

What you should know about sunscreen and how to make your own

Summer is a great time to get outdoors and make the most of the sunshine. [The Skin Cancer Foundation advises us to use sunscreen](#) to protect our skin from harmful ultraviolet radiation that can cause sunburn and skin cancer. But what if the chemicals in sunscreens we apply liberally to our skin are damaging our health in other ways? And what about the health of our oceans affected by chemical pollution?

Impact of sunscreen chemicals on our health

[A study](#) published in the *Journal of Cosmetic Dermatology* looked at the negative health and environmental impacts of the chemical oxybenzone commonly found in sunscreen. While sunscreen can protect our skin from sun damage, malignant melanoma rates are on the rise.

The average number of adults treated each year for skin cancer in the U.S. was 3.4 million between 2002 and 2006. This number rose to 4.9 million adults each year between 2007 and 2011. This worrying trend throws doubt on how effective sunscreen is against deadly skin cancer.

Researchers in the oxybenzone study suggest sunscreen chemicals can disrupt endocrine systems, affecting reproduction and thyroid hormones. [Animal studies](#) show that sunscreen chemicals can affect puberty, male fertility, and female estrous cycles. Although most hormone studies so far have tested animals, the potential for similar impacts on humans is clear.

Another [study](#), published in the *International Journal of Andrology*, also finds sunscreen UV filters disrupt our hormones. It's even more troubling that these chemicals have been found in human breast milk and could even cross the placenta in pregnant women. In one study, oxybenzone was found in the urine of 97% of people tested.

Impact of sunscreen chemicals on the environment

Hawaii is the first U.S. state to ban the use of oxybenzone and octinoxate in sunscreen products, and not without strong reason.

Hawaii's golden beaches and aquamarine seas attract high numbers of tourists who unknowingly pollute the environment. These sunscreen chemicals are toxic to aquatic life, disrupting coral growth and increasing the rate of coral bleaching. Although coral reef damage is also caused by global warming, overfishing, and agricultural runoff, sunscreen use is a growing problem.

The *Journal of Cosmetic Dermatology* study says 4% of oxybenzone is absorbed by the skin, leaving 96% washed off into water treatments systems, rivers, and oceans. In 2008, it was estimated that 4,000 to 6,000 tons of sunscreen were washed off each year in coral reef tourism areas. With the global growth in sunscreen use, estimates for 2017 put this figure at 8,000 to 16,000 tons.

This is bad news for our health too.

Chemicals ingested by organisms at the bottom of the food chain can affect us at the top of the chain. Studies have found oxybenzone in white fish, rainbow trout, barb, chub, perch, and mussels.

Oxybenzone can also react with chlorine and produce toxic substances in swimming pools and water treatment plants.

While environmentalists applaud Hawaii's sunscreen legislation, the [Consumer Healthcare Products Association is critical of the ban](#) saying it could lead to an increase in skin cancer in Hawaii. The association represents personal care product manufacturers, so it can be hard to know what to believe.

Which sunscreen is safe for our health and the environment?

Harvard Medical School dermatology expert Dr. Elizabeth Buzney says that sunscreen, used properly, prevents sunburn and reduces the risk of melanoma so any risk in hormone disruption is worth it to prevent deadly cancers. Asked by [The Skin Cancer Foundation](#) about the safety of sunscreen chemicals, Dr. Buzney says people with sensitive skin and pregnant or breastfeeding mothers should use a mineral sunscreen made with zinc-oxide or titanium-dioxide and few other ingredients as possible. Likewise, the [Environmental Working Group looked at toxicity data for the nine most common sunscreen chemicals](#) and concludes that mineral sunscreens are safer.

If you don't like the idea of sunscreen chemicals seeping into your skin but you still want to enjoy the mood-boosting benefits of sunshine, you can make your own sunscreen with just a few ingredients! You can also follow The Skin Cancer Foundation's advice on sun safety that includes keeping sun exposure to a minimum (especially between 10 am and 4 pm), and wearing sunglasses, a hat and clothing that covers your skin.

By being smart and avoiding sunscreens with harmful chemicals, you can protect your family and our oceans and still enjoy the sunshine!