



## **Seasonality of the links between weather and cardiovascular mortality and morbidity**

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While there is strong evidence that weather variations, particularly temperature extremes, affect cardiovascular (CVD) health in mid-latitudes, limited understanding is related to the seasonality of the links between weather and CVD mortality/morbidity. The present study examines observed seasonal and interannual fluctuations in the effects of weather conditions on variations in CVD mortality/morbidity, and how excess winter mortality (its magnitude as well as position of the peak within season) is linked to the interannual variability of weather conditions, using long-term mortality and morbidity (hospital admissions) data in the population of the Czech Republic since 1994. We also evaluate changes in the amplitude of the annual cycle of the CVD mortality and morbidity over time, and whether they are related to epidemics of acute respiratory infections and/or weather characteristics (such as the annual temperature range). The identified links are particularly useful as they may provide a source of predictability of the magnitude and timing of the winter CVD mortality/morbidity peak using seasonal climate predictions.