

SUMMER 2012 NEWSLETTER

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Sunburn, Sunscreen and How to Avoid Damaging Ultraviolet (UV) Light



Summer has arrived and individuals are outside trying to obtain the perfect tan. Exposing yourself to the sun allows your skin to be exposed to ultraviolet light. We are most concerned about ultraviolet light in UV-A spectrum (320-400 nm) and the UV-B spectrum (290-320). UV-A rays penetrate deeply and cause skin damage including photoaging of the skin, immunosuppression both locally on the skin and systemically and increased risk of cancer and infection. It is the UVB radiation that causes tanning. The delayed tanning that occurs 3 days after exposure is due primarily to UV-B radiation and is due to a redistribution of melanocytes and new melanin synthesis and formation. This delayed tanning is at best mildly protective against sunburn at a level equivalent to SPF 2 – 3 but it has no effect on protecting you against cancer or photoaging.

Sunscreens can help reduce your risk of developing skin damage and cancer. Sunscreens are either inorganic containing products that physically shield and block the effects of ultraviolet rays or organic compounds that physically absorb the ultraviolet rays. You should be looking for a sunscreen that is “broad spectrum” protecting against UV-A and UV-B rays. You want a sunscreen that is substantive. “Water resistant” products protect up to 40 minutes after water immersion. “Very water resistant” products protect up to 80 minutes after water immersion. Data and research shows that a broad spectrum sunscreen with SPF 17 or greater will provide protection against squamous cell carcinomas and photoaging but are less effective in preventing basal cell cancers and melanomas.

It is recommended that we use sunscreen daily on all sun exposed skin. The clouds only scatter UV-B rays so on cloudy days you are being bombarded with UV-A rays despite it appearing to be overcast. It will require about a shot glass worth of sunscreen to protect the most sun exposed areas (two tablespoons) which are the face, ears, hands, arms and lips. You should be using an SPF of at least 30 which should be applied 15-30 minutes BEFORE sun exposure. It should be reapplied every two hours and after swimming or heavy perspiration.

- Remember that the sun’s rays are strongest between 10 a.m. and 4:00 p.m.
- Water, sand and, in the winter, even snow reflect UV radiation so be extra careful in those environments.
- Wear protective clothing such as closely woven, natural fiber, long sleeve shirts and pants, sunglasses and wide brimmed hats.
- Do not use tanning beds.
- Do not expect sunscreens to allow you to spend more time in the sun. Long exposure to the sun’s damaging UV rays increases your risk of skin cancer and photoaging.

Summer means longer days and more time spent outside. Be prepared and protect your skin from damage and injury.

What is SPF “Sun Protection Factor” and What is the Daily UV Index?



SPF is a laboratory measure of the efficacy of sunscreen and is defined as the amount of ultraviolet radiation needed to produce sunburn on protected skin relative to unprotected skin. It is a measurement of redness or “erythema” and is mainly a measure of UV-B radiation exposure not UV-A (the more damaging type of radiation to deep skin structure) exposure.

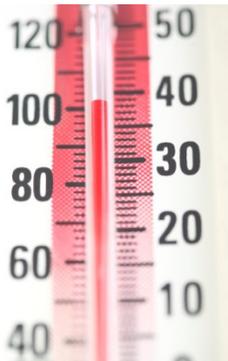
The SPF of a product is not related to the duration of UV radiation exposure. The relationship between SPF and UV-B radiation protection is not 1:1 or linear meaning that an SPF 30 does not protect you for twice as long as an SPF 15. For example, an SPF of 15 can filter 94% of the sun's UV-B radiation while a SPF of 30 will filter 97%. UV radiation dosage depends on both how long you are out in the sun and how intense the UV radiation is.

The daily UV index is a measure of the level or intensity of UV radiation. It is presented on a scale of 1 (low) to 11+ (extremely high). The US National Weather Service and the US Environmental Protection Agency provide this data which is presented on most weather reports and published in newspapers and on line daily.

The Heat Index

The heat index tells you how hot it feels outside in the shade. It is not the same as the outside ambient temperature. It combines the humidity with the temperature. When you are standing in the sun the heat index is even higher. A heat index of 90 or greater is considered dangerous.

Heat Related Illness



It is summer time and the heat and humidity are higher than at any other time of the year, making us more susceptible to heat related illness. Heat related illness occurs when your body cannot keep itself cool. As the air temperature rises, your body cools off by sweating. Sweating occurs when liquid on your skin surface evaporates. On hot humid days, the evaporation of moisture is slowed down by the increased moisture in the air. When sweating cannot cool you down your body temperature rises and you may become ill.

Some people are at greater risk to develop heat related illness than others. This includes people 65 years of age or older, people with mental illness taking medications and the physically ill; especially those with heart disease, high blood pressure and lung disease.

Individuals who have suffered from heat exhaustion or heat stroke in the past have an increased risk of developing recurrent heat illnesses.

When your body overheats due to very hot weather and or exercise in the heat, you are susceptible to heat exhaustion. Patients experience heavy sweating, non-specific weakness and or confusion, dizziness, nausea, headache, rapid heartbeat and dark very concentrated urine.

If you experience these symptoms in the heat you need to get out of the heat quickly. Find an air conditioned building and rest in it. If you cannot find an air conditioned building then get into the shade and out of the sun. Start drinking cool liquids (avoid caffeine and alcohol which exacerbate fluid loss and heat related disease). Take a cool shower or bath or apply cool water to your skin. Remove any tight constricting clothing. If you do not feel better within 30 minutes you must contact your physician or seek emergency help.

Untreated or inadequately treated heat exhaustion can progress to heatstroke. Heatstroke occurs when the internal body temperature rises to 104 degrees Fahrenheit or higher. Heatstroke is far more serious than heat exhaustion. It can cause damage to your internal organs and brain and it can kill you. Patients with heatstroke

are running a fever of 104 degrees or higher. They complain of severe headaches with a dizzy or lightheaded feeling. Their skin is flushed or red in appearance and they are NOT sweating. Many will be experiencing severe and painful muscle cramps accompanied by nausea and vomiting. Their heartbeats are rapid, their blood pressure low. They may be agitated, anxious and disoriented with some experiencing epileptic type seizures.

Heatstroke is a medical emergency and you must call 911 immediately. While you are waiting for help to arrive remove their clothing after taking the patient to an air conditioned or shady place. Wet the skin with water and fan the skin if possible. If you have access to ice or ice packs place them on the patient's neck, back, groin and armpits while waiting for help.

Heat illness is preventable. When the heat index is over 90 and you must go outside wear lightweight, light-colored, loose fitting clothing. Wear a hat or use an umbrella. Apply sunscreen SPF 30 or greater 15-20 minutes BEFORE going outside. Drink plenty of water before you go out and 2-4 glasses of cool water each hour you are outside working in the heat. Avoid alcohol and caffeine including soda with caffeine. Take frequent breaks every 20 minutes and drink water or sports drink even if you do not feel thirsty. Try to schedule your outside work for before 10 a.m. or after 6 p.m. to avoid peak sun exposure.

If you are being treated for chronic medical conditions ask your doctor how to prevent heat illness. Antihistamines, some blood pressure medications (beta-blockers and vasoconstrictors), diet pills, anti depressants and antipsychotics impair your ability to control your internal body temperature. Water pills to prevent excessive fluid lead to dehydration. Anti-epilepsy and anti-seizure medicines impair your body's ability to regulate internal temperatures as well.

Heat illness is preventable if you take the precautions outlined above.

Radiation Exposure



According to most experts, there is no safe level of radiation to receive. Different tissues take up and store different amounts of radiation and it all depends on the size of the dose, the distance from the source of radiation and the time of exposure.

Research shows that the number of diagnostic and surveillance medical x-rays including CT scans has increased dramatically in the last decade. As our radiation exposure increases, the chance of ill effects and ultimate malignancy increase as well.

In the hands of skilled technicians and experienced radiologists, obtaining medically necessary studies remains safe. What may be needed is a realization by all involved that the more exposure we have the more risk we experience. For this reason, I will be giving my patients a radiation exposure history tracking card for their wallets. Each time they have a medical x-ray I will ask them to record the date and type of procedure. This will include all radiation procedures. The radiation tracking card will be available beginning September 1, 2012.

I Lost 52 Pounds And Feel Fantastic!



Patients have noticed my recent 52 pound weight loss but some have been reluctant to discuss it with me. Let me bring clarity to any concerns. My weight loss was *planned* as part of a lifestyle improvement program and, as a result, I now feel great!

Like most American adults, I had accumulated extra pounds due to poor food choices, large portions and poor health habits. Finally, I decided to get healthy as a

preventive measure before I became ill and my doctor insisted I do it. I established certain criteria in choosing a weight loss program. It had to be safe, effective and rapid. I did not want medications or injections to be involved. Any program I was to consider had to have a proven safety record. There needed to be a sound transition and maintenance program to teach me how to prevent regaining the weight rapidly and how to live a healthy life.

My research led me to the Take Shape for Life Program (www.tsfl.com). Clinical studies by Johns Hopkins, the NIH and other organizations have proven the effectiveness of this program.

TSFL participants eat six small meals per day - all of which are low in fat and sugar but rich in protein and nutrients. The five daily small Medifast meal replacements (recommended by over 20,000 doctors since 1980) are supplied by TSFL and are eaten every two to three hours along with one lean and green meal that you prepare yourself. These small frequent meals keep you from becoming hungry and getting cravings. On average, most people lose between 2- 5 pounds per week on the TSFL Program.

Take Shape For Life provides a network of ongoing behavioral support, education and other tools. As part of the program you provided a free Health Coach who guides you, assists with recipes, provides lifestyle tips and helps order product. The low average monthly cost to participate in the TSFL program is about \$315 which includes coaching and the Medifast meal replacements.

I started the program in mid January and reached my goal weight in just four months. I am now working on transitioning to the maintenance program and *have recently become a TSFL Health Coach*. My lovely wife is also participating in the Program and has lost over 45 pounds to date.

I suggest those of you who are struggling to lose weight discuss it with me. The program is perfect for diabetics, hypertensives, individuals with heart disease and individuals with gluten sensitive enteropathy. Please contact me with any questions you may have, to request information, or to begin your journey to achieving optimal health by enrolling in Take Shape For Life.

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