

Climate Change and Health –

When heat turns into a risk

Most people enjoy a sunny summer's day. However, in recent years, summers have become hotter and hotter: They have been increasingly marked by frequent heat waves. The reason for this is climate change.

Climate change not only has an impact on the environment, but can also have serious health implications. In addition to heat-related complaints, climate change can also lead to other illnesses, such as increased allergies or emotional stress. Infectious diseases that have not previously been prevalent in Germany may also occur.

Here you can read about the possible consequences of heat. In addition, we have put together some tips on how you and your fellow humans can comfortably get through hot days.



What happens in the body when it's hot?

Our body is able to adapt to warm temperatures: our blood vessels dilate and we start to perspire. Perspiration cools the skin. However, this natural temperature-regulating mechanism no longer works properly when exposed to prolonged and extreme heat. Blood pressure falls and the body loses fluids and salts. This places a major strain on the circulatory system.

What are the consequences?

Heat can make you ill. Possible symptoms are:

- Skin rash due to perspiration
- Water retention (*oedemas*) in the lower legs and ankles
- Dizziness when standing or brief unconsciousness
- Painful muscle cramps, for example after sport
- Heat exhaustion: weakness, discomfort, headaches, dizziness, low blood pressure, body temperature is normal or below 40 °C
- Heat stroke: body temperature is above 40 °C, impaired consciousness, possible cramps, vomiting, diarrhoea, low blood pressure

Heat can also aggravate respiratory illnesses, disrupt sleep and lead to kidney disease, among other things. There is an increased risk of *thrombosis* and *heart attacks*, too. Studies have shown that heatwaves are associated with more hospital admissions and higher mortality rates. The 2015 heatwave is estimated to have resulted in approximately 6,100 deaths in Germany.

Who is particularly at risk?

Heat can be particularly dangerous for some people. The risk groups are:

- The elderly and people with long-term illnesses, for example cardiovascular diseases or *diabetes*
- Infants and young children
- Pregnant women
- People who do hard physical work outdoors or practise a lot of sport
- People who are on certain medications



At a glance



- Heat can lead to circulatory problems. They may manifest as heat exhaustion and heat stroke.
- You can prevent heat-related health risks: for instance, plenty of fluids, a light diet, avoiding physical exertion and cool rooms are important.
- The elderly and the sick, pregnant women and young children are particularly at risk.



A cool cloth on the forehead can help.

What you can do yourself

Even minor adjustments can help you to cope better with high temperatures:

- **Drink:** Make sure you drink more on hot days. This is particularly important for older people because they feel less thirsty or sometimes forget to drink altogether. The beverages should not be too chilled. Drinking is easier if you choose something you like. Mineral water, juice spritzers or herbal teas are good thirst quenchers. You should avoid alcohol or beverages containing caffeine. They put a strain on the circulatory system.
- **Light food:** On hot days, opt for fruit, vegetables or easily digestible foods. Salty foods, such as broth or salt sticks, supply the body with minerals.
- **Cool down your skin:** Lukewarm showers or foot baths cool you down. Damp cloths on the face, neck or arms can also do you good.
- **Loose clothing:** Lightweight, long clothing, sunglasses and headgear all help. Lightweight nightwear and bed linen make warm nights more bearable.
- **Keep rooms cool:** To prevent your home from heating up, you should only air it in the morning or in the evening. Ozone levels are also at their lowest in the early hours. Blinds, shutters or awnings are best left down during the day. If possible, create a cool space where you feel comfortable. This could be a darkened room or the balcony, for example.
- **Avoid the blazing sun:** Fresh air is good for you. However, if it is hot outside, you should only engage in physical activity in the morning or evening. Then you will also inhale less ozone. Make sure that children in prams or people in wheelchairs in need of care are in the shade.

- **Medication and medical consultation:** Some medications can affect the body's cooling mechanism or increase fluid loss. They include dehydration tablets or thyroid hormones. The doctor may adjust the dose in hot weather. Please note: Do not stop taking your medication without consulting your general practitioner or change the dose yourself. Seek medical advice if you have any pre-existing conditions, are overweight or unfit. In the case of some illnesses, such as heart failure, it is advisable to discuss the amount you drink.
- **Ask for help:** If you are elderly or ill, accept support from your family or friends. They can run errands for you or remind you to drink something.
- **At the office:** Loose clothing and darkened windows can also be a boon in offices when it's hot. Any electrical appliances that you are not using should be switched off. They can radiate heat. Ventilation not only helps to fight viruses, but also to freshen stuffy office air. If possible, adopt flexitime or flexible working hours.
- **Stay informed:** You can access heat and UV warnings from the German Weather Service (DWD) at www.dwd.de.

Helping others in an emergency

Heat exhaustion or heat stroke can be life-threatening. You can be of assistance if someone's life is in danger. Unconsciousness, cramps, disturbed movements, increased body temperature or dry, hot skin may point to an emergency. You should take the person to a doctor's surgery immediately or call the **112** emergency number. Until help arrives, move the person to a cool, shady spot and loosen their clothing. A water bath, spraying water on the skin or cool packs will help to cool them down.

More information



Sources, methodology and links

This information is based on the S1 guideline "Heat-related health disorders in general practice" as well as other recommendations and scientific studies.

Methodology and sources:

→ www.patienten-information.de/kurzinformationen/hitze#methodik

Additional short information on health topics:

→ www.patienten-information.de



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Impressum

Responsible for the content:

German Agency for Quality in Medicine (ÄZQ)

On behalf of:

Bundesärztekammer (BÄK) and
Kassenärztliche Bundesvereinigung (KBV)

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