Protect Your Skin From Sun Damage

It’s that time of year again, and in Southern California that can only mean one thing: More time spent outdoors at the beach and other summertime pursuits. By now, most everyone is aware of the long-term effects of sun exposure. These include increased risk of skin cancer, both melanoma and non-melanomas, premature aging and hyperpigmentation. Although protection from the sun is always important here in Southern California, summer is a good time to review some basics.

Adequate physical protection offers the best defense. Common examples of this are broad brimmed hats and long sleeved shirts, especially when spending prolonged time outside, such as gardening. It should be noted that light cotton material such as white T-shirts when wet offer a SPF value of between only 3-6. The American Academy of Dermatology also suggests limiting sun exposure between 11 am and 3 pm. While it may be ideal to cover oneself from head to toe, it may not always be practical. This is where the role of sunscreens comes into play.

The designation SPF stands for Sun Protection Factor and is intended to be a gauge for the added protection compared with no sunscreen. For example, SPF-15 theoretically means one could stay in the sun 15 times as long as without sunscreen before burning. The problem with this system is that it may give some individuals a false sense of protection especially since burning is NEVER the intended result. In addition, most people do not apply enough sunscreen to form a layer dense enough to compare with that which the sunscreen is rated. In general, for a bathing suit clad adult, two to three tablespoons would need to be applied to achieve this level.

Historically, sunscreens have been only concerned with blockade of the UVB spectrum. This range is most responsible for skin erythema and wrinkling. More recently, UVA exposure has been shown to be an important part of the negative effects of sun exposure. The newest sunscreen active in the UVA range is Avobenzone (Par sol 1789). It is important that the sunscreen used be effective for both UVA and UVB exposure.

There are two types of sunscreens: chemical sunblocks and physical sunblocks. Chemical sunblocks such as the PABA esters, cinnamates, benzophenones, salicylates and anthranilates contain molecules that absorb the radiant light energy. Physical sunblocks such as titanium dioxide, kaolin and zinc oxide create a coating on the skin that reflects light energy. Until recently, these substances were only available as thick, white pastes that were unattractive when applied to the skin. Modern technology has now allowed these physical sunblocks to be micronized into particles so small that they can be applied to the skin in a transparent film. A further refinement has been to coat the particles with silicone to prevent the formation of free radicals. One popular formulation of this is Z-cote.

In conclusion, it is ideal to avoid sun exposure between 11 am and 3 pm and to wear protective clothing as much as possible. If not practical, then sunscreen that covers both UVA and UVB should be applied adequately especially after exposure to water and heavy sweating.

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