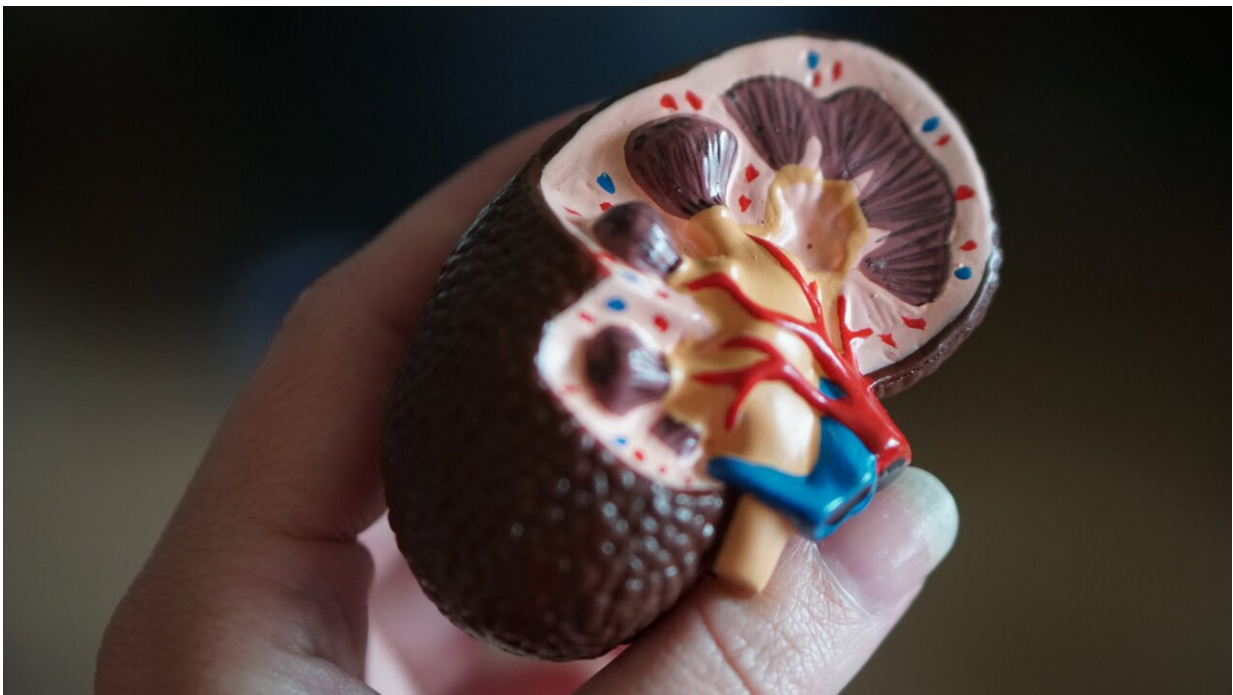


# Wildfire air pollution may increase risks of hospitalization and death among patients on dialysis

November 2 2023

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Credit: Unsplash/CC0 Public Domain

In analyses of data from western US states, increases in wildfire-related air pollution around dialysis clinics were linked to higher rates of hospitalizations and deaths among patients. The research will be presented at [ASN Kidney Week 2023](#), November 1–5.

Wildfires, which are increasing in frequency and severity, are major sources of air pollution that may disproportionately impact vulnerable populations such as individuals with [kidney failure](#) who are undergoing hemodialysis.

In the study of 79,963 patients who received in-center hemodialysis treatment at 191 Fresenius Kidney Care clinics in Washington, Oregon, and California during 2005–2018, scientists investigated the risk of all-cause hospitalization and mortality associated with wildfire exposure, using 2 metrics: wildfire smoke and wildfire-related fine [particulate matter](#) (aerodynamic diameter

Exposure to wildfire smoke plume was associated with a 3% higher risk of all-cause hospitalization the following day. The risk of death increased by 5% on the day of exposure. Exposure to wildfire-related fine particulate matter was linked to a similar increase in risk.

"This research sheds light on the health risks faced by hemodialysis patients during wildfire events," said corresponding author Hyeonjin Song, a Ph.D. student at the University of Maryland, College Park. "The most recent US National Climate Assessment suggests that wildfire seasons will continue to get longer with a corresponding increase in frequency and intensity of wildfire events in response to ongoing climate change. We need to pay attention to how such hazards impact the most vulnerable among us and enhance our preparedness activities to minimize the disease burden."

**More information:** Study: Exposure to Wildfire-Related Particulate Matter and Risk of Hospitalization and Mortality Among Hemodialysis Patients

Provided by American Society of Nephrology

Citation: Wildfire air pollution may increase risks of hospitalization and death among patients on dialysis (2023, November 2) retrieved 21 May 2024 from

<https://medicalxpress.com/news/2023-11-wildfire-air-pollution-hospitalization-death.html>

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