

Reducing the Risks of Sun Exposure

The sun is essential to support life on earth. But the sun's rays can also be detrimental to human health. Ultraviolet (UV) rays are an invisible form of radiation from the sun. UV is produced naturally by the sun, and it is also found in tanning beds and sun lamps. UV penetrates the skin and can damage the skin.

Cancers caused from UV exposure are on the rise. The American Cancer Society estimates that there will be over 76,000 new cases of melanoma diagnosed in the United States this year. In 1965, the risk of men developing melanoma was 1 in 150. In 2006, the risk increased to 1 in 37. While cancer deaths are declining in the United States, deaths from melanoma--the most deadly form of skin cancer--are rising. This trend can be changed by altering our behavior.

In a 2008 survey from the National Cancer Institute, only 58% of adults reported usually practicing at least one sun-protective behavior. In the survey, 32% reported using sunscreen, 41% reported using some sun-protective clothing, and 32% usually sought shade. The numbers were worse for teenagers.

While there is a general awareness about the risks of sun exposure, a 2012 survey of adults ages 18 to 29, showed that there has been little increase in sun-protective behaviors from 2000 to 2010. The study, conducted by the Centers for Disease Control, showed that women were more than twice as likely as men to wear sunscreen. However, the rate of sunscreen use has increased for both men and women.

There are several sun protective behaviors that can help decrease excess UV exposure. These include: wearing a wide-brim hat (not a baseball hat), seeking shade when able, decreasing sun

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exposure during peak hours (10:00 AM to 4:00 PM), wearing sun protective clothing, and regularly using sunscreen and re-applying.

There are many types of sunscreens available. A sunscreen with a sun protection factor (SPF) of 30 is a good rule of thumb. A sunscreen labeled "Broad-spectrum" is recommended to protect against two forms of UV rays. Water, humidity, and sweating decrease the effectiveness of sunscreen, and frequent reapplication is important.

Sun protective clothing has several advantages over sunscreen. It does not need to be reapplied. It does not wash off. It may more reliably protect against sunburns. It may also save money. A typical t-shirt offers protection comparable to an SPF 10. A tightly woven material offers more protection. When fabric is wet, it allows more UV rays through. This is a concern for athletes who sweat.

In the future, sun protective behaviors may be more important than ever. The majority of the sun's UV rays are blocked by the ozone layer in the earth's outer atmosphere. As pollution has damaged the ozone layer, more UV is able to penetrate the atmosphere. It is estimated that with a 1% decrease in the ozone layer, there would be 20,000 additional cases of skin cancer in the United States per year.

Although the trend has been increasing for a half century, through the use of sun-protective behaviors, we may one day see a decrease in skin cancer rates. This may be achieved through a few simple behaviors, and teaching these behaviors to our kids.