

Chemical Burn

Skin cancer isn't the only thing sunbathers should worry about.

By Cara Binder

During the hot days of summer, most people slather on sunscreen and call it a day. However, mounting evidence indicates that the very product used for protection may be quietly causing us—and the earth—serious harm.

Sunbathers, take heed.

At stake are the oceans' coral reefs and human health.

Eighty-three percent of 912 name-brand sunscreens tested for safe ingredients and acceptable protection against UVA and UVB rays did not meet standards set by the Environmental Working Group, a non-profit agency of researchers and scientists. The organization measured the toxicity rating as well as how quickly UVA and UVB protection broke down, according to research analyst Kristan Markey.

The study found that sunscreen with a high sun protection factor, or SPF, may not be the ticket to dodge skin cancer and age gracefully. While many consumers judge the potency of sunscreen by its SPF rating, the study has shown this rating to be insufficient in judging a product's cancer protection. SPF is concerned with UVB rays and for the most part ignores UVA rays.

Of the products tested, 13 percent did not protect against UVA rays, which are responsible for skin cancer. Luckily, this confusion about sun protection may be cleared up in the near future. According to the U.S. Food and Drug Administration, a new four-star product rating system has been proposed, which would rate the strength of UVA protection in an easy-to-understand fashion.

But sun protection isn't the only concern. The study also found that toxic chemicals in sunscreen absorb into the blood and cause health issues linked to hormone problems and

allergic reactions.

"We're especially concerned with the active sunscreen ingredients because you're supposed to smear this into your body every couple of hours," Markey said.

Although testers found changes in estrogen levels linked to sunscreen usage, the more obvious damage can be found in the environment, Markey said.

Common ingredients in sunscreen are washing off swimmers and getting into water. These chemicals interfere with a specific algae living on the coral reef that provides nourishment and essential photosynthesis in the reefs, according to a January 2008 study conducted by Environmental Health Perspectives, a research journal. Without this algae, the reefs are dying. According to Markey, the beaches of California and Hawaii are most plagued with this problem.

Consumers can avoid potentially toxic sunscreen by avoiding brands that use

ingredients such as benzophenone-3, homosalate, 4-methyl-benzylidene camphor, octyl-methoxycinnamate, octyl-dimethyl-PABA, and butyl-methoxydibenzoylmethane, which have been shown to cause problems with estrogenic changes and reef bleaching.

The Environmental Working Group also recommends safe-to-use brands at cosmeticsdatabase.com. Topping the list are Badger, SPF 30; Keys Soap Solar RX Therapeutic Sunblock, SPF 30; and ColoreScience Sunforgettable Rock and Roller Ball, SPF 30.

Of course you can always just stay out of the sun. Switch a day hike to the morning to get out of the sun, lie under a tree, or claim the patio table with an umbrella. The earth (and your skin) will thank you. 🌍

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Sunscreen Smokescreen
Don't get burned by these misleading claims.

Very High SPF
SPF 50 is only 1.3 percent more protective from UVB rays than SPF 30. Apply sunscreen generously rather than opt for the high numbers.

Chemical Free
Sunscreens with zinc oxide and/or titanium dioxide will often print this, even though both are naturally-occurring chemicals. Look for them before buying.

Mild as Water
If a sunscreen claims to be as mild as water, but also warns you against getting it in your eyes, it's simply not true. Keep shopping.

Blocks All Harmful Rays
No sunscreen can block all rays. Even the strongest sunscreen can't keep out all UVA radiation. This claims it can block out all light, which is impossible.

PABA Free
Virtually all sunscreens contain no PABA. It became unpopular thanks to allergies and sensitive skin. Padimate O, a derivative, is still a commonly found toxin.

Waterproof
This claim also holds no water. Some sunscreens are sweat-resistant, but none are truly waterproof. Also beware of sweat-proof, sand-proof and rub-proof.

Source: Environmental Working Group
Graphic by Wes Huling