



Trends in heat-related mortality in urban populations of the Czech Republic over 1994-2013

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The study resumes previous research that found significant effects of hot spells on increased mortality in highly urbanized regions of the Czech Republic, and declining trends in heat-related mortality in the Czech population as a whole. We analyze severe hot spells during 1994–2013 and temporal changes of their effects on total and cardiovascular mortality in several urban regions with a different overall socioeconomic level (city of Prague, city of Brno, Ostrava region, NW Bohemia). Mortality data were standardized to account for different population structure and its changes over time. The mortality baseline for each region was determined using a generalized additive model. Although declining trends in the mortality impacts of hot spells prevail in most regions in spite of rising temperature trends, the magnitude of the mortality decline was different with respect to the overall socioeconomic level and development of the regions. The results suggest that trends in heat-related mortality depend on the level of socioeconomic deprivation of population. It is essential to better understand the risks of climate change in different parts of population with respect to their adaptability.