

The Importance of Hydration

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Water is essential for life, and keeping our body hydrated is necessary for many of our important bodily functions to take place.

As well as promoting good health, keeping hydrated also prevents the development of urinary tract infections (UTIs), kidney stones and constipation.



Water comprises from 75% of an infant's body weight to 55% percent in the elderly. According to H.H. Mitchell, Journal of Biological Chemistry 158, the brain and heart consist of 73% water; the lungs 83%; the skin 64%; the muscles and kidneys 79%; and the bones 31%.

What essential functions is water involved in?

Water serves a number of essential purposes that keep our bodies going, including:

- On a cell by cell level, water acts as the first building material when a cell is created.
- It is involved in thermoregulation, maintaining our bodies temperature through sweat production and respiration.
- It is in the synovial fluid that lubricates our joints.
- It assists in flushing toxins and wastes out of our body through urination.
- It makes up saliva, a liquid involved in the moistening and break down of the foods we consume.
- It acts as a shock absorber for the brain, spinal cord and foetus.

- The plasma in our blood is 92% water, so is therefore essential in maintaining blood volume and also in ensuring effective transportation of oxygen and nutrients to the tissues that need it.

How much water to we need to drink to keep our bodies hydrated?

The NHS recommend that we drink 6–8 glasses of water per day, and the key is to start drinking in the morning and continue to do so regularly throughout the day. This doesn't have to be consumed as plain water and can include lower fat milk and/or lower sugar or sugar free drinks such as low sugar cordials, tea and coffee.

With caffeinated drinks, it is important to be aware of their stimulating effect how they can cause our body to produce urine more quickly, which can be counter-intuitive when we are trying to keep our bodies hydrated.

It's important to remember that there are a number of factors that influence our bodies hydration levels, including:

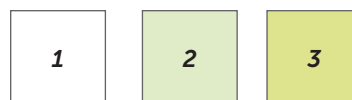
- Age – The elderly population are more vulnerable to dehydration due to the physiological changes that happen as a part of the ageing process. This includes a reduction in the sensation of thirst and renal function. It is therefore important to ensure older adults are drinking regularly, even if the feeling of thirst isn't present.
- Exercise – We lose a lot of water through sweat production when we exercise, so it is important that we replaced this during and after exercise, resulting in an increased daily consumption above the normal 6–8 glasses.
- Alcohol – Consuming alcohol causes our body to pass more urine than normal which can lead to dehydration. It is therefore important to limit alcohol consumption to on or below the government guidelines of 14 units per week, with several drink free days. Also when consuming alcohol, ensure you are making a conscious effort to drink water too to maintain hydration.
- Illness – If you have experienced any vomiting or diarrhoea, this can lead to dehydration due to loss of fluids.

The signs and symptoms of dehydration:

The signs of dehydration are visible in the colour of our urine. Dark and strong smelling urine is a clear sign of dehydration and can be used as a good indicator that we need to drink more.

Please refer to the chart below to assess your hydration level:

Healthy pee



Drink more



The other symptoms of dehydration to look out for include:

- Pain when urinating (UTIs)
- Dry mouth, lips and eyes
- Feeling thirsty
- Feeling dizzy or lightheaded
- Headaches
- Feeling tired
- Lack of concentration
- Urinating small amounts, and less than four times per day.

Top tips for keeping yourself hydrated:

- Add flavour – Dilute water with cordial – be aware of the sugar content in some cordials though as this will increase the calories within the drink. Look to buy low sugar cordials or add fruit to your drinks for natural flavouring.
- Drink teas – If you enjoy hot drinks, you can aim to hydrate yourself by drinking normal, flavoured or fruit teas. The non-caffeinated options of these are particularly suited to the evening, as it ensures the tea won't affect the quality of your sleep.

- Always carry a water bottle with you – Invest in a reusable water bottle and always have it with you – at work, in the car, on a walk etc. The presence of the bottle will be a useful reminder to keep drinking throughout the day and allows you constant access to fluids as you go about your normal daily routine.
- Download a water reminder app – There are several apps that exist for smart phones that you can use to set up reminder notifications that urge you to drink at regular intervals throughout the day.
- Use your mealtimes as a reminder to drink – If you create the habit of having a glass of water before a meal and another as you eat, this will allow you to keep on top of your hydration levels. Drinking a glass of water before a meal also allows us to feel full more quickly, preventing overeating.
- Eat your water – During the winter months you could make fresh soups or broths as these are high in water content, avoiding those that are cream based. In the summer months ice lollies and low-sugar jellies are a great source of water too. Many of the fruits and vegetables we eat also have a high-water content, for example cucumber, celery, tomatoes and melon.

Resources

- www.cpft.nhs.uk/PDF/Miscellaneous/Staying%20Hydrated%20Feb%202018.pdf
- www.nhsinform.scot/campaigns/hydration
- [/www.ncbi.nlm.nih.gov/pmc/articles/PMC2908954/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2908954/)
- www.usgs.gov/special-topic/water-science-school/science/water-you-water-and-human-body?qt-science_center_objects=0#qt-science_center_objects
- www.bupa.co.uk/newsroom/ourviews/ten-water-rich-foods-hydration
- www.nhs.uk/conditions/dehydration/
- <https://www.nutrition.org.uk/nutritionscience/life/dehydrationelderly.html>