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Practicing in Boca Raton and the Surrounding Community Since 1979

SUMMER 2015 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.

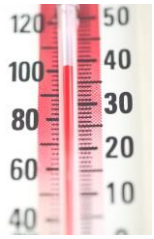
Sunscreens can help reduce your risk of developing skin damage and cancer. Sunscreens are either inorganic containing products that physically shield and block the effects of ultraviolet rays or organic compounds that physically absorb the ultraviolet rays. You should be looking for a sunscreen that 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.

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.

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 suns 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.

Is It Time For A New Bottle of Sunscreen?

As summer approaches those of us interested in protecting our skin reach for the bottle of sunscreen. A third of sunscreen users do not look at the bottle to see if the product has expired. The ingredients in sunscreen do expire and become ineffective so check the date of expiration. If you have run out of sunscreen *Consumer Reports* has just reviewed the topic and rated the best new products to buy. If a lotion is your preference, their "best buys" include Walmart's Equate Ultra Protection and Sport SPF 50 No-Ad. They also like Coppertone Water Babies SPF 50. If you prefer a spray they recommend Walmart's Equate Sport Continuous Spray SPF 30. For extreme protection they suggest Coppertone UltraGuard SPF 70. They suggest that children can use adult sunscreen without problems.

Summer Diseases From Mosquito Bites

We spend a great deal of time outdoors in spring and summer. With the warm wet weather come the mosquitoes. For those of us in South Florida we need to protect ourselves from mosquito borne diseases such as Dengue Fever and Chikengunya Fever. Both of these illnesses were transported from the Caribbean to South Florida in recent years with cases now reported in Florida. High fever, extreme joint and muscle pains, headache and rashes are common. Deaths do occur but usually in the very young and the frail and elderly population. Treatment is supportive with the use of fluids, Tylenol or non-steroidal anti-inflammatory drugs. It is best to prevent catching these illnesses by protecting yourself from bites. Insect repellents work. *Consumer Reports* reviewed various products in its May 2015 edition and concluded that natural homeopathic products are not effective in preventing bites in their tests of products. That would include "Skin So Soft, citronella, lemongrass and rosemary. *Consumer Reports* suggests looking for products with 20 percent picardin or 30 percent oil of lemon eucalyptus plus DEET at less than 30% but greater than 8%. Recommended products include Sawyer Fishermans Formula Picardin or 2Repel Lemon Eucalyptus. Deep Woods Off with 25% DEET received excellent grades as well.

It goes without saying that covering up with long sleeves and long pants helps. Sitting in areas with strong fans decreased mosquito landings and bites extensively. Staying inside at dawn and dusk reduces your risk of exposure as well. It is recommended as part of your spring cleaning program that you eliminate breeding areas for mosquitoes where standing water and decaying foliage encourage their reproduction.

Travel Medicine – Time to Prepare for Summer Vacation

Spring brings out the plans for summer vacations and summer travel. We advise all our patients leaving the United States to speak to their travel agents about what precautions and documentation of health and vaccination you are required to have in the areas you plan to visit. You will additionally want to know what illnesses are common there and what steps you need to take in advance of the trip to prepare yourself. The Center for Disease Control at www.cdc.gov has a wonderful travel section that tells you everything you need to know. It is set up alphabetically so if you know how to spell the future locations you will visit, you can obtain all you need to know on that website. Some vaccinations and immunizations that are required need to be taken in advance of your arrival. Some countries require written documentation from your physician concerning the medications you are carrying when you enter a country. This information is available on the CDC website. When in doubt give us a call and we can review it with you. Please contact us well in advance of your trip just in case the vaccines require timing and sequential administration.

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