



## Heat-related Illness

### What is heat-related illness?

Excessive heat can be harmful to people's health. Heat-related illness is the result of your body gaining heat faster than it can cool itself down. Heat-related illnesses can almost always be prevented.

Heat can lead to weakness, disorientation, exhaustion, and in severe cases, heat stroke also known as sunstroke. Heat stroke is a life-threatening medical emergency. The effects of heat are made worse if you do not drink enough fluids to stay hydrated.

Heat and dehydration can also worsen heart and lung conditions. Infants and older people are at higher risk.

### What causes heat-related illness?

Heat-related illness occurs when your body can not eliminate heat from hot outdoor or indoor environments or from intense physical activity. This may occur in extremely hot environments or in cases of overexposure to heat. Normal body temperatures are exceeded and can lead to body system shutdowns.

Being in a hot environment can make your body temperature go up. Examples of such environments include the inside of a car or a tent on a hot day, the upper floors of a house on a sunny day, a hot tub or sauna, and heat from direct warmth or sunlight in the outdoors.

Heat-related illnesses can also occur in certain workplaces where a hot environment may be created by equipment or enclosed spaces, including: bakeries, kitchens, laundries, boiler rooms, foundries and smelting operations, mines, and certain manufacturing plants.

### What are the symptoms of heat-related illness?

There are a variety of mild to severe symptoms linked with heat-related illness, including:

- pale, cool, moist skin
- heavy sweating
- muscle cramps
- rash
- swelling, especially hands and feet
- fatigue and weakness
- dizziness and/or fainting
- headache
- nausea and/or vomiting
- fever, particularly a core body temperature of 40° C (104° F) or more
- confusion and decreased mental alertness
- hallucinations
- red, hot, dry skin (in the late stages of heat stroke)
- seizures
- unconsciousness/coma

### Who is at high risk of heat-related illness?

Those at high risk for heat-related illness include:

- infants and children up to 4 years of age who rely on adults to make sure their environments are comfortable and provide them with enough fluids.
- people 65 years of age or older who may not compensate for heat stress efficiently and are less likely to sense and respond to high temperatures.
- healthy individuals who do a lot of physical activity or work in a hot environment.

Other things that may increase the risk of heat-related illness include:

- increased body mass
- too much alcohol or caffeine
- chronic illnesses such as uncontrolled diabetes or hypertension, heart failure, emphysema, kidney failure, colitis, mental health issues, and cystic fibrosis

- certain medications (such as diuretics or water pills, and certain psychiatric medications)
- previous heat stroke
- exercising or working in hot weather
- being unable to find a place to cool down
- not drinking enough water during hot weather

### How can heat-related illness be prevented?

There are many ways to reduce the risk of having a heat-related illness.

These include:

- Never leave children alone in a parked car. Temperatures can rise to 52° C (125° F) within 20 minutes inside a vehicle when the outside temperature is 34° C (93° F). Leaving the car windows slightly open will not keep the inside of the vehicle at a safe temperature.
- When it is hot and when you are active on a warm day, drink plenty of fluids. Drink extra water even before you feel thirsty. Ask your health care provider about how much water you should drink on hot days if you are on water pills or limiting your fluid intake.
- To keep cool on hot days, stay indoors in air-conditioned buildings or take a cool bath or shower. At temperatures above 30° C, fans alone may not be able to prevent heat-related illness.
- Limit daytime outdoor activity to early morning and late afternoon.
- Avoid tiring work or exercise in hot, humid environments. If you must exercise, drink 2 to 4 glasses of non-alcoholic fluids each hour. Rest breaks are important and should be taken in the shade.
- Avoid sunburn - use sunscreen with SPF 15 or more.
- Wear lightweight, light-coloured, loose-fitting clothing and a brimmed hat, or use an umbrella for shade.
- Check regularly with older adults, children and others for signs of heat-related illness and make sure they are keeping cool and drinking plenty of fluids. Check on those who are unable to leave their homes, and people with emotional or mental health concerns whose judgment may be impaired.

### Home treatment for mild heat-related illness

When recognized early most heat-related illnesses including mild heat exhaustion can be treated at home. Symptoms of mild heat exhaustion can include fatigue, weakness, headache, dizziness, nausea, and pale, cool, moist skin.

Home treatment for mild heat exhaustion may include:

- moving to a cooler environment
- drinking plenty of cool, non-alcoholic fluids
- resting
- taking a cool shower or bath
- wearing lightweight clothing

If your symptoms persist longer than one hour, change, worsen, or cause you concern, contact a health care professional.

Mild heat exhaustion does not cause changes in mental alertness. Consult a health care professional about changes in mental alertness in someone who has been in the heat, or has been exercising or working in the heat.



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