

Extreme weather events have a significant negative impact on skin disease

October 20 2022



Credit: CC0 Public Domain

The skin is a large, complex organ, and it serves as the body's primary interface with the environment, playing key roles in sensory, thermoregulatory, barrier, and immunological functioning.

As floods, wildfires, and extreme heat events increase in frequency and

severity, they pose a significant threat to global dermatological health, as many [skin diseases](#) are climate sensitive. Investigators draw on an extensive review of published research to highlight the key dermatological manifestations initiated or exacerbated by these [climatic events](#) and also highlight the disproportionate impacts on marginalized and vulnerable populations. Their findings appear in *The Journal of Climate Change and Health*.

"We wanted to provide dermatologists and other practitioners with a comprehensive overview of extreme weather-related skin disease as a foundation for patient education, implementation of early treatment interventions, and improved disease outcomes," explained lead author Eva Rawlings Parker, MD, Department of Dermatology and the Center for Biomedical Ethics and Society, Vanderbilt University Medical Center, Nashville, TN, U.S..

"We were astounded by the sheer breadth of impacts that [extreme weather events](#) have on skin disease and how profoundly climate change exacerbates inequality."

In their review, Dr. Parker and her colleagues cite nearly 200 articles documenting the myriad impacts of extreme weather events on skin. Marcalee Alexander, MD, Editor-in-Chief of *The Journal of Climate Change and Health*, noted that "this information is especially timely in light of traumatic events such as Hurricane Ian, which has led to increased infections due to flood and standing water exposures."

Flooding, one of the most common natural disasters, is linked to traumatic wounds and bacterial and fungal infections of the skin. Contact dermatitis is another common consequence of flooding since flood water is often contaminated with pesticides, sewage, fertilizers, and chemicals. Exposure to wildfire smoke can trigger atopic dermatitis (eczema) in adults with no prior diagnosis, and it can trigger or

exacerbate acne.

Because the skin plays a critical role in the regulation of body temperature, the effects of extended heat waves can be severe. The inability to properly cool during high heat events can lead to heat stroke and death, for example. Many chronic inflammatory dermatoses are exacerbated by heat as well.

Infectious diseases can be seasonal, with heat and humidity increasing the risk of common cutaneous infections caused by bacterial, fungal, and viral pathogens. Less obvious, [extreme heat events](#) influence behavior. When temperatures are high, people may spend more time outdoors, increasing exposure to air pollution, UV radiation, and insects.

Dr. Parker and her colleagues observed that extreme weather events disproportionately affect marginalized and vulnerable populations and widen existing [health disparities](#). Children, [pregnant women](#), the elderly, people with mental health illness, racial/ethnic minorities, low-income individuals, and migrants are especially vulnerable to climate-related effects.

Black and Hispanic populations and lower income populations are more likely to live in areas at higher risk for flooding. These populations also have a greater incidence of skin disease and less access to care. Extreme heat is a frontline occupational hazard for manual laborers and migrant workers. Extreme weather events contribute to large-scale migration.

Skin diseases are among the most commonly reported health concerns observed in migrants. Of particular concern is the spread of communicable and infectious diseases and vector-borne viruses. People experiencing homelessness are plagued by higher rates of highly morbid, climate-sensitive skin diseases.

"This year has been marked by historic and deadly heat waves in North America, Europe, and Asia; devastating flooding in the United States, Pakistan, and Australia; drought and famine in Somalia and Madagascar; and wildfires in the Western US, Russia, Argentina, and throughout Europe. Extreme weather events are ravaging the planet, disrupting [critical infrastructure](#), severely impacting health and accentuating health disparities," said Dr. Parker.

"Clinicians, policymakers, environmental advocates and researchers across the globe should be acutely aware of the current and future disruptions that climate change and extreme weather events pose to human health."

Dr. Parker and co-authors suggest that further population-based, clinical and occupational health research is needed to better define the risk for adverse health outcomes, identify sensitive populations, focus on just and equitable strategies for resiliency and adaptation, and assess the influence of social factors on the relationship between exposure and health outcomes.

More information: Eva Rawlings Parker et al, The dermatological manifestations of extreme weather events: A comprehensive review of skin disease and vulnerability, *The Journal of Climate Change and Health* (2022). [DOI: 10.1016/j.joclim.2022.100162](https://doi.org/10.1016/j.joclim.2022.100162)

Provided by Elsevier

Citation: Extreme weather events have a significant negative impact on skin disease (2022, October 20) retrieved 27 April 2024 from <https://medicalxpress.com/news/2022-10-extreme-weather-events-significant-negative.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.