



Cold waves and cold weather

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Key facts

A cold wave is marked by a drop of average temperature well below the seasonal norms of a region. Before or during a cold wave, there may be other significant winter weather events, such as blizzards or hailstorms. They can have a significant impact on people's health, and on crops, livestock, provision of public services and power supply. Climate change is related to a global increase in temperatures and extreme weather events, including cold waves and other extreme cold weather events.

Main health impacts

Health concern	Risk factors
<p>Cold-related conditions: hypothermia, frostbites, chilblains, trench foot.</p> <p>Hypothermia: Is defined when body temperature falls below 35°C (95F), which most commonly is caused by cold weather or cold-water immersion.</p> <p>Frostbite: Injury caused by freezing of the skin and underlying tissues, resulting in a loss of feeling and colour in the affected areas.</p> <p>Chilblain: Painful inflammation of small blood vessels in the skin due to repeated exposure to cold. It can cause itching, red patches, swelling and blistering, mostly on hands and feet.</p> <p>Trench foot: Injury of the feet resulting from prolonged exposure to wet and cold conditions.</p>	<ul style="list-style-type: none">• Workers in some occupations, such as agriculture, fishing and construction, may endure greater cold exposure.• Certain behaviours, such as alcohol abuse can increase the risk.• People living in precarious types of shelter or people experiencing homelessness are at higher risk.• People that practice winter sports, infants (below one year) and seniors (above 65 years) are also at high risk of frostbite and hypothermia when not wearing appropriate clothing.
Worsening of pre-existing chronic cardiovascular and respiratory diseases	<ul style="list-style-type: none">• Some chronic respiratory and cardiovascular diseases are worsened by cold weather.
Injuries and trauma.	<ul style="list-style-type: none">• Icy roads can lead to increased vehicle accidents.

Carbon monoxide poisoning: frequent symptoms are headache and nausea, vomiting, confusion, up to serious medical problems and even death	<ul style="list-style-type: none"> • The use of outdoor heating/cooking devices to get some extra warmth indoors can lead to dangerous and potentially deadly carbon monoxide (CO) poisoning.
Increased transmission of respiratory illnesses, skin diseases and vaccine-preventable diseases	<ul style="list-style-type: none"> • Cold waves can lead to disruption of basic health services provision. • Some studies have shown that cold weather is associated with greater SARS-CoV-2 transmission. Similarly, influenza outbreaks have peaks coinciding with cold and dry weather patterns.
Occupational risks: work-related accidents or injuries	<ul style="list-style-type: none"> • A higher risk of injury on cold days may happen among fishing, transport, electricity, gas and water distribution workers.
Mental health consequences	<ul style="list-style-type: none"> • Extreme weather events and climate change may cause high levels of anxiety, and cold weather events may lead to mood disorders.

Disease tools that may be relevant

[_> Acute diarrhoea](#)

[_> Hepatitis A](#)

[_> Hepatitis E](#)

[_> Typhoid fever](#)

[_> Measles](#)

[_> Meningococcal meningitis](#)

[_> Poliomyelitis \(polio\)](#)

[_> Acute respiratory infections \(ARIs\)](#)

[_> COVID-19](#)