

Sports and energy drinks for children: sorting fact from fiction

by Sharon Allsopp,
Sports Dietitian, Step Bite Step, Shellharbour, NSW

Keeping young athletes hydrated during exercise is a very real concern for coaches and parents alike.

Children are not able to regulate their body temperature as well as adults and are, therefore, at greater risk of overheating. If the event or training lasts longer than 20 minutes, drinks should be available to ensure dehydration is minimised.

But what drink should be provided, and when? With all the recent media attention concerning childhood obesity, sports drinks have come under some attack and one could be forgiven for being confused about their role with young athletes. This article considers some of the myths surrounding sports drinks and children, and outlines the different options available for hydrating young athletes.

MYTH: Sports drinks cause weight gain because they are high in sugar.

FACT: Most sports drinks have about half the amount of sugar and total kilojoules of a similar serving of fruit juice or regular soft drink. Research shows that if you consume a sports drink rather than water during exercise, you will actually ingest fewer kilojoules during the rest of the day. As with all foods and fluids, sports drinks only become problematic when used inappropriately. Sports drinks are best consumed just before and during sporting activity lasting longer than an hour. Water is the preferred option for meeting fluid needs across the rest of the day.

MYTH: Sports drinks are unsuitable because they are too high in salt.

FACT: The sodium content of sports drinks is similar to that found in a glass of milk or a slice of bread. Sodium stimulates our thirst and helps to encourage fluid intake ... good news, given that children typically have a poor voluntary fluid intake during exercise. Children's voluntary fluid intake during exercise has been shown to improve with use of sports drinks.

MYTH: Sports drinks cause stomach upsets.

FACT: Sports drinks are formulated to improve the rate at which carbohydrate and fluid empties from the stomach and hence avoids stomach upset, provided one does not drink a lot in a short period of time.

MYTH: Sports drinks cause dental cavities.

FACT: Sports drinks are acidic but they do not contain any more acid than a wide variety of drinks, including fruit juices and soft drinks. There is no research to link sports drinks alone with dental erosion. Even so, as a safeguard, young athletes should be encouraged to drink through a straw, if possible, in order to direct the fluid to the back of the mouth and avoid swishing round the mouth.

MYTH: Energy drinks are safe for children to consume.

FACT: Most of these drinks contain caffeine and are definitely not suitable for children. One can of energy drink may provide about the same amount of caffeine as an average-strength cup of coffee, and at this level children could have disturbed sleeping patterns, suffer bedwetting and show symptoms of anxiety. The carbohydrate concentration of energy drinks is also generally too high — 10–12 per cent, which is almost double that in sports drinks. At these levels, water absorption is slowed, making these drinks unsuitable for rehydration during prolonged and vigorous physical activity. Energy drinks do not have the same role to play in sport as sports drinks. Caffeine is a stimulant, providing a short, sharp boost to performance. Sports drinks, on the other hand, do not contain stimulants — only carbohydrates and salts (to replace those lost during perspiration).



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Sports drinks are the most appropriate hydration fluid for use during vigorous activity (especially if it is conducted in the heat).

MYTH: Water is the best hydrator.

FACT: Water is more a thirst quencher than a hydrator, signalling your brain to switch off your thirst mechanism prior to meeting your body's fluid needs. Plain water does not provide the fuel and electrolytes needed for optimum performance, so is really only suitable for sole use with exercise periods of low intensity and/or short duration (less than 45 minutes). Water, however, can be used in addition to sports drinks when young athletes will be exercising for longer than this. Sports waters are a relatively new product to the market and may, with more research, prove to be a more suitable option than water for exercise over less than an hour. They are designed for those who prefer to drink water during exercise. There are some differences among the common sports waters available in Australia, but essentially they are lightly flavoured, purified water that may or may not have additional vitamins, minerals or electrolytes. Some sports waters are artificially flavoured and therefore are kilojoule free, while others have 50 per cent less kilojoules than common sports drinks.

MYTH: Juice and cordial are just as good as sports drinks, only cheaper.

FACT: Generally, juice and cordial drinks are all too high in carbohydrates and too low in electrolytes to be considered ideal fluid replacement during exercise. Their high sugar content can slow fluid absorption, increasing the chance of stomach upsets. While they are not the best choice when rehydrating children before or during activity, they are typically fine for use after the playing is over and to keep energy levels up on busy carnival days.

Like adults, children often do not drink adequate amounts while exercising. It is, therefore, important to encourage and remind them to drink, and to also always have fluids readily accessible. The amount of fluid children lose will vary depending on size, intensity of exercise and environmental conditions. Generally, children lose 350–700ml during each hour of exercise. A rule of thumb is that young athletes ideally should consume 150–300ml of fluid in the hour before exercise, 75–200ml every 20 minutes during exercise and 500–1000ml after they have stopped exercising. As outlined, the fluid of choice will depend on exercise duration and intensity, but water and sports drinks are still the best options just before and during sport.