

## Heat and health inequalities

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This summer has been the [world's warmest](#), by a large margin. The UK experienced its hottest ever June and a record seven days of 30°C or above. In the words of UN Secretary General Antonio Gutierrez, we are now in the age of '[global boiling](#)'.

Climate change has impacts on health and health inequalities, directly and indirectly. A 2020 UCL Institute of Health Equity (IHE) [report](#), warned that climate change will widen health inequalities in future unless we take urgent action. Fortunately, the action we take to reduce greenhouse gasses can also promote health equity.

Extreme temperatures in either direction - below 5°C and above 25°C - is associated with the [greatest risk of mortality](#). The link between the cold and health inequalities is [well established](#), with fuel poverty and cold homes disproportionately affecting more deprived communities. Although the link between health inequalities and excessive heat is less clear, there is growing evidence and cause for concern. We know that extreme heat and heat waves are associated with an increased mortality and morbidity, and for populations less adapted to higher temperatures, [mortality risk increases](#) by between 1% and 3% per 1°C change in high temperature. In the UK, heat related deaths are increasing - causing more than [4500 deaths in 2022 alone](#).

One recent [systematic review](#) found overall that more deprived communities experience higher mortality risk in response to heat, while another [review](#) found that lower GDP cities have higher heat risk, concluding that 'in terms of length of life being shortened, the largest heat burden may fall on the poorest populations, who also have the least economic capacity to adapt'. More

[unequal cities](#) (those with a higher Gini index) experience greater heat-related mortality. The classic study on the 1995 Chicago [heatwave](#) found that the health effects of high heat were greater in poorer neighbourhoods with lower social capital. Recent evidence from the UK also suggests the unequal impact of extreme heat on mortality. One [study](#) from England and Wales found that those living in the most deprived areas had a significantly higher mortality risk. A [study from Scotland](#) found that amongst those aged 0-74, people who lived in the most deprived areas had increased heat-related mortality risk compared to those in less deprived areas. [Level of education](#), as well as relative income, is a [risk factor for heat-related mortality](#). Those working outdoors, who are more likely to be from lower income or migrant backgrounds, are [more likely to be affected](#) due to increased occupational exposure to excessive heat.

There is also growing evidence to suggest that extreme heat has unequal impacts on morbidity. For example, one recent [study](#) found that emergency hospital admissions due to extreme heat were higher in more socio-economically deprived areas of England. Those from the most deprived backgrounds are [more likely to be admitted](#) for heat-exacerbated health conditions including respiratory metabolic and infectious diseases, as well as accidents. [Extreme heat](#) and climate change also adversely affect [mental health](#), including amongst those most socioeconomically disadvantaged

Longer term, greater UV exposure is another risk, particularly for countries, for example in northern Europe, whose populations are at higher risk of negative outcomes like skin cancer. Although historically melanoma incidence in these populations tends to be higher amongst higher socio-economic groups (due to greater travel to low-latitude countries), there is strong [evidence](#) showing how people from lower-income backgrounds are more likely to have a melanoma diagnosed at a more advanced stage and have poorer survival outcomes.

As the [IHE report](#) notes, there are a host of other direct effects of climate change on health, including: the adverse impacts of increasing air pollution, pollen, and extreme weather effects like storms and floods. There are also [indirect effects](#), which are also experienced unequally. For example, the impact of climate change on the prices of food, water and energy are all likely to affect more disadvantaged populations, on both national and global levels.

People are already starting to feel the heat, but some more than others. In the UK, it was recently estimated that just half of its housing would [fail the "bedroom overheating" test](#). In lower-income countries, with less advanced and equitable health systems, the rich are much better equipped [to cope with rising temperatures](#). Globally, the painful irony is that those most impacted by climate change often [contribute to it the least](#).

### **What must be done?**

Heat-related mortality and morbidity will [only get worse](#). [Tackling climate change and health inequalities](#) requires governments and society to invest in reducing air pollution, building more energy efficient homes, promoting more sustainable and healthy food, prioritising active and safe transport, more sustainable working conditions (e.g. supporting working from home or a four-day week), and city planning (e.g. the 15-minute city).

As global temperatures rise, [summertime energy poverty](#) is a growing problem in many countries - where [only the wealthy can afford air conditioning](#). But increasing air conditioning coverage is [unlikely to significantly reduce heat-related health inequalities](#) and will serve only to increase greenhouse gas emissions.

Equity and sustainability must be at the core of housing and urban planning. Evidence from the [UK](#) and [internationally](#) shows that heat-related mortality is significantly higher in the ‘urban heat islands’ of densely-populated cities like [London](#). More urban and more [deprived communities](#) tend to have [less available greenspaces](#), which can have a [cooling effect](#). Currently, manual and casual occupations are nearly [three times as likely](#) to be without a garden, and individuals from some Black and Minority Ethnic communities are [twice as likely](#) to have minimal access to green spaces. Older persons in socially deprived communities are more vulnerable to heatwave-related mortality – but [community-based interventions designed to reduce social isolation](#) have been shown to help.

For instance, we need to continue to invest in ways to minimise air pollution, a problem disproportionately affecting the most [socioeconomically deprived](#). High pollution and high temperatures have a [synergistic effect](#) - leading to increased respiratory, circulatory and other health problems.

Investment in healthcare will also help - extreme heat-related mortality is higher in areas with lower hospital beds per capita. More equitable access to better healthcare will ultimately help across a range of outcomes, from emergency admissions to earlier diagnosis and better long-term survival of melanoma. Heat-related health education programmes and health-warnings (including emergency alerts) [need to consider issues of equity and access](#) (for example, bridging gaps in health literacy and the digital divide).

Promoting social equity will also help empower people to take action to reduce their contribution to climate change - [those in less deprived areas are more able](#) to make changes to their home or shopping habits to help tackle climate change.

At the root of change needs to be a move towards '[wellbeing economies](#)' that puts health and wellbeing, of people and planet, at the heart of progress and growth. Ultimately, reducing health inequalities and addressing climate change are mutually beneficial goals, and this record-breaking summer has been a stark reminder that the time to act on both health equity and the climate crisis is now.

