

Water

The message is clear - drink plenty of water for your health. But why is it so important? And what are the best sources? We investigate

Water is essential to life - it's possible to survive for more than 50 days without eating, but you can live only a few days without water.

We are told to drink six to eight glasses of water a day to stay healthy. And, according to the Natural Mineral Water Information Service, nearly nine out of ten people in the UK don't drink enough. But how accurate is this picture? And, anyway, how much does it really matter?

Last autumn, we surveyed 971 adults across the UK, and found that a fifth don't regularly drink plain water. Here we also take a closer look at the habits of ten people, asking our expert to comment. And we explore the real risks and benefits, and identify other good sources of water in your diet.

Why It Matters?



We are mainly water - 45 to 70 per cent of your total body weight is water. Women have lower average body water content than men. This is because women have more body fat, which doesn't contain any water at all.

A whole range of body processes work to keep your fluid levels relatively stable - the thirst mechanism and kidney function are just two. And fluid is vital to all sorts of bodily functions. One key fluid - your blood - helps transport essential nutrients and oxygen around your body. Fluid acts as a lubricant for joints and eyes, helps you swallow, acts as a cushion for your nervous system, and helps with waste disposal. On top of all that, it also serves to regulate your body temperature - you sweat when you get too hot.

Your body is not a reservoir of water - there is continual loss. You lose fluid through your urine, faeces, skin and lungs (when breathing). This means you also need to top up levels on a regular basis. Don't think you have to drink glasses and glasses of plain water though - there are plenty of other good sources in your diet.

How much you should drink

How much fluid is lost will vary from person to person because we are all different - it will depend on your own particular metabolism, your diet and how much exercise you do, for example. But the basic point is that you should drink enough to replace what is lost.

According to a review published in the Journal of the American Dietetic Association, the average sedentary man should consume 2,900ml of water a day and the average sedentary women at least 2,200ml a day. It's estimated that a third of this will come from the food you eat. In terms of how much you should actually drink, the British Dietetic Association (BDA) recommends at least 1.5 to 2 litres of water a day. This is roughly six to eight 250ml glasses or three to three-and-a-half pints.

The BDA recommends that this is made up of plenty of water, but many other drinks - such as tea, coffee, fizzy drinks, squash and fruit juices - also make a difference. Bear in mind though, that alcohol and caffeine are mild diuretics - this means that they increase the amount of water lost by increasing the amount you urinate.

Evidence seems to be emerging that, for tea and coffee at least, the diuretic effect cannot be detected if you drink them regularly, and in normal strengths. So these drinks will still contribute to your daily water quota. The diuretic effect of alcohol is more pronounced though.

As a rough guide, for every 1ml of alcohol drunk, 10ml of fluid is lost in urine. To give an example, one 125ml glass of wine (12 per cent alcohol) contains about 15ml alcohol. That means that, for every glass of wine drunk, you'll gain about 125ml fluid, but lose 150ml.

In our survey, it's good news that, on average, people were drinking ten drinks a day - that adds up to roughly 2.5 litres of water. Tea, water (sparkling or still) and coffee were the favourites. Over four-fifths of people - 83 per cent - drink an average of five cups of tea a day, and over three-quarters of people (78 per cent) drink around three-and-a-half glasses of water.

There was a good general awareness of the importance of drinking plenty of water. The majority of people (61 per cent) thought you should drink six glasses or more a day - equating to approximately 1.5 litres of water. And 37 per cent of people said eight glasses were ideal.

There was also a fairly good awareness that other drinks can help keep fluid levels up. Overall, three-quarters of people thought orange juice and orange squash were very or fairly good. And 53 per cent thought tea and coffee were. But fizzy drinks, such as cola, were seen as very or fairly poor by the bulk (66 per cent) of people. This isn't actually right - fizzy drinks can make a perfectly valid contribution, although you might want to watch your sugar intake.

Other Factors



The exact amount of fluid you lose depends on a number of factors - including the climate, your level of activity, state of health, diet and how much alcohol you drink. People in warm environments - hotter countries, houses or offices - will lose more fluid because they sweat more. And the more active you are, the more you'll lose too. Most people in our survey recognised these risks, though only 31 per cent mentioned exercise as a factor. Remember to drink more water if any of these

apply:

- You're exposed to high temperatures
- You're carrying out strenuous work or physical activity
- You're exposed to central heating for long stints
- You're pregnant or you're breast-feeding
- You've got a fever, or you've been vomiting
- You have a high fibre diet - which needs extra fluid to process the roughage.

Thirst

What is it?

Thirst is the most important mechanism for ensuring we take on board an adequate level of fluid. We're all familiar with the feeling: your mouth tastes horrible and feels dry; your throat is dry, and you crave the sensation of drinking cool wet liquid. These physiological responses are triggered when your body signals its dehydration.

How does it work?

A number of factors interact to produce the sensation we experience as thirst. But basically, thirst is the response to extracellular (outside the body cells) and intracellular (inside the body cells) dehydration.

The 'hypothalamus' region of your brain has 'osmoreceptors' - cells that control the 'osmotic' pressure and the volume of body fluids. The osmotic pressure measures water pressure - it draws water from saturated areas to help hydrate parched ones. These osmoreceptors trigger the thirst sensation when your cells are dehydrated, and your body fluid level is down.

Emergency response

It's worth remembering that thirst is actually an emergency response - you don't become thirsty until you are already dehydrated. So it's best not to wait until you're actually thirsty before you drink.

Risks and Benefits

Generally, your total body fluid levels vary by less than 1 per cent, regardless of fluctuations in what you drink. But there are dangers if you persistently drink too little. It takes only small changes in your overall fluid levels to destabilise your system and cause dehydration - as little as 1 to 2 per cent can do it. If you were 20 per cent or more dehydrated, you'd die.

Early signs of dehydration include headaches, fatigue, loss of appetite, flushed skin, heat intolerance, light headedness, dry mouth and eyes, a burning sensation in the stomach and dark urine with a strong odour. If dehydration becomes more advanced, you may get symptoms such as difficulty swallowing, clumsiness, shrivelled skin, sunken eyes and dim vision, painful urination, numb skin, muscle spasms and delirium.

Of course, long before these things start happening, a powerful thirst should kick in, and persuade you to drink. And your kidneys are super efficient at regulating water - if things get desperate, you'll probably stop urinating.

It's also possible for people to drink too much water. Your body's fluid balance can be dangerously upset if you drink more water than your kidneys can excrete. Your body cells swell, and you may feel drowsy, weak and suffer convulsions. Most people would probably need to drink more than six litres over a short period of time though, for this to be a danger.

The benefits

There are many health benefits to consuming enough water. Water maintains the health of your kidneys by helping flush toxins and body wastes through them, for example. Some recent research has also shown that fluid (particularly plain water) consumption can reduce the risk of urinary stone disease; cancer of the colon; childhood and adolescent obesity; salivary gland malfunction; and it can improve your overall health if you're elderly.

One simple way to check you're hydrated is to keep an eye on the colour of your urine - the more transparent (so, less yellow) it is, the more hydrated you are. Also check your tongue is moist and clean looking - if it's dry or discoloured, you may be dehydrated. And check out our table on common foods and drinks, right, to see how various sources in your diet compare.