

As climate change warms the planet, ride organiser **Ian Oliver** of Willesden CC, examines the increasing risk posed by heat stroke to long-distance cyclists, and provides advice on how to respond when a rider overheats...

FEELING HOT!

HOT!

HOT!

Audax UK was founded in 1976 – the year of Britain's notorious drought, and the longest UK heatwave in living memory. Oxford had 14 successive days at over 30 degrees. It was another seven years before the country experienced such sustained high temperatures.

But today, every summer is likely to produce an average of five days or more at 30 degrees.

Events I organise have coincided with at least one day at 30 degree plus on three occasions. Indeed, there is a risk of 30 degrees plus on any event held between mid-June and early September. UK riders will need to learn how to cope in heat – and what to do when temperatures raise the risk of heatstroke.

Heatstroke is an increasing risk as temperatures rise. Add in exertion, such as riding long distances, and the danger zone starts kicking in around 30 degrees. In fact it can be fatal even at lower temperatures; triathletes have died swimming in wetsuits when temperatures have been in the upper 20s.

All this comes on top of the other hazards of warm weather cycling sunburn, heat rashes, boils, dehydration and heat exhaustion. But, even on hot days, if you manage your cooling system properly you should be OK.

The following advice has been compiled with the assistance of Dr Helen Vecht, an experienced long-distance cyclist.

Risk analysis: Should I stay or should I go?

When you book an Audax event, you have no idea what the weather will be like. If the day is going to be hot enough to consider not going for a spin from home,

then think about the risk of the Audax, however keen you are to ride it.

Consider road conditions. Are there lots of long climbs? Or might there be a stonking tailwind in the hottest part of the day, meaning there is limited wind cooling as you ride?

Your general health is also going to make a difference. Being over 65, heart, kidney or liver issues, digestion problems, diabetes, painkillers, and some prescription medicines can make heat exhaustion worse. Skin cancer or very sensitive skin can affect how you can dress for heat. GLP-1 medicines slow down water absorption in the gut.

Your size matters as well. Larger riders have a lower surface area relative to mass and hence cool less well. And gender doesn't offer any protection; women and men can both suffer from heat exhaustion or worse.



Finally, a mindset that pushes you to get round whatever the cost could mean you ignore the build-up of symptoms until it's too late. This is a major cause of exercise-related heat problems. It's only a bike ride, so don't push your luck.

Preparation

It's a smart move to take two water bottles for your bike and a third for your bag.

Hydration tablets are invaluable if they include sodium, potassium, calcium and magnesium and you've found a brand with a taste you find least unpleasant. Remember that you won't find them in village stores so a back-up stock of a couple of tubes can be worth the added weight.

You'll be exposing skin that doesn't often get exposed. Which magazine's suncream test is publicly available online and the NHS website has more advice. The consensus seems to also prefer organic lotions over mineral varieties.

Make sure you bring lights, you may need to take time out during the hottest part of the day and hence finish late. Pack your bathroom thermometer. You may not need it but it could help save a fellow rider.

Acclimatising

You'll probably deal with a very hot day in late August better than in mid-June as you acclimatise, but you do need to acclimatise. It needs at least six days. Full acclimatisation takes a fortnight. Bear this in mind if the event you're riding just happens to be on a rather hot day.



PHOTO: DA SCHORSCH - PIRABAY

Clothing: Less, Loose, Light, Linen

This advice is just for the hot bit of hot days. It still may be chilly at 6am.

- **Less:** Your body cools from sweating and heat radiating and convecting from your skin although your clothing limits it. You need the protection from the effects of the sun so the advice is to keep it to one layer.
- **Light:** Where possible use bright white as it reflects the sun's rays better than other colours. Fluorescent material is not bad, and helps you to be seen.
- **Loose:** where you need to wear clothing, loose will aid air movement over your skin and transfer less heat from the sun to your skin. Stretched fabric also tends to let through more UV.

Body heat loss at high temperatures is highest where you have the most sweat glands: the chest, abdomen, thigh and head. Also, where the ratio of body surface to mass is high: the hands, feet and to a lesser extent arms. But you also heat from absorbing the sun's radiation. This is greatest on the head, neck, back and arms.

Linen is the best material for keeping cool in heat, followed by cotton and bamboo.

It's essential the helmet lets air circulate – avoid TT or climbing style helmets. No headwear under the helmet. It will either keep heat in if tightly woven, or still allow UV through. Slather sunblock on. Use a headband or visor to keep sweat out of your eyes. Helmets are optional with AUK, so take it off and tie it to the bike if you're starting to feel the heat.

Keep shirts light and white, with short sleeves unless you have sensitive skin. If you're going to cycle in hotter climates it's probably worth buying kit specially. In the UK a bit of improvisation should do. A gilet on its own could work, as could an everyday white cotton or linen shirt. Short socks and no handwear. Use sunglasses.

The heat is on – the ride

The hottest part of the day is typically from 12 noon to 4pm. Dark tarmac heats up more, and longer, than fields and forest. Plan some breaks during that time, even if they do not align with controls. For 400s and 600s a hot summer night can offer ideal cycling conditions, so consider a siesta.

Keep up the sunscreen. The evidence is that sunscreens do not inhibit sweating.

Adjust or remove clothing as you feel hotter.

Take off the helmet, at least at breaks. The feet are a big loser of heat, shoes and socks off if you can.

Avoid alcohol and be sparing with caffeine and fizzy drinks as they make you pee more.

Keep drinking, typically one bottle electrolyte, one water. It's better to sip as soon as you feel you need something rather than stick to a rigid drinking schedule. Keep bottles full. Keep the third bottle just water for when you really need it.

Licensed premises are obliged to give you water if you ask. Public toilets, churchyards and cemeteries often have taps with potable water. People in shops, farms and private houses will usually fill a bottle for you if you ask nicely. I take a handful of water

purification tablets to remoter parts in case I need to use untreated water.

Eat light food and go for savoury not sweet; you'll get more salt and some useful nutrients.

When it's possible, like at stops, pour some water over your head and neck. I've waded into an Italian lake up to my neck wearing all my cycling kit on a very hot day.

When you stop for supplies, drink plenty and be sure to ride off without feeling any thirst. Keep your eyes open for fellow riders. Ask them if they're OK if stopped by the side of the road. Don't take yes for an answer if they look unwell or are behaving strangely.

Cycle at an easy pace where you can still converse. You'll be burning about four times the calories as at resting, when you can just talk, about six times. So aim to keep talking. Your ability to lose heat will drop drastically up steep hills as you slow, so take them easy and be prepared to pause or walk.

If it's hot and you are starting to feel uncomfortable or unwell, you are standing at the top of the heat exhaustion pit. Cramp is commonly the first symptom. Stop!

Got too hot?

Find shade and rest. Remove your helmet and shoes, and loosen or remove clothing. Cool yourself down with wet cloths, wet clothes and frozen peas from a convenience store. And drink. If you've caught yourself before things get bad you may feel OK in minutes but give it at least half an hour before going on. If you feel you need help, ask for it.

Ask yourself – are you dehydrated? Symptoms include headaches and light-headedness, dry mouth, eyes, and lips, infrequent dark pee and cramps. Consume more water and more electrolyte.

Are you nauseous or bloated? You've probably taken on too little electrolyte.

You can be overheating without being dehydrated, so starting to feel uncomfortable without the symptoms listed for it is a warning sign.

If you recover then overheat again, recover then wait until the heat cools before continuing or packing.

Heat exhaustion

The signs of heat exhaustion include those listed for dehydration but also:

- Tiredness
- Dizziness
- Excessive sweating and skin becoming pale and clammy
- Fast breathing or heartbeat
- Weakness.

You may be getting beyond helping yourself, so ask for help.

If someone has heat exhaustion or heatstroke, follow these four steps:

SHADE! move them to a cooler place.

STRIP! remove all unnecessary clothing like a jacket or

socks. If you have good access to water leave one layer clothes on as wet clothing helps cool.

SPRAY and FAN! Cool their skin – spray or sponge them with cool water and fan them. Prioritise wrists and ankles where there are more blood vessels near the surface to facilitate cooling.

Get them to drink a sports or rehydration drink, or cool water, if fully conscious

Stay with them until they're better. Don't wait too long; If after 20 minutes they are not clearly recovering, treat it as heatstroke, which is an emergency and dial 999.

If they recover, stop for the day and get them home in a way that avoids any strenuous exercise, after the temperature has dropped.

Heat stroke

If you have heatstroke you are in BIG trouble, with a real chance of death (about 25 per cent) and permanent organ damage.

Dial 999 If someone is:

- Still unwell after 20 minutes of resting in a cool place, being cooled and drinking fluids
- Has a very high temperature (over 39 if you can measure it)
- Is confused or lacking coordination
- Has lost consciousness

- Is having a seizure or fit
- Has hot skin that's not sweating and might look red (this can be harder to see on brown and black skin)
- Has a fast heartbeat
- Has fast breathing or shortness of breath

Manage the situation while waiting for help by following the SHADE, STRIP, SPRAY, FAN routine. While you keep hydrating and cooling, recruit as many people as you can, to fan the victim and fetch water.

Put the person in the recovery position if they lose consciousness while you're waiting for help. Monitor pulse and breathing and be prepared to use CPR. The person you speak to at 999 will give you further advice about what to do. You really won't want to be a victim of this, so take heat seriously.

Can't get a signal to speak to 999?

When reception is very poor you may be able to text instead. Prepare by setting up 999 texting. Send a message to 999 with the single word "Register" and get told what to do next by reply. You can find advice on how to make the SMS helpful to the operators. If you can use voice, you MUST!

You can also set up emergency information on your phone and learn how to look at emergency data on a locked phone.



HEATSTROKE FIRST AID



SYMPTOMS MAY INCLUDE:



DIZZINESS, FAINTING



HEADACHE, CONFUSION



HIGH BODY TEMPERATURE



NO SWEATING



FLUSHED DRY SKIN



RAPID SHALLOW BREATHING



RAPID STRONG PULSE



NAUSEA, VOMIT



WEAKNESS OR CRAMPS



SEIZURE, UNCONSCIOUSNESS



MOVE THE PERSON TO A COOL, SHADY AREA



CALL EMERGENCY MEDICAL HELP



COOL THE PERSON'S ENTIRE BODY

COOL THE PERSON BY SPRAYING COLD WATER

USE A FAN TO LOWER TEMPERATURE

PLACE COOL WET TOWELS OR ICE PACKS ON THE NECK, WRISTS, ANKLES AND GROIN

REMOVE EXCESS CLOTHING

GIVE WATER TO DRINK IF THE PERSON IS FULLY CONSCIOUS

HAVE THE PERSON LIE DOWN WITH FEET ELEVATED