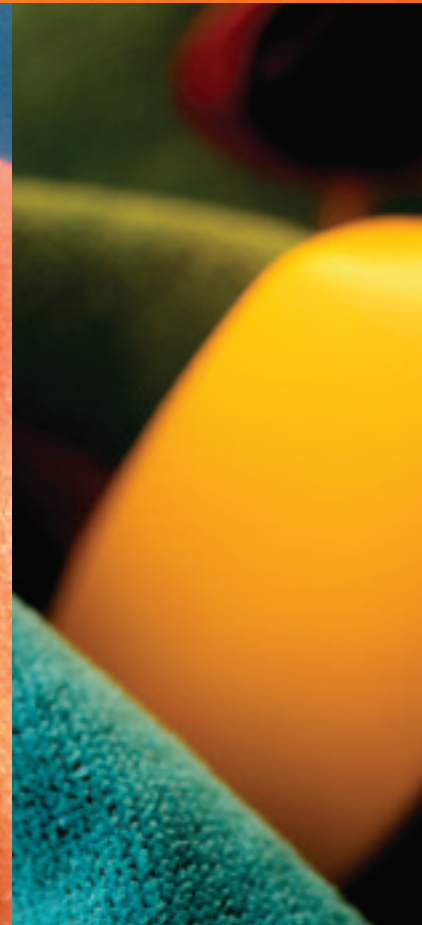


DOUBLE-EDGED THE SUN

We All Hear the Warnings,
But Are We Really Listening?

>>> by Jody Welborn, M.D.

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Open water swims and outdoor pool meets make summer a welcome time for swimmers. But along with the summer fun comes an abundance of sun, which can carry unrecognized—or unheeded—risks. As we age, many of us are hearing our doctors say, “You’ve had enough sun.”

While being out in the sun boosts spirits and aids in the production of Vitamin D, important for calcium adsorption and strong bones, the sun has its downside, contributing to prematurely aged skin and an increased risk of skin cancer.

Exposure to the sun’s ultraviolet rays appears to be the most important factor in the development of skin cancer. The good news is that skin cancer is largely

preventable when protection is used consistently, according to William Delgado, M.D., a dermatologist in Bend, Ore., where open water swimming abounds. The sad news is that approximately 70 percent of American adults do not protect themselves.

It is important to practice sun safety, and it is important to practice it correctly.

According to the American Academy of Dermatology, sun

protection involves wearing a broad-spectrum sunscreen with a sun protection factor (SPF) of *at least* 15, and using sunscreen every day if you’re going to be in the sun for more than 20 minutes. Sunscreen should be applied to dry skin “30 to 45 minutes *before* going outdoors, with particular attention to the face, ears, hands and arms,” Delgado advises. Apply a generous coating to skin not covered by

DID YOU KNOW?

- The sun is most dangerous between 10 a.m. and 4 p.m.
- The sun’s ultraviolet rays can penetrate windows and car windshields.
- The sun’s ultraviolet rays can penetrate clothing.
- Exposure to the UV radiation of a tanning booth may be more risky than exposure to the sun.
- Sunscreen products have a short shelf life; always buy fresh products instead of using last season’s leftovers.

KNOW YOUR RAYS

- **UV:** Ultraviolet light is commonly referred to as UV. There are two types of ultraviolet light commonly referred to when discussing skin and the sun: UV-A and UV-B.
- **UV-A:** Ultraviolet-A is a long-wave solar ray of 320 to 400 nanometers. Although UV-A is less likely to cause sunburn, it penetrates the skin more deeply and is considered the chief culprit behind photo aging of the skin, which results in wrinkling and leathery skin. UV-A has been shown to worsen the carcinogenic effects of UV-B and may directly cause some skin cancers, including melanoma.
- **UV-B:** Ultraviolet-B is a short-wave solar ray measuring 290 to 320 nanometers and is more potent in producing sunburn than UV-A.
- **UV-B** is considered to be the main cause of basal cell and squamous cell skin cancers. UV-B is also considered to be a significant cause of melanoma.
- **SPF:** Sun protection factor measures the length of time a product protects against skin reddening from UV-B, as compared to how long it takes for the skin to redden without protection. For example, if it takes 20 minutes for unprotected skin to redden, it will take skin protected with SPF 2 sunscreen 40 minutes to redden, bearing in mind that the time will vary by individual.

RISK FACTORS FOR SKIN CANCER

- Fair to light skin complexion
- Family history of skin cancer
- Personal history of skin cancer
- Chronic exposure to the sun
- History of sunburns early in life
- Atypical moles
- A large number of moles
- Freckles

If you're at the beach or pool all day, take breaks from the sun. Relaxing in the shade can reduce overall exposure to the sun's harmful radiation by 75 percent. All UV rays will not be blocked, but shade breaks combined with sun-protective clothing, hats and sunscreen will provide maximum protection.

clothes. Reapply sunscreen every two hours or immediately after swimming or any strenuous activity, as water and sweat dilute the product's effectiveness.

Choose the right sunscreens. Look for products with either titanium dioxide or zinc oxide (physical blocking agents) or products with Parsol 1789 (avobenzone), a chemical blocking agent. "The volume and frequency of sunscreen is important," Delgado emphasizes. "If you go to the beach with a 4-ounce bottle of sunscreen, you would have to put on one-fourth of the bottle to get the SPF indicated." Bottom line: "You have to put it on often and a lot of it," he says.

"Swimmers should also pay attention to the fact that sun-

screens do not stay on as well in the water," Delgado notes. "There are sunscreens that may be somewhat water resistant, but one should be suspicious of the actual claims."

Swimmers are not protected from sun while in the water. Reflective radiation from the water and the shore actually add to the exposure. Keeping the sun at bay requires vigilance. "We start out by not applying enough of a sunscreen that is probably not as water resistant as claimed, then we don't put it on as often as we should," Delgado points out.

Cover up. There is more to sun protection than selecting the proper sunscreen. "Covering up is always better than sunscreens or blocks," Delgado says.

The ideal clothing should be made of a lightweight, tightly woven fabric in dark or bright colors. "There are wonderful lines of clothing out now that have sun-protection built in," Delgado notes.

Of particular concern are the neck, ears, temples, lips, face and nose—common sites of skin damage. A well-designed hat can significantly reduce the amount of UV radiation reaching those vulnerable areas. Sunglasses are important for protection of the eyelids and eyes. Remember to protect the lips with your favorite sun block stick.

Seek shelter. If you're at the beach or pool all day, take breaks from the sun. Relaxing under the shade of trees and shrubs or umbrellas and sun domes can reduce overall exposure to the sun's harmful radiation by 75 percent. All UV rays will not be blocked, but shade breaks combined with sun-protective clothing, hats and sunscreen will provide maximum protection.

Beware of added risk factors. People taking certain classes of medications should use extra precaution in the sun, Delgado advises. Some types of anti-hypertensives, diuretics and heart medications can predispose the skin to sun damage. In addition, any sulfa-

based medicine and medications used to treat acne, including antibiotics, are sun-sensitizing agents. Read the labels on all medications you are taking before you head outdoors.

Some individuals are also prone to sun sensitivity. Fair-skinned people are at risk as are people with a type of hypersensitivity to the sun called polymorphous light eruption, which results in red bumps and blisters in sun-exposed areas. The sun also can worsen a skin form of systemic lupus erythematosus. Lupus, as it's commonly known, is an autoimmune disease that causes inflammation of the joints, skin, blood and other connective tissues of the body.

Skin cancer is the most prevalent of all cancers and nearly as common as all other cancers combined. Although Delgado reports that he sees a lot of skin cancers in swimmers, most are curable when treated early.

Know the three types of skin cancer. The least common type, melanoma, is the most serious and accounts for nearly three quarters of the nearly 10,000 skin cancer deaths each year. The other two types of skin cancer—basal cell and squamous cell carcinoma—are more common and are generally easier to cure. Although the number of deaths from skin cancer remains small, the number of skin cancers is increasing each year.

Most skin cancers occur in heavy sun-exposed areas like the face and shoulders, but, as Delgado points out, swimmers spend most their time out of doors nearly naked, and cancers can occur nearly anywhere on the body.

"I think all swimmers, especially Masters, should be screened annually," he advises. "They should do self-exams monthly with someone looking at their back."

Conduct self-exams. Swimmers should monitor the entire surface of their skin for spots that don't heal, bleed spontaneously, scale then heal over and scale again. When

conducting skin examinations, dermatologists look for “*ABCDE*” (Asymmetry, irregular *Borders*, multiple *Colors*, *Diameter* greater than 6 mm, approximately 1/4 inch, and *Evolving* or changing lesions). If you detect any of these signs during a self-examination, consult a dermatologist promptly.

Betsy Durrant, a member of Virginia Masters, was diagnosed with skin cancer during a routine doctor’s visit. “It was very tiny but my family doctor noticed it and did a biopsy, and it came back melanoma. Right after I returned from Nationals in Hawaii, he removed a larger piece from my shoulder and it was clear, just scar tissue.”

Barry Fasbender of Pacific Masters reports a similar story. “I had a brown spot on my cheek that was treated twice with liquid nitrogen by my dermatologist. It came back, so she did a biopsy. It was melanoma in situ and it was treated with Moh’s surgery.” Patients with melanoma in situ

have cancerous cells only in the outer layer of skin (epidermis), and thus are at little risk of having the disease spread. Moh’s surgery involves a microscopic method to make sure all of the affected skin areas are excised.

“We can treat some precancerous lesions with liquid nitrogen, topical medications and even some forms of photodynamic therapy,” says Delgado. “Most cancers are still treated surgically, but therapies are evolving.”

Monitor for melanoma.

“Multiple sunburns are a risk factor and cumulative sun-exposure is as well,” says Delgado. “Fair-skinned folks are at greater risk, as is someone with a direct family history (parents, siblings, children). In addition, if you’ve had one melanoma, you’re at greater risk for another one. Finally, it seems that the larger number of moles you have, especially ones that we call dysplastic (atypical), puts you at greater risk.”

Both Durrant and Fasbender

now examine their skin monthly using the “*ABCDE*” criteria. As added precaution, Durrant sees her dermatologist yearly for a full body scan. They are both careful about sun exposure, and Fasbender has changed his swimming routine. “Workouts are now in the morning and I wear 30+SPF clothing and sunscreen at meets,” Fasbender says. As a result of her experience, Durrant no longer goes to the beach regularly, and she limits her outdoor activities to morning or evening when the risk of sun damage is lower. In addition to hat and sunglasses,

she always wears a shirt or cover-up.

A certain amount of sun exposure is good and contributes to our physical and mental well-being. But there is simply no excuse for being in the sun without adequate protection against its damaging rays. Swimmers, especially, should cover up—with sunscreen and/or the proper attire—and be vigilant in self-examinations. If you have a suspicious skin lesion or mole, obtain medical advice promptly from your primary care physician or dermatologist. <<<

ADDITIONAL RESOURCES

National Cancer Institute

>>> www.cancer.gov

The Centers for Disease Control and Prevention

>>> www.cdc.gov

The American Academy of Dermatology

>>> www.aad.org

The American Cancer Society

>>> www.cancer.org

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