



What is a sports drink?

Sports drinks are a variety of drinks used by active Australians for rehydration, refuelling and to support performance.

Generally, reference to sports drinks relates to drinks containing carbohydrates and electrolytes.

Most sports drinks provide carbohydrates, electrolytes and fluid to allow an individual to rehydrate and refuel during and after exercise.

The term 'electrolyte drink' is defined by the Australia New Zealand Food Standards Code and is also commonly referred to as a 'sports drink'.

Sports drinks are sometimes confused with energy drinks. Energy drinks have a completely different composition and purpose to sports drinks.

Sports drinks vary widely. When determining the most appropriate type of sports drink, many factors should be considered including the intensity and type of exercise, fitness levels and environmental conditions¹.

When to use a sports drink

Pre-exercise

Some very active people and athletes may require a pre-exercise meal or snack to ensure they are adequately fuelled and hydrated before they start their physical activity. Easily digestible foods and drinks containing carbohydrates can be very effective as a source of pre-exercise fuel.

Consuming sports drinks before exercise can help athletes start in a well hydrated and appropriately fuelled state. This may be necessary when exercising over long periods and in hot or humid conditions².

During exercise

Sports drinks, which contain carbohydrates, are designed to provide fuel for those carrying out intense and sustained exercise.

What is in a sports drink?

Carbohydrates are the body's fuel. They are macronutrients which provide energy to cells, particularly brain and muscle cells during exercise².

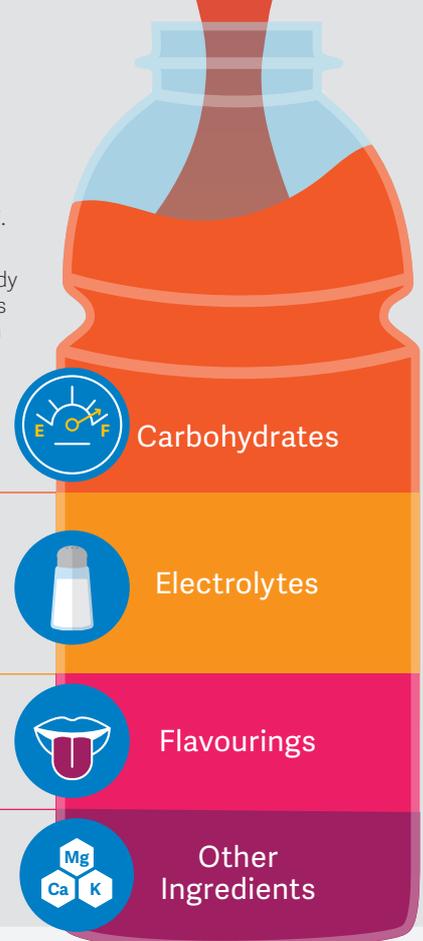
The body breaks down carbohydrates during the process of metabolism to release energy, and the body is also able to store a limited amount of this energy as glycogen in the muscles and liver. The most common type of carbohydrate found in sports drinks is sugar.

When a person has insufficient fuel, it can result in fatigue, a reduced ability to train, impaired competition performance, and a decrease in immune system function².

The most common electrolytes (also called salts) found in sports drinks include sodium and potassium. These support hydration by increasing fluid absorption and fluid retention. Salts in electrolyte drinks also help replace those lost through sweating.

Sports drinks can be found in a wide range of flavours to improve the taste of the product so that consumers enjoy the beverage while getting the benefits of consuming it¹.

As manufacturers of sports drinks innovate, additional ingredients may include vitamins, minerals and protein.



Carbohydrates



Electrolytes



Flavourings



Other Ingredients

The formulation of these products may allow individuals to continue exercising at a higher level for longer, as a result of carbohydrates being consumed during exercise¹.

Evidence also suggests that carbohydrates can reduce fatigue and improve performance during intermittent exercise or team sport³.

Recovery

After exercise, many athletes are dehydrated. It is important that they rehydrate and refuel soon after they stop.

Fluid intake requirements after exercise vary between individuals as well as with the type of exercise and environmental conditions.

The electrolyte content of sports drinks may help provide effective rehydration by replacing electrolytes lost through sweating¹, by increasing fluid absorption and fluid retention.

Recovery should be supported by refuelling with carbohydrates. Consuming foods or fluids high in carbohydrates after exercise can maximise effective refuelling time.

Protein intake is important to help contribute to muscle growth and maintenance, making it important for post-training recovery. In addition to protein intake, recovery meals and snacks should also include sufficient fluids to replenish water lost through sweating.

¹ American College of Sports Medicine, Exercise and fluid replacement: position stand, *Medicine & Science in Sports & Exercise*, 2007;39(2):377-90.

² American College of Sports Medicine, Academy of Nutrition and Dietetics, and Dietitians of Canada, Nutrition and Athletic Performance, *Medicine & Science in Sports & Exercise*, 2016; 48(3): 543-68.

³ Baker LB, Rollo I, Stein KW, Jeukendrup AE, Acute Effects of Carbohydrate Supplementation on Intermittent Sports Performance, *Nutrients*, 2015 Jul 14;7(7):5733-63.

Who should drink sports drinks?

Choosing a sports drink depends on the individual, their needs, the type of activity and exercise intensity as well as timing of consumption (before, during or after exercise) and the environment.

Active Adult Aussies

The best beverage for active adults depends on a variety of factors including the amount and intensity of exercise and the environment in which the physical activity takes place.

Australia's hot climate means exercising outdoors can result in the significant loss of fluid and salts which must be replaced.

For those looking to lose weight and reduce their kilojoule or sugar intake, an electrolyte or sports drink may not be necessary.

Active Young Aussies

The nutritional needs of adolescent athletes should be carefully considered in conjunction with a caregiver and sports dietitian. Unlike adults, adolescent diets must also consider nutrition for growth and development, in addition to providing nutrition for activity⁴.

For adolescents participating in prolonged and vigorous physical activity, such as competitive sports tournaments, they may benefit from consuming sports drinks during these periods.

The consumption of electrolyte or sports drinks may only be suitable for adolescents engaged in competitive sport. The totality of the diet should be considered prior to consumption of sports drinks, and in conjunction with a sports dietitian.



Frequently asked questions

How much exercise is required before I should consume a sports drink?

A: There isn't a set amount of exercise as this varies from person-to-person, the type of exercise undertaken and the particular exercise goal. Generally, those exercising vigorously for 60-90 minutes or more could benefit from an electrolyte/sports drink.

Is plain water just as good as an electrolyte drink?

A: Water is essential for life as it is involved in several functions in the body including regulating body temperature and maintaining proper fluid balance. Water always has a place during sports and exercise when it comes to hydration.

Sweat does not just contain water, but also salts. These important salts require replacement. Water is an effective drink to replace fluid in general and when exercise is at low intensity or for a short duration. For those who exercise at high intensity or for long periods, however, drinks containing carbohydrates and electrolytes, such as electrolyte drinks, are beneficial and may be more appropriate than water alone.

Will consuming a sports drink affect weight loss?

A: Consuming sports drinks, like any other energy (kilojoule) containing food or beverage, may affect weight loss if the energy consumed is not used. All electrolyte drinks governed by Australian food regulations must contain a certain level of carbohydrates and energy. The energy in electrolyte drinks may be unnecessary for Australians looking to lose weight or for those who do not exercise vigorously.

How much sweat would I lose during exercise?

A: Sweat rates vary between individuals and different environmental conditions.

What are some of the other options for staying hydrated?

A: Electrolyte drinks offer a convenient and quick way of hydrating and replenishing the energy used and salts lost during vigorous exercise. For less vigorous exercise, rehydration may be achieved by consuming water, milk, fruit juice (with no added sugar) or other oral rehydration solutions.

Combining a meal or snack with water will help replenish both fluids and salts.

Are sports drinks suitable for children?

A: Children do not need to consume sports drinks. Some adolescents who are involved in competitive sport may benefit from the consumption of sports drinks, particularly electrolyte drinks, but these should only be consumed in conjunction with the advice of a professional. Adolescents who are not taking part in vigorous exercise do not need to consume sports drinks.

Further information

For further information about sports drinks and other non-alcoholic drinks, please visit australianbeverages.org

Additional resources

Australian Sports Commission
sportaus.gov.au

Sports Dietitians Australia
sportsdietitians.com.au