Sun protection in Central Oregon

by Dr. Gerald Peters, MD, FACMS

Most of us love the outdoors, but our skin hates the High Desert sun. The longer wavelengths (known as UVA: think “A” for aging) penetrate and damage deeper structures like elastic fibers and collagen, as well as pigment cells (melanocytes), where melanoma starts. Such damage causes premature aging with wrinkles, fine lines, rough leathery texture, and mottled discoloration, as well as skin cancers. (So don’t believe the tanning salons which claim that UVA is safe!) The shorter wavelengths (UVB… think “B” for burning) cause sunburns, cataracts, and contribute to premature aging of the skin. And UVB rays definitely cause skin cancers!

Most folks don’t realize that sunlight suppresses your skin’s immune system. Skin cancer results from a one-two punch: The first “hit” is nuclear damage from UV radiation; adding up over decades. The second “hit” is ongoing, daily UV suppression of your skin’s immune system. Sunlight is (ultraviolet) radiation! Exposure to UV radiation adds up causing increasing, cumulative skin damage.

AVOIDANCE AND TIMING OF EXPOSURE

Most importantly, minimize exposure of your skin to sunlight. Enjoy your outdoor activities in the mornings or evenings. This will limit your exposure to UVB rays, which are five to ten times stronger in the middle of the day. However, UVA rays are present and potent, at all times of the day and year. And, UVA penetrates window glass, clouds, mist, and even fog! Shiny surfaces, like snow, water, and concrete, will reflect up to 95% of solar rays back at you. That essentially doubles the dose of your radiation exposure. The best protection is complete avoidance, so try to stay undercover in the middle of the day. Outdoor shade offers only some protection. 50% shade cover gives only about SPF2 protection and 90% shade cover gives only about SPF10. When there is enough light energy bouncing around to let you see, skin damage can occur. Umbrellas, gazebos and covered bleachers at outdoor events can help, but will only give you partial protection. 50% of all UVA exposure occurs in the shade.

PROTECTIVE CLOTHING

Next to complete avoidance, proper clothing is most protective. Long sleeves and long pants, made with a tight-woven, synthetic fabric (with a UPF rating, Ultraviolet Protection Factor) is the best protection. Look for low contents (30%) of cotton, linen, and other loose fabrics. The best colors are black, dark blue, green, beige, and white. If clothing stretches out, sticks to skin, gets wet, or wears out after use and laundering, this will lower the UPF, and increase your UV radiation exposure. Above all, make a habit of wearing long sleeves and a hat with a broad brim, 4 inches or wider. www.sundayafternoons.com sells high-quality, cost effective hats and clothing. Cabela’s, Columbia, Ex Officio, Sportif, Solumbra, and Coolibar are other sources. Cocoons and Fitovers are sun safe eyewear, some of which fit over spectacles. We carry a few products at the BMC Mohs Surgery Unit, for your convenience.

SUNSCREENS

Caveat emptor (let the buyer beware)! Many products advertise “broad spectrum UVA/UVB coverage”, but in fact, may only protect against UVB and a fraction of UVA (The FDA is moving slowly toward better labeling requirements, expected in 2011, but long delayed now.) Zinc oxide and titanium dioxide physically reflect (like a mirror) both UVB and UVA rays. The only chemical blockers that absorb well into the long UVA range are Mexoryl and Avobenzone (Parsol 1789). These work by absorbing rays instead of reflecting them. People with sensitive skin can become sensitized to chemical blockers. Overall, physical blockers are a better choice.

Look for zinc oxide or titanium dioxide, 6% or higher on the label.

When a sunscreen is tested to set the SPF (Sun Protection Factor), the application is thick. So if you apply an SPF30 sunscreen too thinly, it may only give you SPF4 protection! SPF numbers are based on how long they protect skin from burning (UVB rays), not aging (UVA rays). An average-sized adult in a bathing suit will require about 1 ounce (about 2
tablespoons) of sunscreen to cover their skin. With reapplication every one to two hours, each person can go through an entire 4 ounce bottle in a day at the beach.

Look for an SPF of at least 30 for maximal protection from skin cancer and premature aging. And it is very important that you apply sunscreen at least 30 minutes before sun exposure, to allow for absorption into the skin. The smartest move for optimal year-round protection is to apply sunscreen every morning to your sun-exposed skin (face, ears, “V” of chest, neck and hands). Think of it as an essential (like toothpaste) and use it regularly to keep your skin healthy. Also make a habit of using lip sunblock, every day, all year.

Acne-prone and hairy individuals may prefer gel or spray sunscreens. To date, however, these are not available with zinc oxide. The alcohol base may sting a bit when first applied, but gels and sprays are better for acne-prone individuals. Lotions and creams are better for folks with dry or sensitive skin.

**MY FAVORITE SUNSCREENS**

**Cream**
Vanicream SPF 60 (for adults, very moisturizing)
Blue Lizard SPF 30+ (for sensitive skin, children, and aggressive protection in wet or sweaty conditions-but this one makes most adults look “ghostly white.”)
Anthelios (by Laroche-Posey with Mexoryl)

**Gel**
Neutrogena SPF 45, Fresh Cooling Gel

**Spray**
Neutrogena SPF 45, Fresh Cooling Body Mist-(great for kids; be sure to rub in well)
Available in blue aluminum cans @ Costco in a 2 can pack

Other good sunscreens are available; use this information to find a truly effective product that you will use DAILY. If you commit to the effort and expense of using sunscreen be sure to choose a good one with effective TRUE broad spectrum protection, rather than an inferior product that may give you a false sense of security, exposing your family’s skin to heavy UVA exposure.

**VITAMIN D**
There has been a lot of buzz about this topic lately. Vitamin D is good for us, and we can get plenty of it from dietary sources, multivitamins, or incidental exposure to sunlight on our sunscreen protected face and hands in just a few minutes each day. Why choose sun exposure, which causes cancer, when we get plenty from dietary sources without the cancer risk? Much of this sort of “research” is sponsored by the tanning industry, which was a $5 billion business last year in our country (we only spent about $1.5 billion last year to fight skin cancer.) We dermatologists work hard to stop tanning because we know that it causes cancer and we have your best interests at heart. Both the Institute of Medicine and the USDA dietary guidelines recommend a daily supplemental dose of 1000 IU for adults.

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