evaluating Possible Hazards

Employers need to determine if the levels of dust and/or chemical vapors in the salon pose a risk to workers and decide if respirators are required. Small employers can use available industrial hygiene services from OSHA's On-site Consultation Program. Other groups that can provide assistance include an employer's private insurance company or private industrial hygiene consulting firms.

Because chemicals can cause effects even at low levels, you may decide that you want to wear a respirator to protect yourself while transferring chemicals or when buffing and filing nails.

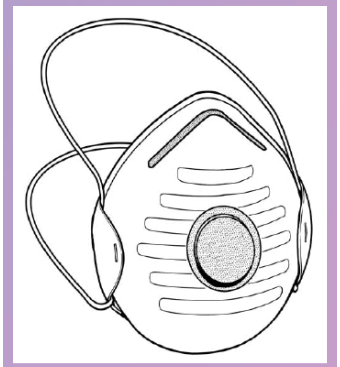
Types of Respirators

Many nail salon workers wear paper or cloth medical masks. **These are not the same as dust masks (filtering facepieces)**, and even when stuffed with tissues, **they will not protect you** from breathing in harmful gases, vapors, or dusts.



Here are some types of respirators that may be used in nail salons:

Filtering Facepiece Respirators (Dust Masks)



You should only use NIOSH-approved filtering facepiece respirators. "N95s" are one type.

This type of respirator **will**:

- Help protect you from dust, viruses, and germs.

This type of respirator **will not**:

- Protect you from vapors or gases. Some N95s have filters that reduce chemical odors, but they may not protect you from harmful chemical exposure levels.

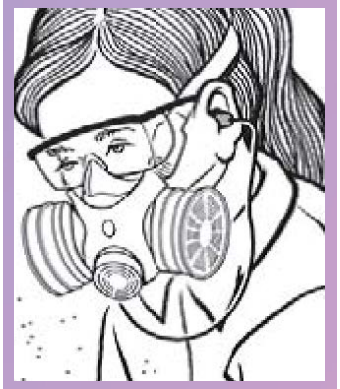
Filtering facepiece respirators may be helpful when you are:

- Buffing or filing artificial nails; or
- Using acrylic powders.

You don't need to wear the mask all the time, only when you are working on a client. When you put on this mask, make sure your hands are clean to avoid irritating your skin.

If your employer allows you to wear this type of respirator voluntarily, then he/she must give you *Appendix D* of the OSHA *Respiratory Protection Standard*, which explains some important information about how to safely and effectively use your respirator.

Half-mask Respirators with Cartridges



Half-mask respirators with chemical cartridges offer protection from breathing in chemical vapors.

This type of respirator **will**:

- Help protect you from breathing in chemical gases and vapors (such as formaldehyde).

Your employer may require you to wear this type of respirator when you:

- Transfer chemicals from larger bottles to smaller bottles; or
- Clean up large spills.

If you must use this type of respirator:

- Your employer is required to develop a respiratory protection program;
- You must be fitted and trained to wear a respirator properly;
- Your employer must evaluate the appropriate cartridge for the job task and provide it to you; and
- You must know how and when to change cartridges, and your employer must provide you with a cartridge change out schedule.

Preventing Aches and Pains

Nail salon workers can get aches and pains from leaning over a worktable for a long time; doing repetitive movements like filing and buffing nails; and resting hands, wrists, and forearms and/or elbows against hard surfaces or sharp edges of worktables. These are often called ergonomic or musculoskeletal hazards because they affect your muscles and bones. Ergonomics is the science of "fitting the task to the worker" so that you are more comfortable and efficient when doing your job. Good ergonomic practices will reduce stress to your body and help you avoid aches and pains.

Steps You Can Take to Reduce These Hazards

- **Use an adjustable chair.** Sit so that your feet are flat on the floor and your back is supported. Use a footrest if your feet do not touch the floor when sitting.
- **Make sure there is enough space** between the back of your knees and the front edge of your seat to improve blood flow to your legs.
- **Adjust the lighting.** Good lighting can help you see without having to bend over.
- **Raise the client's hand or foot.** Use a cushion to raise the client's hand or foot so you do not have to bend over as far.
- **Use safety glasses with magnifying lenses.** These glasses reduce the need for you to bend over to see the client's hand or foot.
- **Put a towel or foam pad** on the table edge to soften it for hands, arms, wrists, and elbows.
- **Put soft pads on tools** to make handles larger and easier to hold.
- **Take frequent breaks if possible**; changing positions and doing a different task is also helpful.
- **Pace your work.** When you work too fast, your body can become tense, which could cause muscle pain.
- **Do gentle stretching exercises**, like the ones on the following page, in between sessions with clients. You may need to check with your doctor first!

What is wrong with this picture?

What improvements do you see?

Stretching Exercises You Can Do to Reduce Aches and Pains

Neck: Keeping your arms and shoulders loose:

- Tilt your head to one side for 2 seconds.
- Tilt your head to the other side for 2 seconds.

Fingers: Stretch your fingers out and hold for 8 seconds. Relax.

Make a claw with your hands and hold for 8 seconds. Relax.

Shoulders and Upper Back: Put one hand on your shoulder and look the opposite way. Pull your elbow in and up with the other hand.

- Hold for 2 seconds.

Lower Back and Hips: Lean forward keeping your neck relaxed and your head down.

- Hold for 8 seconds while breathing slowly.

Use your hands to push yourself up.

Neck: Keeping your arms and shoulders loose and your head facing straight forward:

- Tuck your chin for 2 seconds.

Back of Legs: Place your hands shoulder width apart on a wall or table.

- Bend your knees, keep hips directly above your feet, and lower head between arms.

Neck: Keeping your arms and shoulders loose:

- Turn your head to one side for 2 seconds.
- Turn your head to the other side for 2 seconds.

Inner Thighs: With your feet wide apart, place both hands on your left knee. Bend the knee until you can feel the stretch.

- Hold for 8 seconds.

Shoulders: Lace your fingers and stretch your arms with your palms facing out:

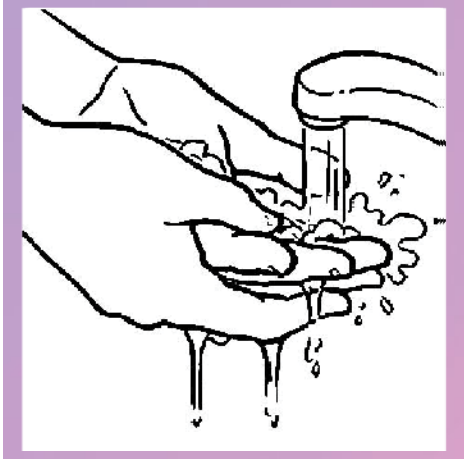
- Hold for 2 seconds.

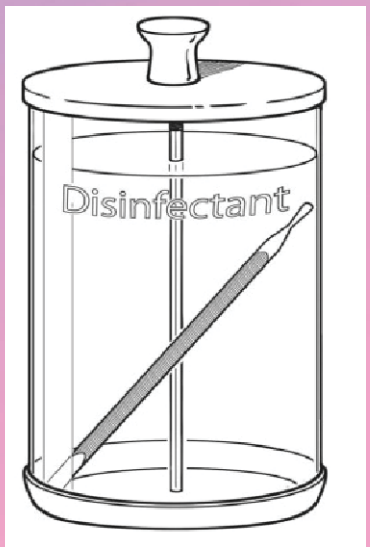
Ankles: While holding onto a table or wall for balance, put one foot out and:

- Point your toe up and down.
- Draw circles with your foot.

Biological Hazards

Biological hazards include bacteria, fungi, and viruses.[3] You can be exposed to many infectious agents, such as hepatitis B, hepatitis C, and human immunodeficiency virus (HIV), if you come into contact with infected blood from a coworker or client. You can also be exposed to fungal infections of the nails and feet by touching a client's infected skin or by using equipment that has not been cleaned.





Steps You Can Take to Prevent Exposure and Protect Your Health

- **Avoid touching any blood or bodily fluids.**
- **Wear gloves,** and avoid clients with cuts, open wounds/sores, blisters, or visibly infected skin on their hands, feet, or nails. Many agencies, such as the Boston Public Health Commission and the California Board of Barbering and Cosmetology, prohibit working on clients with these health issues.
- **Throw away disposable gloves** immediately after using them.
- **Always wash your hands with soap and water** before and after working with clients to avoid spreading germs.
- **Bandage open cuts or broken skin** to prevent contact with blood or other potentially infectious materials from a client or coworker.
- **If an individual is bleeding, do not touch the blood.** Ask the individual to use a cotton ball or tissue to stop the bleeding and to throw the used material directly into the trash once the bleeding has stopped.
- **Consider getting immunized against hepatitis B.** Your doctor can help you determine whether this is needed. Immunization practices can vary by state, so be sure to follow your state's requirements. Your employer must offer you hepatitis B immunization without charge if you are likely to be exposed to blood or other infectious materials during your work.
- **Clean and disinfect tools after each client according to the policies of your state's cosmetology board.** Some common steps for cleaning and disinfecting tools are:
  - Always wear the right gloves for the product you are using while cleaning and handling disinfectants or tools soaked in disinfectant.

[3] OSHA's Bloodborne Pathogens standard, 29 CFR 1910.1030, requires your employer to evaluate whether you may come into contact with blood or other potentially infectious material. If this risk exists, then the employer must follow the requirements of the standard, including providing training, vaccination, and personal protective equipment.

- Wash tools with soap and water. Use a scrub if needed.
- Soak tools in an EPA-registered disinfectant for 10–30 minutes, according to manufacturer directions. Follow the manufacturer's instructions when mixing the product ratios.
- Rinse tools in clean water.
- Dry tools with a clean cloth.
- Store all disinfected tools in a clean, covered area. Only use ultraviolet (UV) sanitizing boxes to store clean and disinfected reusable metal tools. The UV boxes do not disinfect tools.

- **Disinfect foot basins and spas after each client** and at the end of the day. Follow your **state cosmetology board's rules on how to clean** and disinfect foot basins and spas.

Your Rights as a Worker

What is the difference between an Employee and an Independent Contractor for purposes of the Occupational Safety and Health Act?

- It doesn't matter how an individual is labeled by the salon owner. Instead, courts and agencies will look at a list of factors to determine whether you are an employee or an independent contractor.
- For example, if you: rent a station at a salon; purchase your own supplies and tools; have your own customers and set your own schedule and appointments; set your own rate and are paid by customers directly; and have your own business license, you may be more likely to be considered an independent contractor.
- However, if: the owner sets your work schedule; you are paid by the hour; the owner or receptionist makes the appointments for all the workers; you do not rent the space; the owner sets the rates paid by customers; and you use the owner's tools and equipment, you may be more likely to be considered an employee.

Why does it matter?

- Employers must provide protection against workplace hazards for their employees; independent contractors are responsible for their own occupational health and safety protection. Employees also have rights to a minimum wage, workers' compensation, and other benefits. Independent contractors do not.
- Just because a salon owner tells you that you are an independent contractor, it does not mean that you are one. Just because an owner gives you an IRS form 1099 instead of a W-2 does not

mean that you are an independent contractor. Salons sometimes misclassify the employment status of their workers to bypass taking protective safety and health measures, and to also deny benefits. That is why it is important for you to know the difference between what constitutes an employee and an independent contractor. If you need help, you can contact OSHA at 1-800-321-OSHA (6742).

What are my rights as a worker?

You have the right to working conditions that do not put you at risk of serious harm. OSHA also provides you with the right to:

- Ask OSHA to inspect your workplace;
- Receive information and training about hazards, methods to prevent harm, and the OSHA standards that apply to your workplace. The training must be in a language you can understand;
- Get copies of test results done to find and measure hazards in your workplace;
- Review records of work-related injuries and illnesses;
- Get copies of your medical records;
- File a complaint asking OSHA to inspect your workplace if you believe there is a serious hazard or that your employer is not following the OSHA rules. When requested, OSHA will keep all identities confidential; and
- Use your rights under the law without retaliation or discrimination. Your employer cannot fire or punish you if you file a complaint.

For more information on workers' rights, employer responsibilities, and other OSHA services, visit OSHA's website at www.osha.gov and OSHA's Workers page at www.osha.gov/workers.html.

Contact OSHA

For questions or to get information or advice, report an emergency, fatality or catastrophe, order publications, file a complaint, or request OSHA's Free On-Site Consultation Program, contact your nearest office through OSHA's website at www.osha.gov, or call 1-800-321-OSHA (6742); TTY 1-877-889-5627. We will keep your information confidential. We are here to help you.

Twenty-five states, Puerto Rico, and the Virgin Islands operate their own OSHA-approved safety and health program. For a list of all of the states and further information, please visit OSHA's State Occupational Safety and Health Plans page at www.osha.gov/dcsp/osp/index.

For More Information

Resources on Chemical Exposures in Nail Salons

Nail Technicians' Health and Workplace Exposure Controls, NIOSH Workplace Safety and Health Topics, http://www.cdc.gov/niosh/topics/manicure/?s_cid=3ni7d2fb082020111130am. Lists research and publications helpful to preventing injuries and illnesses while working in nail salons.

Controlling Chemical Hazards During the Application of Artificial Fingernails, NIOSH (Publication No. 99-112), http://www.cdc.gov/niosh/docs/99-112/. Describes how workers can prevent some of the potentially harmful health effects of applying artificial fingernails.

Tips on Worker Safety, Labor Occupational Health Program (LOHP) and California Healthy Nail Salon Collaborative. Provides general tips for staying safe and healthy while working in nail salons (English) (Vietnamese).

Safety and Health Hazards in Nail Salons, Oregon OSHA Fact Sheet Plus, http://www.orosha.org/pdf/pubs/fact_sheets/fs28.pdf. Describes the potential hazards of chemicals used in nail salons and what workers and nail salon owners can do to minimize exposure.

How to Be Safe at Work, Oregon Healthy Nail Salon Collaborative, http://www.cbs.state.or.us/osha/pdf/pubs/4783e.pdf. Gives tips on how to prevent overexposure to chemicals in nail salons.

Summary of Data and Findings from Testing of a Limited Number of Nail Products, California Environmental Protection Agency, Department of Toxic Substances Control, http://www.dtsc.ca.gov/PollutionPrevention/upload/NailSalon_Final.pdf. Report assessing chemical composition of a limited assortment of nail salon products.

Understanding the Toxic Trio: Protecting Yourself at Work, California Healthy Nail Salon Collaborative, http://www.cahealthynailsalons.org/wp-content/uploads/2010/07/Toxic_Trio_EN_March2012.pdf. This brochure shares tips on how to protect yourself from the Toxic Trio at work.

Safe Nail Salon Training, Boston Public Health Commission, http://www.bphc.org/programs/cib/environmentalhealth/environmentalhazards/safenailsalons/Forms Documents/2010 Safe Nail Salon Training-English.pptx. English language training presentation that teaches nail salon owners and workers how to recognize workplace hazards, protect health, make improvements to eliminate hazards, and properly use and store hazardous chemicals (English) (Vietnamese).

Safe Nail Salons: Keeping You and Your Customers Healthy, Boston Public Health Commission, http://www.youtube.com/watch?v=PksAPhmm15M&feature=player_embedded. Describes nail salon health and safety measures in video format (in Vietnamese with English subtitles).

Healthy Practices for Nail Salons, King County Local Hazardous Waste Management Program, http://www.lhwmp.org/home/health/nail-salons.aspx. Displays methods for improving health and safety in nail salons.

Will You Try These Ways to Protect Your Customers and Your Health?, King County Local Hazardous Waste Management Program, Environmental Coalition of South Seattle, and Community Coalition for Environmental Justice, http://www.lhwmp.org/home/health/documents/Final_ENGweb.pdf. Gives a brief overview of several measures to protect nail salon workers' health.

California Health Nail Salon Collaborative, http://www.cahealthynailsalons.org/. The California Healthy Nail Salon Collaborative's mission is to improve the health, safety, and rights of the nail and beauty care workforce to achieve a healthier, more sustainable, and just industry. This website lists research and outreach publications related to its mission.

Oregon Collaborative for Healthy Nail Salons, Oregon Collaborative for Healthy Nail Salons, http://www.oregonhealthynailsalons.org/. Provides information and outreach publications related to its mission of improving the workplace health of nail salon workers.

Resources on How to Prevent Muscle Strains (Ergonomic Hazards)

Ergonomic Basics for Nail Salon Professionals, International Nail Technicians Association and Nail Manufacturers Council of the Professional Beauty Association, http://files.nailsmag.com/Handouts/INTA_NMC_ErgonomicBasics.pdf. Gives basic tips on how to prevent aches and pains while working in nail salons.

Ergonomics Safety and Health Topics Page, OSHA, http://www.osha.gov/SLTC/ergonomics/index.html. Gives information about ergonomic hazards at work and how to reduce them.

Ergonomics and Musculoskeletal Disorders, NIOSH Workplace Safety and Health Topics, http://www.cdc.gov/niosh/topics/ergonomics. Gives information about ergonomic hazards at work and how to reduce them.

Resources on How to Prevent Exposure to Biological Hazards

Bloodborne Pathogens Safety and Health Topics Page, OSHA. http://www.osha.gov/SLTC/bloodbornepathogens. Gives information on the hazards of bloodborne diseases and how to prevent infection.

Bloodborne Infectious Diseases: HIV/AIDS, Hepatitis B, and Hepatitis C, NIOSH Workplace Safety and Health Topics, http://www.cdc.gov/niosh/topics/bbp/. Gives information on specific bloodborne diseases and how to prevent exposure.

Selected EPA-Registered Disinfectants, EPA, http://www.cdc.gov/niosh/topics/bbp/. Lists EPA-registered disinfectants that are effective against certain bloodborne diseases.

OSHA Worker Resources

OSHA's Page for Workers, http://www.osha.gov/workers.html. Gives information on workers' rights.

OSHA Regional and Area Offices, http://www.osha.gov/html/RAmap.html. Gives contact information for OSHA Regional and Area Offices.

OSHA-Approved State Plans, http://www.osha.gov/dcsp/osp/index.html. Lists states with their own occupational safety and health programs, standards and policies.

NIOSH Health Hazard Evaluation Program

Getting Help with Health Hazards

The National Institute for Occupational Safety and Health (NIOSH) is a federal agency that conducts scientific and medical research on workers' safety and health. At no cost to employers or workers, NIOSH can help identify health hazards and recommend ways to reduce or eliminate those hazards in the workplace through its Health Hazard Evaluation (HHE) Program.

Workers, union representatives and employers can request a NIOSH HHE. An HHE is often requested when there is a higher than expected rate of a disease or injury in a group of workers. These situations may be the result of an unknown cause, a new hazard, or a mixture of sources. To request a NIOSH Health Hazard Evaluation go to www.cdc.gov/niosh/hhe/request.html. To find out more about the Health Hazard Evaluation Program:

- Call (513) 841-4382, or to talk to a staff member in Spanish, call (513) 841-4439; or
- Send an email to HHERequestHelp@cdc.gov.

For more information

U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

Section 6

Communicable Diseases

LEARNING OBJECTIVES

Section 6

Communicable Diseases

After completing this section, you will be able to:

- Describe how communicable diseases spread.
- Identify some specific communicable diseases that could be spread in the workplace.
- Explain how you can protect yourself against diseases at work.

This lesson on health and safety will focus on communicable diseases. As a licensee, you will be working with people constantly. We will look at some specific diseases that you might be exposed to on the job and how the exposure might occur. We will also suggest some ways you can protect yourself. Let's get started.

What is a Communicable Disease?

A **communicable disease** is a contagious illness that is spread from person to person or from animals to people. There are several kinds of organisms that cause communicable diseases: bacteria, viruses, parasites, and fungi.

You can be infected if:

- There is a harmful organism present (bacteria, virus, parasite, or fungus) in large enough numbers,
- The organism gets into your body, or
- Your immune system is unable to fight off the organism (you usually have a lowered resistance to infection when you are already sick or when you are under stress).

Many respiratory diseases can be spread through the air when an infected person coughs, sneezes, or spits.

How Do I Contract a Communicable Disease?

There are several ways organisms can get into your body. One way is **through the air**. You may breathe air that has been contaminated by an infected person. For example, many respiratory diseases can be spread through the air when an infected person coughs, sneezes, or spits. Some examples of these diseases are the common cold, chicken pox, measles, tuberculosis, and whooping cough.

Another way is **through water or food**. You may swallow water or food that has been contaminated by someone's stool. Many harmful organisms live in the intestine and leave the body in the stool. For example, stool may contain bacteria or viruses that cause diarrhea. The organisms in a stool can be spread if someone goes to the bathroom, does not wash their hands, and then handles food. Some diseases spread this way are salmonella, hepatitis A, and polio.

Additionally, a harmful organism can get into your body **through an insect or animal bite**. Many insects and animals like mice or rats can transmit disease organism through their bite. Insects and animals that do this are called vectors. Examples you have probably heard of are malaria or Zika—infections carried by mosquitoes.

Another way is **through direct contact**. Organisms on the skin can spread if an infected person touches someone else. Examples include lice, ringworm, and colds. Colds may be spread by direct contact with someone's saliva or runny nose. This could occur if someone does not wash their hands after blowing their nose and then shakes your hand. You may then rub your eye or bite your nails, allowing their disease organisms to enter your body. Touching contaminated objects like used tissues can also spread colds.

Lastly, a few diseases can be transmitted **through contact with blood or bodily fluids of an infected person**. These diseases include HIV/AIDS, hepatitis B, and hepatitis C—we will discuss these diseases in the second half of this lesson.

Am I at Risk?

Purulent conjunctivitis (pink eye).

It is important to note that a licensee is at no greater risk of getting communicable diseases than the general population. Nevertheless, as a licensee you have a special responsibility because you could also pass your own diseases along to a client. For example, if you have a cold sore and touch it and then touch your client, you could infect the client with a disease like herpes. If you are not feeling well or are suffering from symptoms, you should not go to work. Protect yourself and your clients by seeing a doctor and recovering before returning.

SAFETY PRECAUTIONS

The California State Board of Barbering and Cosmetology has health and safety regulations to prevent the spread of diseases and infection. Section 984 of the California Code of Regulations states that establishments are prohibited from knowingly allowing a licensee afflicted with an infection or parasitic infestation capable of being transmitted to a client to serve clients in the establishment. At the same time, licensees are prohibited to service a person with an infectious or parasitic disease.

Examples of infections or parasitic infestations where you should not work or serve a client include, but are not limited to, the following:

Head lice.

- Cold, influenza, or other respiratory illness accompanied by a fever, until 24 hours after resolution of the fever.
- Streptococcal pharyngitis (strep throat) until 24 hours after treatment has been initiated and 24 hours after resolution of fever.
- Purulent conjunctivitis (pink eye) until examined by a physician or other licensed clinician and approved for return to work.
- Pertussis (whopping cough) until five days of antibiotic therapy has been completed.
- Varicella (chicken pox) until the sixth day after onset of rash or sooner if all lesions have dried and crusted.
- Mumps until nine days after onset of parotid gland swelling.
- Tuberculosis until a local health department authority states that the individual is noninfectious.
- Impetigo (bacterial skin infection) until 24 hours after treatment has begun.
- Head lice until the morning after first treatment.
- Scabies until after treatment has been completed.

Please note that blood-borne diseases such as HIV/AIDS, hepatitis B, and hepatitis C are not considered infectious or communicable diseases for the purpose of this section by the Board.

In addition, the Board prohibits licensees from performing services upon a surface of the skin or scalp where such skin is inflamed, broken, or where a skin infection or eruption is present. Furthermore, a licensee is prohibited from performing services if the skin of his or her hands is inflamed, broken, or where a skin infection or eruption is present, without wearing gloves. The Board's mission is to protect consumers, but these regulations protect licensees as well.

Hand Washing

Besides ensuring that you and your clients are in good health before performing services, there is another precaution to take—washing your hands. Hand washing may be the single most important act to help stop the spread of infection and stay healthy. Think of it like a "do-it-yourself" vaccine. The Centers for Disease Control (CDC) and Prevention recommends you wash your hands:

Hand washing may be the single most important act to help stop the spread of infection.

- Before, during, and after preparing food
- Before eating
- Before and after caring for someone who is sick
- Before and after treating a cut or wound
- After using the toilet
- After changing diapers or cleaning up a child who has used the toilet
- After blowing your nose, coughing, or sneezing
- After touching an animal, animal feed, or animal waste
- After handling pet food or treats
- After touching garbage

The Board requires every licensee performing services to thoroughly wash his or her hands with soap and water or any equally effective alcohol-based hand-cleaning product immediately before serving each client. Alcohol-based hand sanitizers can quickly reduce the number of microbes on hands in some situations, but sanitizers do not eliminate all types of germs and are not as effective when hands are visibly dirty or greasy. Washing hands with soap and water is the best way to reduce the number of microbes on them in most situations.

While you may already know washing your hands is important, many people do not know how to effectively wash their hands. First, wet your hands with clean, running water. Turn off the tap and apply soap. Lather your hands by rubbing them together with soap. Be sure to lather the backs of your hands, between your fingers, and under your nails. Scrub your hands for at least 20 seconds. Rinse your hands well under clean, running water. Dry your hands using a new, clean paper towel or air-dry them. Let's take a moment and view the CDC's video on proper handwashing procedures: **www.cdc.gov/handwashing/.**

Immunizations
Another way to protect yourself in the shop or salon environment is to make sure you are up to date with your immunizations. Vaccinations are available for the measles, mumps, rubella, tetanus, diphtheria, pertussis (whooping cough), varicella (chicken pox), influenza, human papillomavirus, hepatitis A and B, meningococcal (meningitis), and pneumonia. Not all vaccines are recommended for all people; speak with your doctor to determine which vaccines are best to protect you as you serve your clients.

Proper Disinfection of Tools
One of the best ways to prevent diseases from spreading in the shop or salon is by properly disinfecting tools that have been used on a client. This is required by the Board. To disinfect non-electrical items, such as hair brushes, nail clippers, or tweezers, first remove all visible debris. Next, wash the tools with soap or detergent and water, and rinse with clean water. Dry the tools with a new, clean paper towel then immerse the tools completely in an EPA-registered disinfectant used according to manufacturer's instructions. Use a properly mixed disinfectant that has demonstrated bacterial, virucidal, and fungicidal activity. Dry the tools with a new, clean paper towel and store them in a clean, covered place labeled "clean" or "disinfected."

Any tools or items that cannot be disinfected, such as emery boards, wax sticks, cotton balls, and neck strips must be disposed of immediately after use. Used linens, such as towels, sheets, and gowns, must be placed in a closed container and washed before use on another client. After you use electrical equipment on a client, clean it with an EPA-registered disinfectant proven to kill bacteria, fungi, and viruses (the label should tell you). Always follow the manufacturer's instructions for cleaning equipment. For additional information, refer to the Barbering and Cosmetology Act and its Rules and Regulations on disinfection for additional information at **www.barbercosmo.ca.gov**.

In the Training Materials file, you will find the handout "Communicable Diseases in the Workplace." This chart shows a quick summary of common diseases or health problems in the shop or salon, how they are spread, and how to prevent them. Look over the chart in your spare time and keep it somewhere you can easily access in the future. It may also help you answer questions in the next activity.

Case Studies

Now you will read a few case studies that reflect "real life" problems you might run into when working in a shop or salon. Do your best to answer the questions presented regarding communicable diseases.

For answers to all questions, please refer to your exam booklet.

CASE STUDY #1

There is an outbreak of lice in your community. You are working as a barber. Your shop's policy is to check each child's hair for evidence of lice before working on it. A client brings in his seven-year-old son for a haircut. As you inspect the child's hair, you see white specks close to the scalp. You suspect that they might be lice eggs (nits).

How could you get lice in this situation?

How could you protect yourself?

What should you say to your client?

CASE STUDY #2

You are working in a salon doing facials. A client requests a facial. You notice that she has a cold sore around the corner of her mouth. It looks cracked and you think that it might drain during the facial.

What diseases could you get by touching a draining sore with your bare hand?

How could you protect yourself?

What should you say to your client?

CASE STUDY #3

You are working on a client in the summertime. You notice that he has red, scaly patches shaped like rings on his scalp. You also notice these rings on his face and neck.

What disease could you get by touching the scaly patches with your bare hands?

What should you say to your client?

What should you do to protect yourself after the client leaves?

CASE STUDY #4

When one of your favorite clients is making an appointment, he mentions that he has a bad cold but desperately needs his hair cut and style for an important job interview.

How could you get a cold from this client?

How could you protect yourself?

What should you say to your client?

When working in a shop or salon, be aware of potential symptoms of communicable diseases clients may have. Although you are not a doctor and cannot diagnose a disease or illness, if you notice symptoms, you want to ensure that your client's and your health are not at risk. Do not be afraid to refuse service if necessary.

This concludes the first part of our lesson on communicable diseases. As you have learned, it is possible to protect yourself from exposure to many diseases at work. Washing your hands before and after serving a client, properly disinfecting your tools, and refusing to work on clients when you or the client has a communicable disease will help prevent infection.

Now, let's review what you've learned so far.

Questions for Review

The Board of Barbering and Cosmetology prohibits licensees infected with HIV/AIDS from providing services in a shop or salon. True or False?

Bacteria, viruses, parasites, and fungi cause communicable diseases. True or False?

Washing your hands is not as important as disinfecting your tools. True or False?

How can organisms get into your body?

A) Through water or food

B) Through direct contact

C) Through an insect or animal bite

D) Through the air

E) All of the above

For answers to all questions, please refer to your exam booklet.

Now we will discuss some very serious communicable diseases—HIV/AIDS, hepatitis B, and hepatitis C. You have a much greater chance of getting these diseases off the job than in the workplace, but you should still learn what they are, how they spread, and how to protect yourself.

As a future professional, it is possible, but not too likely, for you to be exposed to these diseases at work as they are spread by blood. When you use sharp instruments like razors, clippers, or tweezers, they might puncture a client's skin and then accidentally puncture yours. Alternatively, if the client has one of these diseases, their blood can enter your body through an open wound, cut, sore, or skin rash.

Clients also face a risk of infection. If equipment in the shop or salon is not properly disinfected, it can pass disease organisms from one client to another.

What Are HIV and AIDS?

HIV, the human immunodeficiency virus, causes AIDS. This virus is transmitted through blood and other body fluids. AIDS stands for acquired immune deficiency syndrome. "Acquired" means that you are not born with the disease, you get it from other people (you "acquire" it). Immune deficiency means that the disease damages your body's immune system, so it doesn't work as well. Without a healthy immune system, you have trouble

fighting off all kinds of organisms that can make you sick. Syndrome means that it is not a single disease. AIDS is a collection of different illnesses. When your immune system is damaged, many different organisms can infect your body.

Health Risks

People with AIDS get many diseases because of their weakened immune system. These infections are often called "opportunistic" because they take advantage of a person's weak immune system, and they can cause devastating illnesses. The most common opportunistic disease among people with AIDS in the United States is pneumocystis carinii pneumonia. Sometimes called PCP; this is a very rare form of pneumonia. Fungus causes this disease that results in inflammation and fluid buildup in the lungs. Other common diseases, infections, and cancers people with AIDS get are:

- Tuberculosis – a bacterial infection that can sometimes cause severe lung damage
- Kaposi's sarcoma – a rare form of skin cancer that produces purple spots (lesions) on the skin
- AIDS dementia – a nervous system disorder that can cause loss of memory and physical coordination
- Cryptosporidiosis – an infection that causes severe diarrhea
- Candidiasis – a severe yeast infection in both men and women; in the vagina, throat, or lungs

Treatment

While there are medications for people living with HIV/AIDS, people still die from the infections or cancers their immune system cannot fight. Currently, there is not a vaccine to prevent HIV/AIDS. There is no cure either. This is why it is important to protect yourself and prevent spreading the virus.

The only body fluids that spread HIV/AIDS are blood, semen, vaginal fluid, breast milk, and any body fluid that contains blood. Body fluids that do not spread HIV/AIDS are saliva, sweat, tears, nasal secretions, and vomit.

How Does the HIV/AIDS Virus Spread?

The kinds of contact among people that can spread the AIDS virus include:

- Sexual contact with an infected person (vaginal intercourse, anal sex, or oral sex)
- Sharing needles and syringes with an infected person (such as during drug use)
- From an infected mother to her baby during pregnancy, in childbirth, or through breast milk
- Being stuck with an HIV-contaminated needle or sharp object

You cannot get HIV/AIDS from any kind of casual contact with another person. You cannot get HIV/AIDS through the air, shaking hands, eating together, sharing items (like books, paper, pens, or phones), sharing the bathroom, or getting insect bites.

Despite common misbeliefs, anyone can get HIV/AIDS. The majority of people with HIV/AIDS were infected from sexual contact with an infected partner. To protect yourself from getting HIV/AIDS in your personal life, use a latex condom for any kind of sexual contact and do not inject drugs. A condom is more effective against HIV/AIDS and other disease if it is used with a spermicide. If you use a lubricant with the condom, use a water-based lubricant as an oil-based lubricant like petroleum jelly can damage the condom.

Symptoms of HIV infection include:

- Fatigue
- Night sweats
- Fever
- Chills
- Weight loss
- Oral thrush (white creamy patches in the mouth)
- Enlarged lymph nodes (in the neck, armpits, or groin)

How Can I Find Out If I am Infected?
To know if you are infected with the AIDS virus, you can get a blood test. Your blood produces antibodies to fight off foreign substances that enter the body, like viruses. So, if HIV gets into your bloodstream, a specific antibody is produced. The antibody test looks for this particular antibody in your blood to know if you are infected with AIDS. The HIV antibody test may not be positive right after you are exposed. You usually produce antibodies within three months, but sometimes it takes up to six months. As soon as you begin to produce antibodies, you will test positive. However, remember, even then, you may not have any symptoms of HIV/AIDS. Symptoms may not show up until years later.

For information about testing and counseling, call:

- Your doctor
- Your local Public Health Department
- An AIDS service organization
- Your local Red Cross chapter
- The Northern California AIDS Hotline: toll-free (800) FOR-AIDS
- The Southern California AIDS Hotline: toll-free (800) 922-AIDS

Your Rights
You have a right to keep your test results confidential. You do not have to tell anyone, not even your employer. It is important to know that you cannot be fired from your job if you test positive for HIV. People with HIV/AIDS are protected from job discrimination under state and federal law.

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- Fatigue
- Night sweats
- Fever
- Chills
- Weight loss
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Blood Exposure Prevention

Handle all sharp instruments carefully and wear protective gloves.

To prevent infection and protect yourself from blood exposure at work, follow these guidelines:

- Handle all sharp instruments carefully (razors, nail clippers, etc.).
- Use a puncture-proof container when you throw away sharp objects like razor blades.
- Disinfect tools, equipment, and surfaces if they get blood on them.
- Disinfect all tools after they are used on clients, even if you see no blood.
- Wash your hands before and after contact with each client.
- If a client bleeds, hand the client a cotton ball to stop the bleeding. Have the client dispose of it rather than doing so yourself.
- If you get someone's blood on your skin, immediately wash with soap and water. Lather for at least 10 seconds, then rinse.
- If you have sores, scratches, cuts, or broken skin (from dermatitis), wear protective gloves.

Standard Precautions

The U.S. Public Health Service says that all U.S. workers must follow certain guidelines if they might come into contact with blood or body fluids on the job. These guidelines are called Standard Precautions. U.S. Department of Labor Occupational Safety and Health Administration (OSHA) has similar rules. These agencies say that to protect yourself you must treat all blood and bodily fluids containing blood as if you know they are infected. In other words, there's no need to decide if a client or co-worker might have HIV/AIDS, or to take different precautions with different people. If you treat all blood as if it is infected, you protect yourself all the time.

For more information on HIV/AIDS, go to **www.hiv.gov**.

What is Hepatitis?

Hepatitis is an inflammation of the liver. Hepatitis can be caused by many different things—viruses, bacteria, drugs, or chemicals. When it's caused by viruses or bacteria, it's called infectious hepatitis. There are several different types of infectious hepatitis. Hepatitis A, B, and C are the most common. Hepatitis A was mentioned earlier in our discussion of diseases spread through contaminated water or food, but it can also be spread from direct contact. Hepatitis B and hepatitis C, however, are spread through an infected person's blood or body fluids.

How is Hepatitis Contracted?
Hepatitis B and hepatitis C are caused by two different viruses. Although each can cause similar symptoms, such as fever, fatigue, loss of appetite, nausea, vomiting, dark urine, abdominal pain, and jaundice (the eyes and skin turn yellow), they have different modes of transmission and treatments. It is possible to have both hepatitis B and C infections at the same time.

Hepatitis B
Hepatitis B is the most common infectious hepatitis worldwide. It is caused by a virus that grows in liver cells. The hepatitis B virus is sometimes called HBV. When the virus inflames the liver, the condition is called acute hepatitis B. Most people get better after an acute hepatitis B infection, but for some, the disease can develop into chronic hepatitis B. This can eventually lead to cirrhosis (hardening of the liver) and liver cancer. HBV is spread in the same body fluids as HIV (blood, semen, vaginal fluid, and breast milk); however, it can also be spread in saliva. The best way to prevent HBV is to be vaccinated.

Hepatitis C
Hepatitis C is the most common infectious hepatitis in the United States. Hepatitis C is spread through contact with contaminated blood, most commonly through shared needles used with drugs. The disease can also be sexually transmitted or from a mother with the virus giving birth, but these routes of transmission are not as common. Hepatitis C also tends to be chronic. The hepatitis C virus is sometimes called HCV. Currently, there is no vaccine for HCV.

While it may take months before people infected with the hepatitis B and C virus to start to show symptoms, for some people they never occur at all. They become carriers, meaning you can get the disease from them, but you cannot tell that they are infected by looking at them. They might not even be aware themselves.

The hepatitis B virus and hepatitis C virus are more common than HIV/AIDS and much easier to get. The hepatitis B virus and hepatitis C virus are greater risks to licensees as they are much sturdier viruses. The hepatitis B virus can survive outside the body for seven days, even if it dries out and the hepatitis C virus can survive outside the body at room temperature for up to three weeks. That is why it is very important to disinfect tools, equipment, and surfaces especially if you get blood on them.


Disinfect tools properly after use.

Treatment
There are many medications available to treat chronic hepatitis B and C, but prevention is very important. Since the hepatitis B virus and hepatitis C virus are spread in the same ways as HIV, take the same precautions in the shop or salon. For example, handle sharp instruments carefully and dispose of them in puncture-proof containers. Disinfect tools properly after use. Wash your hands before and after you have contact with a client. Wash off any blood immediately and wear gloves if you have cuts or sores.

If you do happen to get stuck by a razor or other sharp tools that might be contaminated with blood, you should do all of the following:

- Wash your wound immediately and thoroughly with soap and water
- Report the incident to your supervisor or employer
- Write down the name and contact information for the person whose blood you had contact with
- Get medical treatment

Cal/OSHA Requirements

Cal/OSHA website.

In California, Cal/OSHA has rules on Occupational Exposure to Bloodborne Pathogens (Section 5193 of the California Code of Regulations, Title 8, General Industry Safety Orders). These rules are designed to protect workers against diseases that are spread by blood. They cover all workers who "reasonably anticipate" contact with blood or other potentially infectious materials on the job. Most of those directly affected are health-care and public safety workers, but the rules may also cover future professionals working in a shop or salon.

Cal/OSHA considers job exposure to blood to mean someone's blood getting into your blood through skin contact, through mucous membranes (in your eyes, nose, or mouth), or through a sharp instrument. For you to be covered by the blood-borne disease rule, this exposure must occur while you are performing your job duties.

Because barbers and cosmetologists have some chance of blood exposure on the job, it is possible that they are covered by the rules. It is the employer's responsibility, not OSHA's or Cal/OSHA's, to determine if employees are covered. Employers can call the Cal/OSHA Consultation Service to ask whether the Bloodborne Pathogen rules apply to their workers.

Workers who feel that they are being exposed to blood and are not properly protected have a right to file a Cal/OSHA complaint. Remember that if you are a student or independent contractor, you are not covered by Cal/OSHA.

Cal/OSHA's Bloodborne Pathogen rules say employers must:

- **Establish a written exposure control plan** that identifies who has exposure to blood and how to reduce the danger.
- **Update the plan annually** to reflect changes in tasks, procedures, and positions that affect occupational exposure, and also technological changes that eliminate or reduce occupational exposure.
- **Implement the use of universal precautions** that everyone in the shop or salon must follow to treat all blood as if it could be infected.
- **Identify and use engineering controls** to isolate or remove the danger of exposure to blood. For example, puncture-proof boxes should be available to dispose of contaminated sharp instruments like razors.

- **Identify and ensure the use of work practice controls** so workers perform their jobs safely with a low possibility of exposure.
- **Provide and maintain personal protective equipment** such as gloves, gowns, eye protection, and masks whenever exposure to blood is likely.
- **Make available hepatitis B vaccinations** to all workers with occupational exposure.
- **Make available free, confidential post-exposure medical evaluation and follow up** to any occupationally exposed workers who experience an exposure incident.
- **Use labels and signs** to communicate hazards on containers containing blood, waste, and sharps.
- **Provide information and training** about Cal/OSHA's Bloodborne Pathogen rules, infectious bloodborne diseases, safe work practices, and what to do if exposed to blood on the job.
- **Maintain worker medical and training records** and a sharps injury log.

Cal/OSHA requires your employer to give you free medical evaluation and follow-up after you have any blood exposure. This process should be confidential. The employer should send you to a medical professional who will:

- Investigate and document how the exposure occurred
- Identify the person whose blood you were exposed to
- Test that person for disease (with his or her consent)
- Test you (with your consent) to see if a viral infection occurred
- Give you immediate treatment when needed, including the hepatitis B vaccine or other medications
- Give you counseling
- Evaluate any illness you report in the future that might be related to the exposure

As with all Cal/OSHA regulations, employers can be cited and fined if they do not follow these rules. For more information about the Bloodborne Pathogens, go to Cal/OSHA's website at **www.dir.ca.gov/Title8/5193.html**.

Now, let's review everything we learned in today's lesson.

Questions for Review

You only need to disinfect your tools if you cut a client. Otherwise, you can use soap and water. True or False?

Hepatitis B cannot be spread through saliva. True or False?

The hepatitis B virus is easier to get than HIV/AIDS. True or False?

Which of the following body fluids spreads HIV/AIDS?

A) Tears and blood

B) Saliva and sweat

C) Vaginal fluid and nasal secretions

D) Breast milk and semen

E) C and D

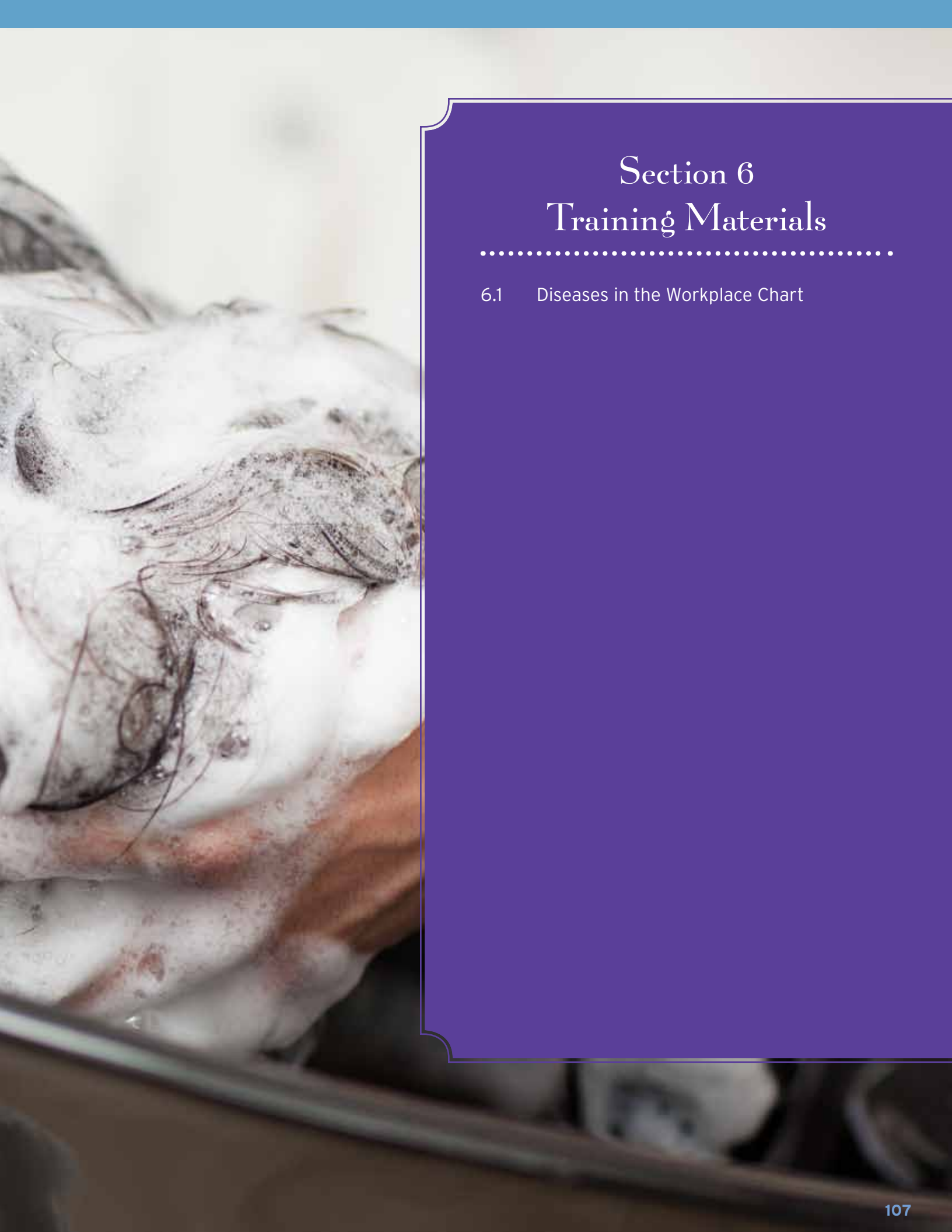
For answers to all questions, please refer to your exam booklet.

This concludes our lesson on communicable diseases. It is important to remember that most tasks done by licensees do not expose you to blood. Therefore, the chance of getting exposed to HIV/AIDS, hepatitis B, and hepatitis C in the shop or salon is very low. If you take all of the precautions that we discussed today, you will protect yourself quite well against exposure.

In our next lesson, we will discuss health and safety rights, agencies that oversee these rights, and important laws and regulations that protect licensees.

Notes

Notes



Section 6
Training Materials

6.1 Diseases in the Workplace Chart

BarberCosmo
Board of Barbering & Cosmetology

Diseases in the Workplace

DISEASE OR HEALTH PROBLEM	HOW IT IS SPREAD IN THE SHOP OR SALON	HOW TO PREVENT IT
HEPATITIS A **Type of organism:** Virus **Incubation period:** 15–50 days, with an average of 28–30 days* **Symptoms:** Fever, fatigue, loss of appetite, abdominal pain, nausea, vomiting, dark urine, light stools, and jaundice (yellowing of the skin or the whites of the eyes)	• Eating or drinking anything that has been contaminated with particles of infected stool (if someone with hepatitis A does not wash after going to the bathroom, then touches your food, you could get sick from the food) • Exposure to the bodily fluid of someone infected	• Wash your hands with soap and water before and after serving each client** • Wash your hands with soap and water, and have the client do the same, before touching food • Properly disinfect equipment** • Vaccination is available if recommended by your medical provider
HEPATITIS B **Type of organism:** Virus **Incubation period:** 60–150 days, with an average of 90 days* **Symptoms:** Fever, fatigue, loss of appetite, abdominal pain, nausea, vomiting, dark urine, light stools, and jaundice (yellowing of the skin or the whites of the eyes)	• Getting blood, semen, vaginal fluid, breast milk, saliva, or any body fluid that contains blood into your body	• Properly disinfect equipment** • Handle sharp instruments carefully • Wash your hands with soap and water before and after serving each client** • Use gloves if you have sores, scratches, cuts, or broken skin • Vaccination is available if recommended by your medical provider
HEPATITIS C **Type of organism:** Virus **Incubation period:** 14–180 days, with an average of 45 days* **Symptoms:** Fever, fatigue, loss of appetite, abdominal pain, nausea, vomiting, dark urine, light stools, and jaundice (yellowing of the skin or the whites of the eyes)	• Getting blood, semen, vaginal fluid, breast milk, or any body fluid that contains blood into your body	• Properly disinfect equipment** • Handle sharp instruments carefully • Wash your hands with soap and water before and after serving each client** • Use gloves if you have sores, scratches, cuts, or broken skin

* Incubation period is the length of time it takes after exposure to show symptoms of the disease.
** Rules and Regulations of the State Board of Barbering and Cosmetology, Title 19, Chapter 9, California Code of Regulations.

DISEASE OR HEALTH PROBLEM	HOW IT IS SPREAD IN THE SHOP OR SALON	HOW TO PREVENT IT
AIDS **Type of organism:** Human immunodeficiency virus (HIV) **Incubation period:** 2 months to 10 years or more. Most individual infected with HIV have no symptoms at all for several years. **Symptoms:** Fever, fatigue, night sweats, chills, weight loss, oral thrush, enlarged lymph nodes	• Getting blood, semen, vaginal fluid, breast milk, or any body fluid that contains blood into your body	• Properly disinfect equipment** • Handle sharp instruments carefully • Wash your hands with soap and water before and after serving each client** • Use gloves if you have sores, scratches, cuts, or broken skin
HERPES SIMPLEX–TYPE 1 **Type of organism:** Virus **Incubation period:** 2–12 days with an average of 4 days* **Symptoms:** Cold sores or painful blisters on the face, gums, lips, or mouth. Sores are often recurring.	• Touching an infected client's cold sores or fever blisters • Touching fluid draining from the eyes • Touching something contaminated with saliva, phlegm, or nasal discharge	• Don't touch cold sores or fever blisters • Use gloves to prevent accidentally touching a sore or blister • Wash your hands with soap and water before and after serving each client** • Properly disinfect equipment** • Properly sanitize towels**
COMMON COLD **Type of organism:** Virus **Incubation period:** 1–3 days* **Symptoms:** Chills, headache, coughing, sneezing, sore or scratchy throat, runny nose, muscle aches, and fatigue	• Breathing air contaminated by an infected client coughing, sneezing, or spitting • Touching something that is contaminated then touching your own mouth, nose, or eyes	• Cover your mouth and nose when coughing or sneezing, and have the client do the same • Wash your hands with soap and water before and after serving each client** • Work in a well-ventilated room • Wear a mask, ask the client to wear a mask, or both wear masks
IMPETIGO **Type of organism:** Bacteria **Incubation period:** 2–4 days* **Symptoms:** Rash—the blisters turn into honey-colored crusts. May occur anywhere, but most often around the mouth, in the nose, and on the chin. May last for 2–3 weeks.	• Touching an open sore on a client's mouth, nose, or chin • Touching something contaminated with the fluid of a sore, especially if you then touch your own nose or mouth	• Don't touch open sores • Use gloves to prevent accidentally touching an open sore • Wash your hands with soap and water before and after serving each client** • Properly disinfect equipment** • Properly sanitize towels**

* Incubation period is the length of time it takes after exposure to show symptoms of the disease.
** Rules and Regulations of the State Board of Barbering and Cosmetology, Title 19, Chapter 9, California Code of Regulations.

DISEASE OR HEALTH PROBLEM	HOW IT IS SPREAD IN THE SHOP OR SALON	HOW TO PREVENT IT
LICE (Head, Body, Or Pubic) **Type of organism:** Vector **Incubation period:** Eggs hatch in 5–8 days; the lice mature in two weeks and are then able to lay more eggs* **Symptoms:** The scalp, genital area, or other hairy part of the body gets infested with eggs (nits). Larvae (like worms) hatch from the eggs and later grow into adult lice. The person who is infested feels severe itching.	• Touching an infested client. Lice crawl (they don't jump) from one person to another • Touching articles that are infested (examples: chairs, combs, hats, and clothing)	• Don't touch infested clients or their clothes • Properly disinfect equipment** • Properly sanitize towels**
RINGWORM **Type of organism:** Yeast (a fungus) **Incubation period:** 10–14 days* **Symptoms:** A small, red, raised area spreads on the skin or scalp, later developing into scaly patches. Patches are ring-shaped. Infected hairs become brittle and break off. On the scalp, this can lead to temporary baldness.	• Touching the patches of a client's skin or scalp (lesions may be moist, dry, or crusted) • Touching contaminated articles, like chairs, scissors, combs, or towels	• Don't touch patches on a client's skin or scalp • Use gloves to prevent accidentally touching patches • Wash your hands with soap and water before and after serving each client** • Properly disinfect equipment** • Properly sanitize towels**
SCABIES **Type of organism:** Vector (a mite) **Incubation period:** 2–6 weeks* **Symptoms:** There is a red, itchy rash on the skin. Tiny tunnels appear between the fingers, on wrists and elbows, under the arms, or in other warm, moist areas. Itching is more intense at night. Itching may continue 1–2 weeks after treatment.	• Prolonged contact with the skin of an infested client • Touching a client's infested clothing	• Don't touch infested clients or their clothes** • Wash your hands with soap and water before and after serving each client** • Properly disinfect equipment** • Properly sanitize towels**

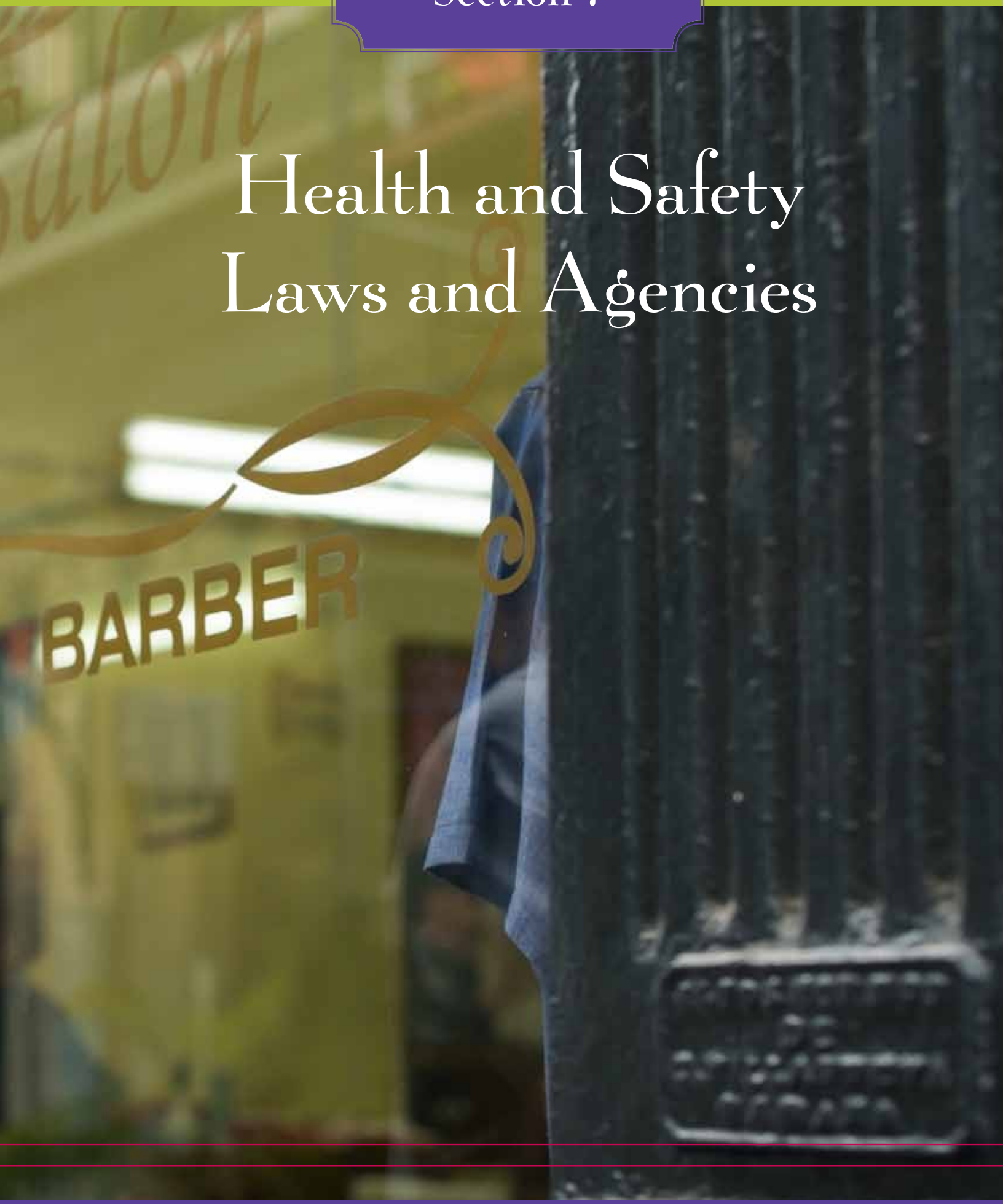
* Incubation period is the length of time it takes after exposure to show symptoms of the disease.
** Rules and Regulations of the State Board of Barbering and Cosmetology, Title 19, Chapter 9, California Code of Regulations.

DISEASE OR HEALTH PROBLEM	HOW IT IS SPREAD IN THE SHOP OR SALON	HOW TO PREVENT IT
TUBERCULOSIS (TB) **Type of organism:** Bacteria **Incubation period:** After initial infection with TB, the disease may lie dormant for a lifetime. Otherwise lung lesions may develop in 4–12 weeks. In approximately 80–95% of people these lesions will heal. The only sign they were once infected will be a positive skin test. Some people will later develop active TB. The greatest risk of active disease is within 1–2 years after initial infection.* **Symptoms:** Fever, weight loss, night sweats, cough, chest pain, coughing up blood, positive TB skin test, abnormal chest x-ray	• Breathing air contaminated by an infected client coughing, sneezing, or singing. Contact must be over a prolonged period of time. • Touching droplets from the nose or throat of an infected client, then touching your own nose, mouth, or eyes	• Cover your mouth and nose when coughing or sneezing, and have the client do the same • Wear a mask, ask the client to wear a mask, or both wear masks • Wash your hands with soap and water before and after serving each client** • Work in a well-ventilated room
CHICKENPOX **Type of organism:** Virus **Incubation period:** 14–16 days; rash and pox appear within 1–2 days after first symptoms **Symptoms: I**tchy rash and red spots or blisters (pox) all over the body, fever, headache, cough, sore throat, decreased appetite	• Breathing air contaminated by an infected client coughing or sneezing • Eating or drinking something that has been contaminated by an infected client • Touching an infected client's fluid from a chickenpox blister	• Cover your mouth and nose when coughing or sneezing, and have the client do the same • Wash your hands with soap and water before and after serving each client** • Wash your hands with soap and water, and have the client do the same, before touching food • Don't touch blisters • Vaccination is available if recommended by your medical provider
MEASLES/RUBEOLA **Type of organism:** virus **Incubation period:** 10–14 days* **Symptoms:** Cough, runny nose, inflamed eyes, sore throat, fever, blotchy red skin rash, and white spots inside mouth	• Breathing air contaminated by an infected client coughing, sneezing, or talking • Touching droplets from the nose or throat of an infected client, then touching your own nose, mouth, or eyes	• Wash your hands with soap and water before and after serving each client** • Cover your mouth and nose when coughing or sneezing, and have the client do the same • Properly disinfect equipment** • Vaccination is available if recommended by your medical provider

* Incubation period is the length of time it takes after exposure to show symptoms of the disease.

** Rules and Regulations of the State Board of Barbering and Cosmetology, Title 19, Chapter 9, California Code of Regulations.

Health and Safety Laws and Agencies



LEARNING OBJECTIVES

Section 7

Health and Safety Laws and Agencies

After completing this section, you will be able to:

- List several state and federal agencies that oversee health and safety in the workplace.
- Explain how these agencies and laws protect you.
- Use these laws and the agencies that enforce them to solve specific health and safety problems at work.

This lesson is about your health and safety rights. We will look at the many agencies that regulate health and safety in shops and salons. This topic is complicated because health and safety rights and regulations are different for owners, employees, and independent contractors (self-employed licensees who rent their stations). Laws and regulations can be important tools to use in solving health and safety problems. But, as you will see, there are some gaps in protection—areas where there are no laws or regulations.

First, we will look at legal rights and regulations, what they mean, and where they come from. The second half of the lesson will focus on how various laws and agencies can help solve some specific health and safety problems in the shop or salon.

What Are My Rights as an Employee?

If you are an employee, some important legal rights you have include:

- Your workplace is required to be safe.
- You must be given information about the chemicals you work with and training on how to work safely.
- You may file a complaint with the California Occupational Safety and Health Administration (Cal/OSHA) (the agency that enforces workplace health and safety laws) or the California Board of Barbering and Cosmetology and have your workplace inspected.

What Agencies Regulate Health and Safety?

From our previous lessons and your knowledge, can you think of agencies that regulate health and safety in shops and salons?

You may have thought of:

- **U.S. Food and Drug Administration**
- **U.S. Department of Labor Occupational Safety and Health Administration**
- **Cal/OSHA**
- **California State Board of Barbering and Cosmetology**
- **Department of Industrial Relations**

FDA website.


COSMETICS FACTS

Hair Dyes and Relaxers

Tips to Keep You Safe

FDA safety tip sheet about hair dyes and relaxers.

The U.S. Food And Drug Administration

The U.S. Food and Drug Administration (FDA) is responsible for regulating cosmetic products, like those used in establishments and at home. However, the FDA does not make sure every cosmetic is safe before it is marketed. The FDA cannot force cosmetic manufacturers to prove that their products are safe before putting them on the market. If manufacturers have not conducted safety tests, they must simply put a warning label on the product that states "Warning: The Safety of This Product Has Not Been Determined." However, you may have noticed from experience that most products do not have this warning. This does not mean that all products without this warning have been tested. The FDA does not have the power to check up on a manufacturer's claim that safety testing was done, so the FDA has to take the manufacturer's word for it.

In addition, the FDA does not routinely test products on its own. Of the hundreds of possibly harmful chemicals used in chemicals, the FDA has conducted tests on only a small number. The FDA usually decides to test a product only after receiving consumer complaints. Therefore, it is very important that people using a product report problems not only to the manufacturer, but also directly to the FDA.

As a future professional, it is important to remember the FDA is primarily concerned with public and consumer safety, not worker safety. When safety testing is done by a manufacturer or the FDA, they are looking at whether or not the product is dangerous to consumers, not licensees. While a chemical found to be hazardous to consumers will also be hazardous to licensees using it on their jobs, a chemical found to be relatively safe for consumers may not be safe for licensees who use it repeatedly over time.

Once the FDA finds out a product contains harmful chemicals, it can take steps to remove it from the market. The FDA has the power to take action against a product if:

- It is adulterated, that is, it contains an ingredient that will harm users under normal conditions of use
- It is misbranded, that is, the label includes information that is false or misleading.

If the FDA decides that a cosmetic is either adulterated or misbranded, it can request that the manufacturer voluntarily take it off the market. In special cases, the FDA can ban the use of a substance that is proven to cause serious illness or disease, like cancer. For example, in 2006, the FDA restricted the use of lash/brow dyes and tints (including vegetables tints) as they have been known to cause serious eye injuries. The FDA maintains that there are no approved lash/brow tints that can be used in the eye area. The FDA has issued an "Import Alert" as a means to intercept products intended for tinting lashes and brows.

The FDA does not require all products used in the shop to be labeled with their ingredients. "Professional use" products are not covered by the Fair Packaging and Labeling Act. This law, enforced by the FDA, requires most cosmetics sold in retail establishments to contain a list of ingredients on

their labels. However, professional use products sold for use only in shops or salons are not required to have ingredient labels. This exemption makes it very difficult for both licensees and consumers to know what is in those products. For more information, visit **www.fda.gov/Cosmetics**.

The U.S. Department Of Labor Occupational Safety And Health Administration

The Occupational Safety and Health Administration (OSHA) is the federal agency responsible for making sure that the workplace is safe. In 1970, Congress passed the federal Occupational Safety and Health Act. This law is designed to prevent worker injuries and illnesses caused by the job. It says that every employee has the right to work in a workplace free of health and safety hazards.

Occupational Safety and Health Administration (OSHA) website.

The Occupational Safety and Health Act set up OSHA. OSHA issues health and safety regulations, which are called standards. These require employers to:

- Limit worker exposure to certain chemicals
- Give workers health and safety training
- Have safety equipment, like respirators and ventilation systems, where necessary
- Reduce fire and electrical hazards
- Keep records of job-related injuries and illnesses
- Take many other steps to make the workplace safe

States are allowed to run their own OSHA programs if they choose. However, the state standards must be at least as strong as the standards set nationwide by federal OSHA. California has its own OSHA program called Cal/OSHA, which protects California workers. If employers do not follow Cal/OSHA standards that apply to them, they are breaking the law.

Cal/OSHA

Cal/OSHA standards that apply to licensees and many other occupations are called **General Industry Safety Orders**, and are found in Title 8 of the California Code of Regulations.

Cal/OSHA covers almost all workers in the state, no matter what job they do. There are a few exceptions, like people who work for the federal government. State and local government workers are covered. Cal/OSHA also does not cover independent contractors. Independent contractors are self-employed licensees. They are not considered "employees" as defined by the State Labor Code, so Cal/OSHA does not cover them. However, determining whether a person is an employee or an independent contractor can be tricky.

Worker Status – Independent Contractor or Employee?

Which category a person falls into usually depends on how much control he or she has over the work. Some factors to consider are who assigns the work, who sets the hours, and who supplies the products and materials. If the salon owner has control over these matters, then the licensee is probably considered an employee under the law. This is true even if there is a signed contract indicating that he or she is an independent contractor. In a case like this, the licensee is probably covered by Cal/OSHA.

Employers must provide workers with training about the hazardous chemicals in the workplace.

EMPLOYER RESPONSIBILITIES

Employers are legally responsible for providing a safe and healthful workplace under state and federal law. The employer must comply with all health and safety standards. Cal/OSHA can order the employer to correct hazardous conditions and can fine the employer for not following the standards.

Employee Training

Employers must provide workers with training about the hazardous chemicals in the workplace. Training should include:

- How to read a Safety Data Sheet (SDS)
- Possible health hazards of the chemicals used in the workplace
- How to use specific chemicals safely and protect yourself from their hazards
- Retraining when you begin to use a new hazardous chemical

Most hazardous chemical products must be clearly labeled with their name, their ingredients, and a warning about their possible health and safety risks. However, since cosmetic products are regulated by the FDA, cosmetics are not covered by this Cal/OSHA labeling requirement. Remember the FDA requires labeling of only some cosmetic products, not those intended for "professional use" only.

Form 300

Upon request, the employer must provide workers with records of work-related injuries and illnesses, results of tests done to monitor chemicals in the workplace, and copies of their own employee medical records. If you work in a shop with more than 10 employees, Cal/OSHA requires your employer to keep a written record of all work-related injuries and illnesses. This record is called Form 300. You have the right to see and copy all Form 300s for the past five years. Also, a summary of the information on the Form 300 must

be posted in the workplace in a visible location. These requirements are found in Sections 14300–14400 of the California Code of Regulations, Title 8. Shops with 10 or fewer employees are not required to fill out Form 300. For more information on Form 300, visit **www.dir.ca.gov/dosh/**.


Log of Work-Related Injuries and Illnesses

Cal/OSHA Form 300.

Records Request
Your employer must allow you to see and copy any workplace monitoring records, which include:

- Tests the employer has done to measure the amount of chemicals in the air
- Medical tests the employer has given to see how much of a toxic chemical has been absorbed into your body

You also have the right to observe these tests when they are done. These requirements are found in Section 3204 of the California Code of Regulations, Title 8, General Industry Safety Orders. Your employer must allow you to see and copy your own company medical records, which include:

- Information from medical questionnaires or histories conducted by your employer
- Results of medical examinations conducted or requested by your employer
- Any medical opinion or diagnosis
- Information on medical treatments

These requirements are found in Section 3204 of the California Code of Regulations, Title 8, General Industry Safety Orders.

Illness Prevention Program
California employers must have a written plan for preventing worker injuries and illnesses. Since 1991, Cal/OSHA has required every California employer to have an effective Injury and Illness Prevention Program (IIPP). It must be in writing and available to workers. These requirements are found in Section 3203 of the California Code of Regulations, Title 8, General Industry Safety Orders. Employers must:

- Identify who is responsible for health and safety in the workplace
- Set up a system to communicate with all workers about health and safety
- Identify and evaluate all workplace hazards, using such methods as regular inspections
- Find methods to correct unsafe work practices and conditions
- Provide health and safety training using language workers can understand
- Set up a process to investigate accidents and illnesses
- Encourage workers to report hazards on the job without fear of firing or discrimination

What Can I Do?
When you see what you believe is an unsafe condition at work, you can complain to Cal/OSHA. To file a Cal/OSHA complaint, you can call any of their offices. Be specific and detailed. Describe the specific task, equipment, or chemicals causing concern. Even if you don't know whether a Cal/OSHA standard or regulation is actually being violated, you still have the right to make a complaint. Cal/OSHA won't give out your name to anyone unless you say they may do so. For more information, see Cal/OSHA's fact sheet, *Health and Safety Rights: Facts for California Workers*, located in the Materials Training file or online at: **http://dir.ca.gov/dosh/documents/health-and-safety-rights-for-workers.pdf**.

Cal/OSHA has many offices located throughout the state. For the phone numbers of your local office, go to **www.dir.ca.gov/dosh/districtoffices.htm**.

Be sure to check out the Cal/OSHA fact sheet, *Working Safely in the Nail Salons* located in the Materials Training file or online at **www.dir.ca.gov/dosh/dosh_publications/Nail-Salon-Safety-fs.pdf**.

INDEPENDENT CONTRACTORS

If you are an independent contractor and not covered by Cal/OSHA, there is still a lot you can do to protect your own health and safety on the job. Just because you are considered self-employed and cannot rely on an employer or Cal/OSHA to protect you, it does not mean you shouldn't do everything in your power to protect yourself. You should find out what chemicals are in the products you work with by getting SDSs from the manufacturers. You can also draw up a plan for protecting yourself from health and safety hazards. If there are several independent contractors in your salon, you can work together to develop an IIPP that will protect everyone. IIPPs are a good idea for independent contractors, but they are not legally required as they are for owners and employers. To get ideas on how to construct an IIPP, you will want to visit Cal/OSHA's website. Cal/OSHA has provided a guide on how to develop your own IIPP complete with checklists and self-inspection sheets to make the process simple. Go to: **www.dir.ca.gov/dosh/dosh_publications/iipp.html.**

California State Board Of Barbering And Cosmetology

The California State Board of Barbering and Cosmetology's primary responsibility is to protect the consumers who use your professional services. To do that, the Board has set standards for each service. For example, it requires that all equipment be disinfected. The Board examination tests your ability to meet these standards to perform services without harming the client. However, the Board also sees the need for you to learn about the dangers you may face when using chemicals on clients. At the request of the Board, California law requires that the Board

examination includes questions about harmful substances used on your job. In the end, both you and the client are better protected from the harmful effects of chemicals. The Board also has a regulation that coincides with an agency already mentioned—the FDA. As we mentioned earlier, the FDA has restricted the use of lash/brow tints and dyes. So, as of January 1, 2015, schools may teach brow and lash tinting, but there are not currently any products on the market that can be used in California. Section 989 of the California Code of Regulations states, "No establishment or school shall use a product in a manner that is disapproved by the FDA, Occupational Safety and Health Administration or EPA." So, until product manufacturers develop a tint that the FDA deems safe for use, no lash/brow tinting services should be performed by cosmetologists.

Now, let's review some main points from the lesson.

Questions for Review

Cal/OSHA helps both employees and employers. True or False?

The FDA and the Board of Barbering and Cosmetology are primarily concerned with protecting worker safety. True or False?

What does it mean if a product is adulterated?

A) It can be used by adults (ages 18 and over) only.

B) It contains an ingredient that will harm users under normal conditions of use.

C) The FDA has tested it and found it causes diseases.

D) B and C

E) All of the above.

Which of the following statements about Cal/OSHA is false?

A) They have two ventilation standards that apply to ventilation systems in shop and salons.

B) They require employers to keep a written record of all work-related injuries and illnesses.

C) They protect employees and independent contractors.

D) Their standards must be at least as strong as the standards set nationwide by federal OSHA.

E) They cover almost all workers in the state, no matter what job they do.

Upon request, the employer must provide workers with:

A) Records of work-related injuries and illnesses.

B) Copies of their own employee medical records.

C) Copies of employees' medical records.

D) All of the above.

E) A and B

For answers to all questions, please refer to your exam booklet.

Our lesson so far has given you a lot of information about health and safety laws and agencies. Now, let's use your new knowledge and apply it to a real-life problem you may face when working as a licensee in an establishment. Try your best to answer the questions below. As you will see, correcting health and safety problems can require many different strategies. There are several ways to approach these questions, and there are no "right" answers. Often, the laws and regulations are limited, or they have gaps or loopholes. However, in spite of these problems, the law does provide some very important protection. It can be a vital tool for you to use in making sure that your workplace is safe.

Case Studies

Now you will read a few case studies that reflect "real-life" problems you might run into when working in a shop or salon. Do your best to answer the questions presented.

For answers to all questions, please refer to your exam booklet.

CASE STUDY #1

You are concerned that other licensees in your shop are not disinfecting their instruments properly.

Which agency could you turn to for help? What can that agency do?

CASE STUDY #2

You think that a particular cosmetic product used in your shop might be causing skin irritation among clients and co-workers. You wonder if consumers have ever reported problems with the product.

Which agency could you turn to for help? What can that agency do?

CASE STUDY #3

You have been working in a large salon for several years. Recently you have developed asthma and wonder if it could be related to something you're doing at work. You want to find out if any other employees in that salon have had similar problems in the past.

Under the law, what record can you get that might give you this information?

What is another way you could find out?

CASE STUDY #4

You want to find out about the possible health effects of a new brand of hairspray you have recently begun using at work.

An SDS for this product should be available in your workplace. What is a SDS? What will it tell you?

CASE STUDY #5

You have asked for a SDS. Your employer has it, but refuses to give it to you.

What regulation covers this problem?

How can you get your employer to give you the SDS?

Which agency could you turn to for help?

CASE STUDY #6

You want information on your employer's plan for preventing health and safety problems.

Under the law, where can you get this information?

What does your employer's plan have to include?

CASE STUDY #7

You are a salon owner and you want to provide your employees with the safest and healthiest work environment you can. However, you are not sure how to improve working conditions and comply with Cal/OSHA standards.

Which agency can you turn to for help? What help can you get there?

This concludes our lesson on Health and Safety Laws and Agencies. We learned how to use the law to solve problems in the shop. As we discussed, the law has limitations and is not always the best way to solve problems. Our next lesson will teach you how to investigate whether your workplace is safe and how to solve safety problems.

Notes

Notes

Section 7
Training Materials

7.1 Health and Safety Rights: Facts for California Workers

7.2 Health and Safety Agency Acronyms Word Search

Department of Industrial Relations
Cal/OSHA
Christine Baker, Director
Juliann Sum, Cal/OSHA Chief

JUNE 2015

Health & Safety Rights: Facts for California Workers

Photo Credits: Bob Gumpert

The State of California, Division of Occupational Safety and Health—better known as "Cal/OSHA"—is working to assure you have a safe and healthful workplace. Read this fact sheet to understand your basic rights and learn what you can do to help keep your job safe.

Employers' Program to Prevent Injuries and Illnesses

California law requires your employer to have an effective injury and illness prevention program (IIPP) that includes training and instruction on safe work practices and an effective system for your employer to communicate with you and your coworkers. (See page 4 for more information about IIPP requirements.) You should actively participate in the training provided by your employer, learn how to recognize health and safety hazards, and inform your employer about any hazards you discover. Your employer must have a system to encourage reporting hazards without fear of retaliation and must correct hazards in a timely manner.

Cal/OSHA Enforcement

You have the right to file a complaint about a workplace hazard with Cal/OSHA, the state agency that investigates and enforces health and safety requirements in California workplaces. If you choose to give your name, Cal/OSHA will keep your name confidential, unless you request otherwise. To file a complaint, call the Cal/OSHA district office serving the location of your job. To find the right district office, use one of these options:

- Go online and follow instructions for filing a complaint. Or go to Cal/OSHA's home page at www.dir.ca.gov/dosh, and link to "File a workplace safety complaint."
- View a map showing Cal/OSHA district offices and the counties they serve. Or go to Cal/OSHA's home page at www.dir.ca.gov/dosh, link to "Locations - Enforcement offices," and then link to "map of the Cal/OSHA Enforcement regional and district offices."
- By phone, call 1-866-924-9757, press or say "2" for Cal/OSHA, then enter or say the zip code of your job site.

Information you should provide to district office staff:

- When you call Cal/OSHA, the information you provide may be critical to the success of Cal/OSHA's investigation of the hazard. You should give the staff person the following information:
- Name and address of your employer. Include the job site address if it is different from the mailing address.
- Where the hazard is located at the job site. Example: "The table saw in room 12."
- When the hazardous operation or condition occurs. Example: "We use this solvent to clean every Friday afternoon."
- Description of the hazard. You do not need to know the legal requirements. You only need to state the problem. Examples: "Bad brakes on forklift," or "no fall protection."

Investigation

Cal/OSHA investigates complaints of hazards in different ways. Sometimes, the fastest and most effective way is for Cal/OSHA to notify the employer and require the employer to correct the hazard. Other times, Cal/OSHA conducts an on-site inspection.

On-site inspection

When Cal/OSHA conducts an on-site inspection, the inspector arrives without advance notice.

- Upon arrival, the inspector holds an opening conference with the employer and union (if there is one) to explain the purpose of the inspection and how it will be conducted.
- The inspector walks around the site, observes hazards, interviews employees and supervisors, reviews written records, and takes measurements and photographs as necessary.
- A representative of the employer and a representative authorized by the employees may walk around with the inspector.
- You have the right to be interviewed in private without the employer present. The Cal/OSHA inspector will make every effort to arrange for interpreter services if needed.
- You may ask the inspector to give you his or her business card so you can contact the inspector away from your job.
- The inspector may visit the site again to collect further information, especially if the inspector needs to speak with employees who were not available during the first visit.

After the inspection:

Information that Cal/OSHA collects during the inspection may show that your employer violated health and safety requirements. If this happens, one or more citations will be issued to your employer. Cal/OSHA issues citations to employers only, not to employees. If you gave your contact information when you filed the complaint, Cal/OSHA will send you a letter describing the results of the inspection. Your employer must "abate," or correct, the violations by a specified deadline. You may contest the abatement date by filing an appeal 15 days after the citations are issued. But if the employer appeals a citation, abatement may not happen until after the appeal is resolved. You may participate in any appeal filed by the employer by filing a motion to be added as a party in the appeal process. In any case where Cal/OSHA issues citations, the employer must post in the workplace a copy of the citations, a description of how the hazards have been corrected, and a copy of any appeal that is filed. You may also call Cal/OSHA to request a copy of the results of the inspection, including any citations.

Right to Refuse Hazardous Work

In addition to filing a complaint, you have the right to refuse hazardous work. It is illegal for your employer to punish you for refusing to perform hazardous work if both of the following are true:

1. Performing the work would violate a Cal/OSHA health or safety regulation.
2. The violation would create a "real and apparent hazard" to you or your coworkers.

When these conditions are met, you have the right to refuse to perform the work. But before you refuse, you should take the following steps:

- Tell your supervisor about the hazard and ask that it be corrected.
- Explain that you are willing to continue working if the hazard is corrected or you are assigned other work that is safe.
- State that you believe a health or safety regulation is being violated.
- Contact your union shop steward, if you have one.

If the problem is not fixed, call Cal/OSHA and file a complaint.

Protection Against Retaliation

It is also illegal for your employer to threaten, discharge, demote, or suspend you for reporting hazards to your employer, filing a complaint with Cal/OSHA, or otherwise exercising your rights to a safe and healthful workplace. If your employer discriminates or retaliates against you for exercising these rights, you have the right to file a complaint with the California Labor Commissioner, also called the Division of Labor Standards Enforcement. The Labor Commissioner may be able to recover wages owed to you and help you get your job back. In most cases, you must file your complaint within six months of the retaliation.

View a listing of Labor Commissioner offices and contact the office nearest your workplace. Or go to the Labor Commissioner's home page at www.dir.ca.gov/dlse, and link to "Contact Us." By phone, call 1-866-924-9757, press or say "1" for the Division of Labor Standards Enforcement, then enter or say your zip code.

Employee Rights to Documents and Records

You have the right to receive copies of written information about hazards in your workplace.

Exposure Records and Medical Records: You may access exposure records that show your own exposure to toxic substances and harmful physical agents as well as exposures to other employees doing similar work. Your employer must provide you the records within 15 days after receiving your written request. Exposure records include environmental workplace monitoring, biological monitoring results, and safety data sheets. You may access medical records if you are the subject of the records or have the subject's written consent. Medical records include medical questionnaires and histories, examination results, medical opinions and diagnoses, descriptions of treatment and prescriptions, first aid reports, and employee medical complaints.

Safety Data Sheets: These sheets contain information about hazardous chemicals in your workplace. Your employer must keep these sheets readily accessible and must provide them to you upon request. Electronic access is allowed as long as there are no barriers to immediate access.

Records of Occupational Injury or Illness: You have the right to receive copies of the following records: Log of Work-Related Injuries and Illnesses (Form 300); Annual Summary of Work-Related Injuries and Illnesses (Form 300A); and Injury and Illness Incident Report (Form 301) describing an injury or illness that happened to you. In most industries, your employer must provide you copies by the end of the next business day.

Written Health and Safety Plans: You have the right to review your employer's written plans for certain Cal/OSHA-required programs, such as hazard communication, respiratory protection, and permit-required confined space entry procedures.

Photo Credit: Bob Gumpert

Cal/OSHA Information

For more information about your health and safety rights, go to **Cal/OSHA's home page** at **www.dir.ca.gov/dosh**. You can also call **1-866-924-9757**, press or say "2" for Cal/OSHA, then enter or say your zip code to find the district office serving your job location.

Requirements for an employer's injury and illness prevention program

All California employers must create and carry out an effective program to meet the requirements of Cal/OSHA's Injury and Illness Prevention Program (IIPP) regulation. The employer's IIPP must be in writing and must specify in concrete terms the employer's ongoing activities in each of the following areas:

- **Responsibility:** Name or job title of the person or persons authorized and responsible for implementing the program.
- **Compliance:** Written system for ensuring compliance with safe and healthy work practices.
- **Communication:** System for communicating in a form readily understandable by employees about safety and health matters. This can include meetings, trainings, postings, written communications, and a labor-management safety and health committee. Employers must encourage employees to report hazards without fear of reprisal. An employer using a labor-management committee to communicate health and safety matters with employees must meet certain requirements specified in the IIPP regulation.
- **Hazard Assessment:** Procedures for identifying and evaluating workplace hazards, including periodic inspections.
- **Accident or Exposure Investigation:** Procedure for investigating occupational injuries and illnesses.
- **Hazard Correction:** Methods and procedures to correct unsafe or unhealthy working conditions in a timely manner.
- **Training and Instruction:** Effective program for instructing employees on general safe work practices and hazards specific to each job assignment, in a language that the employees can understand.
- **Recordkeeping:** Written documentation of the steps taken by the employer to establish and implement the IIPP.

The specific requirements for an IIPP are in the California Code of Regulations, title 8, section 3203. Or go to the home page of the Department of Industrial Relations at www.dir.ca.gov, link to "Laws & Regulations," link to "California Code of Regulations - Title 8," link to "Cal/OSHA," and then search for "3203."

Use Cal/OSHA's educational tools to help employers create an effective IIPP. Or go to Cal/OSHA's home page at www.dir.ca.gov/dosh, and under "Educational Materials," link to "Consultation eTools." See also links to model IIPPs at the top of the web page that displays the California Code of Regulations, title 8, section 3203.

Photo Credit: Bob Gumpert

You have the right to a safe and healthful workplace regardless of whether you have papers to work legally in the United States.

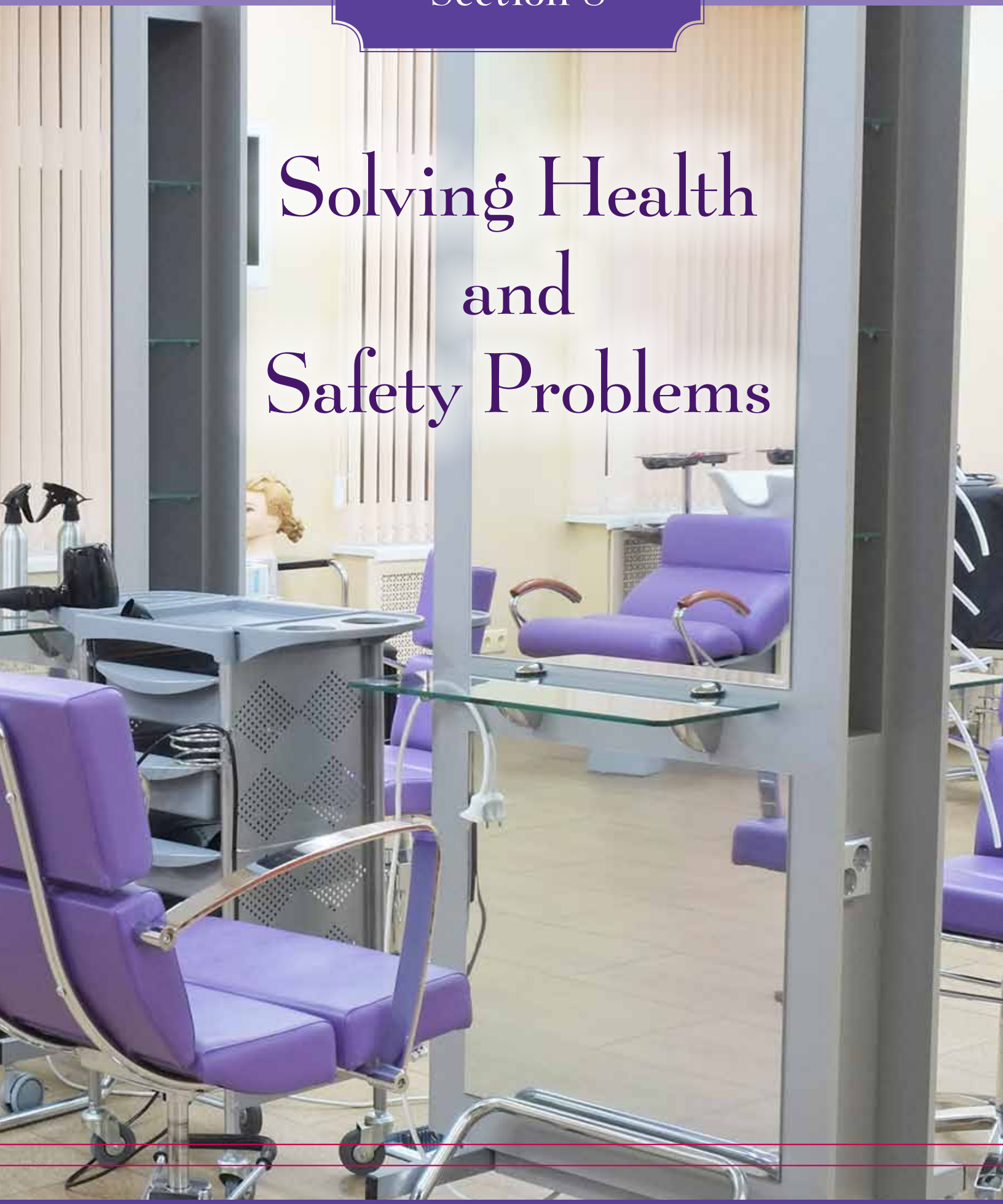
Note: We are not US Immigration and Customs Enforcement (ICE), and we do not ask for or report your immigration status.

STATE OF CALIFORNIA
CAL OSHA
DEPARTMENT OF INDUSTRIAL RELATIONS

NAME:_____ DATE:_____

Health and Safety Agency Acronyms

ALA
BBC
CALOSHA
CDPH
COEH
CSCP
DCA
DPH
FDA
HESIS
LOHP
LOSH
NIOSH
OSHA



Solving Health and Safety Problems

LEARNING OBJECTIVES

Section 8

Solving Health and Safety Problems

After completing this section, you will be able to:

- Describe how to use health surveys and workplace inspections to investigate health and safety hazards.
- Choose the most important hazards to correct in a typical workplace.
- Develop an action plan to correct hazards.
- Identify resource groups and organizations that are available for assistance.

In this lesson we will discuss how to discover possible health and safety problems in the workplace and how to solve them. Let's get started.

In previous lessons, we discussed several different ways to get information about chemicals and other health and safety hazards on your job. For example, we learned:

- You can use Safety Data Sheets (SDSs) to find out about the chemicals you work with.
- You can request injury and illness records from your employer to learn about what problems you and your co-workers have had.
- When your employer tests for chemicals in the air at work, employees have the right to know the results. You can use them to find out how much chemical exposure you've had.

We will look for information in some new ways. We will see what we can find out about workers' health by using a health survey and what you can find out about a typical workplace by doing your own health and safety inspection.

The Health Survey

The first method to find what symptoms and health complaints you and your co-workers have that might be job-related is the health survey. When you want to learn more about the hazards on your job, the survey is an important part of your detective work. You can use a survey form (like the one provided in the Training Materials file) to collect information about health problems or symptoms that you and your co-workers may have. Some of these problems might be related to work. The survey can sometimes give you clues about what's causing them.

What is a Health Survey?

A health survey is usually a questionnaire that asks people to answer specific questions about their health. You can use a survey to find out about one particular problem or to get an overview of all the health problems that people have. The health survey in the Training Materials file is very thorough. You might want to use a shorter version in your own workplace. Many different types of health surveys have been developed by unions, employers, and health and safety groups.

How Do I Use It?

When you do a survey, it is best if everyone in the workplace fills out a copy of the questionnaire. The more complete the information, the better the chance you can figure out the reasons for any problems that show up.

The survey results can help identify the hazards that exist in your workplace. For example, on the survey, do manicurists report frequent sneezing, coughing, or sore throats? Could chemicals in nail products be the cause? Are people getting skin rashes, which seem to be related to

the chemicals they use? Has anyone developed allergies that might come from chemical vapors? See if people who do the same work report the same problems. For example, are many licensees who do perms getting skin rashes on their hands? If many people have the same symptoms, it is probably not an individual problem. It could be related to something they all have in common—their work. See if licensees say their symptoms are worse at work and clear up when they go home or if the symptoms are worse when they do certain tasks at work. These can be further clues that the problem is job-related.

The Follow-Up Plan

After you conduct a health survey, you need a follow-up plan. First, make sure that you go over the results of the survey with each licensee who filled out the form. If licensees are told what problems are found, they may be able to take steps to protect themselves. Next, decide on a strategy for action. Will you go to your employer with the problems that you found? Will you form a health and safety committee to deal with the hazards in your workplace? Will you call the California Occupational Safety and Health Administration (Cal/OSHA)? Whichever approach you choose, try to get as many co-workers as possible to join in.

We won't have time to fill out the health survey form in the Training Materials file, but look it over when you have spare time.

The Workplace Inspection

The other important method of detective work is the workplace inspection. You can conduct your own inspection to identify health and safety hazards. This is sometimes called a walkaround inspection, since you walk around the workplace and look at different areas. It's a good idea to use a checklist during this inspection to remind you about possible hazards to look for.

It's best to do your inspection at a time when licensees are actually working. This allows you to see what hazards there are when licensees are working and using typical equipment, tools, and materials. In addition to filling out the checklist, take notes during the inspection to help you remember details. You might even want to take some photos or draw a diagram of the different work processes and maps showing the locations of possible hazards. It can also be extremely useful to talk to co-workers as you do the inspection, as they may be able to tell you about other problems that are not covered on your checklist. You want to get as much information as possible.

In your Training Materials file you can find a copy of the *Workplace Inspection Checklist*. The checklist has seven sections that deal with different types of hazards and an eighth section where you can list any hazards or problems you find that do not fit anywhere else. In your spare time, practice conducting a health and safety inspection of your school's clinic area to familiarize yourself with the checklist and what to look for. Try to spend some time on every section during your inspection, even though you may not answer every question as some may not apply to your school.

Now that we have discussed two methods to gather information in the shop or salon about health and safety hazards, we will discuss how to develop an action plan to correct these hazards.

The Action Plan

An action plan should include these steps:

1. Identify the hazards
2. Choose which problems to work on first
3. Get more information about the hazards
4. Figure out short-term and long-term goals
5. Involve your co-workers
6. Document the problems
7. Find out what steps have already been taken
8. Decide how to get changes made
9. Set a time limit for fixing the problems
10. Determine what obstacles there are to solving the problems
11. Find ways to overcome the obstacles

The first step of an action plan is to **identify the hazards**. How can you find out what they are? We just learned about two ways to find hazards: conducting a health survey among your co-workers and doing your own workplace inspection.

The second step in an action place is to **choose which problems to work on first**. When you look for hazards in your workplace, you are likely to find many problems that should be fixed. Since you can't tackle everything at once, you need to set priorities. Some hazards may be very important, while others are not so important. When choosing which problem to work on, you should consider several factors. Try to choose a problem that:

- People care about the most
- Everyone agrees is important
- Affects the most people
- Causes the most serious hazard(s)
- Is fairly easy and inexpensive to solve

The third step is to **get more information about the hazards**. As you have learned in previous lessons, you can get information by reading the Safety Data Sheets (SDSs), using the Internet, and asking health and safety resource groups for help.

The fourth step is to **figure out short-term and long-term goals**. Sometimes the best solutions to a problem are not possible right away as they may require major changes in the workplace or they may be too expensive. You may need to separate your solutions into short-term goals and long-term goals. Maybe you could fix the problem temporarily and then fix it permanently later.

The fifth step is to **involve your co-workers**. It's usually easier to solve problems when you work as a group. In addition, solving one or two problems may get people enthusiastic and excited, which may make it easier to get their help in solving other problems later.

The sixth step is to **document the problems** you found. Get all your records together: health survey results, inspection results, and information on products used in the shop. The owner may be able to help you gather some of this information.

The seventh step is to **find out what steps have already been taken**. You would not want to waste your time if the owner is already aware of the problems and in the process of fixing them. Ask the owner if anything is already being done to correct the hazards.

The eighth step is to **decide how to get changes made**. With your co-workers, decide what needs to be done and how to make it happen. Set realistic goals and try to get everyone to agree on the plan so everyone will be committed to it.

The ninth step is to **set a time limit for fixing the problems**. Include a schedule in your plan, showing when you want different hazards to be corrected. Setting a schedule allows everyone involved to manage the time it takes to fix the problems. Once you have completed the steps thus far, you may want to present your plan in a meeting with the whole staff, including the owner.

Next, the 10th step is to **determine what obstacles there are to solving the problems**. The establishment owner and your workers may be unwilling to make changes for various reasons, such as high costs and resistance to changing their work processes. Recognizing these obstacles will help you in your next step.

If the owner or your co-workers respond to your action plan with reluctance about the changes, you need to follow the 11th step and **find ways to overcome the obstacles**. This step is not always straightforward and may require you to try several different tactics. For example, if the owner doesn't believe the health problems you found are work-related, point out that several people who work in the same area of the salon and who do the same work have experienced the same problems. You could also research the chemicals used in the different processes to see if they can cause the particular health problems that people have. Also, point out that Cal/OSHA may require the owner to fix the problems anyway if someone files a complaint. If you face resistance from co-workers, remind them of the health problems they may face if they don't correct the hazards and protect themselves. Be creative and think of many ideas to get your changes made.

Case Study

Now you will read a case study that reflects a "real life" problem you might run into when working in a shop or salon. Do your best to answer the questions presented.

For answers to all questions, please refer to your exam booklet.

CASE STUDY #1

You and some co-workers at a full-service salon named Kool Kuts did a health survey of your co-workers and a workplace inspection to find out what problems exist. From the health survey completed by eight workers (six licensees, one receptionist, and one owner), you found:

- Seven reported regular headaches and shortness of breath.
- Six reported shortness of breath.
- Five reported rashes or other skin problems.
- Four reported allergies.
- Three reported shoulder or back pain.

From the inspection, you found:

- Emergency phone numbers are not posted.
- There is only one fire extinguisher.
- Large, heavy containers are stored on high shelves.
- There is poor air circulation in the workplace.
- The air has a chemical smell.
- There are no vented manicure tables.
- There is no ventilation system.
- No protective gloves are available for use when licensees work with chemicals.
- No Safety Data Sheets (SDSs) are available.
- There are no cushioned mats for workers to stand on.

Based on these results, what two hazards would you choose to work on first?

Why did you choose these two particular hazards?

What changes would you need to make to correct the two hazards? What would be your short-term and long-term goals?

Now that you have decided on your goals, what would you do to get the two hazards corrected?

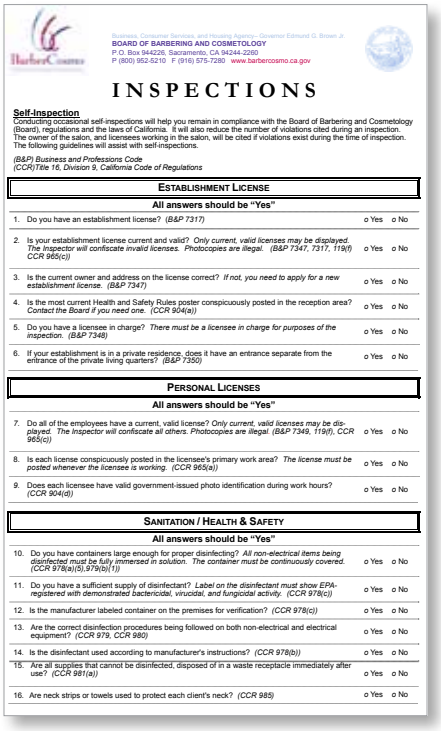
What obstacles are there to getting changes made?

What would you say to the owner when she claims she doesn't have more information about product ingredients?

How could you convince the owner that people's health problems might be work-related?

How would you respond to the owner's concern about money?

What would you say to your co-workers who don't want to wear gloves?



Business, Consumer Services, and Housing Agency – Governor Edmund G. Brown Jr.

BOARD OF BARBERING AND COSMETOLOGY
P.O. Box 944226, Sacramento, CA 94244-2260
P (800) 952-5210 F (916) 575-7280 www.barbercosmo.ca.gov

INSPECTIONS

Self-Inspection
Conducting occasional self-inspections will help you remain in compliance with the Board of Barbering and Cosmetology (Board), regulations and the laws of California. It will also reduce the number of violations cited during an inspection. The owner of the salon, and licensees working in the salon, will be cited if violations exist during the time of inspection. The following guidelines will assist with self-inspections.

(B&P) Business and Professions Code
(CCR)Title 16, Division 9, California Code of Regulations

ESTABLISHMENT LICENSE

All answers should be "Yes"

1.	Do you have an establishment license? *(B&P 7317)*	o Yes	o No
2.	Is your establishment license current and valid? *Only current, valid licenses may be displayed. The Inspector will confiscate invalid licenses. Photocopies are illegal. (B&P 7347, 7317, 119(f) CCR 965(c))*	o Yes	o No
3.	Is the current owner and address on the license correct? *If not, you need to apply for a new establishment license. (B&P 7347)*	o Yes	o No
4.	Is the most current Health and Safety Rules poster conspicuously posted in the reception area? *Contact the Board if you need one. (CCR 904(a))*	o Yes	o No
5.	Do you have a licensee in charge? *There must be a licensee in charge for purposes of the inspection. (B&P 7348)*	o Yes	o No
6.	If your establishment is in a private residence, does it have an entrance separate from the entrance of the private living quarters? *(B&P 7350)*	o Yes	o No

PERSONAL LICENSES

All answers should be "Yes"

7.	Do all of the employees have a current, valid license? *Only current, valid licenses may be displayed. The Inspector will confiscate all others. Photocopies are illegal. (B&P 7349, 119(f), CCR 965(c))*	o Yes	o No
8.	Is each license conspicuously posted in the licensee's primary work area? *The license must be posted whenever the licensee is working. (CCR 965(a))*	o Yes	o No
9.	Does each licensee have valid government-issued photo identification during work hours? *(CCR 904(d))*	o Yes	o No

SANITATION / HEALTH & SAFETY

All answers should be "Yes"

10.	Do you have containers large enough for proper disinfecting? *All non-electrical items being disinfected must be fully immersed in solution. The container must be continuously covered. (CCR 978(a)(5),979(b)(1))*	o Yes	o No
11.	Do you have a sufficient supply of disinfectant? *Label on the disinfectant must show EPA-registered with demonstrated bactericidal, virucidal, and fungicidal activity. (CCR 978(c))*	o Yes	o No
12.	Is the manufacturer labeled container on the premises for verification? *(CCR 978(c))*	o Yes	o No
13.	Are the correct disinfection procedures being followed on both non-electrical and electrical equipment? *(CCR 979, CCR 980)*	o Yes	o No
14.	Is the disinfectant used according to manufacturer's instructions? *(CCR 978(b))*	o Yes	o No
15.	Are all supplies that cannot be disinfected, disposed of in a waste receptacle immediately after use? *(CCR 981(a))*	o Yes	o No
16.	Are neck strips or towels used to protect each client's neck? *(CCR 985)*	o Yes	o No

The self-inspection checklist is currently available in multiple languages on the Board's website.

Where Can I Go for Help?

If you need help with any step of an action plan, locate the *Resource Agencies and Materials* handout in the Training Materials file. There are various groups and public agencies listed that can help you do research on hazards and figure out effective solutions. There are also many groups, agencies, and organizations not listed—do your research and find one that best fits your needs.

Cal/OSHA can give you information on health and safety laws that might apply to your problems in the workplace. If you think the owner is violating a health and safety regulation or standard, you can make a complaint to Cal/OSHA (for example, if the owner refuses to provide SDSs). The owner can also get help from Cal/OSHA's Consultation Service for advice if he or she decides to improve conditions.

The California State Board of Barbering and Cosmetology has several resources on its website about its regulations and how to stay in compliance. For health and safety tips, look on the Board's website for the CASafeSalon button for information on chemical safety, client protection, infection protection, workers' rights, and recourses for a safe, healthy salon.

In fact, the Board has a self-inspection worksheet that can be very helpful for future professionals and licensees. Conducting occasional self-inspections will help you remain in compliance with the Board's regulations and the laws of California. The checklist is currently available in multiple languages on the Board's website **www.barbercosmo.ca.gov** under "Forms/Publications."

Now let's review everything you've learned in this lesson.

Questions for Review

Only licensees should fill out a health survey because they are the ones who use the chemicals. True or False?

It's best to do your inspection at a time when licensees aren't working so you're not in the way. True or False?

Which of the following steps of an action plan is in the correct order?

A) Identify the hazards, set a time limit for fixing the problems, decide how to get changes made

B) Document the problems, determine the obstacles, figure out short-term goals

C) Conduct a survey, find out what steps have been taken, choose which problem to work on

D) Get more information about the hazards, figure out short-term and long-term goals, involve your co-workers

E) B and C

What should you do if the owner and your co-workers do not want to fix the health and safety hazards?

A) Consult health and safety agencies for advice

B) Report the owner to Cal/OSHA

C) Remind co-workers of health problems that could be caused by hazards

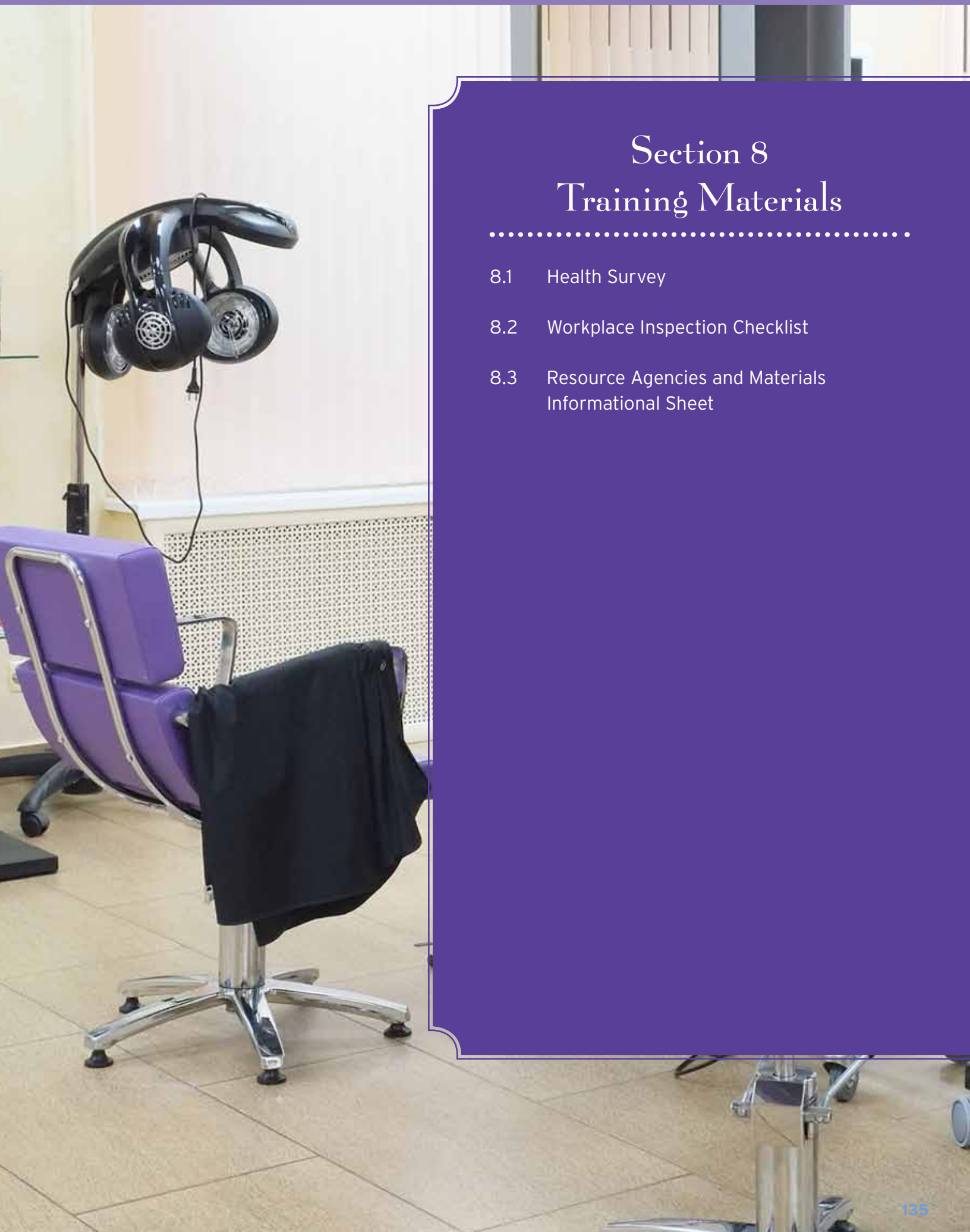
D) Keep thinking of new ways to convince them

E) All of the above

For answers to all questions, please refer to your exam booklet.

The steps you take to solve problems will be similar to what we've just discussed, no matter which particular risks you face in your shop or salon. If you have a health and safety problem at work, you'll need an action plan. Remember that an action plan has several different steps. Try to remember them and follow them at your job to make working conditions safer and healthier for everyone. Remember, work together with your co-workers to establish a safe, healthy shop or salon.

Notes



Section 8
Training Materials

8.1 Health Survey

8.2 Workplace Inspection Checklist

8.3 Resource Agencies and Materials Informational Sheet

Workplace Inspection Checklist

(Adapted from the Cal/OSHA *Guide to Developing Your Workplace Injury and Illness Prevention Program*, 2011)

1. Posting

Yes	No	
___	___	Are emergency telephone numbers posted where they can be found quickly if needed?
___	___	Are there clear signs marking exits from the building?
___	___	Is the employer's Summary of Occupational Injuries and Illness (Cal/OSHA Log 300) posted?
___	___	Is a written list of proper, safe work practices for all tasks done in the shop either posted or circulated to employees?
___	___	Is the California State Board of Barbering and Cosmetology's Consumer Notice posted in the reception area?

2. Fire Protection

Yes	No	
___	___	Does the shop have a fire prevention plan?
___	___	Does the shop have a plan to fight fires and to evacuate in an emergency?
___	___	Does everyone understand these plans?
___	___	Are there fire drills?
___	___	Are all exits kept free of obstructions?
___	___	Are there enough exits to permit everyone to escape promptly?
___	___	Are there enough fire extinguishers in convenient locations?
___	___	Are the correct fire extinguishers available for the types of materials that could catch on fire? *Note: The common types are:* *Class A: Ordinary combustible materials* *Class B: Flammable liquid, gas, or grease* *Class C: Electrical equipment* *Class ABC: All-purpose*
___	___	Are employees trained in the use of fire extinguishers?
___	___	Are flammable and combustible chemicals kept away from flames, sparks, and hot objects?
___	___	Is smoking prohibited around flammable and combustible chemicals?
___	___	Are there enough outlets for all the electrical equipment, so the system isn't overloaded?

3. General Environment

Yes	No	
____	____	Is the workplace kept clean and orderly?
____	____	Are floors and work surfaces kept clean and dry?
____	____	Are spilled liquids cleaned up immediately?
____	____	Are hand washing stations available?
____	____	Is there enough space to work, or is the work area small and cramped?
____	____	Is the indoor temperature comfortable?
____	____	Is there adequate lighting?
____	____	Are electrical appliances, such as stationary hair dryers, grounded to prevent shocks?
____	____	Are electrical equipment and cords kept in good condition so they won't cause a shock or fire?
____	____	Are hot or sharp objects kept out of the way so people won't accidentally touch them?
____	____	Is the shop free of tripping hazards, like stools, equipment, cords, or wires?
____	____	Is the shop free of earthquake hazards, like shelves or cabinets that could fall over?
____	____	Are workers under stress because of workload, overtime, or other pressure?

4. Ventilation

Yes	No	
____	____	Is there enough fresh air in the workplace?
____	____	Is there a ventilation system?
____	____	Is a vented table used for manicures?
____	____	Are all ventilation systems working?
____	____	Have the ventilation systems been inspected in the past year?
____	____	Are repairs on the ventilation systems done promptly?

5. Hazardous Chemicals

Yes	No	
____	____	Is there a Safety Data Sheet (SDS) readily available for each chemical product used in the shop?
____	____	Is there an employee training program on chemical hazards?
____	____	Has the air in the shop ever been tested for chemicals?
____	____	If yes, were the amounts found considered safe?
____	____	Are chemicals stored and mixed away from eating areas?
____	____	Are chemicals mixed in an area separate from the main work area?
____	____	Are chemical bottles and containers closed securely when not in use?
____	____	Are chemical containers kept out of the way so people won't accidentally knock them over?
____	____	Are chemicals stored in a cool, dry, well-ventilated place?
____	____	Are incompatible chemicals stored away from each other?
____	____	Are chemicals disposed of properly (for most chemicals, not down the drain)?
____	____	Do people avoid eating and drinking around chemicals?

6. Protective and Safety Equipment

Yes	No	
____	____	Are safety glasses provided to protect eyes from nail clippings?
____	____	Are splash goggles available to protect eyes during chemical mixing?
____	____	Are there eye wash stations in case chemicals get in to someone's eyes?
____	____	Are dust masks available to manicurists, so they won't breathe dust when filing nails?
____	____	Are surgical masks available to offer to clients who are coughing?
____	____	Are protective gloves of the right type available to anyone who handles chemicals?
____	____	Are protective gloves available to use to avoid exposure to a communicable disease?
____	____	Are aprons and long-sleeve lab coats available to protect people's clothing and arms from chemicals?
____	____	Are there enough well-stocked first aids kits in the shop or salon?
____	____	Do workers know CPR?

7. Ergonomic Hazards

Yes	No	
____	____	Are cushioned mats available for licensees to stand on while working on clients?
____	____	Are client chairs adjustable so workers have easy access to the client?
____	____	Does the shop have a good selection of shears and combs in different sizes so they "fit" each worker?
____	____	Are all the shears kept sharp?
____	____	Are portable carts available so workers can keep their tools with them and avoid reaching?
____	____	Are stools and rolling seats available, so licensees can sit while they work?
____	____	Have workers been trained in proper blending, reaching, and lifting techniques?

8. Other Observations

Use this space to list any other problems or hazards you find during the inspection.

Health Survey

1. Background Information

Age _____ Female _____ Male _____

Occupation _____

How long have you worked in that occupation? _____

How long have you worked on your present job? _____

Job Description _____

_____

_____

_____

2. Musculoskeletal System

Do you often get any of the following? (Check all that apply)

When does the problem occur? (At work? After work? When you do a particular task?)

____ Backache _____

____ Shoulder ache _____

____ Neck pain _____

____Arm pain _____

____ Wrist pain _____

____ Tendinitis _____

Do you often get any of the following? (Check all that apply)

When does the problem occur? (At work? After work? When you do a particular task?)

____ Arthritis _____

____ Bursitis _____

____ Numbness of fingers _____

____ Pain in hand or fingers _____

____ Leg pain _____

____ Foot pain _____

____ Foot calluses _____

3. Respiratory Tract

Do you often get any of the following? (Check all that apply)

When does the problem occur? (At work? After work? When you do a particular task?)

___ Colds _____

___ Sore throat _____

___ Coughing _____

___ Sneezing _____

___ Wheezing _____

___ Runny nose _____

___ Stuffy nose _____

___ Dizziness _____

___ Chest pain _____

___ Chest tightness _____

___ Trouble breathing _____

4. Eyes

Do you often get any of the following? (Check all that apply)

When does the problem occur? (At work? After work? When you do a particular task?)

___ Itchiness _____

___ Pain _____

___ Redness _____

___ Watering _____

___ Blurred vision _____

___ Other vision problems _____

___ Tired feeling _____

5. Skin

Do you often get any of the following? (Check all that apply)

When does the problem occur? (At work? After work? When you do a particular task?)

___ Rash _____

___ Dermatitis (dry, flaking skin) _____

___ Chemical burn _____

___ Itchiness _____

___ Cuts _____

6. Reproductive System

Have you or your partner had any of the following? (Check all that apply)

___ Problems trying to get pregnant

___ Children with birth defects

_____ Miscarriages

_____ Menstrual problems

7. Allergies

Do you have any allergies? Yes ___ No ___ Explain _____

Are they worse at work? Yes _____ No ___ Explain _____

When did you first get them? _____

8. Other Symptoms

Do you often get any of the following? (Check all that apply)

___ Headache

___ Stomachache

___ Dizziness

___ Muscle cramp

___ Chills

___ Fever

___ Feeling hot or cold

When does the problem occur? (At work? After work? When you do a particular task?)

_____

_____

_____

_____

_____

_____

_____

9. Serious Illnesses

Have you ever had any of the following?

___ Cancer

___ Immune disorder

___ Other serious illness

_____ Heart disease

_____ Lung disease

Describe _____

_____

_____

_____

_____

10. Immunizations

Yes ___ No ____ Explain _____

_____

_____

_____

11. Job Injuries

Have you ever had an injury on the job?

Yes ___ No ____ Explain _____

_____

Did you lose time from work?

Yes ___ No ____ Explain _____

_____

Do you always report injuries to the employer?

Yes ___ No ____ Explain _____

_____

12. Co-workers' Health

Have your co-workers complained of health problems that might be related to work?

Yes ___ No ____ Explain _____

_____

_____

_____

13. Your Comments

Is there anything else you want to say about your health and your job?

Describe _____

_____

_____

_____

_____

Resource Agencies and Materials

WHERE TO CALL AND WHAT TO READ

GOVERNMENT AGENCIES: CALIFORNIA

California State Board of Barbering and Cosmetology
Protects consumers by licensing and regulating barbers, cosmetologists, estheticians, manicurists, electrologists, apprentices, and establishments. Administers and enforces health and safety regulations in licensed establishments. Call the Board with questions or concerns on any subject related to barbering and cosmetology.

Headquarters Location:
Board of Barbering and Cosmetology
2420 Del Paso Road, Suite 100
Sacramento, CA 95834

Phone: (800) 952-7281
Website: www.barbercosmo.ca.gov
E-mail: barbercosmo@dca.ca.gov

Mailing Address:
P.O. Box 944226
Sacramento, CA 94244-2260

California Division of Occupational Safety and Health (Cal/OSHA) (To file a complaint)
Enforces workplace health and safety regulations in California. For information about health and safety regulations, or to file a confidential complaint and request an inspection of your workplace, call the District office closest to you to get the number of your local compliance office. For a full listing of contact information, please see the "Resource Groups, Agencies, Databases, and Publications" sheet found in the Training Materials file in Section 3 of this publication.

Cal/OSHA Consultation Offices (Shop/salon owners)
Offers advice to employers on correcting health and safety hazards. For a full listing of contact information, please see the "Resource Groups, Agencies, Databases, and Publications" sheet found in the Training Materials file in Section 3 of this publication.

California Department of Public Health (CDPH)
The California Department of Public Health is dedicated to optimizing the health and well-being of the people in California.

Occupational Health Branch (Headquarters for HESIS, OHSEP, and CSCP)

850 Marina Bay Parkway, Building P, 3rd Floor
Richmond, CA 94804

Phone: (510) 620-5757
Fax: (510) 620-5743
Website: www.cdph.ca.gov
E-mail: occhealth@cdph.ca.gov

The CDPH offers the following programs:

- **Hazard Evaluation System and Information Service (HESIS)**
  Provides information to employers and employees on the health effects of toxic substances and precautions for their safe use.
  Workplace Hazard Helpline: (866) 282-5516
  Free Publications on Workplace Hazards: (866) 627-1586
  Web: www.cdph.ca.gov/programs/hesis
- **Occupational Health and Surveillance and Evaluation Program (OHSEP)**
  Information from OHSEP improves required workplace Injury and Illness Prevention Programs (IIPP) and assists healthcare providers in early identification and treatment of work-related injuries and disease.
  Website: www.cdph.ca.gov/programs/ohsep
- **California Safe Cosmetics Program (CSCP)**
  Collects information on hazardous and potentially hazardous ingredients in cosmetic products sold in California and makes this information available to the public.
  Website: www.cdph.ca.gov/programs/cosmetics
  E-mail: cosmetic@cdph.ca.gov

Division of Workers' Compensation
Provides information on your rights to benefits and medical care when you have a job-related illness or injury.
Toll-free phone: (800) 736-7401
Website: www.dir.ca.gov/dwc

Labor Commissioner Office
Provides information about employment rights, discrimination, and wrongful filings. Takes worker complaints about discrimination for health and safety activity, and investigates them. Go to their website for a list of offices located throughout the state.
Website: www.dir.ca.gov/dlse

GOVERNMENT AGENCIES: FEDERAL

U.S. Food and Drug Administration (FDA)
Regulates cosmetic products. Also takes consumer complaints and keeps records of them.
Website: www.fda.gov/cosmetics

National Institute for Occupational Safety and Health (NIOSH)
NIOSH is a federal agency that offers free publications and an online database of chemicals. They provide information on chemicals and other workplace hazards.

4676 Columbia Parkway
Cincinnati, OH 45226-1996

Phone: (800) 356-4674
Fax: (513) 533-8573
Website: www.cdc.gov/niosh
E-mail: pubstaft@cdc.gov

TRAINING, INFORMATION, AND HELP

American Lung Association (ALA)
Has information on occupational and environmental lung hazards.
Website: www.lung.org

Center for Occupational and Environmental Health (COEH)
A University of California program. Conducts research on occupational illnesses and injuries; offers degree programs and continuing education courses related to health and safety. Go to its website for contact information for its offices located in Berkeley, San Francisco, and Davis.
Website: http://coeh.berkeley.edu

National Council for Occupational Safety and Health (COSH)
Local volunteers (trade unionists and professionals) have formed "COSH" groups through the United States. Most have regular meetings and offer training, information and help.
Website: www.coshnetwork.org

California Groups:

- Southern California Coalition for Occupational Safety and Health (SoCalCOSH)
  1000 N. Alameda St., Suite 240
  Los Angeles, CA 90012
  Phone: (213) 346 3286
- Worksafe
  55 Harrison St., Suite 400
  Oakland, CA 94607
  Phone: (510) 302-1011
  Website: www.worksafe.org

Labor Occupational Health Program (LOHP)
Offers information and advice on chemicals and other workplace hazards.

University of California
2223 Fulton St, 4th Floor
Berkeley, CA 94720-5120

Phone: (510) 642-5507
Fax: (510) 643-5698
Website: www.lohp.org
E-mail: lohp@berkeley.edu

Labor Occupational Safety and Health Program (LOSH)
Nationally recognized center promoting safe workplaces through teaching and education, research, and policy advocacy.

10945 Le Conte Ave., Suite 2107
Box 951478
Los Angeles, CA 90095-1478

Phone: (310) 794-5964
Fax: (310) 794-6403
Website: www.losh.ucla.edu

LEGAL AID

Asian Law Caucus
Provides legal assistance to Asian workers.

55 Columbus Avenue
San Francisco, CA 94111

Phone: (415) 896-1701
Website: www.asianlawcaucus.org

Legal Aid at Work
Protects the rights and jobs of low-income workers by providing free legal help with urgent workplace problems.

180 Montgomery Street, Suite 600
San Francisco, CA 94104

Phone: (415) 864-8848
Website: www.legalaidatwork.org

Employment Law Office at the Legal Aid Foundation of Los Angeles
Provides legal services to poor and low-income workers in greater Los Angeles.

Phone: (800) 399-4529

COMMUNITY ORGANIZATIONS

CA Healthy Nail Salon Collaborative
Protects the health, safety, and rights of nail salon and cosmetology workers, owners, and students through outreach, education, and organizing.

Website: www.cahealthynailsalons.org

Black Women for Wellness
Committed to healing, educating, and supporting Black women and girls.

4340 11th Avenue, 2nd floor
Los Angeles, CA 90008

Phone: (323) 290-5955
Website: www.bwwla.org

Chinese for Affirmative Action
Provides assistance to Asian workers on legal rights and other workplace issues.

17 Walter U. Lum Place
San Francisco, CA 94108

Phone: (415) 274-6750
Website: www.caasf.org

Instituto Laboral de la Raza
Provides low-income workers assistance on legal rights and other workplace issues.

2947 16th Street
San Francisco, CA 94103
Phone: (415) 431-7522

Web: www.ilaboral.org
E-mail: info@ilaboral.org

OCCUPATIONAL HEALTH CLINICS

Occupational Health Clinic, San Francisco
Diagnoses and treat occupational and environmental health problems by referral and appointment. Also offers industrial hygiene services and worksite evaluations.

San Francisco General Hospital, Building 9, Room 109
1001 Potrero Avenue
San Francisco, CA 94110

Clinic phone (to make an appointment):
(650) 821-5600

Occupational Health Clinic Center, UCLA
Gives California workers and employers access to the resources of the UCLA Medical Center. Services include medical examinations, worker training, and occupational medicine seminars.

1099 Heyburn Avenue, Suite 344
Los Angeles, CA 90024
Phone: (310) 206-2086

POISON CONTROL CENTERS

American Association of Poison Control Centers
Supports the nation's 55 poison centers in their efforts to prevent and treat poison exposures.

Phone (available 24/7): (800) 222-1222
Website: www.aapcc.org

California Poison Control System
Provides immediate, free, and expert treatment advice and referral over the telephone in case of exposure to poisonous or toxic substances.

Toll-free phone (available 24/7): (800) 222-1222
Website: www.calpoison.org

LABOR AND TRADE ORGANIZATIONS

California Cosmetology Association
A professional cosmetology association that promotes, represents, and legislatively protects the entire cosmetology industry.

PO Box 291459
Phelan, CA 92329

Phone: (800) 482-3288
Website: http://the-cca.com
E-mail: info@the-cca.com

Electrologists' Association of California
Member-run organization affiliated with the American Electrology Association (AEA). Protects the public and provides members with a wide range of educational opportunities.

Web: www.electrologycalifornia.org

- Northern Chapter President
  Denise LaFave, CPE
  Phone: (909) 709-0832
  E-mail: deniselafavecpe@gmail.com
- Southern Chapter President
  Honora Hertherington, CPE
  Phone: (949) 261-1951
  E-mail: honie26_2@yahoo.com

National Association of Barber Boards of America (NABBA)
The National Association of Barber Boards of America was formed in 1926 as a national organization dedicated to appointed State Board Members, officers, and administrators. Related industry partners are encouraged to join the National Association of Barber Boards. The association works to maintain the barber professional standards and policies of the barber and hair care industry.

Website: http://nationalbarberboards.com
Phone: (870) 230-0777

National Coalition of Estheticians, Manufactures/ Distributors and Associations (NCEA)
The mission of the NCEA is to define standards of practice through certification and continuing education accreditation in order to represent and advocate for the esthetic profession.

484 Spring Avenue, Ridgewood, NJ 07450-4624
Phone: (201) 670-4100
Fax: (201) 670-4265
E-mail: info@nceacertified.org

Professional Beauty Association
The Professional Beauty Association (PBA) advances the professional beauty industry by providing our members with education, charitable outreach, government advocacy, events, and more. PBA is the largest organization of salon professionals, with members representing salons/spas, distributors, manufacturers, and beauty professionals.

15825 N. 71st Street, #100
Scottsdale, AZ 85254-1521

Toll-free: (800) 468-2274
Phone: (480) 281-0424
Fax: (480) 905-0708

Website: https://probeauty.org
E-mail: https://probeauty.org/contact/

Professional Beauty Federation of California (PBFC)
The PBFC works to raise the level of professionalism and the image of our industry in the state of California by working to influence public policy, industry regulation, and promoting positive public relations and perceptions of California's beauty and barbering profession.

Website: www.beautyfederation.org
E-mail: directors@beautyfederation.org

United Food and Commercial Workers International Union (UFCW)
A labor organization that conducts research and produces educational materials on the health and safety hazards facing barbers and cosmetologists.
Web: www.ufcw.org

UFCW Local No. 770
Barbers and Cosmetology Division
630 Shatto Place
Los Angeles, CA 90005
Phone: (213) 201-7028
Website: www.ufcw770.org

Workers' Rights

LEARNING OBJECTIVES

Section 9

Workers' Rights

After completing this section, you will be able to:

- Identify your worker classification.
- Understand basic workers' rights and what options are available to you if those rights are being withheld.
- Identify agencies available for workers' rights assistance.

This lesson is about workers' rights. The barbering and cosmetology industry offers a number of employment options. A future professional may decide to be an employee of a cutting-edge salon or shop, be an independent contractor (booth renter), or maybe own his or her own salon or shop. Whichever direction your career takes you in, it is important to know your workers' rights and responsibilities.

Workers in every state have certain defined rights that cannot be violated, including the right to a minimum wage, safe working conditions, and reasonable breaks. It is important for all workers to know their rights before taking any job and understand these obligations before becoming a salon or shop owner.

The purpose of workers' rights is to ensure that all employees are treated lawfully, paid a minimum wage, and not subjected to any form of harassment within the workplace. We will summarize some basic rights you are entitled to and what action you should take if you are not receiving these rights.

Workers' Rights and Responsibilities

Knowing your worker classification is essential in knowing what rights you are entitled to. For instance, your rights as an employee of a salon are much different than the rights of the salon owner. Let's take a moment to discuss the various worker classifications found in the barbering and beauty industry.

KNOW YOUR WORKER CLASSIFICATION

- **Salon Owner**
  Owners are in business for themselves. They are responsible for the business and do not work for someone else. A business could be a sole proprietor, a partnership, or a corporation. Many owners are also workers. Salon owners are responsible for reporting all income and expenses to the Internal Revenue Service (IRS), withholding employment taxes (if they have employees), and paying all taxes due. Salon owners are responsible for classifying workers correctly as employees or independent contractors (booth renters).

Example

Tiffany owns Clips Barbershop. Tiffany purchases all the supplies used in the Barbershop and sets the shop's hours of operation. She has determined the cost of services provided and menu of services. She maintains a lease agreement with the property owners. She has put in place a strict dress code requirement and since the barbershop has six barbers, she completes an employee work schedule. She arranges training for the employees so they can keep up-to-date with current trends. She regularly offers technical assistance to her team members. Tiffany sends each of her employees a W-2 because she is the owner of the salon.

- **Independent Contractor (Booth Renter)**
  Independent contractors (booth renters) are licensees who rent or lease a workstation in someone else's salon or shop. They are self-employed and are often responsible for record keeping, setting their work hours and menu of services, and collecting their own client payments. They hold a key to the shop and can come and go depending on workflow. They are financially responsible for the profit or loss in their own business and receive all income generated from their work. They are responsible for the timely filing of their tax returns and payment of taxes related to their business. An independent contractor (booth renter) may work inside of a shop or salon owned by a salon owner but maintains a separate identity. An independent contractor (booth renter) works for himself or herself and is not subject to the will or control of the salon owner.

Example

Marisol is a manicurist and esthetician who has a business contract with two large salons where she provides her services. In her contracts, she is provided with a workstation for which she pays $600 per month to each salon. She keeps her own appointment book and sets her own hours of operation at her convenience and has created her own menu of services. She has been provided with a key to the shop. She provides her own tools, nail polish, and makeup. Marisol handles her own payments from customers and is responsible for filing and paying tax on her income and tips. Marisol is an independent contractor booth renter.

Note: If the business contract specifies that Marisol must:

- Work four days a week, 9 a.m. to 5 p.m.
- Only use the products the salon markets
- Provide only the services listed on the shop's menu of services
- Charge the prices established by the salon owner

Then Marisol may no longer be an independent contractor (booth renter) but now may be considered an employee.

- **Employee**
  Employees receive a W-2 form from their employer for wages earned and are responsible for reporting their tips to their employer. They follow a work schedule established by the salon owner. They offer services in the salon that have been determined by the salon owner. They are subject to the will and control of the employer, who has the authority to tell him or her what to do and how to do it.

Example

Patricia works at Blaze Hair Salon owned by Judy. Patricia is told to be at work Tuesday through Saturday, 9 a.m. – 5 p.m. Patricia does not purchase the products used on her clients, rather she uses the products supplied by the shop. The shop has a receptionist who books Patricia's appointments. Patricia would prefer to only do haircuts, however, the shop is a full service shop and so Patricia must provide chemical services to her clients when requested. Judy observes the work that Patricia does and provides technical direction when needed. Patricia reports all her tips to Judy. Patricia is Judy's employee.

Now that you understand each worker classification, let's discuss tax obligations. Read the worker classification below and take a few moments to review what may be required of you by the IRS. The summary provided below is not all inclusive. You will want to contact the IRS, legal counsel, and an accountant representative for detailed information regarding tax obligations.

Additional information on tax obligations can be found in the Training Materials file. You will want to keep the information provided as reference material as you progress in your career.

KNOW YOUR OBLIGATIONS

- **Salon Owner**
  A salon owner with employees may:
  - ✔ File employment tax on all employees
  - ✔ Prepare and file a W-2 form wage and tax statement to report to the IRS wages, tips, and other compensation paid to all employees
  - ✔ File Social Security and Medicare tax withholdings on all employees

- ✔ Maintain workers' compensation insurance on all employees
- ✔ Maintain unemployment insurance on all employees
- ✔ Collect and pay sales taxes
- ✔ Be responsible for state and local taxes

- **Independent Contractor (Booth Renter)**
  In addition to reviewing the salon owner tax obligations stated above, as an independent contractor you may complete a W-9 form (Request for Taxpayer Identification Number and Certification).
- **Employee**
  As an employee, you will receive a W-2 form from each employer you have worked for during the year. Employers issue these forms in January of the following year. The W-2 form combines all wages and reported tips. It shows the amount of federal taxes withheld and paid throughout the year.

Now that you have an understanding of your worker classification and tax obligation, let's review.

Questions for Review

An independent contractor (booth renter):

A) Uses the salons products, pays rent, calls the owner to see if she has to come to work.

B) Uses her own products, has a key to the shop, pays rent, books her own appointments.

C) Has the receptionist book her appointments, pays rent, has to check the work schedule to see when the owner wants her in the shop.

The purpose of workers' rights is to:

A) Ensure that all employees are treated lawfully, paid at least a minimum wage, and are not subjected to any form of harassment within the workplace.

B) Put the power back in the hands of the people who do all the work.

C) Make sure people are earning enough to make a living.

To understand all of my tax obligations I should contact:

A) Department of Industrial Relations

B) Labor Commissioner's Office

C) Internal Revenue Service

For answers to all questions, please refer to your exam booklet.

Now that you know your worker classification and tax obligation, let's take a few minutes to discuss income. Generally speaking, as a future professional working as an employee, your income will probably be earned in three different ways: tips, wages (or salary), and commission on product sales.

Minimum Wage

Effective January 1, 2017, the state mandated minimum wage for California is $10.50 per hour. If you live in a county or city that has adopted a higher mandated minimum wage, your employer is required to pay the higher mandated minimum wage.

> To find out the minimum wage amount for your city or county go to:
>
> **www.minimum-wage.org/wage-by-state.asp**
>
> or search online for:
>
> City/County, California+minimum wage amount

The minimum wage requirement cannot be waived by any work agreement made between the employee and the shop owner. In other words, an employee cannot agree to work for just tips and no minimum wage. Employers are expected to pay the minimum hourly wage, and the employee may keep his or her tips. Tips do not belong to the shop owner. If you find that you have not been paid the mandated minimum wage and the shop owner has made no efforts to rectify the situation, you may file a wage claim with the Division of Labor Standards or file a lawsuit against your employer for lost wages.

Overtime

An employer who requires or permits an employee to work overtime is generally required to pay the employee overtime at time and one half of the regular rate of pay for all hours worked in excess of 40 per week. The overtime requirement may not be waived by an agreement between the employer and employees. An announcement by the employer that no overtime work will be permitted or that overtime work will not be paid for unless authorized in advance also will not impair the employee's right to compensation. To gain additional information, call toll-free at (866) 487-9243 or visit the U.S. Department of Labor's Wage and Hour Division website: **www.wagehour.dol.gov**

Tips

Tips are not gifts. If you have provided a service to a customer and they have paid you more than what you have stated is your fee, then that additional amount is a tip. Tips are taxable and must be reported to your employer. For additional information regarding how to report tips, please see: **https://www.irs.gov/uac/About-Publication-531**.

Tips are taxable and must be reported to your employer.

Salon/shop owners will want to access the Training Materials file and review the IRS publication, *Tips on Tips*.

Tips belong to you, the service provider. Unlike under federal regulations, in California an employer cannot use an employee's tips as a credit toward its obligation to pay the minimum wage. California law requires that employees receive the minimum wage plus any tips left for them by patrons of the employer's business. See Labor Code Section 351.

You may be wondering what can I do if my employer withholds my tips or refuses to pay me minimum wage or overtime? What if I tell my employer that I am going to report him or her to the Labor Commissioner's Office and he or she fires me? Is there anything I can do?

You have options if an employer withholds wages or tips. You have the right to file a wage claim or file a lawsuit against your employer for lost wages.

Filing a Wage Claim

An employee or former employee may file an INDIVIDUAL wage claim to recover:

- Unpaid wages, including overtime, commissions, and bonuses
- Wages paid by check issued with insufficient funds
- Final paycheck not received
- Unused vacation hours that were not paid upon termination of the employment relationship, e.g., left job, discharge, or layoff
- Unauthorized deductions from paychecks
- Unpaid/nonreimbursed business expenses
- Reporting time pay/split shift premiums
- Failure to provide a meal and/or rest period in accordance with the applicable Industrial Welfare Commission Order
- Liquidated damages for failure to receive minimum wage for each hour worked
- Waiting time penalties for failure to receive final wages timely upon separation of employment
- Penalties for paycheck(s) that have bounced or are not negotiable within 30 days of receipt. Penalties for employer's failure to allow inspection or copying of payroll records within 21 days of request.
- Sick Leave Pay for time accrued and used for which you were not paid (effective July 1, 2015)

For an in-depth discussion on how to file a wage claim and the procedures and forms involved, visit: **www.dir.ca.gov/dlse/faq_minimumwage.htm**.

A copy of the publication *Recovering Your Unpaid Wages With the California Labor Commissioner's Office* can be found in the Training Materials file.

Discrimination or Retaliation

If your employer discriminates or retaliates against you, you can file a discrimination/retaliation complaint.

If your employer discriminates or retaliates against you (for example, he fires you because you asked him why you weren't being paid the minimum wage, or because you file a claim or threaten to file a claim with the Labor Commissioner) you can file a discrimination/retaliation complaint with the Labor Commissioner's Office (also called the Division of Labor Standards Enforcement). In the alternative, you can file a lawsuit in court against your employer. For more details, please see the booklet located in the Training Materials file, *Health and Safety Rights: Facts for California Workers*.

As an employee in the state of California, you have the right to speak to representatives of the office of the California Labor Commissioner or any other government or law enforcement agency about any issues affecting your working conditions. Your employer cannot fire, demote, suspend, or discipline you for answering questions or providing information to a government agency.

Filing a Lawsuit

If you decide to file a lawsuit for lost wages, you should consult with legal representation on how to proceed.

Workers' Compensation

Workers' compensation benefits are designed to provide employees with the medical treatment necessary to recover from work-related injuries or illness, partially replace wages that are lost while recovering, and help the employee return to work. Workers' compensation benefits do not include damages for pain and suffering or punitive damages.

The Division of Workers' Compensation (DWC) monitors the administration of workers' compensation claims and provides administrative and judicial services to assist in resolving disputes that arise in connection with claims for workers' compensation benefits.

California employers are required by law to have workers' compensation insurance, even if they only have one employee. If your employees get hurt or sick because of work, you are required to pay for workers' compensation benefits. Workers' compensation insurance provides six basic benefits: medical care, temporary disability benefits, permanent disability benefits, supplemental job displacement benefits, or vocational rehabilitation and death benefits.

DWC's mission is to minimize the adverse impact of work-related injuries on California employees and employers. There are several offices throughout the state. Benefits Assistance and Enforcement Phone: (800) 736-7401

- DWC contact information: **www.dir.ca.gov/dwc/ContactDWC.htm**
- For locations: **www.dir.ca.gov/dwc/dir2.htm**

The Family and Medical Leave Act

The Family and Medical Leave Act (FMLA) applies to employers who employ 50 or more employees. You may be eligible for this benefit if you work for a large chain salon. Eligible employees are entitled to take unpaid, job-protected leave with continuation of group health insurance coverage for up to 12 work weeks in a 12-month period for:

- The birth of a newborn child
- The placement and care of a child for adoption or foster care
- For the serious health condition of the employee or the employee's spouse, child, or parent
- For qualifying needs arising out of a covered military member's active duty status

And 26 work weeks of leave during a single 12-month period to care for a covered service member with a serious injury or illness.

For information regarding FMLA visit: **www.dol.gov/whd/fmla/index.htm**.

Immigrant Workers

The Department of Labor's Wage and Hour Division continues to enforce the Fair Labor Standards Act without regard to whether an employee is documented or undocumented. Regardless of your citizenship status, employees have the right to work for a minimum wage, keep their tips, and have a safe, healthy workplace.

Agency Contact Information:

LABOR COMMISSIONER'S OFFICE (also known as the Division of Labor Standards Enforcement [DLSE])

The Labor Commissioner provides information about employment rights, discrimination, and wrongful firings. The Labor Commissioner's Office also takes worker complaints about discrimination for health and safety activity and will investigates them. There are several locations throughout the state.

Website: **www.dir.ca.gov/dlse/dlse.html**

For locations and contact information: **www.dir.ca.gov/dlse/DistrictOffices.htm**

E-mail: **dlse2@dir.ca.gov**

INTERNAL REVENUE SERVICE

Many tax questions can be answered online at the IRS website.

Website: **https://www.irs.gov**

If you require a face-to-face meeting, you can find your local office information at: **https://www.irs.gov/uac/Contact-My-Local-Office-in-California**

IRS SMALL BUSINESS AND SELF-EMPLOYED TAX CENTER

Website: **https://www.irs.gov/Businesses/Small-Businesses-Self-Employed**

State of California Franchise Tax Board

Website: **https://www.ftb.ca.gov/**

Monday–Friday, 7 a.m.–5 p.m.	(800) 852-5711
24/7 Automated Support	(800) 338-0505
Outside the United States	(916) 845-6500
TTY/TDD	(800) 822-6268

BOARD OF EQUALIZATION

General Tax Questions (Toll-free)	(800) 400-7115
Outside the United States	(916) 445-6362
California Relay Service (CRS)	711 (for hearing and speech disabilities)

EMPLOYMENT DEVELOPMENT DEPARTMENT (EDD)

Website: **www.edd.ca.gov/About_EDD/Contact_EDD.htm**
Ask EDD: **https://askedd.edd.ca.gov/**
Department Directory: **http://www.edd.ca.gov/About_EDD/Department_Directory.htm**

In Conclusion

In this lesson you learned about some basic workers' rights, what to do, and whom to contact if you are not receiving those rights. Take a moment and review the materials located in the Training Materials file. You will want to keep these materials close at hand for easy reference. Please note that the materials provided in this lesson are not all inclusive. Always make it a priority to stay updated on your basic rights by contacting the agencies listed on the previous page.

You have reached the end of California State Board of Barbering and Cosmetology's Health and Safety Curriculum. Hopefully you have gained a wealth of knowledge that you will be able to use in your future as a licensee. Thank you for working with the Board of Barbering and Cosmetology so that all licensees and consumers can have a safe, healthy salon or shop experience.

Section 9
Training Materials

9.1 Independent Contractor or Employee

9.2 Tax Tips for the Cosmetology and Barber Industry

9.3 Tips on Tips

9.4 OSHA's Workers' Rights

9.5 Nail Salon Workers Wage and Hour Rights

9.6 Recover Your Unpaid Wages With the California Labor Commissioner's Office

9.7 Health and Safety Rights: Facts for California Workers

IRS Tax Publications

If you are not sure whether you are an employee or an independent contractor, get Form SS-8, Determination of Worker Status for Purposes of Federal Employment Taxes and Income Tax Withholding. Publication 15-A, Employer's Supplemental Tax Guide, provides additional information on independent contractor status.

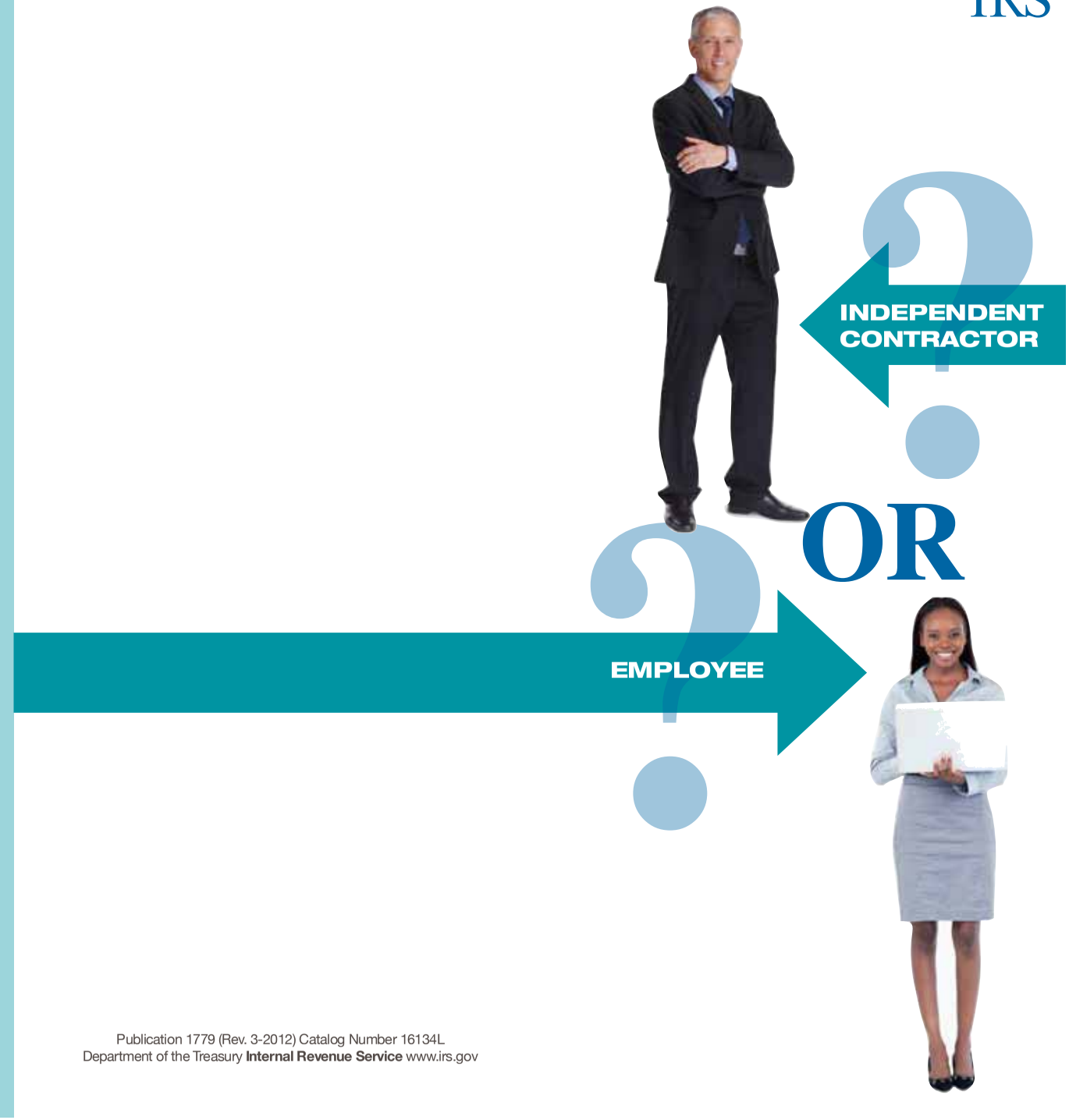
IRS Electronic Services

You can download and print IRS publications, forms, and other tax information materials on the Internet at www.irs.gov. You can also call the IRS at 1-800-829-3676 (1-800-TAX-FORM) to order free tax publications and forms.

Publication 1796, 2007 IRS Tax Products CD (Final Release), containing current and prior year tax publications and forms, can be purchased from the National Technical Information Service (NTIS). You can order Publication 1796 toll-free by calling 1-877-233-6767 or via the Internet at www.irs.gov/cdorders.

Call 1-800-829-4933, the Business and Speciality Tax Line, if you have questions related to employment tax issues.

IRS



Publication 1779 (Rev. 3-2012) Catalog Number 16134L
Department of the Treasury **Internal Revenue Service** www.irs.gov

Independent Contractor *or* Employee

Which are you?

For federal tax purposes, this is an important distinction. Worker classification affects how you pay your federal income tax, social security and Medicare taxes, and how you file your tax return. Classification affects your eligibility for social security and Medicare benefits, employer provided benefits and your tax responsibilities. If you aren't sure of your work status, you should find out now. This brochure can help you.

The courts have considered many facts in deciding whether a worker is an independent contractor or an employee. These relevant facts fall into three main categories: behavioral control; financial control; and relationship of the parties. In each case, it is very important to consider all the facts – no single fact provides the answer. Carefully review the following definitions.

Behavioral Control

These facts show whether there is a right to direct or control how the worker does the work. A worker is an employee when the business has the right to direct and control the worker. The business does not have to actually direct or control the way the work is done – as long as the employer has the right to direct and control the work. For example:

Instructions – if you receive extensive instructions on how work is to be done, this suggests that you are an employee. Instructions can cover a wide range of topics, for example:

- how, when, or where to do the work
- what tools or equipment to use
- what assistants to hire to help with the work
- where to purchase supplies and services

If you receive less extensive instructions about what should be done, but not how it should be done, you may be an independent contractor. For instance, instructions about time and place may be less important than directions on how the work is performed.

Training – if the business provides you with training about required procedures and methods, this indicates that the business wants the work done in a certain way, and this suggests that you may be an employee.

Financial Control

These facts show whether there is a right to direct or control the business part of the work. For example:

Significant Investment – if you have a significant investment in your work, you may be an independent contractor. While there is no precise dollar test, the investment must have substance. However, a significant investment is not necessary to be an independent contractor.

Expenses – if you are not reimbursed for some or all business expenses, then you may be an independent contractor, especially if your unreimbursed business expenses are high.

Opportunity for Profit or Loss – if you can realize a profit or incur a loss, this suggests that you are in business for yourself and that you may be an independent contractor.

Relationship of the Parties

These are facts that illustrate how the business and the worker perceive their relationship. For example:

Employee Benefits – if you receive benefits, such as insurance, pension, or paid leave, this is an indication that you may be an employee. If you do not receive benefits, however, you could be either an employee or an independent contractor.

Written Contracts – a written contract may show what both you and the business intend. This may be very significant if it is difficult, if not impossible, to determine status based on other facts.

When You Are an Employee...

- Your employer must withhold income tax and your portion of social security and Medicare taxes. Also, your employer is responsible for paying social security, Medicare, and unemployment (FUTA) taxes on your wages. Your employer must give you a Form W-2, Wage and Tax Statement, showing the amount of taxes withheld from your pay.
- You may deduct unreimbursed employee business expenses on Schedule A of your income tax return, but only if you itemize deductions and they total more than two percent of your adjusted gross income.

When You Are an Independent Contractor...

- The business may be required to give you Form 1099-MISC, Miscellaneous Income, to report what it has paid to you.
- You are responsible for paying your own income tax and self-employment tax (Self-Employment Contributions Act – SECA). The business does not withhold taxes from your pay. You may need to make estimated tax payments during the year to cover your tax liabilities.
- You may deduct business expenses on Schedule C of your income tax return.

IRS

Tax Tips for the

COSMETOLOGY & BARBER INDUSTRY

Whether a shop owner, an employee, or a booth renter (independent contractor), you need to know your federal tax responsibilities, including how to report your income and tips you receive from your customers.

The most common forms of business are the sole proprietorship, partnership, and corporation. Your form of business determines which income tax return form you have to file. Publication 583, *Starting a Business and Keeping Records*, available free from the IRS, can help you decide.

The purpose of this publication is to describe some of the Federal tax responsibilities that owners and workers must address each day.

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Shop Owner

As a shop owner you can elect to structure your business in different forms. You can choose to operate your business as a sole proprietorship, partnership, or as a corporation. Your business may have employees who work for you or you may decide to operate without employees. Another common arrangement is renting space to another individual who operates an independent business. This is commonly referred to as a booth renter and will be discussed later in this publication.

It doesn't matter which business structure you choose; there are basic principles that do not change. Income received in the course of your business is taxable income and must be reported on the appropriate income tax return form.

If you operate your business without employees, where you are the only worker, then your federal tax responsibilities would be limited to reporting your income earned (including tip income) and expenses on the appropriate tax form. For example, a sole proprietorship would file Form 1040, using Schedule C to report business income and expenses and Schedule SE to report Self-Employment tax.

Once you decide to hire workers you must make a determination if they are your employees or if they will operate their own independent business (booth renters).

Who is an employee?

Simply stated, an employee is an individual who works at the control and direction of another. It is important to remember that as the employer you do not have to control the worker all of the time, you simply have to have the right to control. The following questions are helpful in determining if someone is your employee or an independent contractor:

- As the owner, do you establish the hours the shop is open?
- Who makes the determination regarding who works specific shifts?
- Do the workers purchase their own supplies with their own money?
- Who determines the prices charged to customers?
- Do the workers each set their own appointments?
- Who is responsible for expenses, such as insurance, advertising, etc.?

These questions are not all inclusive, but they will provide insight as to whether you are their employer. If you give extensive instructions as to how, when, or where to do the work and where to purchase the supplies, then more than likely you are the employer and the worker is your employee. For additional information, see Publication 1779, *Independent Contractor or Employee?*

Shop Owner/Employer Tax Responsibilities

As an employer, federal law requires you to withhold taxes from your employees' paychecks. Depending on the wages, you must take out of your employees' paychecks certain amounts for federal income tax, social security tax, and Medicare tax. You must then pay any liability for the employer's share of social security and Medicare taxes. This portion, your share, is not withheld from employees. You may also be required to pay unemployment (FUTA) taxes on these wages. In addition to reporting all taxable income on the appropriate income tax form, you would also have the responsibility for issuing Form W-2, *Wage and Tax Statement.*

The wages paid, along with the taxes withheld, are reported on a quarterly basis by filing Form 941, *Employer's QUARTERLY Federal Tax Return.* You may also be required to file an annual form to pay Federal unemployment taxes. This is done by filing Form 940, *Employer's Annual Federal Unemployment (FUTA) Tax Return.* Form W-2 is furnished to employees after the close of the calendar year, but no later than January 31st.

For more information about payroll taxes, see Publication 15 (Circular E), Employer's Tax Guide that you can download at **www.irs.gov/businesses** and click on the Employment Taxes link.

Booth Renters

A booth renter is someone who leases space from an existing business and operates their own business as an independent contractor. As a booth renter, or independent contractor, you are responsible for your own record-keeping and timely filing of returns and payments of taxes related to your business.

Indications that you are an independent contractor include, but are not limited to:

- Having a key to the establishment
- Setting your own hours
- Purchasing your own products
- Having your own phone number and business name
- Determining the prices to be charged

If these factors are not present, then you are likely an employee of the business who is providing the space to you.

If the above factors are present, then as an independent contractor you would be responsible for your federal taxes. Your tax responsibilities would include:

- Reporting all income (including tips) on the appropriate income tax return form, such as Form 1040, using Schedule C or Schedule C-EZ. Social Security and Medicare Taxes are reported on Schedule SE.
- As a booth renter you must issue Form 1099-MISC for business rent paid of more than $600 or more to non-corporate landlords each year.
- Issue Form 1099 MISC or W-2 to workers you hire or employ.

As a booth renter, or independent contractor, you may need to make estimated tax payments during the year to cover your tax liabilities. This is because as a booth renter (independent contractor), the business does not withhold taxes from your pay. Estimated tax is the method used to pay tax on income that is not subject to withholding, such as earnings from self-employment you receive as a booth renter.

Estimated tax payments are made each quarter using Form 1040-ES, Estimated Tax for Individuals. For additional information regarding tax withholding and estimated tax, see Publication 505, *Tax Withholding and Estimated Tax*.

If you hire others to work for you it is possible that these workers would be your employees. As a booth renter you can hire others to work for you as your employees. If you have employees in your business, you would be required to deduct from their pay social security, Medicare and federal income taxes. This would require you to file quarterly Forms 941, as well as an annual Form 940. You would also be required to file Forms W-2 for each employee who worked for you during the calendar year.

Tip Income Responsibilities for the Employer or Booth Renter

Tips are considered taxable income and are subject to Federal income taxes. Tips that your employee receives from customers are generally subject to withholding. Your employees must report tips they receive to you by the 10th of the month after the month that the tips are received. The report should include tips that you paid over to the employee from customers that added the tip to their charged or debit card receipt and tips that the employee received directly from customers.

You must collect income tax, employee social security tax, and employee Medicare tax on the employee's tips. For more information on the taxation of tips, see Publication 15, *Circular E – Employer's Tax Guide*, available free from the IRS.

Employees are required by law to keep a daily record of all tips they receive. The IRS furnishes free, Publication 1244, *Employee's Daily Record of Tips and Report to Employer*, which employees can use to record their tips on a daily basis. Publication 1244 includes Form 4070, *Employee's Report of Tips to Employer* and Form 4070A, *Employee's Daily Record of Tips.*

If you operate your own business as a sole proprietor or booth renter, any tips received in the normal course of your business must be reported in gross receipts, and then reported on the appropriate income tax form.

See Publication 531, *Reporting Tip Income*, for more information regarding tip income reporting.

Employee Tip Reporting Responsibilities

All tips you receive are income and are subject to federal income tax. You must include in gross income all tips you receive directly from customers, charged tips paid to you by your employer, and your share of any tips you receive under a tip-splitting or tip-pooling arrangement.

You can use Form 4070A, Employee's Daily Record of Tips to record your tips, or any diary of your choosing. You can also keep copies of documents that show your tips, such as customer receipts and credit card slips. Publication 1244 includes Form 4070, Employee's Report of Tips to Employer and Form 4070A, Employee's Daily Record of Tips, available free from the IRS. You can use an electronic system provided by your employer to record your daily tips. If you do, you must receive and keep a copy of this record.

Tip Rate Determination and Education Program (TRD/EP)

Employers may participate in the Tip Rate Determination and Education program. The program consists of various voluntary agreements designed for specific industries where tipping is customary. There is one designed specifically for this industry. TRAC, Tip Reporting Alternative Commitment, has characteristics unique to the Cosmetology and Barber industry.

The IRS developed this program to encourage voluntary compliance with tip income reporting through outreach and education and using enforcement actions as a last resort.

To learn more about the voluntary agreement program, access the irs.gov website at **Market Segment Understandings (MSU)**

You can get copies of the forms and publications referenced in this publication, by searching for them by the form or title shown below at the IRS website at: **www.irs.gov**.

References

Form 941	*Employer's QUARTERLY Federal Tax Return*
Form 940	*Employer's Annual Federal Unemployment (FUTA) Tax Return*
Form 1040-ES	*Estimated Tax for Individuals*
Publication 15	*Circular E – Employer's Tax Guide*
Publication 505	*Tax Withholding and Estimated Tax*
Publication 531	*Reporting Tip Income*
Publication 583	*Starting a Business and Keeping Records*
Publication 1244	*Employee's Daily Record of Tips and Report to Employer*
Publication 1779	*Independent Contractor or Employee*
Publication 3144	*Tips on Tips/for Employees*
Publication 3148	*Tips on Tips/for Employers*

Whatever business structure you choose, remember your tax obligations, stay in compliance with the law, and enjoy the benefits!

Notes

Publication 4902

Tax Tips for the **Cosmetology & Barber Industry**

Publication 4902 (2-2011) Catalog Number 56037B
Department of the Treasury **Internal Revenue Service** www.irs.gov

IRS

Tips on Tips

A Guide to Tip Income Reporting for Employers in Businesses where Tip Income is Customary

If you are an employer of an employee who receives tip income, this guide is for you.

The Internal Revenue Service (IRS) began its Tip Rate Determination/Education Program (TRD/EP) in October 1993 for businesses where tip income is customary. The objective of the Program has been to improve and ensure compliance by employers and employees with statutory provisions relating to tip income.

The Program of Tip Reporting

What tip reporting options are available?

- Tip Rate Determination Agreement (TRDA)
- Tip Reporting Alternative Commitment (TRAC)
- Institute your own reporting system to comply with the tax law.

Under the Tip Rate Determination/ Education Program (TRD/EP), the employer may enter into a TRDA or a TRAC arrangement, depending on the specific business. The IRS will assist applicants in understanding and meeting the requirements for participation. The next pages show how these two arrangements differ.

How does the program benefit my employees?

There are a number of reasons why an employee should report all of his/her tip income:

- Increased income may improve financial approval when applying for mortgage, car, and other loans
- Increased social security and Medicare benefits (the more you pay, the greater the benefits)
- Increased unemployment compensation benefits
- Increased employee pension, annuity, or 401(k) participation (if applicable)
- Increased workers' compensation benefits, should your employees get hurt on the job

How To Get Your Program Underway

How To Apply

To enter into one of the arrangements, you may call 1-800-829-4933 for the IRS Stakeholder Liaison Field office in your area. A Stakeholder Liaison can assist you with more information about the Tip Program. You may also obtain information by sending an e-mail to Tip.Program@irs.gov.

Who Should Apply

Currently, the IRS is offering participation in TRD/EP to employers in the food and beverage, hairstyling, and gaming (casino) industries. There are now new agreements to accommodate every tipping industry.

All employers with establishments where tipping is customary should review their operations. Then, if it is determined that there is or has been an underreporting of tips, the employer may apply for one of the two arrangements (depending on their specific business) under the TRD/EP -TRDA, TRAC or TRDA.

Note: Employers currently under a TRDA, and wishing to switch to a TRAC, must first terminate their TRDA.

When To Apply

An employer may apply for one of the two arrangements, depending on his/ her specific business, at any time. The effective date of the arrangement is determined by receipt and handling of the employer's application.

TRDA is effective as of the date the IRS Employment Tax Territory Manager signs the arrangement.

TRAC is generally effective as of the first day of the quarter following the date the Stakeholder Liaison Area Manager signs the agreement.

TRDA vs. TRAC (how they differ)

TRDA	TRAC
TRDA requires the IRS to work with the establishment to arrive at a tip rate for the establishment's various occupations.	TRAC does not require that a tip rate be established but it does require the employer to: ▪ establish a procedure where a directly-tipped employee is provided (no less than monthly) a written statement of charged tips attributed to the employee. ▪ implement a procedure for the employees to verify or correct any statement of attributed tips. ▪ adopt a method where an indirectly-tipped employee reports his or her tips (no less than monthly). This could include a statement prepared by the employer and verified or corrected by the employee. ▪ establish a procedure where a written statement is prepared and processed (no less than monthly) reflecting all cash tips attributable to sales of the directly-tipped employee.
TRDA requires the employee to enter into a Tipped Employee Participation Agreement (TEPA) with the employer.	TRAC does not require an agreement between the employee and employer.

TRDA	TRAC
TRDA requires the employer to get 75 % of the employees to sign TEPAs and report at or above the determined rate.	TRAC affects all (100%) employees.
TRDA provides that if employees fail to report at or above the determined rate, the employer will provide the names of those employees, their social security numbers, job classification, sales, hours worked, and amount of tips reported.	TRAC provides that if the employees of an establishment collectively underreport their tip income, tip examinations may occur but only for those employees that underreport.
TRDA has no specific education requirement.	TRAC includes a commitment by the employer to educate and reeducate quarterly all directly and indirectly-tipped employees and new hires of their statutory requirement to report all tips to their employer.
TRDA participation assures the employer that prior periods will not be examined as long as participants comply with the requirements under the agreement.	TRAC includes the same rule.

Example of a TRAC Statement

Use the following “example” to help you develop your statement for your specific business, and provide a copy to your employees. (The following example is designed specifically for employees in the food and beverage industry.) A TRAC statement is given to an employee showing tips attributed to him/her. This example not only fulfills the statement required for charged tips but also for cash tip reporting and for indirectly-tipped employee reporting.

"title"

Employer Portion

Employer Name:	Mark Doe
Employee Address:	123 Main Street
City, State, Zip:	Any Town, USA 12345
Employee SSN:	000-00-000
Job Category:	Food Serve
Establishment Name:	ABC Bar & Grill
Employer EIN:	00-0000000
Report Period:	01/01/00 - 01/31/00
Gross Sales:	$6000
Charged Sales w/Tips	$2,000
Charged Tips;	$280
Charged Tip Rate	14%
Sales Subject to Cast tips	$4000

Employer fills out top portion.

Gross Sales: only include food & drink amount. Do not include tax, tip, or non-food/ drink items.

Charged Sales: include charged sales that show a tip on food & drink amounts only. Do not include tax, tip or non-food/drink items.
(A charged sale with no tip is included as a cash sale.)

Employee Portion

Cash Tips	$520
Cash Tip Rate	13%

Tips Shared w/Others

Name:	Job Category:	Amount:
Johnny Noname	Busser	$120
Total		(120)

Tips Recieved from Others

Name:	Job Category	Amount
Susie Cue	Cocktail	$100
Total		100

Net tips kept and reportable: $780

Employee Signature: *Mark Doe* Date: *3/23/15*

Employee fills out top portion. An indirectly-tipped employee would only receive (from the employer) the "title" portion of the statement filled out, unless employer captured "tips shared w/ others" information from the directly-tipped employee's TRAC Statement and showed it as "tips received from others".

Employee signs statement and gives a copy to employer, retaining a copy for his/her records. This statement would satisfy employer's requirement under the TRAC arrangement and the employee's requirement under the law.

Forms and Publications

The following is a list of IRS publications and forms relating to tip income reporting that can be downloaded from the IRS Web site at www.irs.ustreas.gov and can be ordered through the IRS by dialing 1-800-829-3676. (TTY/TDD equipment access, dial 1-800-829-4059).

Publication 505 – *Tax Withholding and Estimated Tax*

Publication 531 – *Reporting Tip Income*

Publication 1244 – *Employee's Daily Record of Tips and Report to Employer. This publication includes Form 4070, Employee's Report of Tips to Employer, and Form 4070A, Employee's Daily Record of Tips.*

Form 941 – *Employer's Quarterly Federal Tax Return*

Form 1040ES – *Estimated Tax for Individuals*

Form 4137 – *Social Security and Medicare Tax on Unreported Tip Income*

Form 8027 – *Employer's Annual Information Return of Tip Income and Allocated Tips*

Form W-2 – *Wage and Tax Statement; and separate Instructions for Forms W-2 and W-3*

Publication 3144 (Rev. 3-2015) Catalog Number 26288G
Department of the Treasury **Internal Revenue Service** www.irs.gov

OSHA®
Occupational Safety and Health Administration
www.osha.gov

Workers' Rights

OSHA 3021-09R 2014

OSHA®
www.osha.gov

Occupational Safety and Health Act of 1970
"To assure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health..."

This publication provides a general overview of worker rights under the *Occupational Safety and Health Act* (OSH Act). This publication does not alter or determine compliance responsibilities which are set forth in OSHA standards and the OSH Act. Moreover, because interpretations and enforcement policy may change over time, for additional guidance on OSHA compliance requirements the reader should consult current administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts.

This document, *Workers' Rights*, replaces *Employee Workplace Rights*.

This information will be made available to sensory-impaired individuals upon request. Voice phone: (202) 693-1999; teletypewriter (TTY) number: 1-877-889-5627.

Workers' Rights

U.S. Department of Labor

Occupational Safety and Health Administration

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Introduction

Worker Protection is the Law of the Land

You have the right to a safe workplace. The *Occupational Safety and Health Act of 1970* (OSH Act) was passed to prevent workers from being killed or otherwise harmed at work. The law requires employers to provide their employees with working conditions that are free of known dangers. The OSH Act created the Occupational Safety and Health Administration (OSHA), which sets and enforces protective workplace safety and health standards. OSHA also provides information, training and assistance to employers and workers.

Contact us if you have questions or want to file a complaint. We will keep your information confidential. **We are here to help you.**

Workers' Rights under the OSH Act

The OSH Act gives workers the right to safe and healthful working conditions. It is the duty of employers to provide workplaces that are free of known dangers that could harm their employees. This law also gives workers important rights to participate in activities to ensure their protection from job hazards. This booklet explains workers' rights to:

- File a confidential complaint with OSHA to have their workplace inspected.
- Receive information and training about hazards, methods to prevent harm, and the OSHA standards that apply to their workplace. The training must be done in a language and vocabulary workers can understand.
- Review records of work-related injuries and illnesses that occur in their workplace.
- Receive copies of the results from tests and monitoring done to find and measure hazards in the workplace.
- Get copies of their workplace medical records.
- Participate in an OSHA inspection and speak in private with the inspector.
- File a complaint with OSHA if they have been retaliated against by their employer as the result of requesting an inspection or using any of their other rights under the OSH Act.

- File a complaint if punished or retaliated against for acting as a "whistleblower" under the additional 21 federal statutes for which OSHA has jurisdiction.

A job must be safe or it cannot be called a good job. OSHA strives to make sure that every worker in the nation goes home unharmed at the end of the workday, the most important right of all.

Employer Responsibilities

Employers have the responsibility to provide a safe workplace. **Employers MUST provide their employees with a workplace that does not have serious hazards and must follow all OSHA safety and health standards.** Employers must find and correct safety and health problems. OSHA further requires that employers must try to eliminate or reduce hazards first by making feasible changes in working conditions – switching to safer chemicals, enclosing processes to trap harmful fumes, or using ventilation systems to clean the air are examples of effective ways to get rid of or minimize risks – rather than just relying on personal protective equipment such as masks, gloves, or earplugs.

Employers **MUST** also:

- Prominently display the official OSHA poster that describes rights and responsibilities under the OSH Act. **This poster is free and can be downloaded from www.osha.gov.**
- Inform workers about hazards through training, labels, alarms, color-coded systems, chemical information sheets and other methods.
- Train workers in a language and vocabulary they can understand.
- Keep accurate records of work-related injuries and illnesses.
- Perform tests in the workplace, such as air sampling, required by some OSHA standards.
- Provide hearing exams or other medical tests required by OSHA standards.
- Post OSHA citations and injury and illness data where workers can see them.
- As of January 1, 2015, notify OSHA within 8 hours of a workplace fatality or within 24 hours of any work-related inpatient hospitalization, amputation or loss of an eye.

- Not retaliate against workers for using their rights under the law, including their right to report a work-related injury or illness.

Who Does OSHA Cover

Private Sector Workers

Most employees in the nation come under OSHA's jurisdiction. OSHA covers most private sector employers and employees in all 50 states, the District of Columbia, and other U.S. jurisdictions either directly through Federal OSHA or through an OSHA-approved state plan. State-run health and safety plans must be at least as effective as the Federal OSHA program. To find the contact information for the OSHA Federal or State Program office nearest you, call 1-800-321-OSHA (6742) or go to www.osha.gov.

State and Local Government Workers

Employees who work for state and local governments are not covered by Federal OSHA, but have OSH Act protections if they work in those states that have an OSHA-approved state plan. The following 22 states or territories have OSHA-approved programs:

Alaska	Arizona	California
Hawaii	Indiana	Iowa
Kentucky	Maryland	Michigan
Minnesota	Nevada	New Mexico
North Carolina	Oregon	South Carolina
Tennessee	Utah	Vermont
Virginia	Washington	Wyoming
Puerto Rico		

Four additional states and one U.S. territory have OSHA-approved plans that cover public sector workers only:

Connecticut	Illinois	New Jersey
New York	Virgin Islands	

Private sector workers in these four states and the Virgin Islands are covered by Federal OSHA.

Federal Government Workers

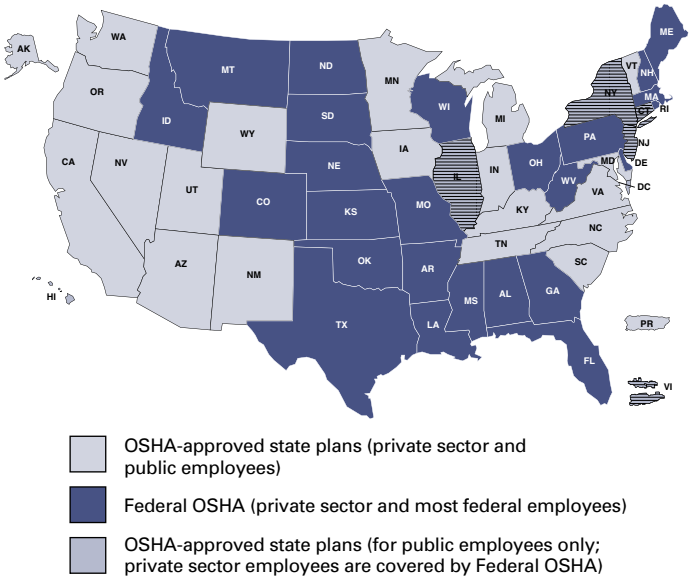
Federal agencies must have a safety and health program that meets the same standards as private employers. Although OSHA does not fine federal

agencies, it does monitor federal agencies and responds to workers' complaints. The United States Postal Service (USPS) is covered by OSHA.

Not Covered under the OSH Act

- Self-employed;
- Immediate family members of farm employers; and
- Workplace hazards regulated by another federal agency (for example, the Mine Safety and Health Administration, the Department of Energy, or Coast Guard).

OSHA-Approved State Plans



OSHA-approved state plans (private sector and public employees)

Federal OSHA (private sector and most federal employees)

OSHA-approved state plans (for public employees only; private sector employees are covered by Federal OSHA)

Worker Rights in State-Plan States

States that assume responsibility for their own occupational safety and health programs must have provisions at least as effective as Federal OSHA's, including the protection of worker rights.

Any interested person or group, including employees, with a complaint concerning the operation or administration of a state program may submit a complaint to the appropriate Federal OSHA regional administrator. (See contact list at the end of this booklet). This is called a Complaint About State Program Administration (CASPA). The

complaintant's name will be kept confidential. The OSHA regional administrator will investigate all such complaints, and where complaints are found to be valid, require appropriate corrective action on the part of the state.

Right to a Safe and Healthful Workplace

Employers' "General Duty"

Employers have the responsibility to provide a safe and healthful workplace that is free from serious recognized hazards. This is commonly known as the General Duty Clause of the OSH Act.

OSHA Standards: Protection on the Job

OSHA standards are rules that describe the methods that employers must use to protect their employees from hazards. There are four groups of OSHA standards: General Industry, Construction, Maritime, and Agriculture. (General Industry is the set that applies to the largest number of workers and worksites). These standards are designed to protect workers from a wide range of hazards.

These standards also limit the amount of hazardous chemicals, substances, or noise that workers can be exposed to; require the use of certain safe work practices and equipment; and require employers to monitor certain hazards and keep records of workplace injuries and illnesses.

Examples of OSHA standards include requirements to:

- Provide fall protection, such as a safety harness and lifeline;
- Prevent trenching cave-ins;
- Ensure the safety of workers who enter confined spaces such as manholes or grain bins;
- Prevent exposure to high levels of noise that can damage hearing;
- Put guards on machines;
- Prevent exposure to harmful levels of substances like asbestos and lead;
- Provide workers with respirators and other needed safety equipment (in almost all cases, free of charge);

- Provide healthcare workers with needles and sharp instruments that have built-in safety features to prevent skin punctures or cuts that could cause exposure to infectious diseases; and
- Train workers using a language and vocabulary they understand about hazards and how to protect themselves.

Employers must also comply with the General Duty Clause of the OSH Act. This clause requires employers to keep their workplaces free of serious recognized hazards and is generally cited when no specific OSHA standard applies to the hazard.

Right to be Provided Protective Equipment Free of Charge

In some situations it is not possible to completely eliminate a hazard or reduce exposures to a safe level, so respirators, goggles, earplugs, gloves, or other types of personal protective equipment are often used by themselves or in addition to other hazard control measures. Employers must provide most protective equipment free of charge. Employers are responsible for knowing when protective equipment is needed.

Right to Information

OSHA gives workers and their representatives the right to see information that employers collect on hazards in the workplace. Workers have the right to know what hazards are present in the workplace and how to protect themselves. Many OSHA standards require various methods that employers must use to inform their employees, such as warning signs, color-coding, signals, and training. Workers must receive their normal rate of pay to attend training that is required by OSHA standards and rules. The training must be in a language and vocabulary that workers can understand.

Right to Know about Chemical Hazards

The Hazard Communication standard, known as the "right-to-know" standard, requires employers to inform and train workers about hazardous chemicals and substances in the workplace. Employers must:

- Provide workers with effective information and training on hazardous chemicals in their work area.

This training must be in a language and vocabulary that workers can understand;

- Keep a current list of hazardous chemicals that are in the workplace;
- Make sure that hazardous chemical containers are properly labeled with the identity of the hazardous chemical and appropriate hazard warnings; and
- Have and make available to workers and their representatives Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) for each substance that provide detailed information about chemical hazards, their effects, how to prevent exposure, and emergency treatment if an exposure occurs.

Right to Know about Laws and Your Rights

Employers must display the official OSHA Poster, *Job Safety and Health: It's the Law*, in a place where workers will see it. It can be downloaded from the OSHA website, www.osha.gov. Pre-printed copies can also be obtained from OSHA.

Right to Get Copies of Workplace Injury and Illness Records

OSHA's Recordkeeping Rule requires employers in higher-hazard industries with more than ten employees to keep accurate and complete records of work-related injuries and illnesses. (Certain low-hazard workplaces such as offices are not required to keep such records). Employers must record any serious work-related injury or illness on the OSHA Form 300. A serious injury or illness is one that required medical treatment other than first aid, restricted work or days away from work. (Details of each incident are entered on a separate form, the OSHA Form 301). This OSHA Form 300 becomes an ongoing log of all recordable incidents. Each year from February 1 through April 30, employers must post a summary of the injury and illness log from the previous year (OSHA Form 300A) in a place where workers can see it. Workers and their representatives have the right to receive copies of the full OSHA Form 300 log. Following a request, employers must make copies available at the end of the next business day.

These injury and illness logs are important because they provide a comprehensive guide to possible hazards in the workplace that may need correcting. The logs should be used to focus on areas with high injury and illness rates, and to find and fix hazards in order to prevent future occurrences.

Right to Exposure Data

Many OSHA standards require employers to run tests of the workplace environment to find out if their workers are being exposed to harmful levels of hazardous substances such as lead or asbestos, or high levels of noise or radiation. These types of tests are called exposure monitoring. OSHA gives workers the right to get the results of these tests.

Right to Your Medical Records

Some OSHA standards require medical tests to find out if a worker's health has been affected because of exposures at work. For example, employers must test for hearing loss in workers exposed to excessive noise or for decreased lung function in workers exposed to asbestos. Workers have a right to their medical records. Workers' representatives also have a right to review these records but they must first get written permission from the worker to gain access to their medical information.

OSHA Worksite Investigations

OSHA conducts on-site inspections of worksites to enforce the OSHA law that protects workers and their rights. Inspections are initiated without advance notice, conducted using on-site or telephone and facsimile investigations, and performed by highly trained compliance officers. Worksite inspections are conducted based on the following priorities:

- Imminent danger;
- A fatality or hospitalizations;
- Worker complaints and referrals;
- Targeted inspections – particular hazards, high injury rates; and
- Follow-up inspections.

Inspections are conducted without employers knowing when or where they will occur. The employer

is not informed in advance that there will be an inspection, regardless of whether it is in response to a complaint or is a programmed inspection.

Right to File a Complaint with OSHA to Request an On-site OSHA Inspection

On-site inspections can be triggered by a worker complaint of a potential workplace hazard or violation. If your workplace has unsafe or unhealthful working conditions, you may want to file a complaint. Often the best and fastest way to get a hazard corrected is to notify your supervisor or employer.

Current workers or their representatives may file a written complaint and ask OSHA to inspect their workplace if they believe there is a serious hazard or that their employer is not following OSHA standards or rules. **Workers and their representatives have the right to ask for an inspection without OSHA telling their employer who filed the complaint.** It is a violation of the OSH Act for an employer to fire, demote, transfer or retaliate in any way against a worker for filing a complaint or using other OSHA rights.

A complaint can be filed in a number of ways:

1. **Mail or submit the OSHA Complaint Form** – Download the OSHA complaint form from our website (or request a copy from your local OSHA regional or area office), complete it and then fax or mail it back to your nearest OSHA regional or area office. Written complaints that report a serious hazard and are signed by a current worker or representative and submitted to the closest OSHA area office are given priority and are more likely to result in on-site OSHA inspections. A worker or their representative can request (on the form) that OSHA not let their employer know who filed the complaint. Please include your name, address and telephone number so we can contact you to follow up. This information is confidential.

2. **Online** – Go to the online Complaint Form on the OSHA website, at www.osha.gov/pls/osha7/eComplaintForm.html. Complaints that are sent in online will most likely be investigated using OSHA's phone/fax system whereby the employer is contacted by phone or fax (not an actual inspection) about the

hazard. **A written complaint that reports a serious hazard and is signed by a current worker(s) or their representative and mailed or otherwise submitted to an OSHA area or regional office is more likely to result in an on-site OSHA inspection.** Complaints received online from workers in OSHA-approved state plan states will be forwarded to the appropriate state plan for response.

3. **Telephone** – Call your local OSHA regional or area office at 1-800-321-OSHA (6742). OSHA staff can discuss your complaint and respond to any questions you have. **If there is an emergency or the hazard is immediately life-threatening, call your local OSHA regional or area office.**

Who else can file a complaint?

Employee representatives, for the purposes of filing a complaint, are defined as any of the following:

- An authorized representative of the employee bargaining unit, such as a certified or recognized labor organization.
- An attorney acting for an employee.
- Any other person acting in a bona fide representative capacity, including, but not limited to, members of the clergy, social workers, spouses and other family members, health care providers and government officials or nonprofit groups and organizations acting upon specific complaints or injuries from individuals who are employees. In general, the affected employee should have requested, or at least approved, the filing of the complaint on his or her behalf.

In addition, anyone who knows about a workplace safety or health hazard may report unsafe conditions to OSHA, and OSHA will investigate the concerns reported.

Rights of Workers during an Inspection

During an inspection, workers or their representatives have the following rights:

- Have a representative of employees, such as the safety steward of a labor organization, go along on the inspection;
- Talk privately with the inspector; and
- Take part in meetings with the inspector before and after the inspection.

When there is no authorized employee representative, the OSHA inspector must talk confidentially with a reasonable number of workers during the inspection.

Workers are encouraged to:

- Point out hazards;
- Describe injuries or illnesses that resulted from these hazards;
- Discuss past worker complaints about hazards; and
- Inform the inspector of working conditions that are not normal during the inspection.

Following the Inspection

At the end of the inspection, the OSHA inspector will meet with the employer and the employee representatives in a closing conference to discuss any violations found and possible methods by which any hazards found will be abated. If it is not practical to hold a joint conference, the compliance officer will hold separate conferences.

When the OSHA area director determines that there has been a violation of OSHA standards, regulations, or other requirements, the area director issues a citation and notification of proposed penalty to an employer. A citation includes a description of the violation and the date by when the corrective actions must be taken. Depending on the situation, OSHA can classify a violation as serious, willful, or repeat. The employer can also be cited for failing to correct a violation for which it has already been cited. Employers must post a copy of a citation in the workplace where employees will see it.

Workers' Rights following Issuance of Citations

Workers and employers can contest citations once they are issued to the employer. Workers may only contest the amount of time the employer is given to correct the hazard. Workers or their representatives must file a notice of contest with the OSHA area office within 15 days of the issuance of a citation.

Employers have the right to challenge whether there is a violation, how the violation is classified, the amount of any penalty, what the employer must do to correct the violation and how long

they have to fix it. Workers or their representatives may participate in this appeals process by electing "party status." This is done by filing a written notice with the Occupational Safety and Health Review Commission (OSHRC).

The OSHRC hears appeals of OSHA citations. They are an independent agency separate from the Department of Labor. For more information, write to:

U.S. Occupational Safety and Health
Review Commission
1120 20th Street NW, 9th Floor
Washington, DC 20036
Phone: 202-606-5400 Fax: 202-606-5050
www.oshrc.gov

Right to Information if No Inspection is Conducted or No Citation Issued

The OSHA area director evaluates complaints from employees or their representatives according to the procedures defined in the OSHA Field Operations Manual. If the area director decides not to inspect the workplace, he or she will send a letter to the complainant explaining the decision and the reasons for it.

OSHA will inform complainants that they have the right to request a review of the decision by the OSHA regional administrator. Similarly, in the event that OSHA decides not to issue a citation after an inspection, employees have a right to further clarification from the area director and an informal review by the regional administrator.

Right to Use Your Rights: *Protection against Retaliation* Whistleblower Protection

The OSH Act prohibits employers from retaliating against their employees for using their rights under the OSH Act. These rights include filing an OSHA complaint, participating in an inspection or talking to the inspector, seeking access to employer exposure and injury records, raising a safety or health issue with the employer, or any other workers' rights described above.

Protection from retaliation means that an employer cannot punish workers by taking "adverse action", such as:

- Firing or laying off;
- Blacklisting;
- Demoting;
- Denying overtime or promotion;
- Disciplining;
- Denying benefits;
- Failing to hire or rehire;
- Intimidation;
- Making threats;
- Reassignment affecting prospects for promotion; or
- Reducing pay or hours.

You can file a complaint alleging retaliation with OSHA if your employer has punished you for using any employee rights established under the OSH Act. **If you have been retaliated against for using your rights, you must file a complaint with OSHA within 30 calendar days from the date the retaliatory decision has been both made and communicated to you (the worker). Contact your local OSHA office by calling, within 30 days of the alleged retaliation, 1-800-321-OSHA (6742), or send a letter to your closest regional or area office. No form is required.** In states with approved state plans, employees may file a complaint with both the State and Federal OSHA.

Following a complaint, OSHA will contact the complainant and conduct an interview to determine whether an investigation is necessary.

If the evidence shows that the employee has been retaliated against for exercising safety and health rights, OSHA will ask the employer to restore that worker's job, earnings, and benefits. If the employer refuses, OSHA may take the employer to court. In such cases, a Department of Labor attorney will represent the employee to obtain this relief.

If There is a Dangerous Situation at Work

If you believe working conditions are unsafe or unhealthful, we recommend that you bring the conditions to your employer's attention, if possible.

You may file a complaint with OSHA concerning a hazardous working condition at any time. However, you should not leave the worksite merely because you have filed a complaint. If the condition clearly presents a risk of death or serious physical harm, there is not sufficient time for OSHA to inspect, and, where possible, you have brought the condition to the attention of your employer, you may have a legal right to refuse to work in a situation in which you would be exposed to the hazard.

If a worker, with no reasonable alternative, refuses in good faith to expose himself or herself to a dangerous condition, he or she would be protected from subsequent retaliation. The condition must be of such a nature that a reasonable person would conclude that there is a real danger of death or serious harm and that there is not enough time to contact OSHA and for OSHA to inspect. Where possible, the employee must have also sought from his employer, and been unable to obtain, a correction of the condition. For more information, go to www.osha.gov/workers.html.

Additional Whistleblower Protections

Since passage of the OSH Act in 1970, Congress has expanded OSHA's whistleblower protection authority to protect workers from retaliation under 22 federal laws. These laws protect employees who report violations of various workplace safety, airline, commercial motor carrier, consumer product, environmental, financial reform, healthcare reform, nuclear, pipeline, public transportation agency, railroad, maritime and securities laws. Complaints must be reported to OSHA within set timeframes following the retaliatory action, as prescribed by each law.

These laws, and the number of days employees have to file a complaint, are:

Worker, Environmental and Nuclear Safety Laws

- ***Asbestos Hazard Emergency Response Act (AHERA)*** (90 days). Provides retaliation protection for individuals who report violations of environmental laws relating to asbestos in public or private nonprofit elementary and secondary school systems.
- ***Clean Air Act (CAA)*** (30 days). Provides retaliation protection for employees who, among other things, report violations of this law, which provides for the development and enforcement of standards regarding air quality and air pollution.
- ***Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*** (30 days). Protects employees who report regulatory violations involving accidents, spills, and other emergency releases of pollutants into the environment. The law also protects employees who report violations related to the cleanup of uncontrolled or abandoned hazardous waste sites.
- ***Energy Reorganization Act (ERA)*** (180 days). Protects certain employees in the nuclear industry who report violations of the Atomic Energy Act (AEA). Protected employees include employees of operators, contractors and subcontractors of nuclear power plants licensed by the Nuclear Regulatory Commission, and employees of contractors working with the Department of Energy under a contract pursuant to the Atomic Energy Act.
- ***Federal Water Pollution Control Act (FWPCA) (also known as the Clean Water Act)*** (30 days). Provides retaliation protection for employees who, among other things, report violations of the law controlling water pollution.
- ***Occupational Safety and Health Act of 1970*** (30 days). Provides retaliation protection for employees who exercise a variety of rights guaranteed under this law, such as filing a safety and health complaint with OSHA and participating in an inspection.

- ***Safe Drinking Water Act (SDWA)*** (30 days). Provides retaliation protection for employees who, among other things, report violations of this law, which requires that all drinking water systems assure that their water is potable, as determined by the Environmental Protection Agency.
- ***Solid Waste Disposal Act (SWDA) (also known as the Resource Conservation and Recovery Act)*** (30 days). Provides retaliation protection for employees who, among other things, report violations of the law regulating the disposal of solid waste.
- ***Toxic Substances Control Act (TSCA)*** (30 days). Provides retaliation protection for employees who, among other things, report violations of regulations involving the manufacture, distribution, and use of certain toxic substances.

Transportation Industry Laws

- ***Federal Railroad Safety Act (FRSA)*** (180 days). Provides protection to employees of railroad carriers and contractors and subcontractors of those carriers who report an alleged violation of any federal law, rule, or regulation relating to railroad safety or security, or gross fraud, waste, or abuse of federal grants or other public funds intended to be used for railroad safety or security; report, in good faith, a hazardous safety or security condition; refuse to violate or assist in the violation of any federal law, rule, or regulation relating to railroad safety or security; refuse to work when confronted by a hazardous safety or security condition related to the performance of the employee's duties (under imminent danger circumstances); request prompt medical or first-aid treatment for employment-related injuries; are disciplined for requesting medical or first-aid treatment or for following an order or treatment plan of a treating physician.
- ***International Safe Container Act (ISCA)*** (60 days). Provides retaliation protection for employees who report violations of this law, which regulates shipping containers.

- ***Moving Ahead for Progress in the 21st Century Act (MAP-21)*** (180 days). Prohibits retaliation by motor vehicle manufacturers, part suppliers, and dealerships against employees for providing information to the employer or the U.S. Department of Transportation about motor vehicle defects, noncompliance, or violations of the notification or reporting requirements enforced by the National Highway Traffic Safety Administration or for engaging in related protected activities as set forth in the provision.
- ***National Transit Systems Security Act (NTSSA)*** (180 days). Provides protection to public transit employees who, among other things, report an alleged violation of any federal law, rule, or regulation relating to public transportation agency safety or security, or fraud, waste, or abuse of federal grants or other public funds intended to be used for public transportation safety or security; refuse to violate or assist in the violation of any federal law, rule, or regulation relating to public transportation safety or security; report a hazardous safety or security condition; refuse to work when confronted by a hazardous safety or security condition related to the performance of the employee's duties (under imminent danger circumstances).
- ***Pipeline Safety Improvement Act of 2002 (PSIA)*** (180 days). Provides retaliation protection for employees who report violations of the federal laws regarding pipeline safety and security or who refuse to violate such provisions.
- ***Seaman's Protection Act (SPA)*** (180 days). Seamen are protected, among other things, for reporting to the Coast Guard or other federal agency a reasonably believed violation of a maritime safety law or regulation prescribed under that law or regulation. The law also protects work refusals where the employee reasonably believes an assigned task would result in serious injury or impairment of health to the seaman, other seamen, or the public and when the seaman sought, and was unable to obtain correction of the unsafe conditions.

- ***Surface Transportation Assistance Act (STAA)*** (180 days). Provides retaliation protection for truck drivers and other employees relating to the safety of commercial motor vehicles. Coverage includes all buses for hire and freight trucks with a gross vehicle weight greater than 10,001 pounds.
- ***Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR21)*** (90 days). Provides retaliation protection for employees of air carriers, contractors, or subcontractors of air carriers who, among other things, raise safety concerns.

Fraud Prevention Laws

- ***Affordable Care Act (ACA)*** (180 days). Protects employees who report violations of any provision of Title I of the ACA, including but not limited to retaliation based on an individual's receipt of health insurance subsidies, the denial of coverage based on a preexisting condition, or an insurer's failure to rebate a portion of an excess premium.
- ***Consumer Financial Protection Act of 2010 (CFPA), Section 1057 of the Dodd-Frank Wall Street Reform and Consumer Protection Act*** (180 days). Protects employees who report perceived violations of any provision of the *Dodd-Frank Act*, which encompasses nearly every aspect of the financial services industry. The law also protects employees who report violations of any rule, order, standard or prohibition prescribed by the Bureau of Consumer Financial Protection.
- ***Section 806 of the Sarbanes-Oxley Act of 2002 (SOX)*** (180 days). Protects employees of certain companies who report alleged mail, wire, bank or securities fraud; violations of the Securities and Exchange Commission (SEC) rules and regulations; or violations of Federal laws related to fraud against shareholders. The law covers employees of publicly traded companies and companies required to file certain reports with the SEC.

Consumer Safety Laws

- ***Consumer Product Safety Improvement Act (CPSIA)*** (180 days). Protects employees who report to their employer, the federal government, or a state attorney general reasonably perceived violations of any statute or regulation within the jurisdiction of the Consumer Product Safety Commission (CPSC). CPSIA covers employees of consumer product manufacturers, importers, distributors, retailers, and private labelers.
- ***FDA Food Safety Modernization Act (FSMA)*** (180 days). Protects employees of food manufacturers, distributors, packers, and transporters for reporting a violation of the Food, Drug, and Cosmetic Act, or a regulation promulgated under this law. Employees are also protected from retaliation for refusing to participate in a practice that violates this law.

If you believe that you have been retaliated against, call 1-800-321-OSHA (6742) to be connected to the nearest OSHA office to report your complaint. For more information, visit OSHA's Whistleblower page at www.whistleblowers.gov.

OSHA Assistance, Services and Programs

OSHA has a great deal of information to assist employers in complying with their responsibilities under OSHA law. Several OSHA programs and services can help employers identify and correct job hazards, as well as improve their injury and illness prevention program.

Establishing an Injury and Illness Prevention Program

The key to a safe and healthful work environment is a comprehensive injury and illness prevention program.

Injury and illness prevention programs are systems that can substantially reduce the number and severity of workplace injuries and illnesses, while reducing costs to employers. Thousands of employers across

the United States already manage safety using injury and illness prevention programs, and OSHA believes that all employers can and should do the same. Thirty-four states have requirements or voluntary guidelines for workplace injury and illness prevention programs. Most successful injury and illness prevention programs are based on a common set of key elements. These include management leadership, worker participation, hazard identification, hazard prevention and control, education and training, and program evaluation and improvement. Visit OSHA's Injury and Illness Prevention Programs web page at www.osha.gov/dsg/topics/safetyhealth for more information.

Compliance Assistance Specialists

OSHA has compliance assistance specialists throughout the nation located in most OSHA offices. Compliance assistance specialists can provide information to employers and workers about OSHA standards, short educational programs on specific hazards or OSHA rights and responsibilities, and information on additional compliance assistance resources. For more details, visit www.osha.gov/dcsp/compliance_assistance/cas.html or call 1-800-321-OSHA (6742) to contact your local OSHA office.

Free On-site Safety and Health Consultation Services for Small Business

OSHA's On-site Consultation Program offers free and confidential advice to small and medium-sized businesses in all states across the country, with priority given to high-hazard worksites. Each year, responding to requests from small employers looking to create or improve their safety and health management programs, OSHA's On-site Consultation Program conducts over 29,000 visits to small business worksites covering over 1.5 million workers across the nation.

On-site consultation services are separate from enforcement and do not result in penalties or citations. Consultants from state agencies or universities work with employers to identify workplace hazards, provide advice on compliance with OSHA standards, and assist in establishing safety and health management programs.

For more information, to find the local On-site Consultation office in your state, or to request a brochure on consultation services, visit www.osha.gov/consultation, or call 1-800-321-OSHA (6742).

Under the consultation program, certain exemplary employers may request participation in OSHA's **Safety and Health Achievement Recognition Program (SHARP)**. Eligibility for participation includes, but is not limited to, receiving a full-service, comprehensive consultation visit, correcting all identified hazards and developing an effective safety and health management program. Worksites that receive SHARP recognition are exempt from programmed inspections during the period that the SHARP certification is valid.

Cooperative Programs

OSHA offers cooperative programs under which businesses, labor groups and other organizations can work cooperatively with OSHA. To find out more about any of the following programs, visit www.osha.gov/dcsp/compliance_assistance/index_programs.html.

Strategic Partnerships and Alliances
The OSHA Strategic Partnerships (OSP) provide the opportunity for OSHA to partner with employers, workers, professional or trade associations, labor organizations, and/or other interested stakeholders. OSHA Partnerships are formalized through unique agreements designed to encourage, assist, and recognize partner efforts to eliminate serious hazards and achieve model workplace safety and health practices. Through the Alliance Program, OSHA works with groups committed to worker safety and health to prevent workplace fatalities, injuries and illnesses by developing compliance assistance tools and resources to share with workers and employers, and educate workers and employers about their rights and responsibilities.

Voluntary Protection Programs (VPP)
The VPP recognize employers and workers in private industry and federal agencies who have implemented effective safety and health management programs and maintain injury and illness rates below the national average for their respective industries. In VPP, management, labor, and OSHA work cooperatively

and proactively to prevent fatalities, injuries, and illnesses through a system focused on: hazard prevention and control, worksite analysis, training, and management commitment and worker involvement.

Occupational Safety and Health Training

The OSHA Training Institute in Arlington Heights, Illinois, provides basic and advanced training and education in safety and health for federal and state compliance officers, state consultants, other federal agency personnel and private sector employers, workers, and their representatives. In addition, 27 OSHA Training Institute Education Centers at 42 locations throughout the United States deliver courses on OSHA standards and occupational safety and health issues to thousands of students a year.

For more information on training, contact the OSHA Directorate of Training and Education, 2020 Arlington Heights Road, Arlington Heights, IL 60005; call 1-847-297-4810; or visit www.osha.gov/otiec.

OSHA Educational Materials

OSHA has many types of educational materials in English, Spanish, Vietnamese and other languages available in print or online. These include:

- Brochures/booklets that cover a wide variety of job hazards and other topics;
- Fact Sheets, which contain basic background information on safety and health hazards;
- Guidance documents that provide detailed examinations of specific safety and health issues;
- Online Safety and Health Topics pages;
- Posters;
- Small, laminated QuickCards™ that provide brief safety and health information; and
- *QuickTakes*, OSHA's free, twice-monthly online newsletter with the latest news about OSHA initiatives and products to assist employers and workers in finding and preventing workplace hazards. To sign up for *QuickTakes* visit www.osha.gov/quicktakes.

To view materials available online or for a listing of free publications, visit www.osha.gov/publications. You can also call 1-800-321-OSHA (6742) to order publications.

OSHA's website also has a variety of eTools. These include utilities such as expert advisors, electronic compliance assistance, videos and other information for employers and workers. To learn more about OSHA's safety and health tools online, visit www.osha.gov.

NIOSH Health Hazard Evaluation Program

Getting Help with Health Hazards

The National Institute for Occupational Safety and Health (NIOSH) is a federal agency that conducts scientific and medical research on workers' safety and health. At no cost to employers or workers, NIOSH can help identify health hazards and recommend ways to reduce or eliminate those hazards in the workplace through its Health Hazard Evaluation (HHE) Program.

Workers, union representatives and employers can request a NIOSH HHE. An HHE is often requested when there is a higher than expected rate of a disease or injury in a group of workers. These situations may be the result of an unknown cause, a new hazard, or a mixture of sources. To request a NIOSH Health Hazard Evaluation go to www.cdc.gov/niosh/hhe/request.html. To find out more about the Health Hazard Evaluation Program:

- Call (513) 841-4382, or to talk to a staff member in Spanish, call (513) 841-4439; or
- Send an email to HHERequestHelp@cdc.gov.

How to Contact OSHA

For questions or to get information or advice, to report an emergency, report a fatality or catastrophe, order publications, sign up for OSHA's e-newsletter *QuickTakes*, or to file a confidential complaint, contact your nearest OSHA office, visit www.osha.gov or call OSHA at 1-800-321-OSHA (6742), TTY 1-877-889-5627.

For assistance, contact us.

We are OSHA. We can help.

It's confidential.

OSHA Regional Offices

Region I
Boston Regional Office
(CT*, ME, MA, NH, RI, VT*)
JFK Federal Building, Room E340
Boston, MA 02203
(617) 565-9860 (617) 565-9827 Fax

Region II
New York Regional Office
(NJ*, NY*, PR*, VI*)
201 Varick Street, Room 670
New York, NY 10014
(212) 337-2378 (212) 337-2371 Fax

Region III
Philadelphia Regional Office
(DE, DC, MD*, PA, VA*, WV)
The Curtis Center
170 S. Independence Mall West
Suite 740 West
Philadelphia, PA 19106-3309
(215) 861-4900 (215) 861-4904 Fax

Region IV
Atlanta Regional Office
(AL, FL, GA, KY*, MS, NC*, SC*, TN*)
61 Forsyth Street, SW, Room 6T50
Atlanta, GA 30303
(678) 237-0400 (678) 237-0447 Fax

Region V
Chicago Regional Office
(IL*, IN*, MI*, MN*, OH, WI)
230 South Dearborn Street
Room 3244
Chicago, IL 60604
(312) 353-2220 (312) 353-7774 Fax

Region VI
Dallas Regional Office
(AR, LA, NM*, OK, TX)
525 Griffin Street, Room 602
Dallas, TX 75202
(972) 850-4145 (972) 850-4149 Fax
(972) 850-4150 FSO Fax

Region VII
Kansas City Regional Office
(IA*, KS, MO, NE)
Two Pershing Square Building
2300 Main Street, Suite 1010
Kansas City, MO 64108-2416
(816) 283-8745 (816) 283-0547 Fax

Region VIII
Denver Regional Office
(CO, MT, ND, SD, UT*, WY*)
Cesar Chavez Memorial Building
1244 Speer Boulevard, Suite 551
Denver, CO 80204
(720) 264-6550 (720) 264-6585 Fax

Region IX
San Francisco Regional Office
(AZ*, CA*, HI*, NV*, and American Samoa,
Guam and the Northern Mariana Islands)
90 7th Street, Suite 18100
San Francisco, CA 94103
(415) 625-2547 (415) 625-2534 Fax

Region X
Seattle Regional Office
(AK*, ID, OR*, WA*)
300 Fifth Avenue, Suite 1280
Seattle, WA 98104
(206) 757-6700 (206) 757-6705 Fax

* These states and territories operate their own OSHA-approved job safety and health plans and cover state and local government employees as well as private sector employees. The Connecticut, Illinois, New Jersey, New York and Virgin Islands programs cover public employees only. (Private sector workers in these states are covered by Federal OSHA). States with approved programs must have standards that are identical to, or at least as effective as, the Federal OSHA standards.

Note: To get contact information for OSHA area offices, OSHA-approved state plans and OSHA consultation projects, please visit us online at www.osha.gov or call us at 1-800-321-OSHA (6742).

www.osha.gov

(800) 321-OSHA (6742)

If you think your job is unsafe and you have questions, call OSHA. We can help. It's confidential.

U.S. Department of Labor

For more information

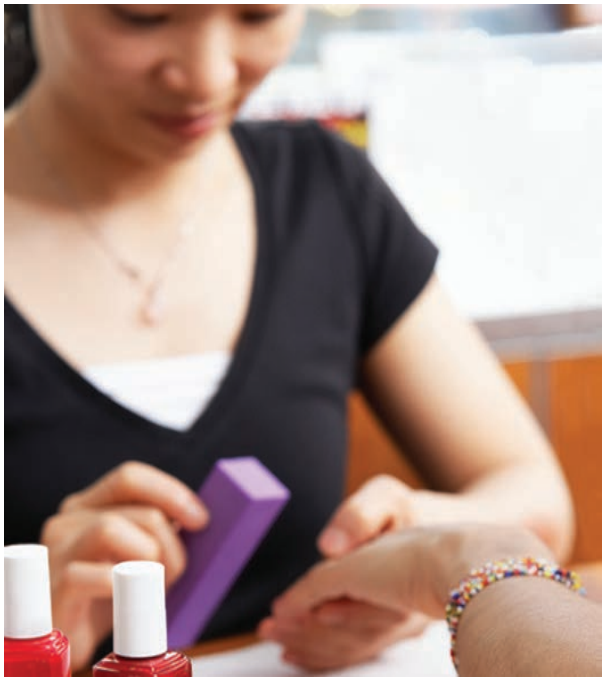
OSHA® Occupational Safety and Health Administration

www.osha.gov (800) 321-OSHA (6742)

WAGE AND HOUR DIVISION
UNITED STATES DEPARTMENT OF LABOR

1-886-487-9243

www.dol.gov/whd



NAIL SALON WORKERS
WAGE AND HOUR RIGHTS

The Wage and Hour Division helps all workers in the United States, regardless of immigration status.

As a nail salon worker you have the right to be paid full and fair wages for all hours you work. Know your rights!

HOURS WORKED:

- You must be paid for all work performed whether or not the employer approves the work in advance.
- This includes time spent in training, traveling from site to site during the day, and any work performed "off the clock."

MINIMUM WAGE AND DEDUCTIONS:

- You must be paid at least the federal minimum wage of $7.25 per hour.
- Even if you are paid by the day or at a piece rate, your total wages must amount to at least the federal minimum wage for each hour worked.
- Your employer may make deductions for job-related expenses such as uniforms, equipment rentals, or tools but such deductions cannot reduce your pay below the federal minimum hourly wage.
- Some state laws require higher minimum wages and greater employee protections; employers must comply with those laws as well as the federal rules described here.

OVERTIME PAY:

- Generally, you must be paid 1-½ times your regular rate of pay after 40 hours of work in a seven-day workweek.

RECORDKEEPING:

- Employers are required to keep accurate records of all their employees' daily and weekly hours worked and wages paid.
- You should keep your own records of your work hours and wages, and your employer's name, address, and phone number.

It is illegal for your employer to fire you or retaliate against you in any way for contacting us or exercising your rights.

If you believe your rights have been violated or you have any questions, call us at **1-866-487-9243**.

We can assist you in ***your language***.

Our services are ***free*** and ***confidential***.

ARE YOU AN INDEPENDENT CONTRACTOR OR AN EMPLOYEE?

Some salons incorrectly call workers "independent contractors" when they are actually employees.

It is important for you to know the difference between the two because employees are legally entitled to greater health and safety protections, wages and benefits.

A salon owner may call you an independent contractor, or give you an IRS form 1099 instead of a W-2, but this does not automatically make you an independent contractor.

We look at several factors to determine whether you are truly an independent contractor.

Do you:

- *Rent a booth or station at a salon?*
- *Purchase your own supplies and tools?*
- *Set your own schedule and pay rates?*
- *Have your own customers who pay you directly?*
- *Have your own business license?*

If you answer "No," to some or all of these questions, you might be an employee.

Please contact us if you are not sure whether you are an employee or an independent contractor. We will look at your job duties and other factors to determine your workplace rights.

WH1019 0515

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
UNITED STATES DEPARTMENT OF LABOR

1-800-321-OSHA (6742)

www.osha.gov

Stay Healthy and Safe While Giving Manicures and Pedicures

Products used in nail salons can contain harmful chemicals. Over time, repeated use or exposure to high concentrations of these chemicals could damage your body or cause serious health effects. You have the right to working conditions that do not put you at risk of serious harm.

Hazardous Chemicals in Nail Salon Products

Some potentially hazardous chemicals and their health effects are below (for a more comprehensive list go to www.osha.gov/SLTC/nailsalons)

- Acetone (nail polish remover): headaches, dizziness, irritated eyes, skin and throat.
- Dibutyl phthalate (DBP) (nail polish): nausea, irritated eyes, skin, nose, mouth and throat.
- Ethyl methacrylate (EMA) (artificial nail liquid): asthma, irritated eyes, skin, nose and mouth; difficulty concentrating. Exposures while pregnant may affect your child. (Methyl methacrylate is banned in many states.)
- Formaldehyde (nail polish, nail hardener): can cause cancer; difficulty breathing; asthma like attacks; allergic reactions; irritated eyes, skin and throat.
- Toluene (nail polish, fingernail glue): dry or cracked skin; headaches, dizziness, and numbness; irritated eyes, nose, throat, and lungs; damage to liver and kidneys; and harm to unborn children during pregnancy.

Getting Information about Chemicals in Salon Products

- Professional nail salon products that contain hazardous chemicals must provide warning and precautionary statements;
- Salons must provide you with safety data sheets (SDSs) for the products that contain hazardous chemicals. SDSs list hazardous ingredients, how you can be exposed, health and safety risks, and steps for safe use and storage. You have the right to ask for and receive a copy of the SDS.

Protecting Worker Health

- Whenever possible, use less hazardous products. Some products claim to be made without the toxic trio (toluene, formaldehyde, and dibutyl phlalate).
- Ventilate salons and let in fresh air. Open doors and windows, always keep exhaust, heating and air conditions system, and ventilation tables on; and use portable ventilation machines.
- Keep products off skin and out of eyes. Wear gloves and goggles when transferring product; wear long sleeve shirts; wash hands frequently and keep food away from chemicals.
- Safely store chemicals.

THE RIGHT TO A SAFE WORKPLACE

Employees have the right to a safe workplace. Employers have the responsibility to provide working conditions that do not put workers at risk of serious harm. You have the right to receive training and information on job hazards and methods to prevent harm. Workers can call OSHA to ask questions, receive information or file a complaint requesting an OSHA inspection if they believe there is a serious hazard. It's illegal for employers to retaliate against you for raising safety concerns, or calling OSHA.

To ask questions or get more information, go to www.osha.gov or call 1-800-321-OSHA (6742). It's confidential. We are here to help.

Scan this code with your smartphone to view a comprehensive list of potentially hazardous chemicals and their health effects.

OSHA 3796-05 2015

RECOVER YOUR UNPAID WAGES

WITH THE CALIFORNIA LABOR COMMISSIONER'S OFFICE

The Labor Commissioner's Office,

also called the Division of Labor Standards Enforcement (DLSE), is a part of the California Department of Industrial Relations. The Labor Commissioner's Office is the state agency that decides your claim for unpaid wages. It enforces minimum labor standards to ensure employees are not permitted to work under substandard, unlawful conditions. It also protects employers who comply with the law from having to compete with those who do not.

YOU DO NOT NEED A SOCIAL SECURITY NUMBER OR PHOTO IDENTIFICATION TO FILE A CLAIM.

YOU MAY FILE A CLAIM REGARDLESS OF YOUR IMMIGRATION STATUS.

YOU DO NOT NEED A LAWYER AND THE LABOR COMMISSIONER WILL PROVIDE AN INTERPRETER IN YOUR LANGUAGE.

THE LABOR COMMISSIONER'S OFFICE ENFORCES LABOR LAWS THROUGH THE FOLLOWING UNITS:

THE WAGE CLAIM ADJUDICATION UNIT reviews and decides individual claims for unpaid wages and other labor law violations.

THE GARMENT WAGE CLAIM ADJUDICATION UNIT reviews and decides claims filed by garment workers under the "Garment Worker Protection Act," a law known as "AB 633."

THE BUREAU OF FIELD ENFORCEMENT (BOFE) investigates reports of employers' failure to provide minimum wage, overtime or meal and rest periods to groups of workers. BOFE also investigates complaints against employers for violations of workers' compensation, child labor, recordkeeping, licensing, and registration laws.

THE PUBLIC WORKS UNIT investigates violations of labor laws on public works construction projects. "Prevailing wages" are wages that are higher than the State minimum wage and are required for workers on most public construction projects.

THE RETALIATION COMPLAINT INVESTIGATION UNIT investigates complaints of retaliation. "Retaliation" occurs when an employer takes actions such as firing a worker or reducing hours or pay because the worker took steps to enforce his or her labor rights.

THE JUDGMENT ENFORCEMENT UNIT helps workers to collect their wages after the Labor Commissioner determines that an employer owes unpaid wages.

VIOLATIONS OF BASIC LABOR LAW PROTECTIONS SUCH AS NOT PAYING MINIMUM WAGE AND OVERTIME IS CALLED **WAGE THEFT**. IF YOU HAVE EXPERIENCED WAGE THEFT, FILE A WAGE CLAIM WITH THE LABOR COMMISSIONER.

HOW TO **RECOVER YOUR UNPAID WAGES**

1 **PREPARE** TO FILE

CHECK THE DEADLINE

- You must file claims for violations of minimum wage, overtime, illegal deductions from pay or unpaid reimbursements within **three years**.
- You must file claims based on an oral promise to pay more than minimum wage within **two years**.
- You must file claims based on a written contract within **four years**.

RESEARCH

Gather any documents you have to prove your claim, such as paystubs, time sheets, calendars or notes about your work hours. If possible, identify any property your employer owns, such as buildings, equipment, and inventory, in case you win your case but your employer refuses to pay. This information may be used to collect your unpaid wages and the Deputy Labor Commissioner assigned to your claim will ask you to list this property.

IDENTIFY ALL YOUR EMPLOYERS

Many workers have one single employer, but some may have more than one employer. Be aware that any person or business that has control over wages, hours or working conditions may be included as a defendant in your claim and may be responsible for your wages.

"I worked as a janitor at a supermarket. The supermarket manager gave me my schedule and supervised me daily. However, my paychecks came from another cleaning company and my uniform had their name on it. I filed a claim because I was not paid for my overtime hours. The Labor Commissioner decided that both the supermarket and the cleaning company were responsible for my unpaid wages."

2 **FILE** A CLAIM

Complete and file the "Initial Report or Claim" with the Labor Commissioner district office that handles wage claims for the city where you worked. This form is available at any of the Labor Commissioner office locations and at the agency's website (www.dir.ca.gov/dlse). Claim forms are available in English, Spanish, Chinese, Korean, Vietnamese, Tagalog, Thai, and Russian. If you go to the Labor Commissioner to file your claim, there may be interpreters to help you in your language. However, it is still a good idea to bring someone who can interpret for you, if needed. Indicate your primary language on the claim form to receive interpretation assistance in the future.

Submit the form with copies of your supporting documents. Do not submit originals, as they may not be returned to you. After you file your Initial Report or Claim, you and your employer will be notified by mail about the next steps of your claim. Update the Deputy Labor Commissioner assigned to your claim in writing of any change in your address or phone number.

You must attend the settlement conference and hearing or your claim may be dismissed. If you are unable to attend the conference in person, you may be able to participate by phone by making prior arrangements with your assigned Deputy Labor Commissioner.

THE LABOR COMMISSIONER'S OFFICE IS HERE TO PROTECT YOUR RIGHTS, REGARDLESS OF YOUR IMMIGRATION STATUS. WE WILL NOT ASK ABOUT YOUR IMMIGRATION STATUS OR REPORT YOUR IMMIGRATION STATUS TO OTHER GOVERNMENT AGENCIES.

3 **ATTEND** A SETTLEMENT CONFERENCE

A settlement conference will be scheduled for most claims. During this conference, a Deputy Labor Commissioner will try to help you and your employer reach a settlement agreement for the payment of your claim. At any point during the conference you may ask to speak with the Deputy Labor Commissioner in private. If you do not reach a settlement agreement before or during the conference, then your claim will move to a hearing.

"I filed a claim because I was not paid minimum wage for my restaurant job. My boss made a settlement offer at the conference but I rejected it because it was much less than the amount of wages I was claiming. To prepare for the hearing, I made notes of all the important dates and activities for my claim to help me remember all the facts. I practiced testifying about the hours that I worked and how much I was paid. I also asked a co-worker to attend the hearing to testify about the hours that I worked. I knew my boss would argue that I was wrong, so I made a list of questions to ask her and her witnesses. The Hearing Officer was patient and fair, and later I received a decision that ordered my employer to pay me the unpaid wages."

4 **PROVE** YOUR CLAIM AT A HEARING

If your claim does not settle at the conference, a hearing will be scheduled and you will receive a Notice of Hearing with the hearing date and time. During the hearing, you and your employer will testify under oath and submit evidence about the claim. You are responsible for proving that your employer owes you wages. The Hearing Officer will not have any supporting documentation that you previously provided to the Labor Commissioner, so you must submit all of your evidence at the hearing.

TO **PREPARE** FOR THE HEARING:

- Review your claim information, such as the hours you worked and how much you were paid, and prepare notes and a timeline of events that you can review during the hearing.
- Bring at least three sets of copies to the hearing of any documents that support your claim so that you can refer to them and provide copies to the Hearing Officer and your employer.
- If you have witnesses who can testify to support your claim, make sure they can attend the hearing.
- You have the right to question the defendants and any of their witnesses. Prepare a list of possible questions in advance.

5 **REVIEW** THE DECISION AND **GET HELP** IF YOUR EMPLOYER APPEALS

After the hearing, you will receive a decision called an Order, Decision or Award ("ODA"). The ODA will explain the Labor Commissioner's decision and the amount that the employer must pay you, if any. An appeal must be filed within 10 days. If neither side appeals within that time, the decision will become final and enforceable as a court judgment. If your employer appeals, the Superior Court will hear the case without reviewing the decision of the Labor Commissioner. You and your employer will have to present your evidence and testimony again. You will receive a "Request for Attorney Representation" and a form called "Claimant's Financial Status." Low-income workers may use these forms to request free representation from one of the Labor Commissioner's attorneys. If you appeal the decision, you may represent yourself or hire an attorney.

SETTLEMENT:

When you enter a **SETTLEMENT AGREEMENT**, you agree to end your claim by accepting an employer's offer to pay you an amount that may be less than the full value of your claim. You may receive a settlement offer at any point in your claim process. Accepting or rejecting a settlement offer is an important decision. You can consider the following points before you make your decision.

- **WHY ACCEPT A SETTLEMENT OFFER?** Your claim resolves promptly and you may receive payment of your wages sooner. You eliminate the risk of losing at the hearing. If you do not settle and proceed with your claim, there is a possibility that your employer will file for bankruptcy or close before you receive any wages.
- **WHY REJECT A SETTLEMENT OFFER?** You may get far less than the wages and penalties to which you are entitled according to the law. If you receive a settlement offer that is too low, you can demand more and try to negotiate for an acceptable settlement amount.

KNOW YOUR RIGHTS:

Minimum Wage: Almost all employees in California must receive the minimum wage as required by State law, whether they are paid by piece rate, by commission, by the hour, or by salary.

Overtime: Most workers in California must receive overtime pay of:

- 1.5 times the regular rate of pay for all hours worked over 8 hours in a workday or over 40 hours in a week, and
- double the regular rate of pay for all hours worked over 12 hours in a workday.

If a worker works 7 days in a workweek, the worker must be paid:

- 1.5 times the regular rate of pay for the first 8 hours on the 7th day, and
- double the regular rate of pay for all hours worked over 8 hours on the 7th day.

However, overtime laws do not apply to all workers and certain workers, such as domestic workers and farm workers, are covered by different overtime laws.

Hourly Wages Promised: Your employer must pay you the wages promised. The Labor Commissioner enforces all wages an employer owes, not just minimum wage. For example, if your employer promised to pay you $15 per hour and only paid you $10 per hour, you may file a wage claim for the unpaid amount of $5 per hour.

Meal and Rest Breaks: Most workers in California must receive an uninterrupted 30-minute unpaid meal period for every 5 hours worked and a paid 10-minute rest period for every 4 hours worked. You may be entitled to a rest break even if you work less than 4 hours. Certain workers such as domestic workers and farm workers have different meal and rest break laws.

Deductions from Pay: Except for withholdings required by law (such as social security tax), your employer may not withhold or deduct wages from your pay. Common violations include deductions for uniforms or tools.

Reimbursement of Expenses: You must receive reimbursement for all expenses reasonably necessary for your job. For example, your employer must pay for tools and supplies required for the job and must provide mileage reimbursement if you use your personal car for work. However, if you earn at least twice the minimum wage, your employer can require you to provide certain hand tools customarily used in your occupation.

Reporting Time Pay: If you report to work expecting to work your usual schedule, but receive less than half of your usual hours, you must still be paid for at least half of your usual hours (for a minimum of at least 2 hours). For example, a farm worker who reports to work for an 8-hour shift and only works for 1 hour must receive 4 hours of pay—1 for the hour worked, and 3 as reporting time pay, so that the worker receives pay for at least half of the expected 8-hour shift.

Split Shift Premium: If you work 2 or more shifts in a workday with an unpaid break of more than an hour, your employer may be required to pay a "split shift premium" which is calculated based on your rate of pay.

Final Paychecks at Termination: If your employer fires you, you must receive your final paycheck on your last day. If you are not paid when your job ends, you may be entitled to receive an additional payment of a day's wages for each day your employer withholds your final paycheck, for up to 30 days.

Penalties for Bounced Checks: If your employer writes you a check that is returned for insufficient funds, you have a right to receive penalties of up to 30 days' wages in addition to the amount of the check.

FAQs

1. Who can file?

California labor laws protect all workers regardless of immigration status. The Labor Commissioner accepts complaints from any employee who performed work in California, and in some cases from public employees.

2. Where can I get help?

You may go to your local office of the Labor Commissioner to ask for help with your claim. Many non-profit organizations, including Legal Service Providers, help workers fill out and file claims with the Labor Commissioner.

3. When will I receive my unpaid wages?

It depends. Many claims settle and you receive your settlement either when you sign the settlement agreement or based on the agreed date of payment. If your case does not settle, the hearing and decision process may take several months. If you win and your employer does not pay, you have a number of collection methods available, such as requesting that the Sheriff seize your employer's assets (such as bank accounts, equipment, or inventory).

4. How does my claim affect other people in my workplace who experienced the same violations?

Your individual claim should not affect your co-workers. Co-workers who experienced the same wage violations will not recover their unpaid wages unless they file their own wage claims. You may also consider filing a Report of Labor Law Violation with the Labor Commissioner's Bureau of Field Enforcement (BOFE), the unit that investigates wage theft violations that affect groups of workers. Co-workers may recover wages as a result of a BOFE investigation.

5. What if my boss fires, demotes or punishes me for filing this claim?

California law prohibits employers from retaliating against workers for enforcing workplace rights. If your employer retaliates against you, you can file a complaint for retaliation with the Labor Commissioner's Retaliation Complaint Unit.

To learn more, visit the Frequently Asked Questions page at the DLSE website: http://www.dir.ca.gov/dlse/dlse-faqs.htm

LABOR COMMISSIONER'S OFFICE LOCATIONS

BAKERSFIELD
(661) 587-3060

EL CENTRO
(760) 353-0607

FRESNO
(559) 244-5340

LONG BEACH
(562) 590-5048

LOS ANGELES
(213) 620-6330

OAKLAND
(510) 622-3273

REDDING
(530) 225-2655

SACRAMENTO
(916) 263-1811

SALINAS
(831) 443-3041

SAN BERNARDINO
(909) 383-4334

SAN DIEGO
(619) 220-5451

SAN FRANCISCO
(415) 703-5300

SAN JOSE
(408) 277-1266

SANTA ANA
(714) 558-4910

SANTA BARBARA
(805) 568-1222

SANTA ROSA
(707) 576-2362

STOCKTON
(209) 948-7771

VAN NUYS
(818) 901-5315

REV. 09/2014

Department of Industrial Relations
Cal/OSHA
Christine Baker, Director
Juliann Sum, Cal/OSHA Chief

JUNE 2015

Health & Safety Rights: Facts for California Workers

Photo Credits: Bob Gumpert

The State of California, Division of Occupational Safety and Health—better known as "Cal/OSHA"—is working to assure you have a safe and healthful workplace. Read this fact sheet to understand your basic rights and learn what you can do to help keep your job safe.

Employers' Program to Prevent Injuries and Illnesses

California law requires your employer to have an effective injury and illness prevention program (IIPP) that includes training and instruction on safe work practices and an effective system for your employer to communicate with you and your coworkers. (See page 4 for more information about IIPP requirements.) You should actively participate in the training provided by your employer, learn how to recognize health and safety hazards, and inform your employer about any hazards you discover. Your employer must have a system to encourage reporting hazards without fear of retaliation and must correct hazards in a timely manner.

Cal/OSHA Enforcement

You have the right to file a complaint about a workplace hazard with Cal/OSHA, the state agency that investigates and enforces health and safety requirements in California workplaces. If you choose to give your name, Cal/OSHA will keep your name confidential, unless you request otherwise. To file a complaint, call the Cal/OSHA district office serving the location of your job. To find the right district office, use one of these options:

- Go online and follow instructions for filing a complaint. Or go to Cal/OSHA's home page at www.dir.ca.gov/dosh, and link to "File a workplace safety complaint."
- View a map showing Cal/OSHA district offices and the counties they serve. Or go to Cal/OSHA's home page at www.dir.ca.gov/dosh, link to "Locations - Enforcement offices," and then link to "map of the Cal/OSHA Enforcement regional and district offices."
- By phone, call 1-866-924-9757, press or say "2" for Cal/OSHA, then enter or say the zip code of your job site.

Information you should provide to district office staff:

- When you call Cal/OSHA, the information you provide may be critical to the success of Cal/OSHA's investigation of the hazard. You should give the staff person the following information:
- Name and address of your employer. Include the job site address if it is different from the mailing address.
- Where the hazard is located at the job site. Example: "The table saw in room 12."
- When the hazardous operation or condition occurs. Example: "We use this solvent to clean every Friday afternoon."
- Description of the hazard. You do not need to know the legal requirements. You only need to state the problem. Examples: "Bad brakes on forklift," or "no fall protection."

Investigation

Cal/OSHA investigates complaints of hazards in different ways. Sometimes, the fastest and most effective way is for Cal/OSHA to notify the employer and require the employer to correct the hazard. Other times, Cal/OSHA conducts an on-site inspection.

On-site inspection

When Cal/OSHA conducts an on-site inspection, the inspector arrives without advance notice.

- Upon arrival, the inspector holds an opening conference with the employer and union (if there is one) to explain the purpose of the inspection and how it will be conducted.
- The inspector walks around the site, observes hazards, interviews employees and supervisors, reviews written records, and takes measurements and photographs as necessary.
- A representative of the employer and a representative authorized by the employees may walk around with the inspector.
- You have the right to be interviewed in private without the employer present. The Cal/OSHA inspector will make every effort to arrange for interpreter services if needed.
- You may ask the inspector to give you his or her business card so you can contact the inspector away from your job.
- The inspector may visit the site again to collect further information, especially if the inspector needs to speak with employees who were not available during the first visit.

After the inspection:

Information that Cal/OSHA collects during the inspection may show that your employer violated health and safety requirements. If this happens, one or more citations will be issued to your employer. Cal/OSHA issues citations to employers only, not to employees. If you gave your contact information when you filed the complaint, Cal/OSHA will send you a letter describing the results of the inspection. Your employer must "abate," or correct, the violations by a specified deadline. You may contest the abatement date by filing an appeal 15 days after the citations are issued. But if the employer appeals a citation, abatement may not happen until after the appeal is resolved. You may participate in any appeal filed by the employer by filing a motion to be added as a party in the appeal process. In any case where Cal/OSHA issues citations, the employer must post in the workplace a copy of the citations, a description of how the hazards have been corrected, and a copy of any appeal that is filed. You may also call Cal/OSHA to request a copy of the results of the inspection, including any citations.

Right to Refuse Hazardous Work

In addition to filing a complaint, you have the right to refuse hazardous work. It is illegal for your employer to punish you for refusing to perform hazardous work if both of the following are true:

1. Performing the work would violate a Cal/OSHA health or safety regulation.
2. The violation would create a "real and apparent hazard" to you or your coworkers.

When these conditions are met, you have the right to refuse to perform the work. But before you refuse, you should take the following steps:

- Tell your supervisor about the hazard and ask that it be corrected.
- Explain that you are willing to continue working if the hazard is corrected or you are assigned other work that is safe.
- State that you believe a health or safety regulation is being violated.
- Contact your union shop steward, if you have one.

If the problem is not fixed, call Cal/OSHA and file a complaint.

Protection Against Retaliation

It is also illegal for your employer to threaten, discharge, demote, or suspend you for reporting hazards to your employer, filing a complaint with Cal/OSHA, or otherwise exercising your rights to a safe and healthful workplace. If your employer discriminates or retaliates against you for exercising these rights, you have the right to file a complaint with the California Labor Commissioner, also called the Division of Labor Standards Enforcement. The Labor Commissioner may be able to recover wages owed to you and help you get your job back. In most cases, you must file your complaint within six months of the retaliation.

View a listing of Labor Commissioner offices and contact the office nearest your workplace. Or go to the Labor Commissioner's home page at www.dir.ca.gov/dlse, and link to "Contact Us." By phone, call 1-866-924-9757, press or say "1" for the Division of Labor Standards Enforcement, then enter or say your zip code.

Employee Rights to Documents and Records

You have the right to receive copies of written information about hazards in your workplace.

Exposure Records and Medical Records: You may access exposure records that show your own exposure to toxic substances and harmful physical agents as well as exposures to other employees doing similar work. Your employer must provide you the records within 15 days after receiving your written request. Exposure records include environmental workplace monitoring, biological monitoring results, and safety data sheets. You may access medical records if you are the subject of the records or have the subject's written consent. Medical records include medical questionnaires and histories, examination results, medical opinions and diagnoses, descriptions of treatment and prescriptions, first aid reports, and employee medical complaints.

Safety Data Sheets: These sheets contain information about hazardous chemicals in your workplace. Your employer must keep these sheets readily accessible and must provide them to you upon request. Electronic access is allowed as long as there are no barriers to immediate access.

Records of Occupational Injury or Illness: You have the right to receive copies of the following records: Log of Work-Related Injuries and Illnesses (Form 300); Annual Summary of Work-Related Injuries and Illnesses (Form 300A); and Injury and Illness Incident Report (Form 301) describing an injury or illness that happened to you. In most industries, your employer must provide you copies by the end of the next business day.

Written Health and Safety Plans: You have the right to review your employer's written plans for certain Cal/OSHA-required programs, such as hazard communication, respiratory protection, and permit-required confined space entry procedures.

Photo Credit: Bob Gumpert

Cal/OSHA Information

For more information about your health and safety rights, go to **Cal/OSHA's home page** at **www.dir.ca.gov/dosh**. You can also call **1-866-924-9757**, press or say "2" for Cal/OSHA, then enter or say your zip code to find the district office serving your job location.

Requirements for an employer's injury and illness prevention program

All California employers must create and carry out an effective program to meet the requirements of Cal/OSHA's Injury and Illness Prevention Program (IIPP) regulation. The employer's IIPP must be in writing and must specify in concrete terms the employer's ongoing activities in each of the following areas:

- **Responsibility:** Name or job title of the person or persons authorized and responsible for implementing the program.
- **Compliance:** Written system for ensuring compliance with safe and healthy work practices.
- **Communication:** System for communicating in a form readily understandable by employees about safety and health matters. This can include meetings, trainings, postings, written communications, and a labor-management safety and health committee. Employers must encourage employees to report hazards without fear of reprisal. An employer using a labor-management committee to communicate health and safety matters with employees must meet certain requirements specified in the IIPP regulation.
- **Hazard Assessment:** Procedures for identifying and evaluating workplace hazards, including periodic inspections.
- **Accident or Exposure Investigation:** Procedure for investigating occupational injuries and illnesses.
- **Hazard Correction:** Methods and procedures to correct unsafe or unhealthy working conditions in a timely manner.
- **Training and Instruction:** Effective program for instructing employees on general safe work practices and hazards specific to each job assignment, in a language that the employees can understand.
- **Recordkeeping:** Written documentation of the steps taken by the employer to establish and implement the IIPP.

The specific requirements for an IIPP are in the California Code of Regulations, title 8, section 3203. Or go to the home page of the Department of Industrial Relations at www.dir.ca.gov, link to "Laws & Regulations," link to "California Code of Regulations - Title 8," link to "Cal/OSHA," and then search for "3203."

Use Cal/OSHA's educational tools to help employers create an effective IIPP. Or go to Cal/OSHA's home page at www.dir.ca.gov/dosh, and under "Educational Materials," link to "Consultation eTools." See also links to model IIPPs at the top of the web page that displays the California Code of Regulations, title 8, section 3203.

Photo Credit: Bob Gumpert

You have the right to a safe and healthful workplace regardless of whether you have papers to work legally in the United States.

Note: We are not US Immigration and Customs Enforcement (ICE), and we do not ask for or report your immigration status.

STATE OF CALIFORNIA
CAL OSHA
DEPARTMENT OF INDUSTRIAL RELATIONS

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