

Making Sense of Sunscreens

By Dr. Elizabeth Roche



Using sunscreen is an important part of everyone's health routine to prevent skin cancers, such as melanoma. However, knowing what type of sunscreen to choose can be a challenge.

In 2013, the FDA required stricter regulations regarding labeling of sunscreens. These changes were designed to help consumers identify and select the right sunscreen to protect them from sunburns, skin cancers and early aging skin or photodamage.

Unlike Europe, the sunscreens in the United States were not nearly as well controlled prior to the new regulations, and the labeling could be misleading. Because of more difficult approval criteria by the FDA, U.S. sunscreens still lack some of the newer ingredients that overseas' sunscreen have, but they are better than they were several years ago.

What are ultraviolet rays?

The sun emits three types of rays, UVB, UVA and UVC. Zero percent of the sun's UVC rays reach the earth's surface because they are filtered out by the ozone. One percent of the sun's shorter UVB rays reach the earth, enough to cause concern. And 99 percent of the sun's longer UVA rays penetrate into the earth.

The difference between the two rays? In general, the UVB rays are the rays that burn you and are more evident on the bright days, and the UVA rays are the rays that age you and are present always, even on cloudy days. Both rays are a concern for skin cancers. However, the UVA rays, being longer rays, actually penetrate deeper into the skin, breaking

down collagen, which leads to premature aging and, more important, to a greater risk of developing melanoma. Since UVA rays are present always, sunscreen should be applied each and every day to prevent their penetration and effect.

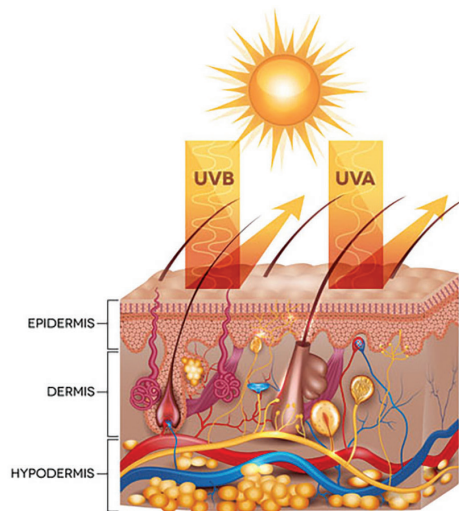
What's on the label?

When we reach for a sunscreen, there are several aspects of the label that we need to understand. First is the term "broad spectrum." This is one of the new FDA requirements, and it indicates that the sunscreen protects against both

the UVA and UVB rays. Next is the term SPF, or Sun Protective Factor, which protects against the UVB rays only.

Another new FDA regulation is an SPF limit to a rating of no more than 50. You won't find sunscreen in the United States with an SPF rating of above 50 because studies have shown that there is no greater sun protection with higher rated SPF.

The SPF is considered a chemical blocker and is not a measure of effectiveness but an indicator of the time each individual user may stay in the sun without getting burned. For instance, if someone can stay in the sun only ten minutes before getting red skin, then a sunscreen with an SPF 15 will allow him or her to stay in 15 x 10 minutes, or 150 minutes before getting red or burned. Picking the right SPF is very individualized, based on skin type and specific activities. A general rule is to apply a sunscreen with an SPF of 30 on a regular working day when you are indoors; for the outdoor activity days, reach for the SPF 50.



The illustration shows how the skin is protected by using sunscreen.

If SPF only protects against the UVB rays, what protects against the UVA rays?

The answer—ingredients called physical or mineral blockers, such as zinc oxide or titanium dioxide. These will prevent the UVA and UVB rays from actually



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penetrating the skin by reflecting them away at the skin's surface. Studies have shown that the best physical blocker is zinc oxide, although others are FDA approved as well. These physical barriers, as well as an SPF of at least 15, are required for sunscreens to be considered "broad spectrum."

Claims of sunscreens being "waterproof" or "sweat proof" are now prohibited. The term "water resistant" is allowed only if it can pass strict testing, and the term pertains to how long the sunscreen remains effective after swimming or sweating. Because of the stricter regulations, this claim is being seen less often on sunscreens.

Sunscreens are now considered FDA-regulated, and therefore every label must include standardized "drug facts," just as any other FDA-regulated product does.

How much and how often?

Knowing which sunscreen is right for you is important, but the application technique and dosage are just as important. The dosage of sunscreen that should be applied is 2 mg/cm², which is approximately one ounce for the average person's body. Most experts suggest that sunscreens be applied 15 minutes before going outside. Don't wait until you get to the beach to apply sunscreen, especially on children. Sunscreen should be reapplied two hours after sun exposure, if not sooner, to remain effective, and each time after swimming or sweating.

Healthy living is key to longevity. Cancer-causing rays change the DNA in your skin, which lead to non-melanoma skin cancers, such as basal and squamous cell, that affect over one million Americans annually. They also play a significant role in the fatal skin cancer, melanoma, which kills over 8,000 Americans each year, and according to the American Academy of Dermatology, these numbers are on the rise.

However, using the proper sunscreen everyday will help reduce this risk. Remember to take the time to read the entire label on the sunscreen bottle to help you pick the right sunscreen and be sure to use it every day. Also, make sure to have a body check by your dermatologist each year, pointing out any new changes you may have noticed on your skin. Live life to the fullest and enjoy the outdoors, but do it wisely.



Dr. Elizabeth Roche is a board certified physician and founder of the Elizabeth Roche, M.D. MedSpa (www.elizabethrochemedspa.com) located in Woodcliff Lake, NJ. An expert in anti-aging treatments, dermal fillers, neurotoxins, lasers and skin care, Dr. Roche is an associate member of the American Society for Lasers in Medicine and Surgery. She is also part of the Allergan Epic program, where she serves as an Allergan speaker, educator and trainer to other physicians.