

Actions on climate change bring better health, study says

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Credit: AI-generated image (disclaimer)

(Phys.org) —The number of extremely hot days in eastern and midwestern U.S. cities is projected to triple by mid-century, according to a new study led by University of Wisconsin-Madison researchers and published today in the *Journal of the American Medical Association*.



Milwaukee and New York City could experience three times as many 90-degree days by 2046; Dallas could see twice as many days topping 100 degrees. The new analysis offers climate data through the lens of public health, in a study that represents a synthesis of the latest science at the intersection of climate change and human <u>health</u>.

In presenting their synthesis, the study authors seek to encourage efforts that benefit both the health of the planet and the health of people, the socalled co-benefits of reducing fossil fuel consumption and adapting to changes that are already underway.

"Climate change already is affecting global health," says Jonathan Patz, director of the UW-Madison Global Health Institute and lead author of the new study. "The good news is that clear <u>health benefits</u> are immediately available, from low-carbon strategies that today could result in cleaner air or to more active transport options that can improve physical fitness, ultimately saving lives and averting disease. "

Patz will present the article today at the Civil Society Event on Action in Climate Change and Health in New York. Acting U.S. Surgeon General Boris Lushniak; Maria Neira, World Health Organization (WHO) director for public health and the environment; Gina McCarthy, administrator of the U.S. Environmental Protection Agency; and many others will also participate in the event.

The study also includes UW-Madison associate professors Tracey Holloway and Daniel Vimont, both in the Nelson Institute for Environmental Studies and the Department of Atmospheric and Oceanic Sciences; Howard Frumkin from the University of Washington; and Andrew Haines of the London School of Hygiene and Tropical Medicine. It reviews the science behind some of the current and projected climate-related health risks.



Those include more extreme heat waves and storms, increased waterborne and infectious disease risks, more chronic health risks related to air pollution, and increased malnutrition and obesity-related risks from unhealthy, carbon-intensive diets.

"Climate change is an enormous public health challenge because it affects our health through multiple pathways," says Patz, also a professor in the Nelson Institute and the Department of Population Health Sciences at UW-Madison. "But if the risks are so interdependent, so, too, are the opportunities."

These opportunities include improvements to air quality, such as through reductions in unhealthy ozone, or smog. The study highlights a close association between the number of extremely hot days and the number of high-ozone days over the last several years in cities like Chicago, Milwaukee and Madison, Wisconsin.

This is "consistent with well-known linkages between climate and ozone in urban areas, and serves as a major pathway for the health impacts of climate change," Holloway says.

The analysis also lays out a number of science-based strategies to reduce global consumption of fossil fuels while improving health. These include designing sustainable cities, eating less meat, enacting better carbon policies (the costs of which could be more than offset by the potential health benefits they afford) and promoting active transport like walking or biking to work.

"Evidence shows there is a significant health benefit in active transport, particularly in the area of chronic disease," Patz says. "And with current disease trends in industrializing nations, burning less fossil fuel can yield potentially large dividends for public health."



The new study relied on an interdisciplinary team of experts in public health, air quality and climate science and offers opportunities across sectors.

"These findings dovetail with recent World Health Organization (WHO) studies that identified major health benefits from low carbon housing, transport and agriculture," says WHO health policy expert Carlos Dora. "Many of these benefits come from reductions in air pollution, but low carbon strategies also can increase physical activity, reduce traffic injuries and improve food security."

Patz is optimistic about recent policy developments and he says the article presents "a blueprint" for the public health benefits possible "if we really took on <u>climate change</u>."

Provided by University of Wisconsin-Madison

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