

Why drink, and what to drink, during exercise

Most people know that it's important to stay hydrated (a 2% fluid loss will have an detrimental effect – for a 70kg adult this equals only about 1.5 litres): what's less clear is what exactly we should drink and how much. Supermarkets, magazines and the internet are full of sports drinks – let's have a look at the differences:

Ordinary water works pretty well, but the longer you exercise for the more likely you'll get benefit from a sports drink – certainly anything in excess of an hour. A sports drink can offer three elements your body might need:

- **Hydration:** It's been recommended that you drink about 500ml of fluid about two hours before exercise, followed by another 200-400ml 15 minutes before exercising. During exercise, start drinking early and at regular intervals (250ml every 15-20 minutes) in order to take in fluids at the rate they're lost through sweating.
- **Fuel.** Carbohydrates in sports drinks provide energy and help delay fatigue. 6% carbohydrate (14g of carbohydrate per 250ml water) is optimal. Sodium stimulates fluid absorption, maintains thirst, and water retention. Avoid carbonated drinks and those containing only fructose – they'll slow fluid absorption and might cause cramps. Also beware of caffeine, which can accelerate dehydration
- **Electrolytes or Minerals.** Sodium, potassium, and chloride are lost through sweat, and need to be replaced for correct body function. If excessive quantities of sweat are replaced by plain water, the blood sodium concentration falls, which reduces thirst.

To make really sure you replace the hydration lost during exercise, weigh yourself before and after. For every half a kilo lost you should be replacing about 500ml liquid. A simpler method though is to check your urine: clear, dilute urine usually indicates correct hydration.

Sports Drinks

There are three main types of sports drink all of which contain differing levels of fluid, carbohydrate and electrolytes.

Type	Content	Suitable for
Isotonic	Fluid, electrolytes and 6 to 8% carbohydrate	Quickly replaces fluids and supplies a boost of carbohydrate. Suitable for most exercisers including running and team sports.
Hypotonic	Fluids, electrolytes and low levels of carbohydrate	Quickly replaces fluids lost by sweating. Suitable for activities with shorter duration but high intensity
Hypertonic	High level of carbohydrate	Used to supplement carbohydrate intake after exercise. If used during exercise they should be used in conjunction with Isotonic drinks to replace fluids.

Sometimes we read about people taking in 'too much water'. While this is possible (it's a condition called *Water Intoxication*), it's relatively rare, and for most of us sensible hydration measures will be no problem.

Finally, and very importantly: if you haven't exercised for a while, or have any medical conditions which might cause problems, check with your Doctor to ensure it's safe to increase your activity levels. People with diabetes, metabolic disorders and those on special diets should consult their doctor for advice on how to modify food and fluid intake. Remember, pain is a sign that something is wrong

Alan Clinch