

# Sports Drinks: Their Role in Hydration for Athletic Performance



## Why Do I Need to Drink During Exercise?

Anyone who exercises can be at risk for dehydration. When we exercise we produce heat, which our bodies can help to control through sweating. If our core body temperature climbs just a few degrees Celsius, then heat illness, heat stroke and even death can occur. When we sweat we can help cool our bodies but can become dehydrated. Athletes can lose 0.4 to 2.0 L of sweat (1 to 4 lb loss) in just one hour, especially if exercising intensely or in heat or humidity. As little as 2% dehydration (e.g. a 3 lb loss for a 150 lb – or 68 kg – individual) can hurt your athletic performance.

## When Should I Choose a Sports Drink?

Sports drinks are specially designed to replace the sweat and electrolytes (mineral salts) that you lose in sweat and to provide energy in the form of carbohydrate for active muscles and the brain. They can benefit a wide variety of athletes, including those:

- With very high sweat rates (1L/h or more);
- Exercising either very hard or for a long time including endurance and team sport athletes;
- Exercising in hot and humid conditions or while wearing protective sports equipment such as with hockey and football.

## What Should I Look For in a Sports Drink?

- **Water**
  - This is the first and most important ingredient.
  - Make sure your sports drink is not carbonated so that it is easy to drink and doesn't make you feel full or bloated.
- **Flavour**
  - Flavour can help us drink more by improving the taste.
- **Sodium**
  - Sweat contains more than water. Have you ever noticed a white powder on your workout clothes or skin? That is the salt you lose in sweat. The salt in sports drinks improves hydration and may even help to prevent muscle cramps in some individuals.
  - Sports drinks should contain at least 300 to 700 mg of sodium per litre although ultra-endurance athletes or athletes prone to cramping may require more.

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- **Carbohydrate (sugar)**
  - Sugar improves the taste, helps you drink more, keeps blood glucose from dropping, and helps fuel active muscles and the brain so that you can exercise longer and harder.
  - Consuming between 30-60 grams of carbohydrate per hour of activity can improve endurance and high-intensity stop and go sport performance, prolong time to exhaustion, improve power output and delay fatigue.
  - On the other hand, too much carbohydrate can upset your stomach and hurt your performance. To prevent stomach and intestinal upset be sure your drink has no more than 80 grams of carbohydrate per litre. Your body is able to easily absorb anywhere from 40 to 80 grams of carbohydrate per litre. Note that juice, pop, and energy drinks contain more than 100 grams of carbohydrate per litre, so they are not intended for using during exercise.

## Bottom Line

Many different types of athletes can benefit from the use of a sports drink that contains carbohydrate and sodium to help improve hydration and athletic performance. It is always important to try a sports drink in training first before using it in competition. Competitive athletes should consult a Registered Dietitian who specializes in sports nutrition to help them develop a hydration routine that meets their individual needs.