



Hydration - The importance of staying hydrated

When the body is dehydrated by as little as 1-2 per cent your physical performance declines as much as 5-10 per cent, depleting your energy and making you feel fatigued.

Water is vital to our diet, fitness and overall health and hydration is a very important area of the dietary needs of anyone partaking in any exercise activities. It is important to get enough fluids before competition and training, but also it is important to re-hydrate after exercise to aid recovery.

Whenever you exercise you lose fluid through sweat and through water vapour in the air that you breathe out. How much fluid you lose during exercise depends on:

- How hard you are exercising
- How long you are exercising for
- Individual body chemistry
- The temperature and humidity of your surroundings

Exercising for one hour an average person could expect to lose around 1litre of fluid – even more in hot conditions.

In general, women tend to produce less sweat than men and this is due to both their body size and their greater economy in fluid loss.

You can estimate your sweat loss and therefore, how much fluid you should drink by weighing yourself before and after exercise. Every 1kg decrease in weight represents a loss of approx 1litre of fluid.

You cannot minimise fluid loss but you can offset it by:

- Making sure you are well hydrated before you start exercising
- Drink plenty of fluids during exercise
- Re-hydrate after exercise to replace losses

Symptoms of dehydration

- Nausea
- Sluggishness
- Loss of appetite
- General sense of fatigue
- Feeling excessively hot
- Headaches
- Light headedness

You can assess your level of hydration from your urine:

- You should be producing a dilute pale-coloured urine.
- Concentrated, dark-coloured urine of a small volume indicates that you are dehydrated

Clinics at:

Point West, 116 Cromwell Road
Kensington, London.

The Lodge, Parkside Hospital
53 Parkside, Wimbledon, London.

When to drink and how much

Before Exercise

- 400-600ml of fluid about 2 hours before exercise – this will promote hydration and allow enough time for excretion of excess water.
- The larger the volume of fluid in your stomach the faster it is emptied into the intestines and the faster it replaces fluid losses in your body.
- Therefore it is best to drink as much as you comfortably can early on in your workout and then continue topping up with frequent drinks.

During exercise

- Offset fluid lost during exercise by drinking early and at intervals
- Aim for 150-350ml every 15-20 minutes during exercise
- To make this more possible it is recommended to drink cool drinks from a container that makes it easy to drink

After exercise

- It is recommended to drink approx 1.5 times the fluid lost during exercise.
- The simplest way to work out how much you need to drink is to weigh yourself before and after training.
- Working on the basis that 1litre of sweat is equivalent to a 1kg body weight loss, you need to drink 1.5fluid/kg weight lost.
- It is best not to drink all this straight away but to drink the amount you feel comfortable and then to drink the remainder in divided doses until you are fully hydrated.

Water is ideal to drink, however, you may benefit further from a sports drink because it also provides carbohydrate.

Where to get your water

Here, in the developed world, we are fortunate to be able to take the supply of clean, safe drinking water for granted. Many of us choose to drink water that has been further treated to remove solvents used in the treatment process, and other contaminants. Although only around 2% of mains water is used for drinking, the whole supply to our homes has to be 'fit for drinking'. And as our bodies are 70% water, and our brains 90%, an adequate intake of good quality water every day can only be beneficial.

Tap water

Tap water is safe to drink and must adhere to strict guidelines in the UK. Even when water softening systems are installed, one mains tap must remain in order to supply drinking water. The majority of the UK has relatively hard water. Only areas like the Lake District where the water runs over granite, therefore can't pick up any mineral residues is the water naturally very soft. Hard water areas like London have a water table of clay which leaches minerals into the water, hardening it.

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Filtered water

Filter jugs use an activated carbon filter that reduces chlorine pesticides and other organic impurities, and an ion-exchange resin that reduces levels of lead, copper and aluminium. The filter cartridge requires changing approximately every month and often jug filters include a device to remind the user when to change the cartridge, if they are used for too long a bacterial residue can be built up.

Bottled

Bottled water, whether still or sparkling, has become a mainstay of modern living. Although it is often viewed as being healthier, often it has been in the bottle for up to two years. Two thirds of bottled water is 'natural mineral water', which must come from a known source and have a mineral profile that is consistent, be bottled at source, and have its mineral analysis printed on the label. The rest of the bottled waters on sale are 'spring water', from an underground source, which can be treated to remove impurities and doesn't have to be consistent in its mineral properties.

- Volvic water has a low mineral content.
- Perrier water is high in bicarbonate, but the calcium content is only around 18% of the RDA.
- San Pellegrino, the Italian mineral water, 17% of the RDA for magnesium, and 23% of the RDA for calcium.
- Evian provides a reasonable source of magnesium and calcium, and bicarbonate.

Is it possible to drink too much water?

Usually the body normally excretes any fluid not required. A problem may only arise during prolonged strenuous exercise such as marathon running when sweat losses are very high and only plain water is drunk. If sodium is not replaced there will be a rapid drop in blood sodium concentration with very watery blood plasma: hyponatraemia. This can result in dizziness, mental confusion and in the worst cases seizures, respiratory failure and even death. So, if you are sweating heavily for long periods of time, drink dilute electrolyte/carbohydrate drinks as opposed to plain water to help better maintain the fluid levels in the body.