# Athletics guidance related to heat and cold

## Outline

Globally we are experiencing extremes of heat and cold, in an often rapidly changing context. Extremes of heat and cold not only have an impact on athletic performance, but can also have immediate health impacts.

## Position statement

Across the whole of athletics, climatic conditions can affect club sessions, competition or informal training. This relates to athletes, coaches, officials, volunteers and spectators.

A number of factors impact upon an individual's resilience to extremes of temperature;

- Preparedness (general health, fitness, age, acclimatisation)
- Exposure time
- Exertion level
- Equipment (clothing, shade)
- Access to hydration and nutrition
- Humidity (high and low) can amplify the effects of both heat and cold.

UK Athletics recognise that activity takes place in extreme environments, and that this can be done in acceptably safe ways.

We encourage all involved in athletics to consider heat and cold as part of their risk assessment, and risk assess the impact of these climatic conditions on all affected.

**All environmental illness is entirely preventable.** In athletics, it is always caused by a lack of knowledge, and poor planning.

## Organised activities

Extremes in weather conditions require a knowledge of the participant, activity and emergency response. UK Athletics will always support caution as an approach to extremes of heat.

The Met Office and UK Health and Security service provide an alert system - https://www.metoffice.gov.uk/weather/warnings-and-advice/seasonal-advice/heat-health-alert-service - where this is anything other than Green we would expect extra evaluation of the risk to be taken.

It would be normal to consider;

- Specific advice to participants on the effects of heat/cold
- Whether the timetabling of the event could be altered.
- Can the exposure time be changed (particularly for officials, spectators and volunteers)
- Are there adequate emergency arrangements in place (warm or cool areas, additional hydration or nutrition and suitably experienced first aid cover)

## Informal activities

Activities that can be rescheduled are the easiest to avoid the impacts of heat and cold – training or participating in the morning and the evening can avoid heat extremes. For cold weather the middle of the day often reduces the associated risks of slippery surfaces.

When thinking about heat and cold, the distance from where shelter is should be considered closely – clearly being in a more rural location increases the risk and time to help.

Being aware of how the body reacts is useful to know – this shouldn't be used as a replacement for specific first aid training but can be used to increase awareness.

Particularly consider what happens if things don't quite go to plan – injury, getting lost etc. Have you got suitable clothing and shelter to be able to maintain yourself if you are stationary for a longer period of time? For fell-runners it is common to carry full body cover in inclement weather, but on a club session could you create shade (even with a foil blanket) until help arrives? Having proportionate amounts of equipment to cope with the expected conditions is important.

## Heat impacts (hyperthermia)

Sudden warming of the athletic environment is harder for the human body to cope with. From a cool day to a moderately warm day is physiologically a greater stress than exposure over a longer (72hrs) period.

Remember that dehydration has a significant impact on performance, and recovery time.

It is extremely difficult in a non-clinical setting to accurately judge whether someone is suffering with the effects of heat exhaustion (core temperature 37C-40C) or heat stroke (core temperature above 40C). Non clinical observations to notice and suggestions for non trained persons are:

| | Observations | Suggested intervention |
|---|---|---|
| Heat exhaustion (core 37C-40C) | Normal mental state<br>Sweating | Stop activity<br>Remove from heat source<br>Oral rehydration<br>Loosen clothing evaporative cooling |
| Heat stroke (core 40C+) | Altered mental state<br>Not sweating | Call 999<br>Continue as above<br>Consider immersion cooling if available |

It should be noted that hyperhydration can be something that athletes can unwittingly subject themselves to. The impact of electrolyte imbalance that this causes can be fatal.

## Cold impacts (hypothermia)

Remember that warming muscles up takes longer in colder weather, don't forget that performance is compromised.

Even on a warm summers day in the UK it is possible for the human body to become too cold. This is often due to being wet (or sweaty) and being exposed to evaporative (wind chill) when not having enough clothing.

As with heat, it is difficult to detect the shifts in core temperature that define hypothermia

- Mild – 32C-35C
- Moderate -28C-32C
- Severe - less than 28C

Non clinical observations and interventions for non trained persons include:

| | Observations | Suggested intervention |
|---|---|---|
| Mild Hypothermia (core 32C-25C) | Normal mental state<br>Vigorous shivering | Insulate from further heat loss<br>Consume high energy foods<br>Get moving |
| Moderate Hypothermia (core 28C-32C) | Altered mental state<br>Below 30C shivering stops<br>Loss of co-ordination<br>Blue lips | Call 999<br>Keep still<br>Insulate from all heat loss<br>Actively warm areas where blood is close the skin |
| Severe Hypothermia Core less than 28C | Unconscious<br>Appears dead | This is an acute medical emergency and should be medically trained in support |

## Summary

Globally we can expect that we will experience periods of extreme heat and cold, and that athletic activity can be adapted to be acceptably safe.
Remember two key points;

- **All heat and cold impacts are entirely avoidable – so prevention is always possible.**
- **If in doubt, don't!**

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