

Keep cool this summer: What is heat stress and how to treat it

Most of us look forward to the warmer weather and feeling some sun on our faces. However, exposure to even moderate heat can result in heat stress and heat-related illnesses. Importantly, heat-related illness can be prevented.

Heat stress occurs when our body is unable to cool itself enough to maintain a healthy temperature. The body cools itself by sweating, but sometimes sweating isn't enough to keep the body's temperature from rising.

Heat-related illness can range from mild conditions, such as a rash or cramps, to very serious conditions such as heat exhaustion, heatstroke, and even heat-related death.

This fact sheet¹ provides details on:

- Who is at risk
- Causes of heat stress and heat-related illness
- Symptoms and treatment of heat-related illness
- Preventing heat-related illness
- Advice for carers, family members and neighbours.

¹ This fact sheet is based on information provided by AgeUK, Australian Red Cross, Better Health Channel, Center for Disease Control (USA), Department of Health (Victoria), Health Direct, Sports Medicine Australia and Vicsport.

Who is at risk?

Extreme heat can affect anybody. Warm to very hot weather or long periods of exceptionally high day and night-time temperatures (heatwaves) increases the risk of heat illness.

Those most at risk are young children, older people, and people with a medical condition.

Young children

Young children can be sensitive to the effects of hot temperatures as they tend to sweat less than adults. Young children rely on adults and others to make adjustment to themselves or their environment to stop them getting too hot or too cold.

People with a medical condition

People who are physically ill, especially people who live with a chronic illness (e.g. heart disease, neurological condition or lung disease), or who take certain medications (such as for depression, insomnia, or poor circulation) may be affected by hot weather.

Medications can affect our body's ability to monitor and control its temperature, reduce our ability to sweat, and can also increase the risk of dehydration.

Older people

Older people can also be highly sensitive to warm to hot temperatures. As we age, we become less able to control our body temperature at rest or when exercising because we:

- do not sweat as much
- store body fat differently which can affect how our body controls its temperature
- are more likely to have chronic diseases that may increase the risk of heat illness
- are more likely to take medication that can affect how our body controls and monitors thirst, hydration and sweating.

Causes of heat stress and heat-related illness

There are many factors that can cause heat stress and heat-related illness, including:

Environmental conditions

- A lack of airflow from working or living in hot, poorly ventilated or confined areas
- Locations that are exposed to high direct heat such as bus stops, car parks, footpaths, and other asphalt surfaces
- Attending events in hot or crowded conditions
- Exposure to direct heat from bushfires can cause fast dehydration and heat-related illness
- High temperature and high humidity.

Individual conditions

- Dehydration—If a person becomes dehydrated, they don't sweat as much and their body temperature keeps rising.
- Sun exposure—especially on hot days, between 11 am and 3 pm.

Symptoms and treatment of heat-related illness

Heat-related illnesses range from mild conditions, such as a rash or cramps, to serious and life-threatening conditions such as heatstroke.

Importantly, deterioration of an existing medical condition is the most common health problem of heat stress.

Heat rash

Sometimes called 'prickly heat', this is a skin irritation caused by excessive sweating.

Symptoms include red clusters of pimples or small blisters that appear on the neck and upper chest, in the groin, under the breasts and in the elbow creases.

Treatment for heat rash

- Move to a cooler, less humid environment.
- Keep the affected area dry.
- Try using unperfumed talcum powder to increase comfort.
- Avoid using ointments or creams as they keep the skin warm and moist and may make the condition worse.

Dehydration

You may feel dizzy, tired, irritable or thirsty. Your urine may be dark yellow. You may have a loss of appetite or feel faint.

Treatment for dehydration

- Drink plenty of water or diluted fruit juice and avoid tea, coffee and alcohol.
- Move to somewhere cool (preferably air-conditioned), and, if possible, use a spray bottle filled with water to cool you down.
- If you have one, drink an oral rehydration solution.
- Seek medical help if you start to feel unwell.

Heat cramps

You may feel muscle pains or spasms, usually in the abdomen, arms or legs.

They may occur after activity in a hot environment, when the body gets depleted of salt and water. Though your body temperature and pulse usually stay normal during heat cramps, your skin may feel moist and cool.

Cramps may also be a symptom of heat exhaustion.

Treatment for heat cramps

- Stop what you are doing and sit quietly in a cool place.
- Increase fluid intake.
- Rest a few hours before returning to activity.
- Seek medical help if there is no improvement.

Symptoms and treatment of heat-related illness

Heat exhaustion

Heat exhaustion is a serious condition. It can develop into heatstroke.

You may feel thirsty, dizzy, weak, uncoordinated, and nauseated, or like you want to vomit.

You may sweat a lot and have muscle cramps (usually in the abdomen, arms or legs).

Your body temperature may stay normal, but your skin may feel cold and clammy. Some people with heat exhaustion have a rapid pulse.

Treatment for heat exhaustion

- Immediately go to a cool area and lie down.
- Remove any outer or tight clothing.
- Wet your skin with cool water or wet cloths.
- Place cool packs under your arms, in the groin area or against your neck.
- Increase your fluid intake. If you are supporting a person with heat exhaustion, make sure they are fully conscious before offering drinks.

Following treatment, your symptoms should improve within 30 minutes. If you're feeling better but still have any concerns, contact your doctor immediately or NURSE-ON-CALL for advice.

If you don't feel better soon, seek urgent medical attention or call an ambulance. Be careful—heat exhaustion can progress to heatstroke.

Dizziness and fainting (Heat syncope)

When you are active in hot weather, a sudden dizziness can happen.

You may feel light-headed before fainting occurs. If you take a heart medication called a beta blocker or are not used to hot weather, you are even more likely to feel faint.

Treatment for dizziness or fainting

- Move to a cool area and lie down.
- Put your legs up.
- Have a drink of water.
- If you are supporting someone who feels faints, or does faint, only offer a drink when they are fully conscious.

Heatstroke—

This is a medical emergency and requires urgent attention from paramedics.

Heatstroke occurs when the core body temperature rises above 40.5°C and the body's internal systems start to shut down. Many organs in the body suffer damage and the body temperature must be reduced quickly.

The symptoms of heatstroke may be the same as for heat exhaustion, but the skin may be dry with no sweating and the person's mental condition worsens.

The person may stagger, appear confused, grouchy, agitated, or act strangely. They may have a fit or collapse and become unconscious.

The person's skin may be dry and flushed, meaning they are no longer able to sweat. They may have a strong, rapid pulse or a slow, weak pulse.

Heatstroke is a medical emergency and requires urgent attention:

- If you have a community alarm, press the button on your pendant to call for help.
- Call Triple Zero (000) for an ambulance.
- Get the person to a cool, shady area and lay them down while you're waiting for emergency medical help.
- Remove clothing and wet their skin with water, fanning continuously.
- Do not give the person fluids to drink.
- Position an unconscious person on their side and clear their airway.
- If medical attention is delayed, seek further instructions from ambulance or hospital emergency staff.

Advice for carers, family members and neighbours

During hot weather, make daily or twice-daily visits to older relatives and neighbours. Remind them to drink lots of water or diluted juice (as long as their doctor hasn't recommended otherwise because of a pre-existing condition).

If there is a heatwave, offer to help them go somewhere cool such as air-conditioned libraries, or senior centres.

Make sure their home has adequate airflow.

Ask yourself these questions:

Are they drinking enough water?

Do they have access to air conditioning?

Do they know how to keep cool?

Do they show any signs of heat stress?

First aid for heat stress

If your relative or friend seems to be suffering from heat stress, cool them down promptly. Use whatever means is on hand; for example, sponge and fan the person, get them into a cool shower or wet them with a garden hose. Seek immediate medical help.

Where to get help



In an emergency, call Triple Zero (000)



Department of Health - 'Survive the Heat' resource in community languages



Your doctor—if you, or someone you know, may be suffering from a heat-related illness



St John Ambulance Australia—for information and resources on first aid



NURSE-ON-CALL is a Victorian helpline. Call 1300 60 60 24 for expert health information and advice (24 hours, 7 days). **Other states** have a similar helpline.