

# Taking the heat

By ROSE YASMIN KARIM

**T**hese last few months have been toasty. The temperature and humidity is so tormenting that the sweat starts to flow the moment you step out. Looks like global warming is here to stay.

So what's a runner to do?

The good news is you don't have to dodge the hot days or trade running for bowling just because the thermometer's on a high. However, before you lace up your trainers to pound the asphalt, make sure you know how to keep yourself from overheating.

"When you run in the heat, the body sends more blood to the skin for cooling. Less blood flows to your muscles, so you're forced to slow down," explains Dr Reza Ng Ching Soong, 43, a consultant orthopaedic surgeon with the Kuala Lumpur Sports Medicine Centre.

"At the same time, your body will demand oxygen for the muscles, which means less blood will flow to the skin. At this point you will start to overheat because less blood is going to the skin for cooling."

So begins the tug of war in your body.

"When it's hot, your sweat glands work hard. While the evaporation of sweat is good because it cools you down, losing too much water can dehydrate you, so it's important to maintain an adequate fluid intake at all times," adds Dr Ng.

"The average sedentary person needs a minimum of eight 240ml glasses of fluid a day. Runners need more, at least 16 240ml glasses of water and a sports drink or juice."

So if you're going to exert yourself, be sure to plan your fluid intake.

"Carefully plot your running routes to pass shops and petrol stations where you can buy a drink," suggests Jamie Pang, 40, creator of Runners Malaysia, an online portal that promotes the sport of distance running.

"Before the race, study the course that the race organisers would have uploaded onto the website so that you have a general idea of where the water stops are. You can even stash water bottles discreetly along the course. Cold water works best as it is absorbed faster than warm water."

Plain water is fine for runs of up to an hour, but a sports drink will help in recovery and performance if you run for more than an hour.

"Most popular sports drinks have a low level of electrolytes and also contain carbohydrates to help speed up glycogen replacement and electrolytes lost through sweat. Some runners prefer Gatorade to water, others cannot stomach it. Always experiment with fluids during training and be prepared to race with what works," says Pang.

"But don't include caffeine or alcohol in your daily tally of fluids. They act as diuretics and will cause an overall fluid loss. Caffeine does seem to enhance performance so if you decide not to skip it, make sure you get adequate fluid.

"Drink 16 ounces of fluid two hours before you train. Ten minutes before a run, you'll want to drink another one or two cups of water or sports drink.

"During the race, try and drink another 12 ounces of fluid every 15-20 minutes. If you're running a race shorter than 30 minutes long, you probably won't need any water other than what you drank before the start. After finishing a run, start drinking immediately," Pang advises.

"If you bring along your own water, you can avoid crowds at water stops and you can carry the sports drink that you prefer," says Zulhelmi

**Some like it hot, but endurance runners have to be more heedful when it's scorching outside.**



Dr Reza Ng says a runner must carefully manage his fluids.

Majid, 36, a three-time marathon finisher.

"You can drink whenever you choose. And if you're eating on the run, you don't have to worry about coordinating your energy gels with the spacing of the water stops."

However, if you're not used to using a water bottle during training, you probably shouldn't try it during a race.

"You don't want to try a brand-new hydration belt on the day of your marathon only to discover that it bounces up and down too much. Make sure you wear it on several training runs. Sometimes what feels OK at the beginning of a run may not feel great 21km into it.

Dr Ng says there is some evidence that protein-carbohydrate drinks may better assist in glycogen replacement than carbohydrate alone and can prevent the body from plundering its muscles for energy.

Zulhelmi, for instance, gets his protein-carb mix by adding whey protein to orange juice — "It's an acquired taste but it could help speed up your recovery and help build lean and strong muscles," he says.

## Cool duds

The cotton running T-shirts you get for entering a race are probably fine for the post-event party but special running gear works best.

"Light-coloured, loose-fitting clothing will help your body breathe and cool down. Tight clothing restricts that process, and dark colours absorb the sun's light and heat," says Pang.



Above: Test a hydration belt before you use it on race day.

Micro-fibre clothing, hat and socks, says Pang, is the way to roll. "Sweat soaks into cotton and

doesn't dry quickly causing it to cling to your skin, increasing heat build-up. Although 'technical fabrics' cost a little more, it wicks away moisture so you'll appreciate the comfort, especially during long runs."

And don't let the overcast sky fool you into thinking you won't get sun exposure.

"I made the mistake once of not wearing sunblock to a race on an overcast day," says May Foong, 32, a race volunteer. "Clouds were in the forecast, but the sun broke through. That night, I had to deal with painful sunburn on my shoulders."

Foong uses an active sunscreen that doesn't run off when she sweats.

"Get one that protects against UVA and UVB rays. Some sunscreens only protect against B, but it's the A (the



Plot your running routes to pass shops and petrol stations where you can buy a drink, says Jamie Pang. — M. AZHAR ARIF & NORAFIFI EHSAN/The Star

longer wave of ultraviolet light) that penetrates the skin more deeply," she cautions.

When the sun comes up, her sunglasses also go on to protect her eyes from damaging rays.

"It adds a little extra weight but, psychologically, the sunglasses help keep me cooler since it seems like I'm running in the shade. Also, I no longer squint while I'm running. Mine doesn't fog up because it lets air flow around the eyes."

## The heat is on

Living in hot climates does not automatically acclimatise you to exercising in hot climates, Dr Ng says.

"You cannot spend all your time in air-conditioning and then expect to run well outdoors in the heat," he notes, adding that to acclimatise, one should ideally spend one or two weeks running 5-10km a day, then gradually building up the mileage in the heat.

"An individual who is heat-acclimatised may perspire earlier and almost twice as much as an unacclimatised person. This alleviates early heat build-up," Dr Ng says.

To prepare his body to deal with severe heat, Aaron Goh, who is training for a triathlon, joined a gym with a dry sauna. He spends at least 30 minutes a week in there to simulate race conditions.

"It's important to hydrate while inside the sauna to replace all the liquids you sweat out. This trains my body to process all the liquids it's going to need. I usually take in three, two-litre bottles of ice water. Two bottles are for drinking and the third is for rinsing the body," he reveals.

## Keep your cool

"Pre-cooling is a way to lower your skin temperature and can help you withstand the heat a little longer. A simple way to do it is to have a cold shower before your run," Dr Ng points out.

"After pre-cooling, less blood is sent to the skin, so more oxygen-rich blood goes to the muscles. This results in a lower heart-rate running which lets you maintain a faster pace in the heat. This will also reduce sweating during warm-up and will preserve precious body fluids for the race. Just make sure to gently stretch those cold muscles properly to avoid strains," he warns.

If you are overheating during the run, splash water on your head and body, he adds. Have you ever seen a runner bent over at the side of the road massaging their calves during a race? Chances are he or she had heat cramps.

"Heat cramps occur because you've lost minerals through sweating and dehydration and you rarely work out. Once you've reached the point of heat cramps, it's too late to try to replace fluids on the run. To make it go away, stop running, get out of the sun and drink fluids immediately. Once the pain begins to subside, cool your body with wet towels," says Dr Ng.

Heat exhaustion is another serious condition affecting runners.

"The symptoms are dizziness, goose bumps, nausea, headaches, weak legs, rapid pulse and a lack of coordination and cramping. If you experience any of these symptoms, you must stop running immediately and get medical attention," Dr Ng points out.

The antidote?

"Drink large amounts of fluids, including a sports drink and get out of the sun and loosen your clothing. Heatstroke symptoms are very similar to heat exhaustion but rapidly progress to strange behaviour, seizures and even coma. Those affected should be brought into the shade, cooled down by either rubbing their body with ice or immersing them in cold water and given fluids."

Drink too little, and you get dehydrated, but drink too much and you get hyponatremia.

"A person experiencing hyponatremia looks like he or she is mildly drunk. It happens when the body becomes dangerously low in sodium," says Dr Ng.

"You would have to be drinking water regularly for at least four to six hours to develop the condition so runners taking four to six hours or more to run a marathon are at particular risk," he suggests.

Unfortunately, symptoms of hyponatremia tend to mimic those of severe dehydration and heat exhaustion.

"By giving the runner more water to drink, one makes the hyponatremia become worse, as more and more sodium is flushed out of the system. Although hyponatremia is rare, it's best to be aware that it can occur, particularly if you're running a marathon in unusually hot weather."

Also, medical conditions and medications, reminds Dr Ng, can affect your heat tolerance.

"Make sure you are aware of the medical conditions that you have and the medications that can affect your tolerance in the heat. The conditions include diabetes, high blood pressure, anorexia nervosa, bulimia, obesity and fever. Anti-inflammatory medications like aspirin, ibuprofen and other anti-inflammatory drugs can also contribute to the development of heat-related illnesses."

While tolerating the overwhelming heat can be a big moral victory, safety should always be your main concern.

"If you have to sit out a race, so be it. There will always be another one," he argues.