UV Protection from the Patient’s Perspective

Data show that patients understand the need for sun protection—they just don’t use sunscreen as often as they should. An expert offers insights on patient education.

A Q&A WITH STEVEN Q. WANG, MD

In a recent survey of American consumers, 86 percent of respondents said they know that sunscreen helps prevent skin cancer when used with other protection measures, yet the majority do not use sunscreen on a regular basis. Reasons consumers gave for not using sunscreen include not thinking about doing it (40 percent), believing that they do not stay out long enough in the sun to burn (44 percent), and having an aversion to sunscreen texture (51 percent).

Memorial Sloan Kettering’s Steven Q. Wang, MD, Director of Dermatologic Surgery and Dermatology at Basking Ridge Dermatology, addressed consumer behaviors and strategies to increase UV avoidance. He, along with Stephen Dusza, PhD, conducted the study described above and has written extensively on sunscreen formulation and science. Ahead, he answers questions about UV avoidance and sunscreen formulation and use.

Q. You found that 86 percent of Americans understand the importance of sun protection, yet most don’t use sunscreens or use them properly. Why do you think this is and how can this change?

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There are ways to support patients and facilitate change. “I encourage dermatologists to emphasize comprehensive photoprotective strategies,” Dr. Wang says. He argues that the current emphasis on sunscreens, “puts the hierarchy of sun protection strategies in reverse.” Over-dependence on sunscreens gives patients a false sense of security.

It is more important, he says, for patients to understand when and how they are exposed to UV radiation and how they can limit exposure through sun avoidance and physical protection strategies: staying out of the sun as much as possible, especially during midday hours, wearing protective hats and clothing, etc. When patients adopt these crucial strategies, then sunscreen becomes a secondary mode of defense to protect minimal exposure rather than a first line of defense.

When patients adopt adequate UV avoidance strategies,
then use of a daily sunscreen SPF 30 is probably sufficient for day-to-day use. Remind patients that windows block out UVB, Dr. Wang suggests.

Dermatologists should also, “Focus on the need for adequate application of sunscreens,” Dr. Wang says. “Most people use about one-third the desired amount of sunscreen, which translates to about one-half or one-third the stated level of protection.”

**Q. Your research and other surveys have found that patients are concerned about the safety of sunscreen ingredients and the cosmetic elegance of formulations. What should dermatologists know about these topics?**

“There have been some overblown concerns regarding sunscreen ingredients,” Dr. Wang acknowledges. “Many people voice concern about oxybenzone,” he says, noting that the degree of exposure needed to realize theoretical oxybenzone affects on human hormone levels are far above those achieved with normal sunscreen use. In fact, he says, it would take more than 270 years of consistent application to achieve problematic levels.

Additionally, fear of nanotechnology is also “not valid,” according to Dr. Wang. Micronized or nanosized TiO₂ and ZnO are important for cosmetic elegance of sunscreen formulations; compared to older, larger particle size formulations that tended to leave white residues on the skin. The new formulations may be especially compatible with skin affected by eczema, rosacea, or acne, Dr. Harper points out. Given that National Rosacea Society surveys consistently identify UV exposure as a common rosacea trigger, sunscreens can be especially useful in this population, she says.

The mass market, affordable formulations offer physicians another readily accessible product recommendation, Dr. Harper suggests. Consumers should be aware that the spray formulation does not contain zinc, Dr. Harper notes. However, she adds that the convenience of a spray formulation that can be used on wet skin may be a practical benefit in many settings, especially for young children. As with any spray, Dr. Harper says it is important for patients to rub in the formulation after spraying on skin.

**Neova Smart Sunscreens.** “I use Neova DNA Damage Control Everyday SPF 44 faithfully every morning and recommend to all my patients,” says Helen M. Torok, MD, Medical Director, Trillium Creek Dermatology. The formulation is part of the Neova “Damage Control” line of daily sunscreens that also includes a broad spectrum “Active” (SPF 43) and Silc Sheer 2.0 (SPF 40) offerings. The physician-dispensed products are formulated with DNA repair enzymes to augment protection.

“I know that the broad-spectrum sunscreen will protect against UVA and UVB rays and I also get the benefit of antioxidants, DNA repair enzymes, and moisturizers all in one convenient application. I also have sensitive skin and rosacea and there is no irritation with the DNA Damage Control line,” Dr. Torok adds.

—PD Staff

### RECENT SUNSCREEN LAUNCHES

*Here are some recently released sunscreens compliant with the FDA monograph.*

**Anthelios Cell-OX Shield™ XL (LaRoche Posay).** Anthelios Cell-OX Shield™ XL (LaRoche Posay), featured in Anthelios 60 Ultra Light Sunscreen Fluid for face and Anthelios 60 Melt-In Sunscreen Milk, uses 21 percent fewer ingredients than other Anthelios products, without compromising efficacy. The formulations are broad-spectrum, with an SPF of 60. The low number of ingredients addresses a public concern about sunscreen ingredients. Over half of surveyed Americans say they do not use sunscreens because they do not like the texture. New products offer another, potentially more cosmetically acceptable option, for patients.

**The CeraVe® Sun Care line (Valeant).** The new line from CeraVe includes: CeraVe Sunscreen SPF 50 for Face with Invisible Zinc™ technology; CeraVe SPF 50 Sunscreen for Body; CeraVe SPF 30 Sunscreen for Body, CeraVe Wet Skin Spray SPF 50, and CeraVe SPF 50 Sunscreen Stick.

The products, available at mass market retailers, are an extension of the CeraVe line of barrier supporting skincare. “In addition to sunscreens, the CeraVe Sunscreen formulations contain ceramides and hyaluronic acid to support the epidermal barrier,” says Julie C. Harper, MD of Birmingham, AL. “Niacinamide appears to provide anti-inflammatory effects that may support the barrier repair effects of ceramides.” The new formulations may be especially compatible with skin affected by eczema, rosacea, or acne, Dr. Harper points out. Given that National Rosacea Society surveys consistently identify UV exposure as a common rosacea trigger, sunscreens can be especially useful in this population, she says.

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immunosuppression, and photocarcinogenesis. It is shown that excess UVA irradiation and exposure to pollutants are themselves drivers of ROS-generation in human skin.1

While in vitro studies using cell culture models did suggest a high level of ROS generation when non-organic nanosized filters were exposed to UV irradiation, subsequent in vitro and in vivo studies have not borne out these findings.1 However, Dr. Wang says, most nanosized filters are coated to reduce reactivity and thus limit free-radical formation. Furthermore, the skin’s natural antioxidant capacity can readily neutralize any ROS generated through enzymes and nonenzymatic molecules.1

As an additional measure of protection, many sunscreen formulations now incorporate topical antioxidants, which may have the potential to diminish the ROS generated from exposure to UVA radiation.2 This antioxidant capacity may be especially important, given that most sunscreens tend to provide greater protection against UVB than UVA. Dr. Wang and colleagues recently have published on the use and benefits of topical antioxidants within sunscreen formulations, but he cautions that much depends on the quality of the finished product. Failure to provide sufficient concentrations of antioxidants or stable formulations will negate the benefit of the antioxidants.2

Q. What are your recommendations for effectively educating patients about UV avoidance? How can this be achieved quickly in the average clinic visit?

“What I find helpful and what I encourage dermatologists to do is to give specific recommendations,” Dr. Wang says. “Most people only want to hear what sunscreen and what SPF they should be using.”

Dr. Wang also strongly encourages dermatology practices to develop a handout that lays out a specific, appropriate, comprehensive UV avoidance strategy. “It is very important to have a sheet of instruction ready.”

Specific product recommendations can be made on this handout. Of course, Dr. Wang says, give a few options across various price points, and encourage patients to seek out a product that they like.

“Overall, I think US sunscreen manufacturers have done a good job creating products for the American consumer,” Dr. Wang says. But patients still have preferences. Common consumer complaints about sunscreens tend to focus on texture, which may be perceived as greasy to some. Formulations intended to be water resistant may have a sticky feel.

Q. What are remaining questions in the area of sunscreens?

The FDA is still trying to determine whether formulations should indicate a level of UVA protection and how to best accomplish this. There also remain questions about certain dosage forms, such as sprays. Under the current FDA proposed ruling, Dr. Wang notes, “wipes, powders, and washes cannot claim SPFs because they were deemed to not provide sufficient protection.”

Sprays are popular due to their convenience, ease of application at certain anatomic sites, and the ease of use in children, who may not like creams or lotions. The challenge is in achieving adequate and consistent coverage, Dr. Wang says. Even if a spray is applied imperfectly, “it’s better than nothing,” he says. There are methods to optimize use of sprays. One is to spray the product into the hand and then apply to the desired area, though this somewhat defeats the purpose of the spray, Dr. Wang admits. Alternatively, consumers should move the can slowly over the target area to ensure a good amount of coverage. The product should still be rubbed in by hand once on the skin.