

KEY TAKEAWAYS

- Average temperatures, the frequency and intensity of heatwaves, and the number of heat stress days, have increased in Reading over the past four decades, putting increased pressure on the health of Reading's population.
- People with pre-existing conditions such as cardiovascular disease and diabetes, are particularly vulnerable to heat stress, and the number of people in Reading with these conditions has been increasing over the last decade.
- Hospital admissions due to the diseases listed above, as well as asthma, have similarly climbed over the past decade, increasing pressure on local health services.

WHAT IS THE READING COUNTDOWN?

Climate change is damaging global human health. Here in Reading, the impacts of climate change on human health are already being felt, harming livelihoods, and putting increased pressure on local public health services, the consequences of which have only been highlighted by Covid-19.

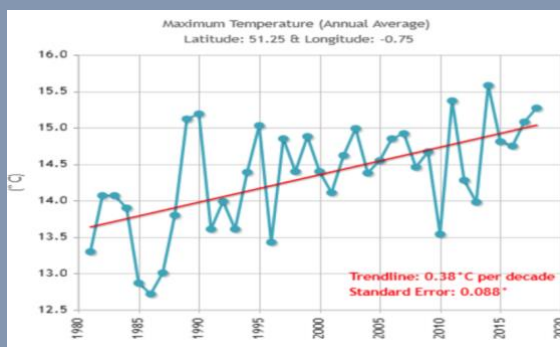
The Lancet Countdown, which tracks global indicators of health and climate, clearly demonstrates the benefits to human health from climate change mitigation. The *Reading Countdown* is the first town or city level "Countdown" with similar goals, directly inspired by the Lancet Countdown.

IMPACT OF CLIMATE CHANGE ON READING

Consistent with national and international level data, the average annual maximum temperature in Reading has been increasing steadily over the past several decades. Across England, all of the top 10 warmest years ever recorded in the country have occurred since 2002, with the second highest mean temperature since 1908 occurring in 2020. In Reading specifically, 17 of the town's 20 warmest recorded years have occurred in the past 30.

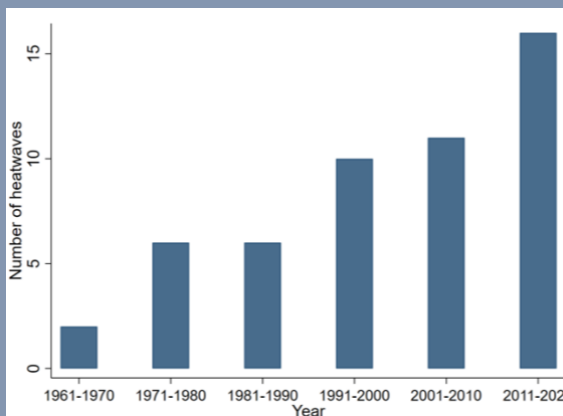
Global public health is being impacted by the rising temperatures associated with climate change, and the Town of Reading is no exception. These effects are particularly severe during heatwaves, during which time the population is exposed to an increased risk of heat related disorders (dehydration, sunstroke), diseases, and mortality.

READING MAXIMUM TEMPERATURE



Maximum temperatures trend for Reading (latitude: 51.25°N, longitude: 0.75°W).

HEATWAVES IN READING



Heatwave events, or a period of at least three consecutive days with daily maximum temperatures meeting or exceeding an established heatwave threshold (27 degrees C for Berkshire) have been steadily increasing from decade to decade in Reading since the 1960s, consistent with the remainder of the UK.

HEAT STRESS AND INCREASED RISK

Health impacts observed during heat waves are the result of *heat stress*; the body's inability to maintain its core temperature due to exposure to extreme heat. Factors influencing an individual's risk of suffering from heat stress include **age**, with mortality ratios during heatwaves rising demonstrably amongst the older population. In Reading, age is of particular importance as an indicator of local vulnerability to heat stress, as the proportion of the town's population over the age of 65 has been rising over the past decade.

At risk groups also include those suffering from:

- **Diabetes**, which significantly increases risk of hospitalisation and death during heatwaves
- **Cardiovascular diseases**, which decreases tolerance to heat
- **Chronic kidney disease** and cases of acute renal failure, which increase during heatwaves

This is of local concern, as all of the above conditions have been increasing amongst the Reading population in recent years.

RESPIRATORY DISEASES

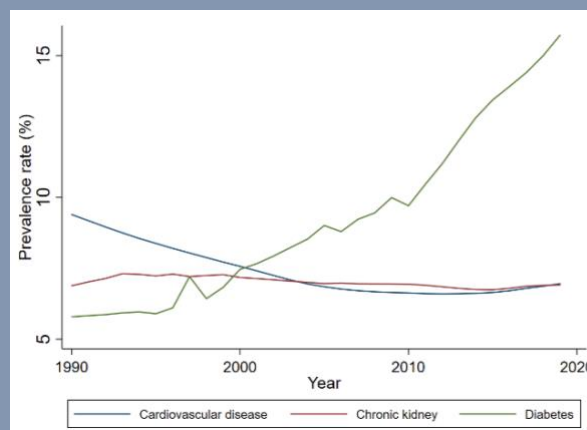
In addition to diseases which increase an individual's vulnerability to heat stress, several health issues are directly exacerbated by rising temperatures, namely respiratory conditions such as asthma and chronic obstructive pulmonary disease (COPD). The severity of Asthma and COPD can be compounded by lung damage caused by the particulate matter found in climate change fuelling carbon emissions, which are also linked to lung cancer.

In Reading, mortality rate from respiratory diseases for those under 75 (considered preventable) has started to increase, after a steady decline from 2002-2011. Since 2010, this mortality rate has also been consistently higher than the average in South East England.

PRESSURE ON OUR HEALTH SERVICES

If the prevalence of the aforementioned diseases as well as the local populations vulnerability to heatwave events continue to rise, it will likely put increased strain on the town's healthcare system and make it more difficult for Reading to improve its overall health outcomes.

DISEASES PREVALENCE



Cardiovascular disease and chronic kidney disease have risen slowly in the recent decade; however, rate of diabetes has increased notably.

HOSPITAL ADMISSIONS



Hospital admissions due to respiratory disease, COPD, and asthma have been steadily increasing over the last decade in Berkshire and Reading.

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