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Train smart and run hard to beat the heat

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Last week, we discussed the potential health and performance concerns of exercise-induced heat stress, especially when one is not used to exercising in the heat.

With increasingly warmer weather in Singapore, it is important for runners to be cognisant of some common tricks and strategies to combat heat stress.

Some of these strategies can be as simple as changing behaviour, while others may involve specific training or physiological adaptation.

TRAIN IN THE COOL

Running in the early mornings or late evenings will help you avoid the heat from the sun.

Mok usually does his long runs at the weekend, starting as early as 6am to finish by 8am, effectively running mostly under cooling conditions.

However, not everyone can afford the luxury of running at such times of their choosing.

If you are one of those who need to squeeze in a lunchtime run at work, you can either do it on the gym treadmill, or slow down if you are running outdoors.

Running in the heat incurs further thermal strain on the body, so slow down when running under the hot sun to reduce your risks of heat injury.

ATTIRE CHOICES

Wear loose and thin clothing during exercise, preferably with moisture-wicking material that pulls sweat away from the skin to the exterior of the clothing. This promotes sweat evaporation and the removal of body heat.

However, heat loss from sweat evaporation is also reduced especially under humid conditions.

Thus, it is also recommended that runners run in singlets to reduce clothing insulation and to enhance heat loss through ventilation.

PHYSICAL FITNESS

When exercising in the heat, our body produces sweat to promote evaporative heat loss.

However, sweating also reduces the volume of blood in the body. As a result, less blood is available to bring nutrients and oxygen to the exercising muscles.

Physically fit individuals can better withstand heat stress because endurance training increases blood volume, which enhances tolerance to dehydration from sweat loss.

In short, the more you train, the less susceptible you are to heat-related injuries.

RUN SAFE

Another key to running safety is to partner a buddy. Heat injury is not the only risk one undertakes during physical activities like running.

In addition to potential heat injuries such as heat cramps and exhaustion, simple accidents like an ankle sprain can also disrupt your training plans.

As much as possible, run with a buddy and look out for one another. Remember, a good run is a safe run.

PROPER HYDRATION

Keeping the body well hydrated is another effective way to combat heat stress during endurance runs.

A good hydration strategy is therefore pivotal to safe and successful endurance running.

However, the decision on how much to drink is less straightforward.

Therefore, our next article in two weeks' time will be devoted to hydration.

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Adapting to race conditions

Heat acclimatisation is a physiological process by which the body adapts and gains greater tolerance to heat exposure. It is akin to teaching the body how to recognise and respond to heat early, so to reduce the risk of overheating.

As such, it is a great strategy to enhance a runner's ability to cope with heat during endurance races. This is especially important for runners who constantly train under cool conditions, such as in the gym or early in the morning.

Runners who are heat acclimatised perspire more readily and therefore their bodies cool faster. Their sweat also tends to be less salty in order to reduce the loss of blood electrolytes.

They also have greater blood volume and lower resting body temperature. They simply feel cooler in a hot environment.

So, how do we achieve heat acclimatisation?

A typical programme involves gradual training/exposure to hot and humid weather conditions for about 10-14 days.

While there may not be any standard protocol, one can consider incorporating a few easy training runs under warm conditions during the first few days of a programme. This is followed by higher intensity or race pace workouts in warm conditions during later stages.

It is important to note that the benefits of heat adaptation may be lost after a prolonged absence of heat exposure. A heat acclimatisation programme is therefore best done two to three weeks before race day.