

Heat-related mortality and morbidity

Deaths and illnesses from heat exposure are severely underreported and vary from year to year. They were much higher in 2006 than any other year because of a prolonged heat wave.



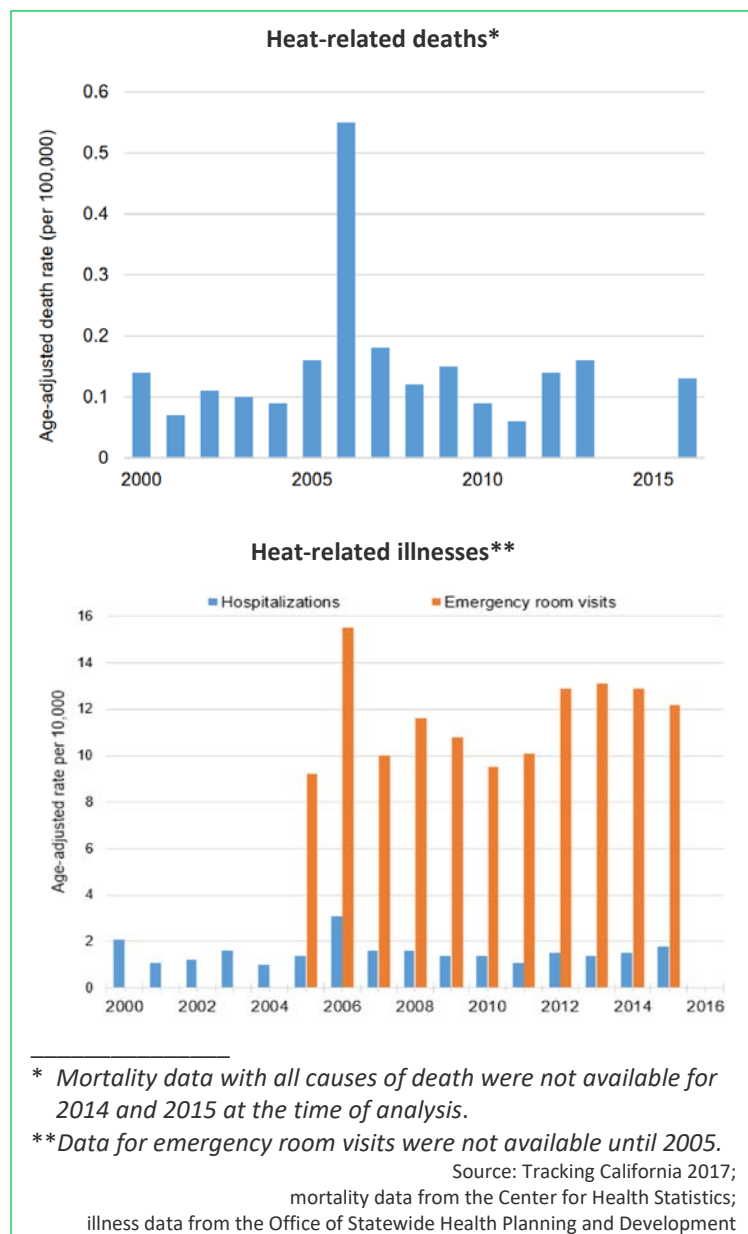
Heat causes more reported deaths per year on average in the United States than any other weather hazard, yet heat-related illnesses and deaths are generally preventable. Heat-related mortality (deaths) and morbidity (illnesses) increase during heat waves. In California, these numbers peaked in 2006, the year when the state experienced a prolonged and severe heat wave.

Heat-related illnesses encompass a broad spectrum of diseases, ranging from mild heat cramps to severe, life-threatening heat stroke, to death. Climate change is expected to lead to more frequent and extreme periods of warmer temperatures, thus posing a greater threat to public health.

What does the indicator show?

No trend is evident in either heat-related deaths or illnesses in California, both of which vary from year to year. Both increased dramatically in 2006 following a record-breaking heat-wave. That year, at least 140 deaths occurred between July 15 and August 1. About 16,000 more emergency room visits, and about 1,100 more hospitalizations than usual occurred during this period (compared to a similar time period in the summer of 2006 when there was not a heat wave). Multiple locations in California broke records for the highest number of uninterrupted days over 100°F ever recorded: 11 in Sacramento; 12 in Modesto; and 21 in Woodland Hills near Los Angeles. Deaths related to this heat wave were largely attributed to elevated nighttime temperatures.

Heat-related illnesses and deaths are often unrecognized or misclassified as another underlying cause. Because of this, the number of heat-related illnesses and deaths that are reported likely underestimate the full impact of exposure to periods of high temperatures.





Why is this indicator important?

The relationship between high temperatures and deaths has long been documented. More recent analyses have found that the risk of death increases with warming average temperatures, not just heat waves.

Heat contributes to deaths among people with certain health conditions such as heart or lung disease. It has also been linked to increased hospital visits for heart attacks, strokes, lung disease, dehydration, diabetes and acute kidney failure. In addition, warming temperatures have been associated with increased mental health-related emergency room visits, including for violence and self-harm, and with premature births and stillbirths. While anyone can suffer from heat-related illness, certain groups are at higher risk, such as the elderly, young children, people with pre-existing health conditions, and the economically disadvantaged. Those engaged in vigorous physical activity outdoors, such as workers in construction, firefighting, and agriculture, are also at greater risk.

Tracking heat-related illnesses and deaths provides critical information for better understanding the factors that affect vulnerability to the effects of heat. This helps inform actions to prevent harmful exposures. Many state and local strategies are already in place, including heat wave early warning and surveillance systems, accessible cooling centers, public education campaigns on preventing heat-related illness, and worker heat-safety regulations. Communities with such measures will be better able to protect against heat-related illnesses and deaths as California continues to warm.



For more information about this and other climate change indicators, visit:
<https://oehha.ca.gov/climate-change/report/2018-report-indicators-climate-change-california>

