

People in hotter, poorer neighborhoods at higher risk of death during extreme heat

June 28 2016

In Vancouver, heat exposure and social vulnerability can be a lethal combination.

New research from the University of British Columbia shows a higher risk of mortality during extreme heat events in neighbourhoods that tend to get hotter and where people tend to be poorer.

"Climate change has increased the frequency and intensity of extreme hot weather events," said Sarah Henderson, senior author on the study and an assistant professor in UBC's school of population and public health and a research scientist at the BC Centre for Disease Control. "Being able to map and target the most vulnerable areas will be highly beneficial for [public health intervention](#)."

The researchers used maps of [urban heat islands](#) where the humidex would climb over 34.4 degrees Celsius, and the Vancouver Area Neighborhood Deprivation Index (VANDIX) to examine the relationship between temperature and mortality on very hot days from 1998 to 2014. The VANDIX is a [public health](#) research tool that measures material and social deprivation factors, such as education and unemployment rate.

The study showed pockets of risk throughout the region including Vancouver's Downtown Eastside but also in neighbourhoods that are not associated with extreme deprivation in Abbotsford, Surrey, New Westminster and throughout the Lower Mainland. The risk of death is higher in neighborhoods with lots of concrete and not a lot of trees and

where people were not working because they are either unemployed or retired.

"In one week in 2009, 110 people died simply because it was hot outside," said Henderson, pointing out that many of the people who died were younger seniors aged 60 to 70 and not the very elderly.

She believes that part of the problem may be that people are staying in hot homes during the day and not heading to offices or other places that might be cooler or air conditioned. More people die at home when it is extremely hot outside.

"Keeping cool is the key to staying safe in hot weather," said Henderson. "Go to places with air conditioning, wet down your shirt with cool water, and you must drink plenty of water even if you don't feel thirsty."

More information: Hung Chak Ho et al, Delineation of Spatial Variability in the Temperature-Mortality Relationship on Extremely Hot Days in Greater Vancouver, Canada, *Environmental Health Perspectives* (2016). [DOI: 10.1289/EHP224](https://doi.org/10.1289/EHP224)

Provided by University of British Columbia

Citation: People in hotter, poorer neighborhoods at higher risk of death during extreme heat (2016, June 28) retrieved 23 April 2024 from <https://medicalxpress.com/news/2016-06-people-hotter-poorer-neighborhoods-higher.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.