

Sunscreen May Be Bad for Your Health, Study Finds

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Sunscreen is vital for protecting our skin from damaging rays, but some of the ingredients could have the unintended side effect of harming animals and humans, researchers warned.

Scientists based in China found seawater on the coast of Hong Kong that contained active ingredients from sunscreen, which they linked to fertility problems in fish.

Sunblock often contains UV filters [including](#) benzophenone-3 (BP-3), ethylhexyl methoxycinnamate (EHMC) and octocrylene (OC) to protect the skin from radiation which can cause cancer. Manufacturers also use those chemicals to protect products like textiles from the sun.

When the chemicals are washed off our skin into the sea, they can linger in the water and enter the ecosystem and food chain uninvited.



Chemicals in sunscreen were found to harm zebrafish in a study. Getty Images

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Earlier this year, [Hawaii](#) became the first U.S. state to ban sunscreen containing oxybenzone and octinoxate, both of which are known to harm coral reefs, by 2021.

The clampdown followed a study published in the journal *Archives of Environmental Contamination and Toxicology* which concluded that oxybenzone tinkered with the DNA of corals and made the invertebrates less able to withstand climate change.

For the new study, researchers at Hong Kong Baptist University collected seawater two meters below surface level from 30 locations skirting Hong Kong, as well as marine life including shrimp, fish and mussels from the city's aquaculture farms.

They were tested for seven types of UV filters used in sunscreen, leading the researchers to conclude that the chemicals accumulated in the seawater and marine life and could enter humans through the food chain and negatively affect their health.

To explore the potential risks further, the researchers populated a laboratory aquarium contaminated with the three UV filters with zebrafish, and fed the creatures contaminated brine shrimp for 47 days.

At the end of that portion of the study, the zebrafish were unharmed, but the 24-hour mortality rate of their embryos spiked from 10 percent of almost 60 percent. Simultaneously, the rate of hatching every 72 hours plummeted from 80 percent to less than 30 percent. What's more, a number of embryos were abnormal or malformed.

The authors of the study did not immediately respond to a request for comment. Dr. Kelvin Leung, a coauthor who specializes in water quality and environmental contaminants at Hong Kong Baptist University, explained in a statement: "Since more than 70 percent of the genetic structure of zebrafish resembles that of humans, the effect of these contaminants passing along the food chain to humans and the long-term impact on human fertility cannot be neglected."

Dr. Leung demanded that those chemicals be better regulated and suggested that manufacturers switch to mineral UV filters such as zinc oxide and titanium oxide.