

Hot town, summer in the city

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Heat waves may cause increased mortality but, until now, there has been no single scientific definition for the occasional bursts of hot weather that can strike during the summer months. Researchers writing in BioMed Central's open access journal *Environmental Health* have created a definition that they use to document, for the first time, how heat wave mortality impact differs between European cities.

Daniela D'Ippoliti from the Regional Health Authority, Rome, Italy, worked with an international team of researchers to develop the new definition and then used it to compare the impact of heat waves on mortality in different European cities. She said, "Heat waves of long duration had the greatest impact on mortality, and resulted in 1.5 to 3 times higher daily mortality than others. The elderly are most at risk during heat waves, especially women. And the excess mortality is mostly in regard to respiratory, rather than cardiovascular, mortality."

The researchers' definition of a [heat wave](#) was a period of at least two days when 'Tappmax', an interaction between maximum [air temperature](#) and humidity, was among the highest monthly 10%, or when the minimum temperature was among the highest 10% with Tappmax above the average.

Speaking about future applications of this work, D'Ippoliti said, "Climate change predictions for Europe show an increase in the frequency and the intensity of heat waves, especially in central, southern and eastern Europe, and as consequence heat-related [mortality](#) will become a relevant threat even in cities usually not exposed to extreme

hot temperatures. Because the impact of heat waves differs between cities, public health interventions need to be tailored to the specific needs and should focus on the elderly, especially women living in [urban areas](#)".

More information: The impact of heat waves on mortality in 9 European cities: results from the EuroHEAT project, Daniela D'Ippoliti, Paola Michelozzi, Claudia Marino, Francesca de'Donato, Bettina Menne, Klea Katsouyanni, Ursula Kirchmayer, Antonis Analitis, Mercedes Medina-Ramon, Anna Paldy, Richard Atkinson, Sari Kovats, Luigi Bisanti, Alexandra Schneider, Agnes Lefranc, Carmen Iniguez and Carlo A Perucci, Environmental Health (in press), www.ehjournal.net/

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