

10 sunscreen myths you can't afford to fall for

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Attention sunscreen skeptics: The sun's UV rays are coming for you, and you're just making their job easier.

Summer is now upon us, which means more time in the sun—and more exposure to the [ultraviolet radiation](#) it emits. Longer-wavelength ultraviolet A rays can reach beneath the skin's surface, causing it to age prematurely. Shorter-wavelength ultraviolet B rays affect the outermost layers of skin, causing sunburns and tans. (A third type of rays, ultraviolet C, is intercepted by Earth's protective ozone layer.)

Both UVA and UVB damage the DNA in [skin cells](#), causing mutations. These mutations can accumulate over time and cause tumors to grow. The more UV exposure you have, the greater the risk, according to the Skin Cancer Foundation.

Basal cell carcinoma is the most common type of skin cancer in the United States, followed by squamous cell carcinoma. About 5.4 million of these cancers combined are diagnosed each year, and they cause between 2,000 and 8,000 deaths, the American Cancer Society says.

Melanoma of the skin is both more rare and more deadly, affecting an estimated 100,640 Americans this year and resulting in 8,290 deaths, according to the National Cancer Institute.

Sunscreens can protect you from these malignancies in one of two ways. Chemical sunscreens contain ingredients such as avobenzone that absorb UV rays. Mineral sunscreens rely on zinc oxide or titanium dioxide to block or reflect the rays. Either way, the solar radiation is unable to penetrate the skin and corrupt your DNA.

Here are 10 [sunscreen](#) myths you can't afford to fall for:

Myth 1: As long as you don't get a sunburn, you're safe.

The reality: You don't need to get a sunburn to put your skin at risk. UV exposure will compromise the DNA of unprotected skin—even if your skin looks normal to the naked eye—and the effects are cumulative, said Dr. Henry Lim, a photodermatologist at Henry Ford Health in Detroit who studies the effect of sunlight on skin.

"Each time the skin is damaged by the sun, with or without sunburn reaction, there is some damage that the skin would have to repair," Lim said. "If that subclinical damage goes on often enough for a long enough period of time, the skin's ability to be able to completely repair all that DNA damage will be compromised."

Myth 2: Your body needs vitamin D, and sunscreen will keep you from getting it.

The reality: It only takes a small amount of sun exposure to produce all the vitamin D your body needs. One study of white people in the Boston area determined that 5 to 10 minutes of sun on the face, arms and legs two or three times a week during the summer months was enough to produce sufficient amounts of vitamin D.

Even if you apply sunscreen, you'll still get that minimum amount of sun exposure, Lim said. "When we use sunscreen, we don't apply enough," he said. "It's just human nature."

Dr. Anne Chapas, a dermatologist in Manhattan and clinical instructor at Mt. Sinai Medical Center, advises patients who are concerned about their vitamin D levels to protect their skin and seek out the nutrient in foods or take supplements.

"You do need vitamin D to be healthy, but there are multiple ways to get it," she said.

Myth 3: The chemicals in sunscreen can cause cancer.

The reality: The active ingredients in sunscreens sold in the U.S. are regulated by the Food and Drug Administration, which has determined that they are safe and effective. The National Academies add that "sunscreen use is not linked to higher rates of any type of cancer."

In fact, it's the reverse that's true, Chapas said, "If you're trying not to get cancer, then wear sunscreen."

Myth 4: You don't need to wear sunscreen when the UV index is low.

The reality: The UV index primarily measures UVB, which Lim calls "the sunburn spectrum." Even if UVB is low, you still need to protect yourself from UVA.

"As long as there is light out there, there's enough UVA" to induce tanning, cause wrinkles, and contribute to skin cancer risk, Lim said.

Chapas concurred. "Even on cloudy days, about 80% of the sun's rays come through and you can still get sun damage," she said.

Myth 5: You don't need sunscreen if you have dark skin.

The reality: People of every complexion can get sun damage and skin cancer. In fact, "skin cancer in patients with darker skin tones is often diagnosed in later stages, when it's more difficult to treat," said Dr. Seemal Desai, president of the American Academy of Dermatology.

Chapas added that since darker skin is apt to produce melanin in

response to sun exposure, it may become discolored more readily than lighter skin.

Myth 6: Mineral-based sunscreens are safer than chemical sunscreens.

The reality: Both types are safe to use, but there are fewer unknowns with mineral sunscreens since they are not absorbed into the skin, Lim said.

Chapas said that's one reason why she prefers mineral sunscreens. She also appreciates their versatility, since they can be applied on top of makeup or moisturizer. "The challenge is that some of these formulations have a whitish cast to them, so you have to find one that works with your complexion," she said.

Myth 7: You can protect yourself from the sun by building up a "base tan."

The reality: A tan can provide a small bit of protection, but it's less than the equivalent of SPF 5, Lim said. That's not nearly enough to make sunscreen unnecessary.

Besides, a tan itself is a sign of sun damage. "When our skin is exposed to UV light, it stimulates the production of melanin to prevent more UV from entering the skin and damaging the underlying skin cells," Chapas said. "A tan isn't healthy. A tan is actually your body trying to protect itself."

Myth 8: The antioxidant astaxanthin will protect you from UV and act as an "internal sunscreen."

The reality: There are two ways that antioxidants reduce the biological damage that comes with sun exposure, Lim said. When UVA rays harm DNA, they do so by causing oxidative damage to DNA, and antioxidants can help minimize it. In addition, when visible light interacts with the skin, it can cause cells to produce a type of destructive molecule called reactive oxygen species. Antioxidants can help counteract this process as well.

Including antioxidants in a sun protection regime makes sense, but they can't do the job by themselves. "There are no pills that act as effectively as a sunscreen," Chapas said.

If you do want to take an antioxidant to reduce sun damage, astaxanthin isn't necessarily the best choice, Lim and Chapas agreed. The product Chapas recommends is from Heliocare.

Myth 9: The chemicals in sunscreen get into your bloodstream and build up over time.

The reality: There are no long-term studies of the blood of people who use sunscreen regularly, so there is no data to say whether this is true or false. However, the chemicals are excreted in urine, which is a sign that they don't linger in the body, Lim said.

People who are wary of chemical sunscreens can opt for mineral sunscreens instead, he said.

Myth 10: You can keep sun damage at bay by wearing a good hat.

The reality: A wide-brimmed hat will definitely help protect you from the sun. This is particularly true for people who are bald or have thinning

hair, since "we don't have great sunscreens for hair-bearing areas," Chapas said.

However, a hat will only block UV rays coming from above. Without sunscreen, you'll still be vulnerable to rays that reflect off the water, sand, or urban surfaces like a sidewalk and come at your skin from below. (This is also why you need sunscreen even if you're in the shade.)

"There are multiple actions we need to take," Lim said. "Each one of them is helpful, but it's not as good as when you put everything together."

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