



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 and companion animals, 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 |
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| <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. |

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| 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