

Objectives:

- Define infection control terms
- Identify common infections
- Describe how infections are spread
- List the In-home Aide's role in infection control

- ✓ Talk to your agency about occupational exposure/infection control policies and procedures for your agency

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Resources:
 OSHA.gov; World Health Organization (WHO); Mosby's Textbook for the Home Care Aide-third edition; The Aide's Role in Infection Control in Home Care & Hospice Michelle White, DNP, RN, CNL May 10, 2018. CDC-Show Me the Science - When & How to Use Hand Sanitizer accessed 8/28/18; CDC-fungal disease:<https://www.cdc.gov/infectioncontrol/pdf/outpatient/guide.pdf> - (8/25/17).
<https://www.cdc.gov/cancer/prevention/symptoms.htm> (8/28/17).
 NC DHHS DHSR Adult Care Home Infection Control Course Instructor Manual, September 2013. CDC-infection control-<https://www.cdc.gov/infectioncontrol/basics/index.html>

Infection Control

An Infection is a disease or condition of the body that occurs when harmful germs get into the body and grow in number.

Infectious diseases are caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi; the diseases can be spread, directly or indirectly, from one person to another. Zoonotic diseases are infectious diseases of animals that can cause disease when transmitted to humans.

Healthcare workers in all settings play a role in preventing the spread of infection either directly or indirectly. The practice of medical asepsis is the use of techniques and practices to prevent the spread of pathogenic organisms from one person or place to another person or place. Medical asepsis is also known as clean technique. *Handwashing is a key component in the practice of medical asepsis. Experts on infection control often say that handwashing is one of the most effective ways of preventing the spread of infection. Sterile technique is a specialized skill used during surgical procedures, injections, and other invasive (entering the body) procedures.*

The most common groups of pathogenic microorganisms include the following:

- Bacteria- one celled microscopic plants that multiply very quickly. There are many types of bacteria (examples include streptococci and staphylococci). Streptococcus may cause wound, heart, respiratory, and other infections. Staphylococcus may cause wound and soft-tissue infections. The term *strep* infection is used when the streptococcal organism is the cause of the disease. Likewise, the term *staph* infection refers to a disease resulting from an invasion of one of the staphylococcal organisms.
- Viruses- The smallest known living disease producing organisms. They cause many illnesses, ranging from the common cold and influenza to HIV/AIDS, Hepatitis A, B, C and D.
- Fungi- Tiny plants that live on other plants or animals and can cause disease. Fungi (fungus for singular) are very plentiful in the environment; they can be seen growing on old bread or oranges (moldy). Fungi live outdoors in soil and on plants and trees as well as on many indoor surfaces and on human skin. Among the diseases caused by fungi are athlete's foot and vaginal yeast infections.
- Protozoa- Protozoa are microscopic, one-celled organisms that can be free-living or parasitic in nature. They are able to multiply in humans, which contributes to their survival and also permits serious infections to develop from just a single organism.

The Reservoir of Infection:

- The place where the pathogen is stored, lives, and grows is called a reservoir. Examples of reservoirs are *persons with infectious diseases, soiled tissues and linens, client supplies, and equipment such as thermometers, bedpans, and commodes*. Another reservoir may be a *carrier*, a person or animal that does not become ill but spreads the disease to others.

Exit from the Reservoir of Infection:

- **The pathogen must escape from the original host to cause disease in another host.** Pathogens can be found in body fluids, such as blood, urine, semen, saliva, sputum, and vomitus, and in mucous membranes, tissues, and organs of the body. Secretions from the eyes, ears, nose, vagina, or penis may also contain pathogens. Draining sores and infected wounds are excellent sources of pathogens.

Method of Transmission:

- Organisms are **transmitted** by means of many routes; *through direct (your hands, sexual contact) or indirect contact (contact with items used by the infected person such as a razor, toothbrush, cup or glass, used tissues), in the air, by animals and insects, and by food and water (drinking unsafe water, eating contaminated food or undercooked meat or poultry).*

Be a chain breaker in infection control!

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We must provide care using infection control guidelines in a consistent manner! Protect yourself and your clients! Help break the chain of infection!








Entrance into a New Host:

- The pathogen must find a way to enter the body of the new host. The first line of defense is the skin. When skin is broken from a cut or a surgical wound, by injection, or from a bedsore, there is the opportunity for infection. Drainage tubes and *catheters* are often the route by which pathogens invade the body.

Host

- Microorganisms are all around us, but most of us do not have an infection because we have resistance to many microorganisms. But when pathogens increase in numbers and strength and body defenses cannot destroy them, an infection may occur. *(Some signs and symptoms of infection are fever, chills, sore throat, shortness of breath, vomiting, diarrhea, coughing, skin rash, pus or foul smelling drainage from a wound or body opening, redness, soreness, or swelling of a body area, increased urination, burning or pain with urination, new onset of pain).* **Be alert for these symptoms in your client, and report them to your supervisor immediately.**

Breaking the cycle of infection through medical asepsis:

<p>Step in Cycle</p>		<p>In-Home Aide Activity (check the client's plan of care for specific activities to complete)</p>
<p>Pathogenic organism</p>		<p>Keep the environment clean, practice disinfection</p>
<p>Reservoir of infection</p> <p>Did you know- Germs can live under artificial fingernails both before and after using an alcohol-based hand sanitizer and handwashing!  (CDC hand hygiene in healthcare settings)</p>		<p>Eliminate reservoir when possible, use gloves to handle contaminated material (tissues, sanitary napkins). Double bag and discard into covered trash container to keep animals out of trash. Empty bedpan, urinal and commode promptly, disinfect properly. Remove and treat soiled linens promptly. Keep client clean, bathe when necessary. Clean refrigerator, discard leftovers.</p>
<p>Exit from reservoir of infection</p>		<p>Block exit. Do not cough or sneeze on client or permit anyone to sneeze or cough on you. Teach client to cough into tissue and to discard in plastic bag. Do not go to work if you have an open, draining sore anywhere on your body. Notify your supervisor if you have an infection to discuss if you should work with clients. Wear gloves when handling blood or body fluids, wear other personal protective equipment as needed such as gowns, masks, etc. (your employer is required to provide this for you). Place soiled linens in plastic bags. Wear gloves when doing laundry contaminated with blood or body fluids.</p>
<p>Method of transmission</p>		<p>WASH HANDS, clients should have their own personal care items (linens, razors, and toothbrush), there should be no sharing. Do not let client care items touch the floor (discard or disinfect any items that touch the floor). Do not let soiled linens touch your uniform, keep drainage bags and tubes off the floor, do not shake linens when changing the bed. Discourage people with infections, especially colds and flu from visiting the client. Cover nose and mouth when sneezing. Prepare and store food properly. Keep clean and contaminated items apart.</p>
<p>Entrance into a new host</p>		<p>Protect client's skin. Keep clean, dry and prevent skin breakdown. Wear gloves if there is a risk of exposure to blood or other body fluids. Ask about your agency post exposure plan/procedures if you are exposed such as a needle stick injury or other exposure to blood/body fluids. Do not handle "sharps"- (the nurse supervisor can talk to the client about discarding sharps such as insulin syringes and lancets safely). Notify your supervisor if your client uses "sharps".</p>
<p>Host</p>		<p>Maintain and encourage healthy practices: good nutrition, sufficient rest. Avoid people with infections.</p>

➔ Germs can also get onto hands if people touch any object that has germs on it because someone coughed or sneezed on it or was touched by some other contaminated object. When these germs get onto hands and are not washed off, they can be passed from person to person and make people sick (think of a door handle).

- Be sure to ask your supervisor any questions you may have related to infection control in order to protect yourself and your clients! Be sure to know your agency policies and procedures related to infection control and your agency's exposure control plan.
- Protecting the client from becoming a new host is an important role for every In-home aide. The *cycle of infection* must be broken to prevent the transmission of a pathogen from one host to another. The organism can be *removed, destroyed, or blocked* in its progress through the cycle. Keep clean things "clean" and dispose of contaminated materials promptly. Follow all practices of good housekeeping and other measures to prevent the spread of disease.
- You cannot always tell if someone has an infection, they may be a *carrier* and able to spread disease to others but may not be ill themselves, therefore, practicing infection control techniques for *all* clients is necessary. If your client has an infection or contagious illness talk with your supervisor about what types of precautions need to be taken depending on the type of infection and how it is spread (in the air, by touch, by blood, etc.) and determine what type of personal protective equipment is needed according to standard and transmission based precautions. (ex.-droplet, contact, airborne, bloodborne). Know your agency's staff training policies.

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV). The bloodborne pathogen standards can be found in the US Department of Labor OSHA standards 1910.1030. Tuberculosis (TB) is a disease caused by bacteria that can damage the lungs or other parts of the body like the spine, lymph nodes or kidneys. If not treated properly, TB disease can be fatal. TB is spread through the air from one person to another when a person with active TB disease of the lungs or throat coughs, sneezes, speaks or sings. As part of worker protections, your agency is required to follow OSHA standards for airborne and bloodborne pathogens and provide training and necessary personal protective equipment and other protections as needed.

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● Examples of how to prevent the transmission of disease :

- Wash your hands after using the bathroom
- Wash your hands before and after handling or preparing food and before and after eating
- Cover your nose and mouth when coughing, sneezing, and blowing nose
- Wash your hands after coughing, sneezing, or blowing your nose
- Do not use another person's soiled drinking or eating utensils
- Do not use another person's personal items, such as toothbrushes, razor, washcloth, or towels
- Practice good personal hygiene, and maintain good grooming habits
- Wash raw fruits and vegetables before eating or serving
- Prepare and store food properly
- Use good housekeeping practices to eliminate household pests and maintain a clean environment
- **Handwashing is a vital part of the practice of infection control, along with the proper use of gloves. Gloves are always worn when there is a risk of direct contact with body fluids or moist body surfaces. They are used to protect you from infectious disease and the client from you (sometimes health care workers bring infection to the clients). Handwashing is always done before and after using gloves. Hand hygiene using alcohol based hand rubs can be used according to your agency policies. 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 (such as a stomach bug called norovirus, some parasites, and Clostridium difficile, which causes severe diarrhea). Use an alcohol based hand sanitizer that contains at least 60% alcohol.**
- Infection control precautions- There are 2 tiers of recommended precautions to prevent the spread of infections in healthcare settings: Standard Precautions and Transmission-Based Precautions.
 - ➔ **STANDARD PRECAUTIONS FOR ALL PATIENT CARE**
Standard precautions are used for all patient care. They're based on a risk assessment and make use of common sense practices and personal protective equipment use that protect healthcare providers from infection and prevent the spread of infection from patient to patient.
 - ➔ **TRANSMISSION-BASED PRECAUTIONS**
Transmission-based precautions are used in addition to Standard Precautions for patients with known or suspected infections.

Individuals have different responses to infection. Not all symptoms will be experienced by all people. Learn the usual health status of each person you are caring for so you will know when there is a change in their typical health status.

Talk to your supervisor about what to observe, record and report for your clients related to possible infections.

Standard Precautions- are the minimum infection prevention practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered. These practices are designed to both protect health care personnel (HCP) and prevent HCP from spreading infections among patients. Standard Precautions include: 1) hand hygiene, 2) use of personal protective equipment (e.g., gloves, gowns, masks), 3) safe injection practices, 4) properly handle and properly clean and disinfect patient care equipment and instrument/devices, clean and disinfect the environment appropriately and 5) respiratory hygiene/cough etiquette.

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Name _____ Date _____

For each question circle true or false

1. Hospital workers are the only healthcare workers that should be concerned with infection control.

True

False

2. The place where a pathogen is stored, lives, and grows is called a reservoir.

True

False

3. Organisms are only transmitted by direct contact.

True

False

4. Your agency is required by OSHA guidelines to provide you with needed personal protective equipment such as gloves.

True

False

5. Part of infection control is breaking the chain of infection.

True

False

6. Broken skin is an entrance point for a pathogen to enter into your body.

True

False

7. You only need to wear gloves if there is a risk of exposure to blood or body fluids if you know someone has a communicable disease.

True

False

8. Protecting the client from being a host to an infection is part of the role of an In-home aide.

True

False

9. Handwashing is a vital practice of infection control.

True

False

10. You can always tell if someone has an infection.

True

False