

# Flexible heat-mortality models for projecting climate change impact on health

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**Background and Aims:** Projecting the future impact of climatic heat on human health requires three inputs: (1) climate changes scenarios, preferably downscaled at least to city-sized geographical areas (statistical divisions); (2) dose-response functions specific to local age-specific sub-populations; (3) consideration of the potential for acclimatisation to a changed environment, whether through physiology, technology or behaviour. This talk addresses the second input: how to arrive at heat-mortality response functions that are robust enough to support reliance on both extremes of the temperature distribution.

**Methods:** Regression analysis of daily mortality data in Australia in relation to local weather, 1998-2007.

**Results:** The choice of functional form bears greatly on the balance between reduced impact of cold and increased impact of heat in projected climates to 2050 and 2100 in Australian capital cities.

**Conclusions:** Care is needed in accurately modelling both ends of the temperature-mortality response function.