

### Summer is almost over—do I still need sunscreen? (Hint: Yes.)

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With COVID-19 on our minds, it may be easy to forget about another potential danger: the sun.

As the pandemic continues to limit indoor visits with friends and relatives, many have opted to make outdoor plans during the summer,



potentially increasing their risk for sun damage—and <u>skin cancer</u>. Though summer is coming to an end, outdoor activities abound as we enter a fall (and school year) that may include more time in the sun. And that has many experts worried.

It takes just 15 minutes for the sun's ultraviolet (UV) rays to damage your skin, increasing your chances of wrinkles, age spots, and cancer, say Yale Medicine dermatologists. In fact, skin cancer is the most common form of cancer in the United States, affecting one in five adults.

The solution—wear sunscreen and protective clothing and seek shade—is something everyone has likely heard before. Still, it never hurts to be reminded of its importance, or to know a little more about it. Below, Yale Medicine dermatologists answer commonly asked questions.

### Are mineral sunscreens safer?

Sunscreens are either mineral- or chemical-based. Mineral sunscreens typically contain zinc oxide and/or titanium dioxide and sit on the skin's surface to deflect the sun's rays. Chemical sunscreens, in contrast, penetrate the skin and absorb the sun's rays.

Recent studies have shown that many of the common chemical ingredients are absorbed into the body's bloodstream at <u>concentration</u> <u>levels</u> higher than the Food and Drug Administration's (FDA) safety threshold. One concern is that the chemicals can mimic and disrupt hormones in the body.

In 2019, the FDA proposed a rule that would have required sunscreen manufacturers to do additional testing of 12 common chemical ingredients to ensure that they are safe and effective. But the rule was



later shelved after a federal coronavirus relief act overhauled regulations of over-the-counter products, including sunscreens.

Given the uncertainties of chemical sunscreens, Kathleen Suozzi, MD, a Yale Medicine dermatologic surgeon, recommends using mineral products, especially since they are better for sensitive skin.

"While it is unclear if the levels at which chemical sunscreen ingredients have been detected in the bloodstream pose any risk to human health, mineral-based sunscreens are generally recognized as safe and effective," she says. "Using them instead of chemical-based sunscreens avoids concerns about potential, unproven systemic effects."

What's more, mineral-based sunscreens are less likely to cause irritant or allergic skin reactions, Dr. Suozzi adds. "They are safer for patients with sensitive skin, particularly patients with eczema," she says.

But mineral sunscreens can be more difficult to rub into the skin and sometimes leave a slight white sheen. Jonathan Leventhal, MD, a Yale Medicine onco-dermatologist, says he tells patients to use the sunscreen that works best for them and that they feel the most comfortable applying to their skin.

"These studies have shown us the main ingredients in chemical sunscreens can show up in your blood, but there isn't great data telling us if they are harmful," Dr. Leventhal says. "You should still use sunscreen, and you should also protect yourself with a hat and sunglasses, as well as seek shade and wear clothing with UPF [ultraviolet protection factor]."

# Do you really need to reapply sunscreen every two hours?

The directions on most sunscreen bottles advise you to reapply every two



hours when outdoors or after swimming or sweating. But what if, as life happens—your plans are delayed or your kids want a snack—you end up remaining indoors for two hours or more after applying sunscreen?

Dr. Leventhal says there is a "recommended" and "practical" answer to this question.

"The recommended answer is that you should reapply every two hours, which is especially important if you are outside, sweating, or swimming, because it may wear off. And the sun can wear off its effectiveness, too," he says. "But if you are indoors away from windows and not sweating, you probably do not need to reapply before you go outside."

"While there is some data that suggests the higher SPF (sun protection factor) sunscreens may last four to six hours, they don't remain as strong as when you initially apply them," says Sara Perkins, MD, a Yale Medicine dermatologist. "It's best to stick to every two to three hours, and reapply as soon as you pop out of the water."

# Should you wait 15 to 20 minutes after applying sunscreen before going outside?

On this, all the dermatologists agree: Yes, you should.

"This is more important for chemical sunscreens than it is for physical sunscreens as they have to be absorbed into the skin to be effective, whereas mineral sunscreens act as a barrier on top of the skin, and that forms quickly," Dr. Perkins explains.

And don't forget to rub it in well, because if it's streaky, it will wash right off if you swim, she adds.

### Is a higher SPF always better?



To a degree.

The Yale Medicine dermatologists we spoke with recommended first choosing a sunscreen that is broad spectrum, which means it protects your skin from UVA rays (which cause skin aging) and UVB rays (which cause burning).

SPF specifically refers to the amount of UVB radiation it takes to produce a sunburn on protected skin (i.e., with sunscreen) compared to skin without sunscreen. An SPF 15, for example, protects the <u>skin</u> 15 times longer than it would if you didn't apply sunscreen. What's more, SPF 15 blocks about 93% of UVB rays, compared to about 97% with SPF 30, and 98% with SPF 50.

"We usually recommend a sunscreen with an SPF of 30 or above, but once you get to a certain level, there isn't much added benefit to going to an SPF 60 or 100," Dr. Leventhal says.

Higher SPF sunscreens also aren't as easy to wear—they tend to be thicker in consistency and greasier, points out Dr. Suozzi. "The key is frequency of application, especially if you are sweating or swimming a lot," she says.

# What do you put on your face first, moisturizer or sunscreen?

Some moisturizers contain sunscreen, which is a convenient and reliable option, provided you follow the advice above about reapplication. But if you prefer separate products, Dr. Leventhal says the order probably doesn't matter much as long as you are applying an adequate amount of sunscreen. Still, most recommend applying sunscreen before makeup.



### Do sunscreen powders work?

You may have seen loose powders that contain SPF in them. While these are fine to use for a touch-up, dermatologists don't recommend relying on these alone.

"They may be beneficial for mid-day reapplication, but they shouldn't take the place of your daily use of sunscreen," Dr. Leventhal says.

Dr. Suozzi adds that, because many of the powders are translucent, they are a nice way to add extra protection without having to put your whole face together again.

## Do you need a separate sunscreen for your face and your body?

The short answer is no, but there are advantages to using a sunscreen that is labeled "noncomedogenic" for the face, Dr. Leventhal says. That means it won't clog the pores and will help you avoid breakouts, he explains.

#### Do you need sunscreen on cloudy days?

UV rays can penetrate clouds. "Unless you are completely shaded and protected from the sun, you still need sunscreen on cloudy days," Dr. Leventhal says.

And remember that sun damage can happen with just short intervals of time outside. "I think it is ingrained in most people to wear sunscreen if they are going to the pool or to the beach, but not everyone is as mindful about day-to-day exposure, or year-round exposure, which adds up," Dr. Perkins says.



Plus, even if the sun is strongest at mid-day, you can still burn at 5 p.m., she adds.

In the end, when in doubt, err on the side of caution and apply that <u>sunscreen</u>, Dr. Perkins says.

Provided by Yale University

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