

S - Sports drinks

Sports drinks are specifically designed to help people rehydrate before, during and after exercise. They are typically used by athletes and those taking part in sport and work by replenishing electrolytes, carbohydrates and other nutrients that can become depleted after exercise.

Sports drinks fall into three key categories:

- Isotonic sports drinks – which contain concentrations of salt and sugar similar to the human body
- Hypertonic sports drinks – which contain a concentration of salt and sugar that is higher than that of the human body
- Hypotonic sports drinks – which contain a concentration of salt and sugar that is low than that of the human body.

Rehydration is essential during exercise since body's functional abilities deteriorate quickly even at lower levels of dehydration. The replacement of electrolytes promotes proper rehydration which is essential in enabling the body to continue to exercise without getting tired. Carbohydrates are the primary nutrient used by the body's muscles when exercising. Minerals such as sodium and potassium are often added to the beverages to replace those lost by sweating.

The majority of sports drinks are moderately isotonic and contain between 13 and 19 grams of sugar per 250ml serving.

The role of sports drinks and hydration

During exercise the working muscles produce heat and this heat must be dissipated in order to keep the body temperature within safe limits.

Sweating is our most effective mechanism for regulating body temperature. If fluid lost as sweat is not replaced during exercise, the resulting dehydration quickly impairs performance. As little as a 2% of body weight lost as fluid (i.e. 1.5 liters for an average 75kg male) can result in a decrease in both mental performance (e.g. reduced concentration/decision making ability) and physical performance (fatigue/reduced muscular strength).

Replacing lost fluid is thus vitally important both for maintaining sporting performance and also for minimizing risks to health. Sports drinks have been specially designed to contain both carbohydrate and electrolytes which work to promote rapid absorption from the small intestine and increase retention of ingested fluid.