

Water or Sports Drink?

Which one when?

The human gut can absorb an average of 1 litre of water per hour.

It can absorb an average of 1.5 litres of isotonic fluid per hour.

Isotonic (sports drinks such as Replace or Powerade) have concentrations of fluids, sugars and salts in the same ratio as the body fluids. This allows a faster transfer through the membranes of the stomach lining.

A calorie is a measure of energy. 2/3rds of every calorie in the body is expressed as heat. When you burn a lot of calories through exercise you create heat. Sweat forms on the skin and evaporates to cool us down.

1% of dehydration = a 10% loss in performance; 2% dehydration = 20% loss.

If you sweat more than 1 litre per hour you should drink an isotonic sports drink to allow proper re-hydration.

Signs of de-hydration:

- Increased thirst
- Dry mouth
- Weakness / Dizziness
- Heart palpitations (erratic heart beat)
- Confusion
- Headache
- Fever
- Fainting
- Death

There are 3 systems your body uses to provide energy for movement. Anerobic Alactate, Anerobic Lactate and Aerobic. The Aerobic system is capable of using body fat as fuel. All 3 systems are always working but one will be dominant.

What is your goal?

Increased performance (lift more weight, run faster over a distance, improved lung capacity). To increase performance requires maximum energy. When your body runs out of blood sugar it will rely more on the Aerobic (fat burning system) which is a slower energy transfer system as a result you slow down. Drinking a sports drink will help prolong maximum speeds/strength and aid in maintaining hydration over long/vigorous workouts.

Is your goal to reduce body fat? If so then drink water. Your goal requires you to use all your blood sugar energy so you use the stored energy (body fat). If you take in 150kcal of sugar from a sports drink it will help your hydration levels but you will need to burn another 150kcal through activity to shift fully to the Aerobic (fat burning) system.

To sum up:

Goal – Reduce Body Fat: Drink water to maintain hydration levels. If you sweat more than a litre per hour use a sports drink as well to speed up the re-hydration process. If exercising vigorously for more than 1 hour; use a sports drink + water in the second hour to maintain enough intensity to increase your metabolism.

Goal – Increased performance: Maintain hydration levels use a sports drink after 30-45minutes depending on rate of calorie use to ensure maximum available strength.

During hot weather drink water 30 minutes before workout to ensure maximum hydration/performance at the start. This means you don't have to drink so much so fast during workout and helps prevent sloshing in the stomach.

If exercising more than once per day: Refuel as soon as possible. At end of training your muscles and blood are depleted in energy. You have about 30 minutes to top up the muscle energy stores. This helps the muscles recover in time for the next workout. A sports drink will help re-hydrate and supply essential sugars and salts. Fresh fruit is a good option also (especially watery ones – apples, melons etc...).