

# Southeast England most at risk of rising deaths due to climate change

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Warmer summers brought on by climate change will cause more deaths in London and southeast England than the rest of the country, scientists predict.

Researchers at Imperial College London looked at temperature records and mortality figures for 2001 to 2010 to find out which districts in England and Wales experience the biggest effects from warm temperatures.

In the most vulnerable districts, in London and the southeast, the odds of dying from cardiovascular or respiratory causes increased by over 10 per cent for every 1C rise in temperature. Districts in the far north were much more resilient, seeing no increase in deaths at equivalent temperatures.

Writing in *Nature Climate Change*, the researchers say local variations in climate change vulnerability should be taken into account when assessing the risks and choosing policy responses.

Dr James Bennett, the lead author of the study from the MRC-PHE Centre for Environment and Health at Imperial College London, said: "It's well known that [warm weather](#) can increase the risk of cardiovascular and respiratory deaths, especially in elderly people. Climate change is expected to raise average temperatures and increase temperature variability, so we can expect it to have effects on mortality even in countries like the UK with a temperate climate."

Across England and Wales as a whole, a summer that is 2C warmer than average would be expected to cause around 1,550 extra deaths, the study found. Just over half would be in people aged over 85, and 62 per cent would be in women. The extra deaths would be distributed unevenly, with 95 out of 376 districts accounting for half of all deaths.

The effects of [warm temperature](#) were similar in urban and rural districts. The most vulnerable districts included deprived districts in London such as Hackney and Tower Hamlets, with the odds of dying more than doubling on very hot days like those of August 2003.

"The reasons for the uneven distribution of deaths in warm weather need to be studied," said Professor Majid Ezzati, from the School of Public Health at Imperial, who led the research. "It might be due to more vulnerable individuals being concentrated in some areas, or it might be related to differences at the community level, like quality of healthcare, that require government action.

"We might expect that people in areas that tend to be warmer would be more resilient, because they adapt by installing air conditioning for example. These results show that this isn't the case in England and Wales.

"While [climate change](#) is a global phenomenon, resilience and vulnerability to its effects are highly local. Many things can be done at the local level to reduce the impact of warm spells, like alerting the public and planning for emergency services. Detailed information about which communities are most at risk from high temperatures can help to inform these strategies."

**More information:** J.E. Bennett et al, 'Vulnerability to the mortality effects of warm temperature in England's and Wales' districts.' *Nature Climate Change* 23 March 2014 [DOI: 10.1038/NCLIMATE2123](https://doi.org/10.1038/NCLIMATE2123)

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