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Is Climate Change Affecting Trends in Mortality?

New study in "The Lancet Planetary Health" looks at temperature-related cardiovascular disease mortality in Spain



Source: IgorBukhlin

As a consequence of the climate becoming warmer, the world population is more exposed to moderate and extreme warm temperatures and less exposed to moderate and extreme cold temperatures, which may affect health outcomes. Many studies have shown both a negative and positive long-term net effect in mortality depending on the location and magnitude of the warming. However, most of these analyses did not take into account how vulnerable individuals are to these changes.

To fill this gap, Hicham Achebak, Daniel Devolder and Joan Ballester (Centre for Demographic Studies, Autonomous University of Barcelona, and Barcelona Institute for Global Health) explored mortality and temperature data from the Spanish National Institute of Statistics and the European Climate Assessment and Dataset project, respectively. The study, published in the prestigious journal *The Lancet Planetary Health* is the first to comprehensively assess the impact of the 1°C increase in ambient temperature, observed in Spain since 1980, on mortality due to cardiovascular disease by sex and age.

Their results show an overall substantial decrease in mortality due to heat and cold over the period of study for both sexes and across all age groups: For the period 2002 to 2016, cardiovascular mortality due to heat-related factors was more than 42 per cent lower for men and more than 36 per cent lower for women than it was in the period from 1980 to 1994, while cold-related mortality was 30 per cent lower for women and around 45 per cent lower for men. This indicates that the warming of the climate has been accompanied by substantial adaptation among the population to both warm and cold temperatures in Spain. But, this should not be misunderstood: There is indeed an adaptive response to the negative consequences of climate change, but this adaptation might be more limited than the contribution of more general factors

such as socio-economic development, increased life expectancy and quality, and improved healthcare services in the country, all of which have occurred in Spain.

Achebak, H., Devolder, D. & Ballester, J. (2019). Trends in temperature-related age-specific and sex-specific mortality from cardiovascular diseases in Spain: A national time-series analysis. *The Lancet Planetary Health*, first online 21 June 2019.

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