Environmental Newsletter

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In a time where a tan body is still considered beautiful it is hard to make the right choice to protect yourself against skin cancer. But one only has to read the statistics in order to run for cover.

- Skin cancer is the most common type of cancer in the US.
- Approximately 65-90% of melanomas are caused by ultraviolet radiation.
- Exposure to UV radiation during childhood and adolescence plays a role in the future development of skin cancer.
- Persons with a history of one or more blistering sunburns during childhood or adolescence are twice as likely to develop melanoma.

Skin cancer is largely preventable by limiting exposure to sunlight. UV-B rays are partially absorbed by the ozone layer, tan and sometimes burn the skin. UV-B radiation has been linked to the development of cataracts and skin cancer. UV-A rays, however, are not absorbed by the ozone layer, they penetrate deeply into the skin, and cause premature aging and possibly suppression of the immune system.

Environmental Factors and UV radiation:
Factors that increase the intensity of ultraviolet rays reaching the skin surface are

- latitude closer to the equator**,**
- higher altitude**,**
- light cloud coverage or no cloud coverage **(**a partly cloudy sky will block only 20% of UV radiation**),** materials such as sand, water or snow that will reflect UV radiation and,
- time of day.

The weather service predicts an ultra violet index that represents the amount of UV radiation that will reach a location. In doing so factors taken into consideration, include geography and weather. The UV index forecast is presented as a number form 1 to 11+; the higher the number the more intense the rays. The numbers are also color coded: 1-2 green (low), 3-5 yellow (moderate), 6-7 orange (high), 8-10 red (very high), 11+ purple (extreme).

Skin Cancer Protective Behaviors:
To reduce UV radiation exposure the guidelines recommend:

- minimizing exposure to the sun during peak hours (10am to 4pm),
- seeking shade from midday sun from 11am-1pm,
- using a broad-spectrum sunscreen (UV-A and UV-B protection) with a sun protection factor greater or equal to 15,
- avoiding tanning beds and
- wearing sun-protective clothing.

Clothing: Not all clothing provides the same amount of UV protection. A typical bleached cotton

outfit will offer only an SPF factor of about 6.5 (less when wet). The Morehouse School of Medicine in Atlanta, GA conducted a study on mice that showed that clothing with a high-SPF factor offers better protection from skin cancer (*1). When it comes to the type of fabric used, natural cotton or Lycra both transmit less UV radiation than bleached cotton. Darker colors block more UV radiation than do light colors. When selecting a garment for sun protection, choose a tighter weave. A legionnaire hat or a wide brim hat offers more protection than does a baseball hat. Fabrics transmit more UV radiation when wet or stretched.

Sunglasses: Sunglasses can reduce UV radiation to the eye by 80% and combined with a legionnaire hat can reduce exposure to the face by 65%. The UV protection for sunglasses comes from a chemical coating on the surface of the lens and not the lens itself. The color or darkness of the lens does not set the UV protection factor.

Sunscreen: Sunscreen has been shown to reduce certain types of skin cancers and moles in children when applied correctly. Sunscreen is not recommended to be used as a means of prolonging exposure to sunlight. Sunscreens SPF factor is determined by testing under artificial light and for UV-B radiation only. In April of 2002, when the CDC published this article, there were no government standards to measure how much protection sunscreens provided against UV-A rays. This is why sunscreen alone is not recommended for protection against UV radiation.

When you apply sunscreen make sure that you apply a sufficient amount of sunscreen and that you allow it to dry before exposure to UV rays. Then, reapply it after getting out of the water, sweating or drying off with a towel. Use a sunscreen with an SPF factor greater than 15.

This article is a compilation of the Guidelines for School Programs to Prevent Skin Cancer published by the Center for Chronic Disease Protection and Health Promotion. The guidelines were prepared by Karen Glanz, Ph.D., M.P.H. from the Cancer Research Center of Hawaii, Mona Saraiya, M.D. M.P.H from the Division of Cancer Prevention and Control and Howell Wechsler, Ed. D. from the Division of Adolescent and School Health National Center for Chronic Disease Prevention and Health Promotion.

Reference:

*1: The Skin Cancer Foundation Web site at http://www.skincancer.org/prevention/dress.php

Centers for Disease Control and Prevention Website.
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5104a1.htm

If you have comments regarding this article please e-mail Sofia Peruzzi at peruzzis@earthlink.net. Thank you!

Why did the turtle cross the road? Red-eared Slider turtles will travel in search of another body of water when their population numbers are high in search of food and space. If you see a turtle on the road give it a break. If you touch a turtle wash your hands with soap and water. Red-eared Sliders, like other reptiles, have been known to carry salmonella.