

Beating the summer heat while
maintaining a high level of protection
against infection

Information for employees in inpatient and outpatient care

LMU Clinical Center

Institute and Outpatient Clinic for Occupational, Social and Environmental Medicine

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Due to reasons of legibility, no distinction is made between different genders. The corresponding terms apply equally to all three genders (M/F/D).

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Protecting your health against the heat – Even during periods with a high risk of infection

High temperatures and health

Heat events are a great strain on the human body, and long hot spells can be particularly dangerous to our health. Studies show that a particularly high number of hospital admissions and even deaths occur during such hot spells.

Long-lasting hot spells are a health risk, especially for older people over 65, people with acute or chronic diseases, e.g. chronic lung, kidney or cardiovascular diseases, as well as for those who are immunosuppressed and obese. But heat waves are not just a strain on the body for the aforementioned risk groups. High temperatures can also constitute a serious threat to your health during your daily work.

High temperatures and Covid-19

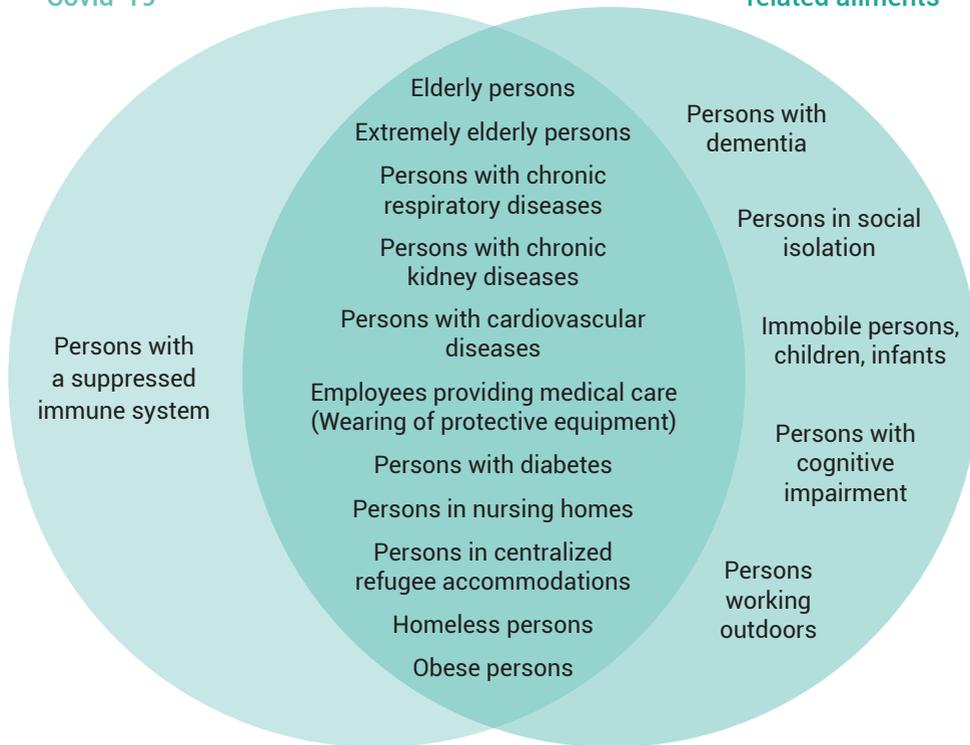
The chances of a heatwave coinciding with the ongoing Covid-19 pandemic in the coming summer are very high. When tending to patients in need of care, you not only need to protect them, but also yourself against infection. However, wearing recommended personal protective equipment against infection can be particularly taxing for you in hot weather, and in certain cases even impact your health. The longer the heat waves last, the higher the chances of experiencing heat-related health problems.

In this brochure, we inform you how you can best protect yourself in your professional life against heat-related health problems while maintaining an increased level of protection against infection.

Who is particularly affected?

Risk group for Covid-19

Risk groups for heat-related ailments



According to current knowledge, elderly and above all extremely elderly persons, as well as persons with severe underlying diseases, have an increased risk of a severe disease progression should they contract Covid-19.

At the same time, these risk groups are also particularly vulnerable to heat-related health problems.

Tips for your day-to-day work

- 1 **Stay informed about upcoming heat waves** with the National Meteorological Service, the Deutscher Wetterdienst (www.DWD.de). Subscribe to the newsletter to receive heat alerts or use an app that provides heat alerts (www.dwd.de/app). Well before a heat wave, plan in advance what you need to change in your workflows in order to protect yourself and those being cared for.

The DWD distinguishes between two risk warning levels – high heat stress from a perceived temperature of 32°C and extreme heat stress from a perceived temperature of 38°C. The heat stress is accompanied by a very high risk for your patients and also for you as a caregiver. From a perceived temperature of 32°C, you should pay extra attention to your patients, your team and yourself and protect yourself well. Elderly persons already experience extreme heat stress from a perceived temperature of 36°C.

- 2 **Discuss the upcoming heat wave in your team** and how you can work together to adapt your activities to the temperatures. For example, you can discuss whether the rules for breaks can be adapted individually to how strenuous the work done is. It may also be possible to perform certain activities at times of the day where the temperature is lower.

- 3 **Keep an eye on the indoor temperature and the relative air humidity** (max. 24 - 26°C and 40 - 60% rel. humidity)
- 4 **Drink enough fluids.** Approximately one glass every hour (150 - 250ml), also before your shift. You can easily check if you or your patients have drunk enough fluids. Your/their urine should be light yellow and not smell. If the urine has a dark yellow color, it probably comes from not drinking enough fluids.
- 5 **Take breaks regularly** and use them to cool down and drink fluids.
- 6 **Rest in the shade during your breaks in order to cool down.** Suitable places include nearby parks, gardens, or shady backyards, or cool break rooms.
- 7 **Wear airy clothing** with single-layer breathable fabric – particularly under your protective clothing.
- 8 **To cool down, place wet compresses on your arms, legs, forehead, or neck** whenever possible.
- 9 **Use a spray bottle to spray water on your arms, legs, face, and neck.**
- 10 **Let cool water flow over your wrists every now and then.**
- 11 **Pay attention to yourself and your colleagues.** Act quickly if one of your colleagues is not feeling well.

Tips for reducing indoor temperatures

- 1 **Make consistent use of shades, such as external blinds or roller blinds.**
- 2 **Air common rooms** and where possible treatment rooms in **the cool hours of the morning.** Cross-airing is particularly effective.
- 3 **Switch off devices which emit heat** that are not currently necessary.
- 4 **Use a fan** to improve air circulation. This is recommended up to 35°C.

Caution! Avoid using fans during nursing activities and when multiple people from different households are in the same room. The circulation of air may increase the risk of an infection.

Tips for daily life at home

- 1 **Use the tips for reducing indoor temperatures** at home as well.
- 2 **Take a cool shower** before lying down to sleep.
- 3 **Ensure that you receive enough sleep in a cool environment** (below 24°C at night) – this will allow you to recover from your stressful workday. Keep your apartment as cool as possible via (cross-)airing in the morning and at night, as well as using shades and blinds.
- 4 **Improve your fitness**, as regular exercise strengthens the cardiovascular system and increases its performance. The cardiovascular system is under particular stress when temperatures are high.

Tips on infection protection measures in high temperatures

Caregiving activities are frequently physically demanding – particularly when temperatures are high. However, it is even more strenuous when personal protective equipment (PPE) also needs to be worn due to the current Covid-19 pandemic. Wearing PPE is

an occupational safety measure and should be implemented according to the risk assessment performed by your employer. Listed below are some tips on how you can make life easier when wearing PPE.

While wearing personal protective equipment (PPE)

- Before donning the protective equipment, drink sufficient cool mineral water or diluted juice..
- For additional comfort, wear breathable clothing under the PPE wherever possible. Ensure that you do not wear multiple layers of clothing. You can also wear a cooling vest under the protective equipment.

While wearing FFP masks and medical mouth and nose protection

- **Wearing medical mouth and nose protection and FFP masks is strenuous due to the increased resistance when breathing – particularly with high temperatures.** Hence, you should only use the FFP masks if they are necessary according to the risk assessment.
- **If you have a disability or other severe ailment** (e.g. severe asthma), you can obtain a doctor's letter to exempt you from wearing a mask. Speak to your employer. It may be possible for you to work together to find another way to ensure the necessary level of occupational safety.
- **Replace a medical mouth and nose protector and/or an FFP mask immediately as soon as it is soaked.**
- **If your patients are suffering from heart or lung diseases,** observe them carefully when wearing a mouth and nose protector with regard to:
 - Their vital parameters, as well as
 - Strained breathing,
 - Discoloration of the lips,
 - Cold sweat,
 - Disorientation or
 - Restlessness.

In addition, you can also measure the oxygen saturation in the blood. For certain severe diseases (e.g. severe COPD or asthma), the wearing of masks may not be reasonable or may cause their health to deteriorate. **In such cases, check whether the patients can be exempted from having to wear a mask. A lung specialist should first confirm this in writing.**

Meticulous hand hygiene is quintessential

- In addition to hand disinfection, wash your hands with cold or lukewarm **water and soap**. For protection against infection, it is not necessary to wash your hands with hot water. The length of the washing procedure (30 sec.) and the sufficient use of soap are crucial in this context. If, after washing your hands, you then allow cold or lukewarm water to flow over your wrists, this will have a pleasant, cooling effect. Do not forget to apply a regular and conscientious skincare regimen.

Airing

- In the early morning and at night, it is still cool outside. If you are at work during this time, you can cross-air the rooms of your patients and the common rooms. This has a lasting cooling effect on the rooms, while also helping to keep the virus load in the room low.

Training

- Courses on measures against heat stress are generally well-received. Check whether your institution also offers training courses.

Important: Some of the measures – whether for heat protection or protection against infection – must not be circumvented or replaced. Hence, the measures should always be individually considered and adapted according to the situation.

Physical warning signs

Pay particular attention if the following symptoms occur, as they may indicate a heat-related illness. Particular caution is required, as the symptoms may also be indicative of Covid-19.

- Feelings of exhaustion
- Severe paleness / skin redness
- Headaches
- Stiff neck
- Nausea / dizziness / vomiting
- Shortness of breath
- Restlessness
- Muscle aches / muscle cramps
- High temperature / fever
- Infections
- Constipation
- Excessive sweat or no sweat at all

If one or more symptoms occur, please alert the doctor in charge immediately.

Note that a person may not present symptoms immediately, but with a significant delay after being in the heat! To distinguish a fever due to Covid-19 from an increase in body temperature due to heat, your patient should remain in cool surroundings for at least 30 minutes. Give him sufficient mineral water to drink. If his body temperature has not decreased by then, your patient may have an infection, and you should contact the doctor in charge by phone.

You should immediately contact the emergency doctor in the following cases:

- Disorientation with reduced responsiveness
- Severe lapses of consciousness and/or confusion
- High / low blood pressure
- Severe breathing difficulties

First aid:

- Remove the victim from the heat/sun as quickly as possible
- Open/remove clothing
- Cool the victim with moist, lukewarm cloths on the head, neck, hands, and feet
- Offer electrolyte-containing drinks (mineral water, electrolyte drinks or lightly salted water), provided the victim does not feel the urge to vomit

Medicines and heat

Pay particular attention to the administration of medicines to persons requiring care during periods of high temperatures. Heat has an influence on the absorption, distribution, breakdown, and excretion of drugs in the body.

Medicines may...

- Reduce sweating
- Influence body temperature
- Constrict blood vessels
- Lead to the loss of fluids

Some medicines such as ACE inhibitors are being discussed as risk factors for persons who have been infected with the Corona virus. Please also discuss this aspect with the doctor providing treatment.

Also pay attention to the storage temperature of the medicines. Some medicines are not to be stored at high temperatures, or they will lose their effectiveness. For more information, the relevant pharmacy will be able to advise you.

The measures and information contained in this booklet are based on the current scientific findings on heat and Covid-19 (as of 07/06/2020). SARS-Cov-2 is a novel virus, which is why new findings and changes to the current state of knowledge are constantly being released. Please keep track of the latest findings and adapt individually to the new circumstances.

Helpful links

FAQs on Corona for persons working in inpatient and outpatient care
www.pflegebevollmaechtigter.de/details/faqs-zu-corona-fuer-die-stationaere-und-ambulante-pflege.html

This is where you will find questions and answers related to Corona and care.

Deutscher Wetterdienst (German National Meteorological Service)

www.dwd.de

Inform yourself about upcoming heat waves here.

Deutscher Wetterdienst (German National Meteorological Service) – Heat warning system

www.dwd.de/DE/leistungen/hitzewarnung/hitzewarnung.html

Inform yourself about upcoming heat waves and register for the newsletter here.

Federal Centre for Health Education (BZgA)

www.bzga.de

This is where you will find the latest information related to your health.

Zentrum für Qualität in der Pflege (Center for Quality in Care)

www.zqp.de

Pertinent information for all persons employed in care occupations.

German Environment Agency (UBA)

www.umweltbundesamt.de/publikationen/klimawandel-gesundheit-tipps-fuer-sommerliche-hitze

Additional materials on heat and climate change for further reading are available here.

Der Hitzeknigge (Heat Tips)

www.umweltbundesamt.de/sites/default/files/medien/364/dokumente/schattenspender_hitzeknigge.pdf

Information specifically for caregivers

www.klimawandelundbildung.de

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