

Exploring Health and Environmental Concerns Surrounding Sunscreen

Even as summer vacations draw to a close in much of the nation, the perils of *sunscreen* to the environment remain in the news. Of local interest to those of us here in Tampa are recent [media reports about a potential ban on certain types of sunscreen](#) – namely those that might provide the best protection against the sun *but* are toxic to coral reefs.



Turns out that even tiny amounts of sunscreen that wash off a swimmer's skin in the ocean is enough to cause corals to bleach, lose their algae food source, and make them susceptible to viral infections. In addition, the chemical *oxybenzone* – an active

ingredient in many sunscreens – inhibits the ability of baby corals (polyps) to attach themselves to the reef.

The chemicals in commercial sunscreens may also affect the health of oyster domes and other filter-feeding organisms. Environmental concerns have risen to the point where some areas – most notably Hawaii and Key West – have banned the use of certain sunscreens. While here in Tampa, Spectrum News 9 recently ran [a story questioning whether such a sunscreen ban could be imposed in The Big Guava as well](#).

Effects on the environment aside, skin cancer is the most commonly diagnosed form of cancer in the United States, affecting more than three million Americans each year. Broad spectrum sunscreens with SPF (sun protection factor) values of at least 15 play an important role in protecting the skin from sunburn and other damage from the sun's ultraviolet (UV) radiation.

However, a study published in the May 6, 2019, *Journal of the American Medical Association* calls attention to the fact that [chemicals in many commercially available sunscreens are absorbed through the skin](#) and enter the bloodstream at levels high enough to cause concern. As a result, the Food and Drug Administration (FDA) recently issued a proposed rule to update regulatory requirements for most sunscreen products in the United States.

Regardless of whether certain sunscreens are banned or prove harmful to human health, it is always a good idea to limit your exposure to manufactured chemicals. Some laboratory studies show that certain chemicals in some sunscreens may mimic hormones. In addition, sunscreen-related skin allergies raise concerns about the possible unintended health consequences of frequent sunscreen use.

Distinguishing Chemical and Mineral Sunscreens

Sunscreens generally come in two types: chemical and mineral. *Chemical sunscreens* penetrate the skin and are designed to absorb UV rays before these rays can damage the skin. *Mineral sunscreens*, such as those that contain zinc or titanium oxide, create a physical barrier on the surface of the skin that helps to reflect UV rays away from the skin. Unfortunately, because zinc and titanium oxide are white and are not absorbed by the skin, they can give the wearer a chalky appearance, making them a less popular choice. Need a visual for this phenomenon? Witness the grief Bradley Cooper recently received when photos of the actor wearing sunscreen on his face showed up in all manner of news reports, including [this article from BuzzFeed](#).

Mineral sunscreens like the one Cooper appears to be wearing are safer for both humans and the environment, assuming they do not contain any other harmful ingredients, such as paraben (a commonly used preservative that has antifungal and antibacterial properties). The chemicals in chemical sunscreens that create the most concern to both health and environment are *oxybenzone*, *octinoxate*, and *paraben*. And if you are going to be using chemical sunscreens, make sure to apply it 15 minutes prior to sun exposure to allow enough time for them to penetrate the skin.

Protecting Yourself from the Sun

Some exposure to natural sunlight is of course healthy, but as we all should know by now, over-exposure increases the risk of skin cancer. Bottom line? You really do need to protect your skin when you're spending more than a few minutes in direct sunlight. Here are some suggestions from us here at [Tampa's functional medicine practice](#) – BioDesign Wellness – for protecting yourself from the sun while limiting your exposure to potentially harmful chemicals found in many commercially available sunscreens:

- **Use a mineral sunscreen.** Apply a mineral sunscreen to any areas of your body that are exposed to the sun. We recommend zinc oxide and coconut oil. Apply the coconut oil first followed by the zinc oxide. The coconut oil nourishes the skin, while the zinc oxide protects it.
- **Avoid spray-on sunscreens.** With aerosols, any chemicals in your sunscreen become airborne, dispersing them into the environment and making them more prone to being inhaled.
- **Wear clothes:** Wear a hat with a brim that shades your entire head, a long-sleeved shirt, pants or shorts, and shoes that cover the tops of your feet. Look for clothes that include UV protection.
- **Wear sunglasses:** Sunglasses protect your eyes from UV rays.
- **[Check the UV index](#):** The UV Index predicts the level of solar UV radiation and indicates the risk of overexposure on a scale from 0 (low) to 11 or more (extremely high).
- **Plan your day around the sun:** Go outdoors early in the morning and late in the afternoon when the sun is lower in the sky.
- **Stay in the shade:** When you are outdoors – and especially if you’re at the beach – sit under an umbrella or canopy.

Most important, spending time in the great outdoors where you are exposed to fresh air and sunshine is generally a good thing. People who spend more time outside are typically more physically active and reduce their exposure to potentially harmful chemicals in their homes. However, when you go outside on days when sunscreen is necessary, choose a product that’s safer for you and less likely to harm the environment.

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