

Overheating in UK homes is a public health disaster waiting to happen

March 3 2017, by Judy Wing



Credit: Loughborough University

A Loughborough academic has warned the UK is facing a public health disaster if the issue of overheating in homes is not tackled.

Professor Kevin Lomas, an internationally acclaimed expert in building simulation, says the next heat wave to hit the country could have grave

consequences for the most vulnerable in our society, as the country now has a housing stock unable to keep cool in the warmer months.

New research provides clear measured evidence of overheating across England, Scotland and Northern Ireland, and outlines the health risks that inhabitants face due to heat stress experienced in their homes.

The issue is the result of new housing being heavily insulated to meet environmental targets, Government schemes which encourage owners of older properties to retrofit insulation, the creation of more high-rise properties and poor building design.

Researchers from the University's School of Civil and Building Engineering, led by Professor Lomas, collected indoor temperature data from close to 800 homes across England.

They found that many homes experience summertime temperatures that are uncomfortably warm, even in mild summers, and that temperatures are higher in tower blocks and homes occupied by the elderly.

The team has also measured temperatures on wards in four English hospitals, the results of which show that the very places that should provide a safe haven from summer heat are also prone to overheating.

The European heatwave of 2003 led to the premature deaths of around 15,000 people, and with climate change causing warmer summers and more frequent and intense heatwaves, deaths related to overheating could triple by 2040.

"Despite the major health risks associated with overheating, particularly for the old and the very young, the focus of the UK building regulations remains on keeping people warm in the winter and not cool in the summer," explains Professor Lomas. "But there needs to be a

philosophical shift in the regulations to also include building adaptation measures.

"We need the Government to listen to what the experts in academia and industry are saying – that urgent action needs to be taken to ensure the people of the UK, and in particular the most vulnerable in our society, are not left at risk from overheating."

Professor Lomas has proposed the following measures to try and combat the problem:

- Develop regulations to stop the [building](#) of homes that are highly likely to overheat in the summer
- Provide people with simple ways to regulate the temperatures in their [home](#), such as easy-to-open windows and shading
- Provide advice and guidance so people use the cooling opportunities they have at the right time in the right way. For example opening windows at night to let in cool air but closing windows to the daytime heat.

A recent special issue of the journal Building Research and Information 'Overheating in buildings: adaptation responses' was edited by Professor Lomas and Dr Stephen Porritt, also of Loughborough University. It pulls together research from several UK universities, and the work can be downloaded [here](#).

More information: Kevin J. Lomas et al. Overheating in buildings: lessons from research, *Building Research & Information* (2016). [DOI: 10.1080/09613218.2017.1256136](https://doi.org/10.1080/09613218.2017.1256136)

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