

Diversity Under the Sun

Suncare is important for every skin tone.
The risk of sunburn correlates with skin tone - not ethnicity.

Sunburn experiences differ across ethnicities.

An online survey of 3,597 adults who identified as White, Black, Hispanic and Asian showed sunburns occur across all ethnicities - even the darkest skin tones, but the experience is very different.¹

Those who identified as White reported "skin is hot when touching" and "color" as top signs of sunburn.

In contrast, those who identified as Black reported experiencing "peeling", painful or itchy skin.

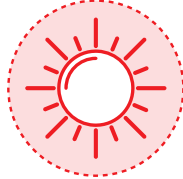


While sunburns occur less often in darker skin tones, they were reported to be more severe and painful.¹



Those who identified as Hispanic and Black with darker skin tones (FSP V-VI) had more severe and painful sunburns compared to those who identified as White.

In contrast, those who identified as Hispanic with a similar average skin tone to those who identified as Asian (FSP I-IV), reported higher sunburn incidence rates.



Despite reporting an overall average lighter skin tone, those who identified as Asian reported a similar sunburn incidence rate to those who identified as Black with lighter skin tones (FSP I-III).

Those who identify as Black and Hispanic with lighter skin tones reported high sunburn incidence rates, approaching the incidence rates for those who identified as White.

Yet engagement in sun protection is low.

An online survey of 1,742 adults who identified as White, Black, Hispanic and Asian revealed significant differences in sun protection practices among ethnicities:²



Across all ethnicities, the sun protection behavior performed most often is wearing a sleeved shirt, followed by seeking shade and then sunscreen use.



Sunscreen use among those who identified as White is higher than those who identified as Black or Hispanic. While sunscreen use among those who identified as Black is significantly lower than those who identified as Hispanic or Asian.



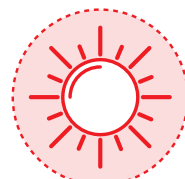
Sunscreen use tends to increase with increasing income among those who identified as White, Black or Hispanic, and higher education among those who identified as White or Black.

Knowledge of sun protection and self-perceived skin cancer risk also vary among ethnicities

A survey among minority groups in a lower socioeconomic community revealed:³



Relative to those who identified as White, Hispanics were 68% more likely to describe sunscreen as important for health, but 2.5 times less confident in their knowledge about skin cancer.



Those who identified as Asian were 70% and Hispanic 79% more likely to believe the sun's rays are the most important cause of skin cancer relative to those who identified as White.



Those who identified as Hispanic were 24 times more likely than Whites to say it is not worth getting sunburned for a tan.



Those who identified as Hispanic were 77% more likely than Whites to report concern for getting skin cancer.

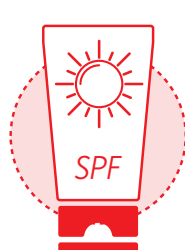
Underscoring the need for primary prevention

While having a darker skin tone offers some natural protection against the sun's rays, no one is immune to the damage caused by the sun. In addition, sun safety awareness may not translate to sun safe behavior. As UV intensity increases across the US, there is a greater need to ensure that the public practices sun safe behaviors.⁴

Understanding common motivating factors is also essential. Multiple studies have suggested that regardless of race or ethnicity, pigmentation, aging effects and avoidance of sunburn are often more compelling reasons than the prevention of skin cancer in the context of sunscreen use.⁵⁻⁸

Both UVA and UVB contribute to hyperpigmentation. Visible light can also induce hyperpigmentation in individuals with dark skin tones and contribute to the exacerbation of pigmentary disorders.⁹ Photoprotection measures including seeking shade, using photoprotective clothing and applying broad-spectrum are essential. Tinted sunscreens containing iron oxide can also help protect against both UV and VL and may be beneficial to help prevent sunburn and hyperpigmentation in darker skin tones.^{9,10}

Recommendations for the use of sunscreen¹⁰



Daily sunscreen photoprotection is beneficial for all skin phototypes. The type of sunscreen should be adapted both to skin phototype and to the extent of daily sun exposure (occupational, geographic).

Protection against UV-A and UV-B wavelengths is important for all skin tones.



For FST IV-VI, broad-spectrum sunscreen with SPF of 30 or above should be recommended.

Tinted sunscreens, which contain iron oxide pigments, protect against VL and are recommended for prevention and treatment of pigmentary disorders in FST IV-VI.



FST, Fitzpatrick skin type; SPF, sun protection factor; VL, visible light

REFERENCES

- Hartman CL, Linkner R, Kizoulis M. Relevant OTC skincare solutions for multicultural consumers. Paper presented at: Skin of Color Update 2020 Virtual Meeting; September 12-13, 2020.
- Calderin TA, Bleakley A, Jordan AB, Lazovich D, Glanz K. Correlates of sun protection behaviors in racially and ethnically diverse U.S. adults. *Prev Med Rep.* 2018;13:346-353. Published 2018 Dec 28. doi:10.1016/j.pmed.2018.12.006
- Nguyen AT, Ferguson J, Engel TN, et al. Attitudes and Behaviors Regarding Sun-Protection Practices Among Minority Groups in a Lower Socioeconomic Community. *Research Square*; 2021 DOI:10.21203/rs.3.rs-153191/v1
- National Oceanic and Atmospheric Administration. Available at: https://www.epa.gov/products/stratosphere/uv_index/uv_index.html
- Buchanan Lunsford N, Berkold J, Holman DM, Stein K, Premph A, Yerkes A. Skin cancer knowledge, awareness, beliefs and preventive behaviors among black and hispanic men and women. *Prev Med Rep.* 2018;12:203-209.
- Mahler HIM. Reasons for using and failing to use sunscreen: comparison among whites, hispanics, and Asian/Pacific Islanders in Southern California. *JAMA Dermatol.* 2014;150(1):90. [PubMed] [Google Scholar]
- Coups EJ, Stapleton JL, Manne SL, Medina-Forrester A, Rosenberg SA, et al. Psychosocial correlates of sun protection behaviors among U.S. Hispanic adults. *J Behav Med.* 2014;37(6):1082-1090.
- Mahler HIM. Reasons for Using and Failing to Use Sunscreen: Comparison Among Whites, Hispanics, and Asian/Pacific Islanders in Southern California. *JAMA Dermatol.* 2014;150(1):90-91. doi:10.1001/jamadermatol.2013.4992
- Rigel DS, Taylor SC, Lim HW, Alexis AF, Armstrong AW, Chiesa Fuxench ZC, Draelos ZD, Hamzavi IH. Photoprotection for skin of all color: Consensus and clinical guidance from an expert panel. *J Am Acad Dermatol.* 2022 Mar;86(3S):S1-S8. doi:10.1016/j.jaad.2021.12.019. Epub 2021 Dec 20. PMID: 34942296.
- Taylor SC, Alexis AF, Armstrong AW, Chiesa Fuxench ZC, Lim HW. Misconceptions of photoprotection in skin of color. *J Am Acad Dermatol.* 2022 Mar;86(3S):S9-S17. doi:10.1016/j.jaad.2021.12.020. Epub 2021 Dec 21. PMID: 34942293.