- Exercise

Why it pays to play it cool when the heat is on

Exercising in hot weather carries a number of serious risks. Here's how to do it safely

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Extreme heat makes it especially hard for your body to cool down, so you need to be extra careful if you exercise or play sports when it is baking outside.

Your brain tries to keep your body temperature around 37 degrees Celsius and it does so in part by triggering sweat. When sweat evaporates, it carries away heat from your body's surface.

When sweat cannot do its job – because your body is generating a lot of heat or it is too hot and humid to cool down – you are at risk of dehydration or a heat-related condition such as heat exhaustion or heatstroke.

Bharat Venkat, an associate professor at the University of California, Los Angeles (UCLA), and the director of the UCLA Heat Lab, says heat can affect the entire body.

"We will often talk about heat cramps. We will talk about heat exhaustion. We will talk about heatstroke. But it is actually much wider than that. Heat can really [have an] impact [on] every system in our body, our hearts, our lungs," he says.

When heat is dangerous – and why humidity matters

The higher the temperature, the harder it is for the body to stay cool, and humidity plays a big role, too.

High humidity makes the air feel hotter than the actual temperature because it makes sweating less effective. There is so much water in the air already that it cannot take up much more – including the water in your sweat.

The heat index, which factors in humidity and is included in many weather forecasts, provides a sense of how hot it feels – and what is dangerous for prolonged exposure or strenuous activity.

The National Oceanic and Atmospheric Administration (NOAA) says people should start exercising "caution" when the heat index reaches 80 to 90 degrees Fahrenheit (26.7 to 32.2 degrees Celsius) and "extreme caution" from 90 to 103 degrees Fahrenheit (32.2 degrees to 39.5 degrees Celsius). It labels everything over 103 "danger" or "extreme danger".

NOAA has a chart that shows how the heat index is affected by humidity. For example, a day that is 90 degrees Fahrenheit (32.2 degrees Celsius) can hit the "danger" level with 70 per cent humidity.

Five tips for staying safe if you exercise in the heat

If you want to exercise in the heat, here are some tips to stay safe, according to the US Centres for Disease Control and Prevention.

1. Time your exercise and outdoor activities for the coolest parts of the day.
2. Exercise in the shade as much as possible.
3. Take frequent breaks.
4. Drink lots of fluids, and limit drinks that are high in sugar, caffeine and alcohol. Do not wait until you are thirsty to drink more.

5. Exercise with someone so you can check on each other, or pair up with a teammate.

How to recognise that you may be overheating

If you start to feel any of these symptoms, stop exercising, get to a cool place and seek medical care:

- Muscle cramping or muscle weakness
- Shortness of breath
- Dizziness
- Headaches
- Nausea

If you take it too far, you can easily risk serious heat-related illnesses.

“Athletes and other folks who regularly engage in strenuous activity often think that they can handle it,” Venkat said.

“But a lot of studies have shown that we’re really bad at gauging how hot it is.”

A common heat-related illness is heat exhaustion, which can be marked by rapid heartbeat, fast breathing, headache, nausea, and muscle weakness or cramping.

It can develop into the more serious heatstroke, when your body can no longer control its temperature. Symptoms include confusion or slurred speech, seizures, and loss of consciousness.

Heat also increases your risk of a rare condition called rhabdomyolysis, which causes the rapid breakdown of muscles.

Even if you think you can deal with the heat, Venkat said, “It’s better to kind of take a step back and take it easy.”

Heat can really [have an] impact [on] every system in our body, our hearts, our lungs BHARAT VENKAT, UCLA