



Insights on the Intersection of Climate Change, Air Pollution, and Dermatology at the AAD 2025 Annual Meeting

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The impact of air pollution and our changing climate on dermatologic disease is a new and emerging area of research. The American Dermatological Association (ADA) recently published a policy statement highlighting the importance of recognizing and addressing the dermatologic implications of climate change.¹ At this year's American Academy of Dermatology (AAD) Annual Meeting, experts within this area discussed the latest breakthroughs and provided valuable, clinically oriented insights in a session entitled, "Skin-Environmental Interface: Dermatologic Challenges of our Changing Climate and Environment"²

A VARIEGATED THREAT

This session was directed by Eva Parker, a Co-Chair of the AAD's Expert Resource Group on Climate Change and Environmental Issues. Parker provided the first lecture within this session by giving the audience an introduction into the complex interplay between our changing climate and skin disease. In particular, she highlighted the growing evidence that climate change is affecting human health in a myriad of ways. "Basically, every organ system is impacted," Parker noted, when discussing the multifactorial threat climate change is to human health. This includes worsening asthma and allergic disease, further

burdening patients with cardiovascular disease, and finally, worsening skin diseases.

Next, David Fivenson, Fivenson Dermatology, Ann Arbor, Michigan, provided an insightful presentation on the importance of advocacy and how to get started at the local, state, and national level. Moreover, he provided tips to



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optimize one's practice to be more climate friendly. Importantly, Fivenson emphasized utilizing an online tool known as My Green Doctor (My Green Doctor Foundation, Jacksonville Beach, Florida). He noted this practice management resource provides step-by-step guidance to any practicing physician on how to make minor changes, which can have lasting, positive results on the environment.

HIDDEN CONTAMINANTS

Annika Belzer, a dermatology resident at the University of California-San Francisco, California; and Dennis Niebel, a leader in the intersection of climate change and dermatology, University Hospital Regensburg, Germany, both gave captivating talks on the accumulation of forever chemicals and microplastics in dermatologic products, respectively. Belzer provided an overview of what these forever chemicals consist of, primarily a compound known as polyfluoroalkyl substances (PFAS), and how commonplace they are in our world. Just as concerning as their ubiquitousness is the potential link Belzer provided between PFAS and dermatologic diseases, such as psoriasis and atopic dermatitis. Similarly, Niebel provided an introduction on what constitutes microplastics and their harmful impact on the environment. Of note, he emphasized that

microplastics can be present in dermatologic products as well, with unknown implications on the structure and function of the skin.

THE DEVIL IS IN THE DETAILS

The session's focus then shifted from potential contaminants in dermatologic products to reducing waste in the dermatology clinic. Divya Sharma, a dermatology resident at the University of Nebraska Medical Center, Omaha, provided a practical, engaging lecture on tips for providers to minimize production and disposal of regulated medical waste. Initially, he described what regulated medical waste is defined as. Or rather, he discussed how the definition is often variable and subject to change depending on one's state and institution. He attributed this ambiguity to the reason why many studies show excessive amounts of non-regulated waste that are often disposed of in regulated medical waste containers. Additionally, he noted that the disposal of regulated medical

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waste is more costly and more harmful to the environment than traditional municipal waste. The first tip he provided was to work with your institution and state to better understand the guidelines and definition of regulated medical waste. Of note, he provided evidence from the United States Center for Disease Control (CDC) stating that: “Just because an item has been in contact with blood, it is not necessarily regulated medical waste.” Additionally, his tips also included educating staff and team members on proper disposal of waste, performing waste audits, and optimizing the location of waste containers.

CONCLUSION

The focal points of this session included the importance of recognizing how dermatologic disease is impacted by air pollution and climate change, how finding resources and organizations to advocate for our climate is imperative as dermatologists, the importance of identifying and further researching the harmful role of contaminants in dermatologic products, and the importance of proper disposal of regulated medical waste.

References

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