El Deana's Custom Essentials

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Member, Associated Bodywork & Massage Professionals

The Right Sunscreen

Cut through the hype and learn what works

Jason Barbaria

According to the American Cancer Society, more than 2 million people are diagnosed with skin cancer in the United States each year. There are more than 2,000 over-the-counter sunscreen formulas on the market today. How can you tell which sunscreens are the safest, most effective, and represent the best value for your money? In most cases, the answer comes down to the difference between the two types of filtering ingredients.

Chemical or Physical?

The UV radiation in sunlight consists of UV-A, UV-B, and UV-C rays. UV-A and UV-B are both responsible for photoaging, skin cancer, sunburn,

- -Work by absorbing UV radiation. -Require application 30 minutes before sun exposure.
- -Provide partial protection from UV spectrum.
- -May irritate the skin and eyes.
- -Not regulated for safety by the US Food and Drug Administration (FDA); some may even be carcinogenic.
- -Not photostable (exposure to sunlight degrades effectiveness).

-Avobenzone is the most commonly used chemical filter ingredient.

PHYSICAL UV FILTERS

-Work by reflecting UV radiation. -Start protecting immediately upon use. -Provide full broad-spectrum protection.



Protection from harmful UV rays can do wonders for your skin.

tanning, and wrinkling. UV-C is not a factor in skin health, as it is absorbed by the Earth's atmosphere and does not reach us in significant amounts. Broad-spectrum sunscreen protects against both UV-A and UV-B. This protection can work in one of two ways: chemical or physical.

CHEMICAL UV FILTERS

-Non-irritating to skin and eyes.

-Safe, as particles do not penetrate the skin.

-Highly photostable (exposure to sunlight does not change effectiveness).

Zinc oxide and titanium dioxide are the most commonly used physical filter

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Good habits are as addictive as bad habits, and a lot more rewarding. -Harvey Mackay

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ingredients. Clothing and shade structures also count as physical filters.

How Stable Is It?

One of the most important factors in the effectiveness of a sunscreen formula is also one of the least known to the general public. Photostability is an ingredient's ability to remain effective after exposure to sunlight. Many people are aware that this is an issue for numerous skin care ingredients, but may be surprised to learn that some active ingredients in sunscreen--a product whose sole purpose involves being exposed to sunlight--are not photostable. In addition, the FDA's new rules do not require sunscreen be ingredients to tested for photostability. Yet, many consumers expect that their sunscreen will protect them for longer than one hour.

Physical filters such as zinc oxide and dioxide are photostable. titanium have shown that Studies these ingredients suffer no degradation after more than two hours of sun exposure. However, the chemical filter avobenzone is not at all photostable, and degrades almost completely in less than one hour. Even worse, avobenzone also degrades on contact with other UV filters such as zinc oxide or titanium dioxide, and with metal ions such as iron oxide, which is commonly found in makeup. This goes a long way toward explaining why many consumers experience sunburn even after applying sunscreen as directed.

Health Concerns

Effectiveness is not the only thing to consider in any product being applied to the face or body. Significant health concerns have also been raised about many sunscreen ingredients. Here are some issues to consider.

Avobenzone has been found to generate free radicals beyond acceptable safety levels after sitting on the skin for just one hour, and children and pregnant women have been advised not to use products containing it.

Octocrylene, which is known to act as an endocrine disrupter, is used in many sunscreens as a stabilizer. It can also cause skin irritation. According to the Archives of Dermatology, "Octocrylene appears to be a strong allergen leading to contact dermatitis in children and mostly photoallergic contact dermatitis in adults." Chemical UV filters can also have harmful effects on the environment. Octocrylene does not seem to be effectively contained in wastewater treatment plants, and studies in Switzerland have indicated that it accumulates in fish. Oxybenzone, a chemical UV-B filter often used in combination with avobenzone, has been found to negatively impact reef ecosystems and biodiversity.

Physical UV filters, in contrast, have an excellent safety profile. The FDA has long considered zinc oxide to be a safe ingredient for both external use and as a food additive, even in infant formula.

Considering all these factors, physical UV blockers represent the best choice overall. The main challenge in getting consumers to use sunscreens based on physical filters is purely cosmetic: zinc oxide and titanium dioxide tend to feel thick and greasy, and are visible on the skin, leaving a white residue. However, new advances mean there are now an increasing number of sunscreens that use these ingredients in formulations that allow for clear application.

When evaluating a sunscreen, the most important considerations should be safety and effectiveness. Carefully examine the ingredients and make use of all available information to make the best choices for yourself and your family.

Jason Barbaria is director of marketing at Dermagenics, a skin care line that includes sunscreen, cleansers, and moisturizers.



Learn what to look for to get the right sunscreen.

Be Smart About Sunscreen

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Chemical or Physical?

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- protection.
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Zinc oxide and titanium dioxide are the

most commonly used physical filter ingredients. Clothing and shade structures also count as physical filters.

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Make sure you are protected from UV rays.

The Sunshine Vitamin

Shelley Burns

In the world of skin health, we focus on ways to improve skin quality. We work to prevent acne, cellular damage, dryness, and wrinkles. It is less common to discuss how a skin-care strategy may increase risk of developing other health conditions.

Skin cancer is one example. To prevent skin cancer, we protect ourselves with sunscreen--especially during the summer months. But by using sunscreen we are blocking the absorption of vitamin D, the "sunshine" vitamin.

Vitamin D is fat soluble and contains powerful antioxidant and anticarcinogenic properties that can prevent premature aging and cellular damage. Solid research indicates that vitamin D plays a role in reducing the risk of cancer, specifically breast, colon, and prostate cancers. Vitamin D has been associated with preventing diabetes by reducing insulin sensitivity. It also improves heart health, reduces the risk of multiple sclerosis, strengthens bones, and decreases the effects of seasonal affective disorder.

Vitamin D can help resolve skin conditions like psoriasis, as it plays a role in skin cell regulation, including cell turnover and growth. Vitamin D can be effective in reducing the itching and flaking associated with this disorder. Ultraviolet B (UVB) treatments have long been used successfully in treating psoriasis because UVB produces vitamin D in the body.

Getting between 5-10 minutes of direct sun exposure daily on the arms, face, hands, and back (without sunscreen) can provide enough vitamin D to meet your daily requirements, though sun exposure does present a risk. Because it is difficult to obtain enough vitamin D through food, many prefer to use supplements. Research on the health benefits of ingesting vitamin D led experts to advise an intake of 25-50 micrograms daily.

Shelley Burns is a doctor of naturopathic medicine and campleted studies at the Canadian College of Naturopathic Medicine. She has certification in complementary and integrative medicine from Harvard University.



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