

Dermatologist Practical Guide to Encouraging Photoprotection in Skin of Color Patients

Nkemjika Ugonabo MD MPH,^a Rachael A. Ward MD MPH,^b DiAnne S. Davis MD,^c Anne Chapas MD^a

^aUnionDerm, New York, NY

^bUniversity of Washington Division of Dermatology, Seattle, WA

^cDallas, TX

INTRODUCTION

Patients with skin of color (SOC) are at risk for skin cancers and photoaging and have a unique predisposition to pigmentary disorders that are exacerbated by ultraviolet light exposure. Sun protection with a Sun Protection Factor (SPF) > 15 sunscreen has been shown to not only decrease the incidence of melanoma and non-melanoma skin cancers, but also improve and prevent the exacerbation of certain ultraviolet (UV)-sensitive conditions, such as post-inflammatory hyperpigmentation (PIH), melasma, and Lichen Planus Pigmentosus (LPP).¹ Despite this, the use of sunscreen among SOC patients have been shown to be inadequate, with barriers such as a poor blend with some skin complexions and lack of awareness being attributed as its drivers. Recent studies have also highlighted issues related to cultural and communication barriers that affect the way dermatologists relate to their skin of color patients.² The purpose of this article is to provide practical tips to dermatologists interested in improving sunscreen adherence in their SOC patient population.

Tip 1: Explore the reasons why your SOC patient does not currently wear sunscreen to better target your recommendations. Explicitly dispel the myth that SOC patients do not need sunscreen.

Malignant melanoma and keratinocyte carcinomas are the most common malignancy in the US, accounting for 40% of neoplasms in Whites.¹ The incidence of skin cancer is significantly lower in people of color when compared to Whites, contributing to the myth that SOC patients do not need SPF sunscreen. However, there is a considerably increased risk of morbidity and mortality in skin of color patients compared to Whites with skin cancer, which can be attributed to biologic and socioeconomic differences that are still being studied.¹ Additionally, in a study evaluating the correlations between melanin content and the degree of UVA- and UVB-induced DNA damage in normal appearing skin in various ethnic groups, it was found that although DNA damage is most severe in lighter skin, even low exposure to UV radiation induced appreciable DNA damage in all skin types.³ This should be emphasized to patients to dispel the misconception that SOC is immune to UV-induced DNA damage.

Tip 2: Highlight how poor sunscreen adherence may be relevant to their current dermatology visit (eg, worsening pigmentary changes in PIH and melasma).

Despite increased photoprotection provided by darker skin, it should be mentioned to patients that individuals with skin of color are more susceptible to developing certain pigmentary disorders, such as PIH, melasma, and LPP. Acne and dyschromia were previously shown to be the top two reasons African-Americans visit dermatology offices.⁴ Pigmentary disorders are worsened by ultraviolet exposure. These conditions can be cosmetically disfiguring, impacting one's quality of life and self-esteem; therefore, photoprotective methods such as daily sunscreen use, with SPF of at least 30, are essential to halt the worsening of these conditions.

Consider other common skin conditions and how they may impact sunscreen use and adherence. Patients with atopic dermatitis may experience photosensitivity or aggravation when exposed to sun, which can be improved with sunscreen use.⁵ Given drier skin, these patients may benefit from more moisturizing sunscreens or moisturizers with SPF. These patients may also have more sensitive skin and should avoid oxybenzone containing products to avoid potential allergic contact dermatitis. In patients with oily or acne-prone skin, recommend the patient to cleanse the skin prior to the application of sunscreen and to use less greasy formulations, mineral sunscreens with low absorption, or oil-absorbing moisturizers with SPF. It is crucial that patients with rosacea apply sunscreen daily.

Skin of color patients may also present to clinic with concerns of premature aging and photoaging, which can be moderated by regular sunscreen use. It is a common misconception that sunscreen is less crucial in skin of color patients given that there is less apparent photoaging in darker skin. However, in skin of color, both intrinsic aging and photoaging significantly impact skin function and composition despite additional photoprotective properties of increased melanin.¹ Additional cutaneous manifestations of photoaging in ethnic skin include the development of solar lentigines and dermatosis papulose nigra, which may be considered unsightly to some patients.

Tip 3: Strongly consider tinted sunscreens.

Consumer studies have demonstrated that cosmetic elegance is of top importance when evaluating sunscreens.⁶ In patients with darker skin tones specifically, the white residue or cast that is left on their skin after application of many sunscreens significantly impedes regular use.⁶ These hesitations can significantly deter patients from regular sunscreen use and should be specifically addressed with patients. Newer formulations of tinted sunscreens have been developed to accommodate a richer variety of skin tones, with different shades available. These options can help skin of color patients with challenges related to poor blending of sunscreens with their natural skin tones.

In addition to the photobiologic effects of UV radiation on the skin, visible light has now been shown to induce long-lasting pigmentation in people with darker skin types.⁷ Although broad spectrum sunscreens protect against UV radiation, they do not adequately protect against visible light, which must be visible on the skin to be protective. Tinted sunscreens provide protection against visible light by including iron oxides and pigmentary titanium dioxides. These sunscreens combine UV filters with color-based coverage. These formulations are very beneficial and should be encouraged in patients with darker skin types, especially those with pigmentary disorders. Patients with melasma, LPP, or PIH frequently complain of worsening disease with sun exposure despite regular sunscreen use.⁷ Additionally, cutaneous porphyrias, solar urticaria, and chronic actinic dermatitis are all photodermatoses with active spectrums in the visible light range.

Tip 4: Consider sunscreen options that extend beyond over the counter products. Bring a variety of sunscreens into your office that patients may test. We recommend having a test tube in a room where patients can easily apply to the skin. Additional samples can also be provided to patients in small plastic containers that may be taken home. Notably, many retailers provide small samples for patients to try if their product is carried in the office. If not, inform patients of where they can purchase whichever sunscreen they prefer. A pre-created handout may be helpful here to save time for busy offices.

In a recent study, it was shown that surveyed dermatologists from multiple tertiary care centers in Boston highly value cosmetic elegance of sunscreen for personal use but viewed cosmetic elegance as the least important factor when making recommendations for patient use.⁶ This may indicate that perhaps dermatology providers underestimate the importance of cosmetic elegance to patients. Cosmetic elegance can certainly be found in many over the counter products but can also be found in products that extend beyond over the counter. Additionally, a more diverse selection of product options

that are presented to SOC patients may present the chance to identify a product that fits their personal criteria for good sunscreen that will encourage daily use and at a cost that is acceptable to the patient. A discussion of challenges that come with different types of sunscreens in addition to a wide array of products that may address those challenges may be concordant with increased patient satisfaction.

Dermatologists should be diligent about trying samples of different types of sunscreens to gain exposure and knowledge as to the best products that may be more suitable for SOC patients. When providing samples for patients to try and/or creating a pre-created handout for patients, it is important that the physician incorporate products that address the diverse and specific needs of many SOC patients, including products that contain iron oxides and physical sunscreens with cosmetic elegance when applied to darker skin.

Tip 5: Follow up with the patient at the next visit. Devote time to follow up on sunscreen use. Provide/encourage trying a different sample if only one was tried previously.

It is prudent that dermatologists understand and empathize with the frustrations that patients with darker skin types may experience when trying to find the right sunscreen on the market for their skin types. This is especially given the fact that traditionally, sunscreens have not been produced to target this particular patient population. In addition to encouraging patients to continue trying new sunscreens until the right fit is found, we also recommend monitoring progression and improvement of sun-induced photodermatoses and PIH to encourage continued use.

DISCLOSURES

The authors have no relevant disclosures to declare.

REFERENCES

1. Agbai ON, Buster K, Sanchez M, et al. Skin cancer and photoprotection in people of color: a review and recommendations for physicians and the public. *J Am Acad Dermatol.* 2014;70(4):748-762.
2. Adotama P, Mohammedu Z, Sicco KL. Choosing the right sunscreen in communities of color. *J Drugs Dermatol.* 2021;20(7):790-791.
3. Tadokoro T, Kobayashi N, Zmudzka BZ, et al. UV-induced DNA damage and melanin content in human skin differing in racial/ethnic origin. *FASEB J.* 2003;17(9):1177-1179.
4. Alexis AF, Sergay AB, Taylor SC. Common dermatologic disorders in skin of color: a comparative practice survey. *Cutis.* 2007;80(5):387-94.
5. Rigel DS, Taylor SC, Lim HW, et al. Photoprotection for skin of all color: Consensus and clinical guidance from an expert panel. *J Am Acad Dermatol.* 2022;86(3S):S1-S8.
6. Song H, Beckles A, Salián P, et al. Sunscreen recommendations for patients with skin of color in the popular press and in the dermatology clinic. *Int J Womens Dermatol.* 2020;7(2):165-170.
7. Lyons AB, Trullas C, Kohli I, et al. Photoprotection beyond ultraviolet radiation: A review of tinted sunscreens. *J Am Acad Dermatol.* 2021;84(5):1393-1397.

AUTHOR CORRESPONDENCE

Nkemjika Ugonabo MD MPH

E-mail:..... n.ugonabo@gmail.com