

Is it OK to run in heat of 30C or more?

June 21 2017, by Hannah Moir And Chris Howe



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Most of Britain is experiencing a heatwave, with temperatures reaching up to [32°C](#). The public health watchdog for England has issued an [amber health warning](#), advising people to take care in the hotter weather. But what does it mean for runners? Is it ever too hot to go for a run?

With the recent high temperatures in parts of the UK soaring above 30°C, people may find themselves questioning the safety of running in the heat. Running in hotter temperatures though is not uncommon, with many runners competing in warmer climates such as Kenya, Ethiopia and Japan, where temperatures average 25°C.

But while running in the heat may be considered [a risk](#) to some people – such as children, the elderly and pregnant women – as long as precautions are taken, running in temperatures as high as 30-35°C is fine.

A number of running events take place in extreme heat (over 35°C), such as [Badwater](#), the 135-mile ultra-marathon that takes place in Death Valley, California, where temperatures can soar to over 50°C. There is also the annual [Marathon des Sables](#), a five-day run across the Sahara Desert in Morocco, where temperatures can reach 50°C. This 156-mile run is considered the toughest foot race on Earth. Our experience at [Kingston University](#) with people running and training in our heat chamber for events such as the Marathon des Sables and Badwater, demonstrates that with enough preparation, hydration and being sensible about how hard you run, it is possible to run safely in high temperatures. But it is important to note, that these races do take a lot of preparation and acclimatisation and running in such temperatures is certainly not recommended without thorough training.

Be prepared ...

Running in the 30°C heat does not come without its risks, it can very easily cause dehydration, overheating which can lead to muscle cramps, excessive sweating, headaches, nausea, tiredness and dizziness. Your performance may be [impaired](#), and you may find you are not be able to run at the same pace or cover the same distance as you might having run in milder temperatures. Also, there can be serious [health consequences](#)

to exercising in the heat, such as heat exhaustion and heat stroke. But these can be avoided if you listen to your body and take sensible precautions to avoid getting too hot such as drinking enough fluids to stay hydrated, avoiding running at the hottest times in the day (between 11am and 3pm), wearing light, breathable clothing, and by slowing down your normal pace, and consider acclimatising to the [temperature](#) (which can take up to 14 days).

The body learns to adapt

Running [in the heat](#) causes the body's core temperature to rise. The body works best when the core temperature is maintained at 37°C, so to help keep the body cool, the body starts to sweat, allowing the heat to evaporate. This sweating causes water loss from the blood and can lead to dehydration.

To help with the sweating, blood vessels dilate to allow more blood to be diverted to the surface of the skin by enabling more heat loss as a way to reduce this rising temperature. This is why people go red and their blood vessels may be more visible in hotter conditions. The issue is that less blood is available to be delivered to the working muscles, which in turn, puts a strain on the body, especially the heart. As a result, sweating can lead to dehydration and so exercising in the heat may make you feel tired and unable to exercise as well as you usually can at cooler temperatures.

The hotter the environment, the higher the dependency on sweating and [heat loss](#) to maintain the [core body temperature](#). Typically, people will lose up to one litre of sweat per hour when exercising in hot environments, but it can be more than four litres of sweat in others.

For humans, though, one of the greatest things is that we are well designed at regulating our temperature compared with other animals.

This enables us to run long distances in the heat. With [regular exposure to high temperatures](#), the body learns to adapt, and the stresses and strains of running in the heat can be reduced. Adaptations to the [body](#) include increased sweat rates and blood volume, decreased losses of electrolytes (important salts and minerals) in the sweat, reduction in resting and exercising core temperatures as well as a reduction in heart rate and perceived effort levels when running in the [heat](#). With preparation and common sense, you should be able to run safely in hot temperatures.

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