

# Climate Change and Health: The Effects of Heat

Climate change is real and is caused primarily by human activity, especially burning fossil fuels. As ocean and air temperatures rise, the delicate balance of climate, weather events and life is disrupted. Human health suffers as a result. What is truly needed for health is a cool, stable climate.

## Climate Change and Heat Waves

A heat wave is an extreme weather event when the temperature for a given region is unusually warmer than average, for a period lasting from a few days to months.

It is difficult to directly attribute a specific heat wave to climate change. However, scientists see a strong correlation.

- For the 21<sup>st</sup> century, the Intergovernmental Panel on Climate Change (IPCC) projects with 80% confidence that extreme heat events will intensify in magnitude and duration over portions of the U.S. where they already occur.
- The IPCC is also “virtually certain” there will be a decrease in the frequency and magnitude of cold days/nights and increase in frequency and magnitude of unusually warm days/nights on a global scale.
- Scientists estimate that human influence on climate change more than doubled the probability of the European heat wave of 2003.



## Heat and Health

Extreme heat can cause a range of ailments:

- Milder effects: rashes, cramps, heat exhaustion.
- Severe effects: Heat stroke. This is a severe illness. Body temperature rises to 105°F or more and can be accompanied by delirium, convulsions, coma and even death.

The risk of death from heat waves is higher for people with pre-existing heart conditions and respiratory illnesses.

Hospitalizations for stroke and cardiovascular disease also increase as temperature rises.

### How serious is the threat?

Serious! 750 people died as a result of heat-related illnesses in the 1995 Chicago heat wave.

During the European heat wave in 2003, an estimated 70,000 people died from stroke, heart attack, lung disease, and other causes exacerbated by heat.

## Heat and Mental Health

- Long-lasting bouts of heat exacerbate stress and symptoms of mental illness.
- Heat waves have been shown to increase violent behavior, suicide, and homicide.

## How to Protect Yourself

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- Stay inside air conditioned homes or shelters during heat waves
- Avoid physical exertion outdoors on hot days, especially if you have asthma
- Stay hydrated
- Know the symptoms of heat exhaustion and heat stroke and seek medical attention:

### Heat Exhaustion:

- Headache
- Dizziness
- Dark colored urine
- Rapid heartbeat
- Profuse sweating
- Confusion
- Muscle cramps
- Nausea
- Fainting

### Heat Stroke (most of the above plus):

- Lack of sweat
- Red, hot, dry skin
- Fainting and unconsciousness

## Who is most vulnerable?

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- The elderly, who have diminished ability to regulate body temperature and are more likely to suffer from poor health
- Babies and young children
- Pregnant and nursing mothers
- Those chronically ill with pre-existing cardiovascular, respiratory, neurologic, and psychiatric conditions, or obesity.
- Outdoor workers
- Athletes, and children who are active outdoors.
- People who abuse drugs and alcohol
- People without access to air conditioning including the poor and those in areas previously not warm enough to warrant air conditioning.
- Urban populations. City environments hold more heat and routinely experience temperatures 2-10 degrees Fahrenheit warmer than surrounding areas.

## Take action to reduce climate change

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To protect our world from the health effects of climate change, we must take steps that restore the climate. This includes switching from fossil fuels to safe clean renewable energy sources like sun, water and wind. Planning future growth to ensure efficient, convenient mass transit. Where conditions permit, walking and bicycling more. We'll all live better on a cool, green, healthy planet!

To learn more about what you can do, see PSR's website: [www.psr.org/environment-and-health](http://www.psr.org/environment-and-health)



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1111 14<sup>th</sup> St, NW, Suite 700 • Washington, DC 20005  
Telephone: (202) 667-4260 • Fax: (202) 667-4201 • [www.psr.org](http://www.psr.org)