

# Debunking Dermatology Myths to Enhance Patient Care

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**T**he advent of social media has revolutionized the way patients access and consume health information. While this increased access has its merits, it also has given rise to the proliferation of medical myths, which have considerable effects on patient-physician interactions.<sup>1</sup> Myths are prevalent across all fields of health care, ranging from misconceptions about disease etiology and prevention to the efficacy and safety of treatments. This influx of misinformation can derail the clinical encounter, shifting the focus from evidence-based medicine to myth-busting.<sup>2</sup> The COVID-19 pandemic exacerbated this issue, as widespread lockdowns and social distancing measures limited access to in-person medical consultations, prompting patients to increasingly turn to online sources for health information that often were unreliable, thereby bypassing professional medical advice.<sup>3</sup> Herein, we highlight the challenges and implications of common dermatology myths and provide strategies for effectively debunking these myths to enhance patient care.

## Common Dermatology Myths

In dermatology, where visible and often distressing conditions such as acne and hair loss are common, the impact of myths on patient perceptions and treatment outcomes can be particularly profound. Patients often arrive for consultations with preconceived notions that are not grounded in scientific evidence. Common dermatologic myths include eczema and the efficacy of topical corticosteroids, the causes and treatment of hair loss, and risk factors associated with skin cancer.

**Eczema and Topical Corticosteroids**—Topical corticosteroids for eczema are safe and effective, but nonadherence due to phobias stemming from misinformation online can impede treatment.<sup>4</sup> Myths such as red skin syndrome and topical corticosteroid addiction are prevalent. Red skin syndrome refers to claims that prolonged use of topical

corticosteroids causes severe redness and burning of the skin and worsening eczema symptoms upon withdrawal. Topical corticosteroid addiction suggests that patients become dependent on corticosteroids, requiring higher doses over time to maintain efficacy. These misconceptions contribute to fear and avoidance of prescribed treatments.

Eczema myths often divert focus from its true etiology as a genetic inflammatory skin disease, suggesting instead that it is caused by leaky gut or food intolerances.<sup>4</sup> Risks such as skin thinning and stunted growth often are exaggerated on social media and other nonmedical platforms, though these adverse effects rarely are seen when topical corticosteroids are used appropriately under medical supervision. Misinformation often is linked to companies promoting unregulated consultations, tests, or supposedly natural treatments, including herbal remedies that may surreptitiously contain corticosteroids without clear labeling. This fosters distrust of US Food and Drug Administration–approved and dermatologist-prescribed treatments, as patients may cite concerns based on experiences with or claims about unapproved products.<sup>4</sup>

**Sunscreen and Skin Cancer**—In 2018, the American Academy of Dermatology prioritized skin cancer prevention due to suboptimal public adoption of photoprotection measures.<sup>5</sup> However, the proliferation of misinformation regarding sunscreen and its potential to cause skin cancer is a more pressing issue. Myths range from claims that sunscreen is ineffective to warnings that it is dangerous, with some social media influencers even suggesting that sunscreen causes skin cancer due to toxic ingredients.<sup>6</sup> Oxybenzone, typically found in chemical sunscreens, has been criticized by some advocacy groups and social media influencers as a potential hormone disruptor (ie, a chemical that could interfere with hormone production).<sup>7</sup> However, no conclusive evidence has shown that oxybenzone is harmful to humans. Consumer concerns often are based

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Alexander R. Kheshvadjian has no relevant financial disclosures to report. Dr. McMichael has received research grants, royalties, and/or consulting support from Allergan; Almirall; Arcuits; Bioniz; Cassiopea; Concert Pharmaceuticals; Covance; eResearch Technology, Inc; Galderma; Incyte; Informa Healthcare; Johnson & Johnson; Keranetics; Lilly; Merck & Co, Inc; Pfizer; Proctor & Gamble; Revian; Samumed; and UpToDate.

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Cutis. 2025 January;115(1):4-5. doi:10.12788/cutis.1151

on animal studies in which rats are fed oxybenzone, but mathematical modeling has indicated it would take 277 years of sunscreen use by humans to match the doses used in these studies.<sup>8</sup> The false association between sunscreen use and skin cancer is based on flawed studies that found higher rates of skin cancer—including melanoma—in sunscreen users compared to those who did not use sunscreen. However, those using sunscreen also were more likely to travel to sunnier climates and engage in sunbathing, and it may have been this increased sun exposure that elevated their risk for skin cancer.<sup>7</sup> It is imperative that the dermatology community counteract this type of misinformation with evidence-based advice.

**Hair Loss**—Some patients believe that hair loss is caused by wearing hats, frequent shampooing, or even stress in a way that oversimplifies complex physiological processes. Biotin, which commonly is added to supplements for hair, skin, and nails, has been linked to potential risks, such as interference with laboratory testing and false-positive or false-negative results in critical medical tests, which can lead to misdiagnosis or inappropriate treatment.<sup>9</sup> Biotin interference can result in falsely low troponin readings, which are critical in diagnosing acute myocardial infarction. Tests for other hormones such as cortisol and parathyroid hormone also are affected, potentially impacting the evaluation and management of endocrine disorders. The US Food and Drug Administration has issued warnings for patients on this topic, emphasizing the importance of informing health care providers about any biotin supplementation prior to laboratory testing. Despite its popularity, there is no substantial scientific evidence to suggest that biotin supplementation promotes hair growth in anyone other than those with deficiency, which is quite rare.<sup>9</sup>

## Myths and the Patient-Physician Relationship

The proliferation of medical myths and misinformation affects the dynamic between patients and dermatologists in several ways. Research across various medical fields has demonstrated that misinformation can substantially impact patient behavior and treatment adherence. Like many other specialists, dermatologists often spend considerable time during consultations with patients debunking myths and correcting misconceptions, which can detract from discussing more critical aspects of the patient's condition and treatment plan and lead to frustration and anxiety among patients. It also can be challenging for physicians to have these conversations without alienating patients, who may distrust medical recommendations and believe that natural or alternative treatments are superior. This can lead to noncompliance with prescribed treatments, and patients may instead opt to try unproven remedies they encounter online, ultimately resulting in poorer health outcomes.

## Strategies to Debunk Myths

By implementing the following strategies, dermatologists can combat the spread of myths, foster trust among patients, and promote adherence to evidence-based treatments:

- **Provide educational outreach.** Preemptively address myths by giving patients accurate and accessible resources. Including a dedicated section on your clinic's website with articles, frequently asked questions, videos, and links to reputable sources can be effective. Sharing patient testimonials and before-and-after photographs to demonstrate the success of evidence-based treatments also is recommended, as real-life stories can be powerful tools in dispelling myths.

- **Practice effective communication.** Involve patients in the decision-making process by discussing their treatment goals, preferences, and concerns. It is important to present all options clearly, including the potential benefits and adverse effects. Discuss the expected outcomes and timelines, and be transparent about the limitations of certain treatments—honesty helps build trust and sets realistic expectations.

- **Conduct structured consultations.** Ensure that consultations with patients follow a structured format—history, physical examination, and discussion—to help keep the focus on evidence-based practice.

- **Leverage technology.** Guide patients toward reliable digital patient education tools to empower them with accurate information. Hosting live sessions on social media platforms during which patients can ask questions and receive evidence-based answers also can be beneficial.

## Final Thoughts

In summary, the rise of medical myths poses a considerable challenge to dermatologic practice. By understanding the sources and impacts of these myths and employing strategies to dispel them, dermatologists can better navigate the complexities of modern patient interactions and ensure that care remains grounded in scientific evidence.

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