



## Sunscreen Safety Concerns....Short Review

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Sunscreen is an important part of a complete sun protection system. When used as directed, sunscreen is proven to:

- Lower your risk of skin cancers and skin precancers such as melanoma and squamous cell carcinoma.
- Help prevent premature skin aging caused by the sun, including wrinkles and age spots.

Sunscreen products are regulated as over-the-counter drugs by the U.S. Food and Drug Administration. Claims that sunscreen ingredients are toxic or a hazard to human health have not been proven.

The FDA is calling for more safety data on the following 12 ingredients: before determining whether these ingredients can be classified as GRASE

- Ingredients commonly used in the U.S.: Ensulizole, octisalate, homosalate, octocrylene, octinoxate, oxybenzone, avobenzone
- Ingredients not frequently used in the U.S.: Cinoxate, dioxybenzone, meradimate, padimate O, sulisobenzonate.

A recent study by the FDA looked at 4 sunscreen ingredients and concluded that absorption of these ingredients into the body supported the need for additional safety data. An open-label, randomized clinical trial by Matta et al published in JAMA in 2019 demonstrated that, under maximal use conditions, 4 chemical UV filters (avobenzone, oxybenzone, octocrylene, and ecamsule) were absorbed through the skin and achieved systemic levels exceeding the FDA threshold for safety testing (plasma concentration >0.05 ng/mL. However, the study noted that the data do not conclude that there are any effects on a person's health and more research would be needed before it that can be determined. Importantly, the study authors stated that individuals should continue to use sunscreen.

However, data from animal studies and preliminary human data have previously indicated possible health risks associated with some of the sunscreen ingredients evaluated in this study, in-

cluding endocrine disruption and reproductive harm. Until these safety data are available, should clinicians continue to recommend the use of chemical sunscreen? This is a pragmatic question that affects the daily regimen of many individuals and is a critical clinical question. In making an informed decision, clinicians must determine whether the magnitude of the benefit exceeds the risk of potential harm for a specific individual. Importantly, this balance may be different, depending on characteristics of the sunscreen user (e.g., for individuals with darker skin types and for children) and may depend on the frequency and duration of application (e.g., daily vs intermittent use; starting in infancy or later in life). Elevating the science of the benefits and harms of sunscreen should be a priority. The sunscreen industry must begin conducting these safety studies as recommended by the FDA. Until then, the harms of absorption of sunscreen filters will remain uncertain [1-3].

**Bibliography**

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