

Study: Londoners at increased risk of dying from heat stress

July 27 2022, by Eric Stann



Credit: AI-generated image ([disclaimer](#))

As much of Europe and the United States continue to deal with extreme heat, and cities like London break all-time high temperature records, an economist at the University of Missouri predicts Londoners in particular are at an increased risk of dying from heat stress. Based on current trends, J. Isaac "Zack" Miller said a heat event that raises the risk of

death as much as 9.4% in any given year will become common by the end of the century—but is relatively unlikely in next decade.

Miller, a professor and associate chair of the MU Department of Economics, said the data they analyzed in a study published in the *Journal of Econometrics* also shows that the United Kingdom cannot do much to change the trend alone. Even if the U.K. achieves its strategy of net-zero carbon emissions by 2050, it will do little to mitigate the risk unless other countries follow their lead. The strategy includes various plans to curb emissions and invest in green energy sources, including renewables like solar and wind.

"Northern European cities, London in particular, are especially vulnerable to [heat stress](#) because they don't have a lot of air conditioning," he said. "The way London, and other cities like it, escape this fate so to speak, is to become more like Chicago, New York City or Houston—all big U.S. cities with lots of air conditioning and where a sense of adaptation has already set in for [extreme heat](#) events."

The study used a predictive model to compare two scenarios—a mitigation scenario that involved the U.K. achieving its net-zero goal, and a business-as-usual scenario, or one that's void of any mitigation or adaptation strategies, Miller said.

"We found there really wasn't that much of a difference between the two scenarios with respect to the risk level of people dying from heat stress," he said.

Miller said a contributing factor to their selection of London as a location for this study is a [weather event](#) called polar amplification. This means the closer a location is to either the North Pole or South Pole, the faster that place is going to get hotter temperatures, compared to someplace farther away. Since this weather phenomenon is occurring

over the North Atlantic, Miller said London's proximity to that part of the ocean played a role in their analysis.

Miller believes this situation needs to be analyzed by multiple disciplines, and that economists like him can provide an innovative perspective on the ongoing heat wave unfolding in London. They, like other [social scientists](#), are involved in thinking about human activities.

"Even more so than [climate scientists](#), we are ones who naturally look at costs and benefits," said Miller, whose research focuses on the topics of energy and climate economics.

While the study does not address specific actions to take based on their findings, Miller believes the UK cannot act alone—it must work together with other countries.

"It has to be addressed by the majority of countries in the world, including China, India and the U.S.," he said. "Without the U.S. and China on board, it's going to be hard to do much globally."

"Beyond RCP8.5: Marginal mitigation using quasi-representative concentration pathways," was published in the *Journal of Econometrics*. William A. "Buz" Brock at MU, who also has a joint appointment at University of Wisconsin-Madison, contributed to the study.

More information: J. Isaac Miller et al, Beyond RCP8.5: Marginal mitigation using quasi-representative concentration pathways, *Journal of Econometrics* (2021). [DOI: 10.1016/j.jeconom.2021.06.007](https://doi.org/10.1016/j.jeconom.2021.06.007)

Provided by University of Missouri

Citation: Study: Londoners at increased risk of dying from heat stress (2022, July 27) retrieved 21 June 2024 from <https://phys.org/news/2022-07-londoners-dying-stress.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.