Action plan Heat wave

Valid from February 2023

EKERÖ KOMMUN

Content

Target group

The heat wave action plan is aimed at those who work in home care, special forms of accommodation (elderly and LSS), daily activities, day activities and open activities in the municipality. The plan addresses how the health effects of high temperatures are managed and contains checklists and advice.

Those of you who work with people in risk groups, remember that you too are affected by the heat.
How you experience and cope with the heat is individual.

Health effects of heat wave

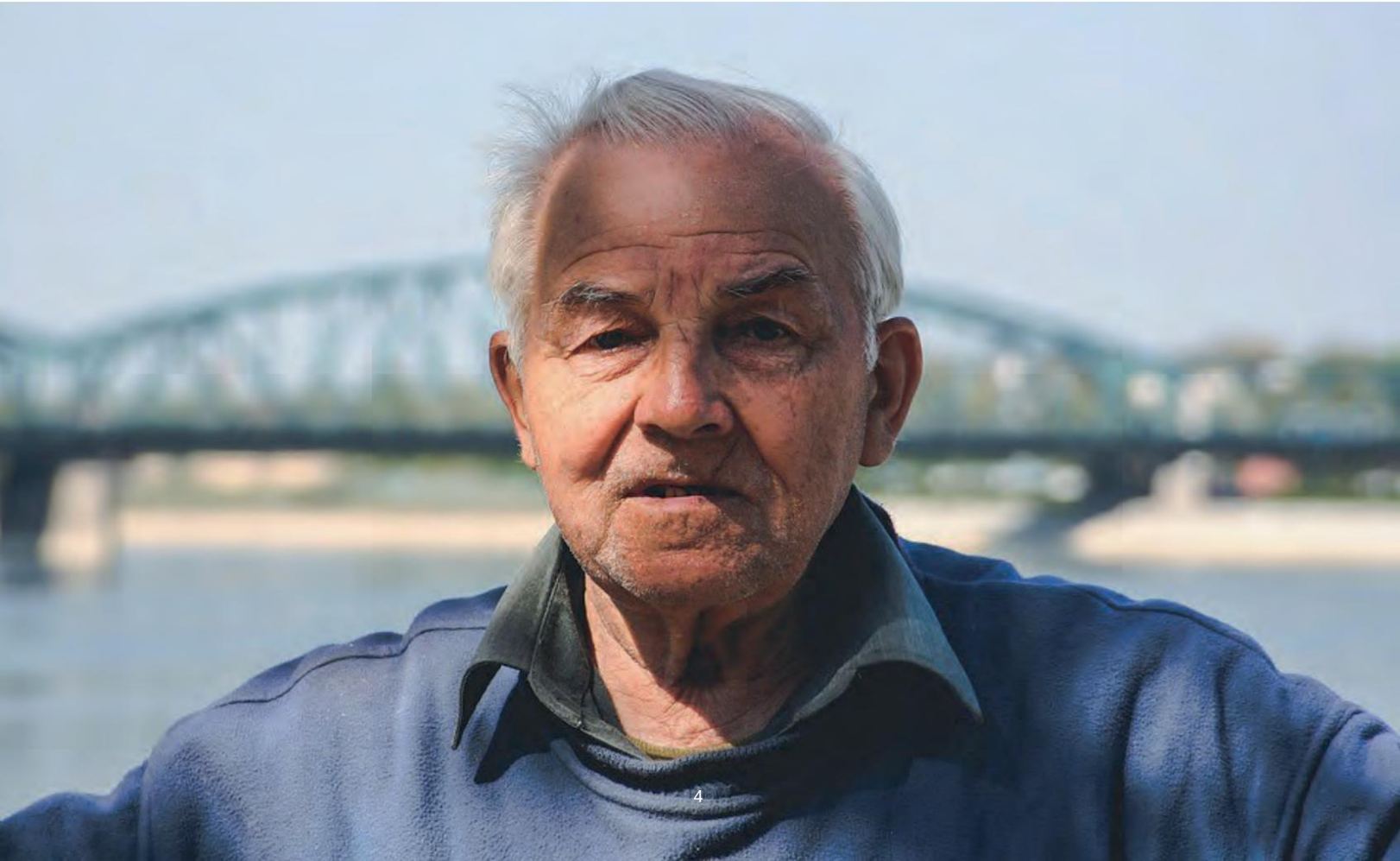
It is well known that heat waves can lead to health problems and an increased number of deaths, especially in the elderly population. The daily mortality rate increases by approximately ten percent if the temperature reaches 26 degrees or more for three days in a row, and it increases by another ten percent if the temperature reaches 30 degrees or more for three days in a row.

With a changing climate, we can count on both a rising average temperature and extreme weather conditions such as high temperatures becoming more common. As we in Sweden are not so used to high temperatures, negative health effects are already seen at lower temperature levels than, for example, in tropical countries.

Extreme heat is dangerous for everyone, but the elderly (over 65) and chronically ill people are particularly vulnerable groups. Older people are more sensitive than younger people, because they have poorer temperature regulation and a reduced ability to feel thirst. In addition, they often also have chronic diseases.

The heat itself causes the superficial blood vessels to dilate and sweating increases. If you don't have time to take in enough fluid to compensate for the increased evaporation, the blood becomes more concentrated and the risk of blood clots in the heart and brain increases. If the heart cannot cope with the increased demands on pumping capacity, it can result in severe heart failure. Heat-related deaths in the elderly are usually due to circulatory disorders.

The presence of chronic diseases such as dementia, physical disabilities, cardiovascular disease, kidney disease, asthma/COPD, but also diabetes, obesity and serious mental illness, can further increase the risk of health problems at high temperatures. Some medications that are common among the elderly can cause more serious side effects from the heat. During a heat wave, in addition to the high temperature, increased humidity and air pollution can also contribute to the negative health effects.



Heat warnings

When the weather forecast shows that the temperature will reach 26°C or more three days in a row, SMHI sends advance information to those responsible in health and social care via the county administrations and municipalities, in order to increase preparedness there.

SMHI's heat wave warning system

• Notice of high temperatures: The forecast shows that the maximum temperature during the day is at least 26°C three days in a row.

• Class 1 heat wave warning: The forecast shows that the maximum temperature during the day is at least 30°C for three consecutive days.

• Class 2 warning: The forecast shows that the period with a maximum temperature during the day of at least 30°C may be longer than five days and/or that the maximum temperature during the day is at least 33°C three days in a row.

Risk groups

• Elderly

• Cardiovascular disease

• Lung disease

• Kidney disease

• People with serious mental illnesses

• Dementia

• Bedridden

• Socially isolated

• Infants and young children

• People taking medicines that affect the body's regulation of heat

General advice at high temperatures

Pay attention to the indoor temperature
The risk of health problems increases significantly if the temperature reaches 26 degrees for three days in a row.

Encourage increased fluid intake
Avoid large amounts of sugary and caffeinated drinks and alcohol. Feel free to serve liquid-rich food, for example vegetables and fruit. Help especially the elderly and people with disabilities to drink. People with a specific disease, consider fluid list and weight control as there may be a risk of overhydration.

Try to arrange a cool environment
Make use of curtains, blinds, awnings and fans. It is important that sensitive people stay in the coolest part of the home/accommodation. Buildings insulate against heat, so only ventilate at night when it is cooler. Keep in mind that the temperature can differ by several degrees in different rooms. When staying outdoors - look for places with shade!

Arrange cooling measures
A cool shower is most effective. A wet towel around the neck is an alternative.
Loose-fitting clothes made of natural materials are cooler than tight synthetic clothes.

Pay extra attention to signs of heat exposure
Warning signs can be elevated body temperature, pulse and breathing rate, dizziness and abnormal fatigue. Dry mouth and decreased urine output can be signs of dehydration.
Keep in mind that antipyretic medications can worsen the condition. Contact a nurse if anyone shows signs of feeling unwell from the heat.

Encourage reduced physical activity
Especially during the hottest hours of the day.

Reactions and symptoms of heat

The majority of increased morbidity and mortality during high temperatures is due to cardiovascular disease, lung disease and medication effects. However, one should be aware that there are a number of specific heat-related symptoms and illnesses, which can also affect younger and healthy individuals.

Heat-related symptoms and medical conditions can be:

- Cramps due to dehydration (dehydration) and disturbance in salt balance (electrolyte loss). Mainly seen during intense sports in the heat.
- Rash, small itchy red bumps. This is harmless and goes away spontaneously.
- Swelling (edema) – usually manifests as swollen ankles.
- Dizziness and fainting due to dehydration and dilation of superficial blood vessels (often at the same time cardiovascular disease and medication).
- Exhaustion: nausea, vomiting and circulatory collapse. May occur at body temperature at 37-40 degrees. This is due to a lack of water or salt and requires rapid intervention with cooling and dilution in accordance with local care practices.
- Heat stroke can occur with untreated heat exhaustion and is an ultra-acute condition with confusion, convulsions, possible loss of consciousness, hot and dry skin and a body temperature which exceeds 40.6 degrees, which untreated can cause organ failure, brain damage and lead to death.

Specific efforts

In general, in case of heat exhaustion and heat stroke, antipyretics should not be given, as this can worsen the condition. People suffering from exhaustion and/or heatstroke must be treated in hospital. Often, treatment in an intensive care unit is necessary. Take the temperature, cool down and give drink if the person is conscious. Contact a nurse for assessment or call an ambulance.

There are still no controlled studies of which type of fluid therapy is best for alleviating the health effects of heat for the elderly, which is why specific recommendations cannot be given. In cases where specific liquid treatment needs to be considered, an individual assessment must be made with regard to any underlying disease and medication and local care routines applied.

Tips!

More detailed information regarding heat waves is available on the Public Health Agency's website:

www.folkhalsomyndigheten.se/varmebolja

Checklist for manager or supervisor within the municipality regarding work environment

The ability to work is affected because high heat affects both body and mind. The body's natural response to high heat is to lower the work rate to reduce the body's heat production. Attention and judgment deteriorate and the risk of accidents increases. Mood is affected by heat stress in the same way as by other stress.

Already after a few days of staying in heat, heat acclimatization begins. It is an adaptation of the body's functions so that sweating is activated at a lower body temperature. The regulation of blood circulation is also improved. However, maximum tolerance for heat is only reached after 8 – 10 days of acclimatization/habituation.

In this type of work, the working time in heat must be adjusted so that the total stress on the body does not become too great. With heat training, the body can cope with higher heat, but after a break in work, for example a holiday, the body needs heat training again.

During summer, the temperature indoors should normally be between 20 and 26 °C if the work is light and sedentary.

Checklist for manager or supervisor in home care

In addition to the general advice at high temperatures, you should consider the following:

- Inform all employees about the risks of heat waves at joint workplace meetings. Information must be available in paper form and electronically (see page 4).

- Inform people in the risk group, preferably before the summer, about the advantage of get a fan.

- The checklists must be easily accessible both in paper form and electronically. Employees must have read through the checklists before the summer and they must be quickly made available to all employees in the event of a heat wave.

- Point out the negative effect strong heat can have on older people (see page 4). Discuss with your employees how you can best prepare for heat waves within your business.

- Identify extra sensitive individuals, with the help of the nursing supervisor. In addition to old age, a number of different chronic diseases, as well as certain medications, can make an individual extra vulnerable to high temperatures.

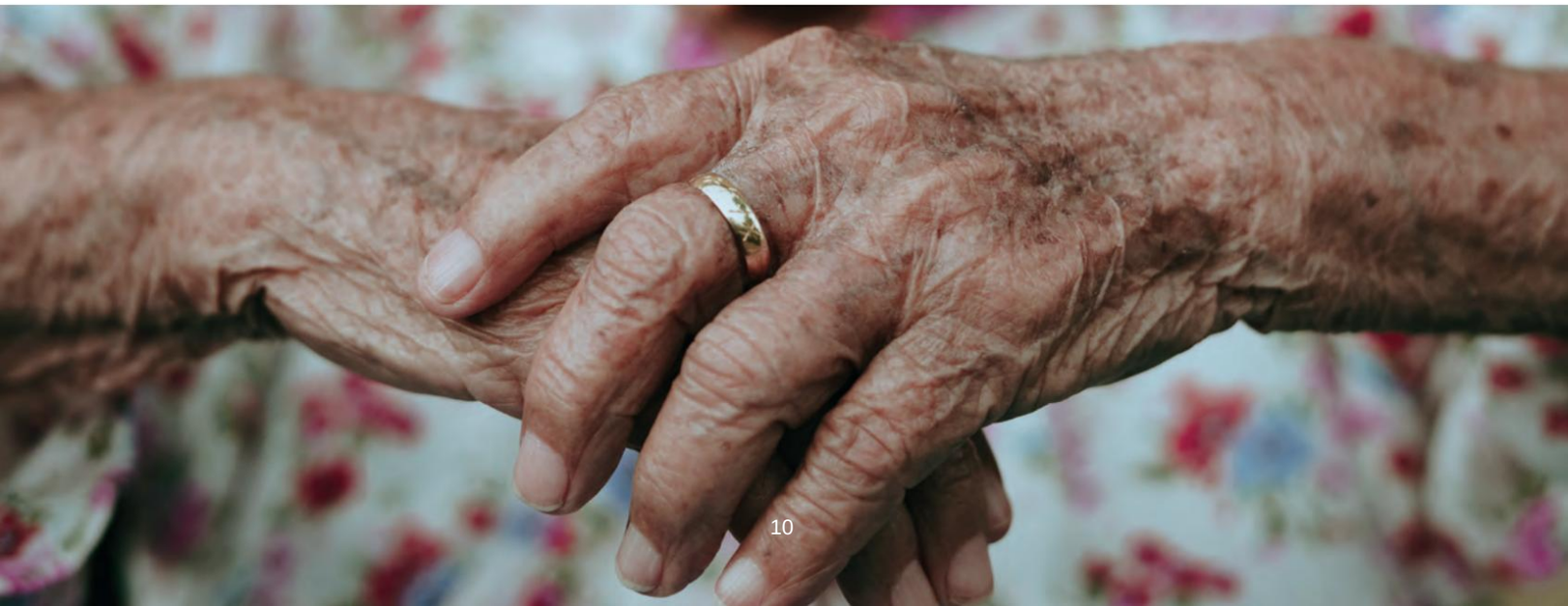
- Some homes can get very hot in summer. Discuss with the employees whether there are homes in your area that are particularly vulnerable, and the measures you can recommend to lower the temperature.

- Have a preparedness to re-prioritize efforts in the event of a heat wave and focus on nursing instead of less urgent service efforts (for example washing and cleaning). In the event of an extreme and prolonged heat wave, it may be necessary to call in extra staff.

- Make sure that there is a person responsible for receiving alarms about high temperatures - even during weekends and holidays and that this person knows where the information is and how it is distributed to other staff.

- Distribute this action plan to your employees.

For full medical advice, see separate doctor or nurse checklist.



Checklist for manager or supervisor for special forms of accommodation

In addition to the general advice at high temperatures, you should consider the following:

- Inform all employees about the risks of heat waves at joint workplace meetings. Information must be available in paper form and electronically.

- Inform people in the risk group, preferably at the move-in meeting, about their responsibilities to purchase a fan for their apartment.

- Point out the negative effect that intense heat can have on older people. Identify extras sensitive individuals with the help of a responsible nurse or doctor. In addition to old age, a number of different chronic diseases, as well as certain medications, can make an individual extra vulnerable to high temperatures. More detailed information on this can be found in the special advice for nurses or doctors.

- If it is not possible to maintain normal room temperature throughout the accommodation, arrangements should be made so that there is access to at least one room in each unit or department where the temperature is lower than 25 degrees, so that extra sensitive people can stay there during the hottest hours.

- The temperature can differ greatly between different rooms. A thermometer should therefore be installed in all residents, as well as in public areas. If the temperature in a resident's apartment is above 25 degrees, they should be asked to be in a cooler place until the temperature has dropped.

- Make sure that there is an opportunity to reduce the heat through well-functioning air conditioning, and measures that reduce heat radiation such as light curtains, blinds and awnings. Check that windows can be opened for ventilation during the cool hours of the day. Review if necessary need to purchase fans for common areas. Keep in mind that opening windows can reduce the effect of any air conditioning.

- Have a preparedness to re-prioritize efforts and focus on nursing in the event of a heat wave instead of less urgent service efforts, for example washing and cleaning.

- In the event of an extreme and prolonged heat wave, it may be necessary to call in extra staff.

- Make sure that there is a person responsible for receiving heat wave alarms - even during weekends and holidays, and that this person knows where the information is and how it is distributed to other staff.

- Distribute this action plan to your employees.

For full medical advice, see separate doctor or nurse checklist.

Checklist for doctors and nurses within the municipality

In addition to the general advice at high temperatures, you should consider the following:

- Chronic illness and medication: Certain illnesses and medications mean an increased risk of complications and death during a heat wave. Patients with cardiovascular disease, lung disease and kidney disease are at greatest risk, but people with diabetes, severe obesity, physical disabilities, neurological disease, serious mental illness and dementia also have an increased risk.

- The medication groups that can most often cause problems during a heat wave are: Diuretics, which can cause electrolyte disturbances and reduced fluid volume. ACE inhibitors can also cause dehydration, but loop diuretics seem to be the most problematic in this regard. Anticholinergics, which cause dry mucous membranes and reduced sweating. Psychopharmaceuticals (also known as neuroleptics), which by disrupting the body's temperature regulation can reduce sweat production, but also anti-depressants can increase the risk of complications. This may partly be due to an anticholinergic effect, but also SSRI preparations in combination with diuretics (thiazide or furosemide) increase the risk of electrolyte disturbances (hyponatremia). Antihypertensives (including beta blockers) can, like diuretics, contribute to an insufficient cardiac output in connection with a heat wave. In addition, antihypertensive and antianginal preparations reduce arterial pressure, which can cause insufficient heat regulation via impaired sweat gland function. Lithium, digoxin, anti-epileptics and preparations for Parkinson's disease have a narrow therapeutic range and dehydration can therefore cause serious side effects.

- People with heart failure and/or diuretic treatment may need to be monitored with a fluid list and more frequent weighing than usual, as well as possible control of electrolytes. Both dehydration, overhydration and electrolyte disturbances can cause serious deterioration. Mental and physical disabilities can mean that it is more difficult to perceive or adequately handle the body's warning signals in the event of heat and may then need practical help to take measures.

- In the case of planned care contacts before the summer, there may be reasons to give extra information to care recipients who belong to one of the risk groups. During a possible heat wave, they should be especially observant of worsening of their underlying disease and signs of a serious heat reaction.

- Regardless of whether you are responsible for special or ordinary housing, it may be wise to go through the list of care recipients and decide which people may need individual advice or extra efforts in connection with a heat wave. This makes it easier for the staff working during the holiday period.

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