



# Heat waves and hot weather

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## Key facts

- A heatwave is an extended period of unusually high temperatures. Heatwaves typically have a noticeable start and end and tend to particularly affect urban areas.
- Heatwaves and hot weather events are exacerbated by climate change and are expected to become more frequent and more severe in the future. Hotter and drier conditions are drying out ecosystems and therefore increasing the risk of wildfires. The risk of wildfires increases where there is drought and during high winds. In turn, wildfires affect weather and the climate by releasing large quantities of carbon dioxide, carbon monoxide and fine particulate matter into the atmosphere. Resulting air pollution can cause respiratory and cardiovascular problems.
- The risk of extreme heat is often seasonal. Nevertheless, preparing for heatwaves should take place throughout the year.

## Main health impacts

Health concern	Risk factors
<p><b>Heat-related conditions:</b></p> <ul style="list-style-type: none"><li>• <b>Dehydration:</b> It happens when a person's body does not have enough water and other fluids to carry out normal functions. It results in feeling thirsty, dizzy, tired, having a dry mouth and eyes, and in a change in urination habits (less volume, darker colour).</li><li>• <b>Heat cramps:</b> Painful spasms of large muscle groups due to heat.</li><li>• <b>Heat exhaustion:</b> Inability to continue activities due to exhaustion and weakness, nausea, sweat and thirst.</li><li>• <b>Heatstroke:</b> Happens when the core body temperature rises to 40°C (104F) or above. Symptoms may include disorientation, convulsions, confusion, absence of sweat despite feeling very hot. It is a medical emergency.</li></ul>	<ul style="list-style-type: none"><li>• Doing manual labour and/or working outdoors increase the risk of illness from heat.</li><li>• Adults over 65, infants, pregnant and lactating women and people with chronic health conditions are at higher risk due to less efficient body thermoregulation (the ability to maintain a stable temperature) and faster dehydration in high temperatures.</li><li>• Living in urban areas increase the risk because of faster temperature rises in urban settings.</li><li>• People experiencing homelessness are at higher risk due to extended exposure to weather conditions.</li><li>• Socio-economically disadvantaged groups may have less access to coping strategies; e.g., fewer possibilities to stay in cooler air-conditioned or shaded places, or to postpone work to a cooler period of the day or even after the end of a heatwave.</li></ul>

Worsening of pre-existing chronic cardiovascular and respiratory diseases	<ul style="list-style-type: none"> <li>• The main causes of illness and death during a heatwave are pre-existing respiratory and heart-related diseases.</li> </ul>
Burns and injuries at the workplace	<ul style="list-style-type: none"> <li>• Risks at the workplace include unintentional injuries and accidents at work, as high temperatures can affect cognition, therefore increasing the risk of mistakes.</li> </ul>
Increased transmission of water-, food- and vector-borne, and zoonotic diseases	<ul style="list-style-type: none"> <li>• In hot weather conditions where there is water scarcity, limited potable water may lead to the use of contaminated water for drinking and cooking.</li> <li>• Food safety is also compromised by hot weather as foodborne bacteria (e.g. salmonella) grows in hot temperatures and fast perishing food which cannot be kept cold can lead to food poisoning and diarrhoeal diseases.</li> <li>• Hot weather is one contributor to the increase of Harmful Algal Blooms (HAB), a risk factor for food and waterborne diseases. The algae produce biotoxins accumulated by shellfish and fish. Consumption of contaminated seafood leads to people experiencing nausea and diarrhoea. Cooking or processing cannot destroy these biotoxins.</li> <li>• The risk of vector-borne and zoonotic diseases increases where there is a rise in hosts attracted by perishing food (e.g. rats).</li> </ul>
Burns and respiratory diseases during wildfires	<ul style="list-style-type: none"> <li>• Burns, external injuries and internal burns from the inhalation of smoke are a risk, particularly for firefighters and emergency response workers.</li> <li>• Smoke and ashes can also cause eye, nose, throat and lung irritation; coughing and wheezing; lung diseases such as bronchitis or exacerbation of asthma; as well as exacerbation of cardiovascular diseases like heart failure.</li> <li>• Wildfires release large amounts of mercury into the air, which can lead to impairment of speech, hearing and walking, vision problems and muscle weakness.</li> </ul>

## Disease tools that may be relevant

- > [Acute diarrhoeal disease](#)
- > [Hepatitis A](#)
- > [Hepatitis E](#)
- > [Typhoid fever](#)
- > [Measles](#)
- > [Meningococcal meningitis](#)
- > [Polio](#)
- > [Acute respiratory infections \(ARIs\)](#)