

Hot weather and the potential implications for vulnerable people during the COVID-19 response

Why heat matters - Background

Every summer there are a number of excess deaths due to the negative impacts of hot weather. It is estimated that nationally there are 75 extra deaths per week for each degree of increase in temperature.

The health impacts of heat start at relatively moderate temperatures (25°C+) although the risk increases with the heat, highest temperatures occur on only a small proportion of days so the greatest impacts are seen at more moderate temperatures. ¹

A range of mild to severe health impacts can result, especially when temperatures remain high for prolonged periods. The main causes of illness and death during hot weather are respiratory and cardiovascular. In order to keep cool, large quantities of extra blood are circulated to the skin. This causes strain on the heart, which for elderly people and those with chronic health problems can be enough to cause heart attacks.

The specific heat-related health effects and illnesses include; heat cramps, heat rash, heat oedema, heat syncope, heat exhaustion, heatstroke.

Heat related illnesses

Heat syncope – dizziness and fainting, due to dehydration, vasodilation, cardiovascular disease and certain medications

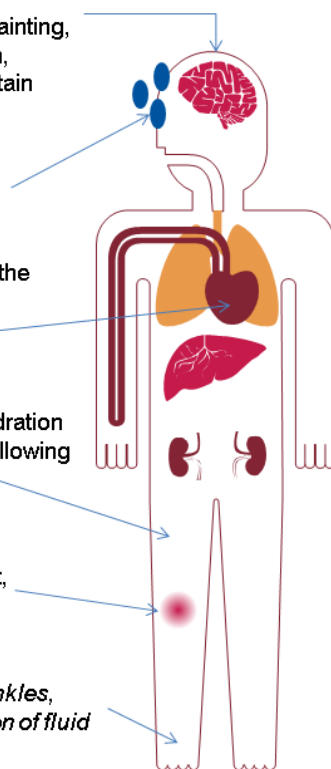
Excessive sweating can deplete fluid and salts

When blood temperature rises, the body stimulates sweat glands, dilates blood vessels and increases the heart rate

Heat cramps – caused by dehydration and loss of electrolytes, often following exercise

Increased blood flow to the skin cools the body by radiating heat, leading to heat rash (small, red itchy papules)

Heat oedema – mainly in the ankles, due to vasodilation and retention of fluid



Health effects of heat

The main causes of illness and death during a heatwave are respiratory and cardiovascular diseases. Additionally, there are specific heat-related illnesses including:

Heat Exhaustion

- Nausea or irritability
- Dizziness
- Muscle Cramps or weakness
- Feeling faint
- Headache
- Fatigue
- Heavy sweating
- High body temperature

Heatstroke

- Hot, dry skin or profuse sweating
- Confusion
- Loss of consciousness
- Seizures
- Very high body temperature

¹ Sourced from: Gasparrini A, Guo Y, Hashizume M, Lavigne E, Zanobetti A, Schwartz J, et al. (2015). Mortality risk attributable to high and low ambient temperature: a multicountry observational study. *Lancet*, Volume 386, Number 9991: 369-375

Who – Vulnerable groups

EVERYBODY can be affected by high temperatures, but there are certain factors that increase an individual's risk during a heatwave. These include:

- **older age:** especially 75+, living alone, socially isolated, or living in a care home
- **chronic and severe illness:** including heart, lung conditions, diabetes, renal diseases, Parkinson's disease or severe mental illness
- **inability to adapt behaviour to keep cool:** babies, the very young, certain disability conditions, being bed bound, consuming too much alcohol, those with Alzheimer's disease
- **environmental factors and overexposure:** living in a top floor flat, being homeless, activities or jobs that are in hot places or outdoors and include high levels of physical exertion.

Thermoregulation may be impaired in the elderly, very young & the chronically ill, and those who use certain medications that limit sweat, or may cause electrolyte imbalance including anticholinergics, vasoconstrictors, antihistamines, certain renal function/diuretics, psychoactive drugs, anti-hypertensives.²

Recent evidence suggests that around 20% of homes in England already experience overheating, even during relatively cool summers, often an inadvertent effect of better measures to prevent heat loss during the cold winter months.

Many are unaware of the potential risks to health from indoor high temperatures and are therefore less likely to take measures to safeguard their and their dependents' wellbeing.

During the COVID-19 social distancing measures there will be an increased population risk of overheated houses with the greatest potential impact on the most vulnerable.

For those remaining at home the direct effects of the sun – sunburn, sun safety messages, are important. The following Sun Smart messages are relevant for both sitting in the garden or long periods in the sun behind glass (which reduces UV radiation, but does not block it) https://www.speakupagainstcancer.org/lower-your-risk#sun_safe

The city's care homes, shared housing and early years providers routinely address this issue every year. The general public may not be aware nor routinely consider these issues in their domestic context.

What - Actions are in place

² Doctors prescribe **anticholinergic drugs** to treat a variety of conditions, including chronic obstructive pulmonary disease (COPD), bladder conditions, gastrointestinal disorders, and symptoms of Parkinson's disease. e.g. Parkinson medications, allergy medications such as Benadryl, antipsychotic medications e.g. Thorazine and Largactil

The heat-health watch service (and the cold weather alerts) have recently changed to be a year round service. Therefore, if the triggers are met at any time of the year, an alert would be issued. The Met Office provides regular forecasts and has changed its Heatwave definition which now has a lower trigger temperature (27⁰C rather than 31⁰C). Once the temperature has been met for 3 consecutive days, information will be distributed about the high temperatures, in advance of the formal Heat-health Alerts³. These alerts are widely distributed to those services supporting the most vulnerable groups such as Care Homes and Early Years.

As part of the COVID-19 response people are being recommended to stay in their homes as part of the social distancing measures with greatest emphasis for those considered most at risk and extremely clinically vulnerable. Plus those with COVID-19 like symptoms are self-isolating and may have high temperatures.

As those groups identified at higher risk for COVID-19 are also at higher risk of the negative impacts of heat, additional advice should be provided in preparation for the increasingly warm weather over spring and summer even before the heat alerts are made available. This is especially so for those who live alone.

The following actions are now in place:

- Weather related advice will be included on the BHCC COVID-19 pages see - Appendix A and B
- Temperatures in excess of 27⁰C will trigger local communication with organisations that support vulnerable people
- Information widely shared with all services and volunteers supporting vulnerable groups
- Prompts/questions be shared with all services and volunteers who work with those in the vulnerable groups – Appendix C
- A link to the Met office forecast will be available on the BHCC COVID-19 pages
- Once the Heat Alerts are commenced these will be routinely distribute through all networks.
- Sun safety information will be widely shared over the spring and summer months for those venturing outside - in their gardens, for exercise, work/volunteering or dog walking.

³ More about the Heatwave Definition can be found at <https://www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/temperature/heatwave>

Appendix A – public health messages

Stay out of the direct heat:

- Keep out of the sun between 11.00am - 3.00pm.
- If you go out in the heat, walk in the shade,
- Apply sunscreen with a minimum SPF of 30 and reapply frequently, even if sitting behind glass
- Avoid extreme physical exertion.
- Wear a hat and light scarf, light, loose-fitting cotton clothes.

Cool yourself down:

- Drink plenty of cold drinks, avoid alcohol, caffeine and hot drinks.
- Eat cold foods, particularly salads and fruit with a high water content.
- Take a cool shower, bath or body wash.
- Sprinkle water over the skin or clothing, or keep a damp cloth on the back of your neck

Keeping your living space cool

- Thermometer in main living room and bedrooms
- Close sun exposed windows during daytime, open at night
- Close sun exposed curtains
- Turn off non-essential lights and electrical equipment – they generate heat.
- Keep indoor plants and bowls of water around the house, evaporation cools the air
- If possible, move into a cooler room, esp. for sleeping
- Electric fans help if temperatures are below 35C

Look out for others & those with health problems

- Keep medicines below 25 °C or in refrigerator as per storage instructions
- Be alert, call a doctor if someone feels unwell in the heat
- Check (by phone) isolated, elderly, ill people are able to keep cool,
- Do not leave babies, children or elderly people alone in stationary cars
- Check (by phone) on elderly or sick neighbours, family or friends every day during a heatwave
- Seek medical advice for those with a chronic medical condition or taking multiple medications
- Certain medicines can have side effects in the heat/sun e.g. skin burns easily.

Longer term:

- Consider putting up external shading outside windows
- Use pale, reflective external paints

- Have your loft and cavity walls insulated –keeps the heat in when cold & out when hot
- Grow trees/leafy plants near windows to act as natural air-conditioners

If you or others feel unwell

- If you feel dizzy, weak, anxious, have intense thirst and headache; move to a cool place asap get help, take your temperature.
- Drink water or fruit juice to rehydrate.
- Rest immediately in a cool place if you have painful muscular spasms (particularly in the legs, arms or abdomen, in many cases after sustained exercise during very hot weather), and drink oral rehydration solutions containing electrolytes.
- Ring NHS 111 if you feel unusual symptoms or if symptoms persist
- Medical attention is needed if heat cramps last more than one hour.

Appendix B - Resources

Heat wave plan and guidance 2019

<https://www.gov.uk/government/publications/heatwave-plan-for-england>

[Heatwave information for Care Home Managers and staff](#)

[Looking after children in a heatwave](#)

[Easy Read Heatwave Plan](#)

[Beat the Heat leaflet](#)

[Beat the Heat poster](#)

[Beat the Heat checklist - keeping cool at home](#)

[Beat the Heat Care Homes](#)

Speak up against Cancer website https://www.speakupagainstcancer.org/lower-your-risk#sun_safe

Appendix C – prompts/questions when talking to those who are more vulnerable from the effects of heat and of COVID-19

Sometimes people can be unwell if their homes become too hot – do you know how to keep cool if the weather gets hotter?

Do you have any outside space at home? Y/N

Advice about shade and direct sunlight.

Is your home well ventilated? Windows that can open? Curtains?
Windows that do not get the direct sunlight?

Advice about closing curtains /windows in direct sunlight

Can I share some suggestions with you?

Select from Appendix A as relevant for the discussion