

A drop of sunscreen can be fatal to coral reefs: study

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WASHINGTON — The sunscreen that snorkellers, beachgoers and children romping in the waves lather on for protection is killing coral and reefs around the globe. And a new study finds that a single drop in a small area is all it takes for the chemicals in the lotion to mount an attack.



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Researchers have found an ingredient in many sunscreens, oxybenzone, breaks coral reefs down, robs them of nutrients and turns them white.

The study, released Tuesday, was conducted in the U.S. Virgin Islands and Hawaii several years after a chance encounter between a group of researchers on one of the Caribbean beaches, Trunk Bay, and a vendor waiting for the day's invasion of tourists. Just wait to see what they'd leave behind, he told the scientists — "a long oil slick." His comment sparked the idea for the research.

Not only did the study determine that a tiny amount of sunscreen is all it takes to begin damaging the delicate corals — the equivalent of

a drop of water in a half-dozen Olympic-sized swimming pools — it documented three different ways that the ingredient oxybenzone breaks the coral down, robbing it of life-giving nutrients and turning it ghostly white.

Yet beach crowds aren't the only people who add to the demise of the coral reefs found just off shore. Athletes who slather sunscreen on before a run, mothers who coat their children before outdoor play and people trying to catch some rays in the park all come home and wash it off.

Cities such as Ocean City, Md., and Fort Lauderdale, Fla., have built sewer outfalls that jettison tainted waste water away from public beaches, sending personal care products with a cocktail of chemicals into the ocean. On top of that, sewer overflows during heavy rains spew millions of tonnes of waste mixed with stormwater into rivers and streams. Research for the new study was conducted only on the two islands. But across the world each year, up to 12,600 tonnes of sunscreen lotions are discharged into coral reef, and much of it "contains between one and 10 per cent oxybenzone," the authors said. They estimate that places at least 10 per cent of reefs at risk of high exposure, judging from how reefs are located in popular tourism areas.

The study was published Tuesday in the journal Archives of Environmental Contamination and Toxicology. Fauth coauthored the study with Craig Downs of the non-profit Haereticus Environmental Laboratory in Clifford, Va., and Esti Kramarsky-Winter, a researcher in the Department of Zoology at Tel Aviv University in Israel.

Their findings follow a National Oceanic and Atmospheric Administration study two weeks ago that said the world is in the midst of a third global coral bleaching event. It warned that pollution is undermining the health of coral, rendering it unable to resist bleaching or recover from the effects.

Oxybenzone is mixed in more than 3,500 sunscreen products worldwide, including popular brands such as Coppertone, Maui Beach, Baby Blanket Faces, L'Oreal Paris Hawaiian Tropic and Banana Boat.