

What percentage of your body is water?

- 10%
- 25%
- 50%
- 60%
- 75%
- 95%

60 - 75%



Functions of water

- Transports nutrients and oxygen in the body
- Helps medications to work properly
- Keeps skin, eyes, and mouth moist
- Helps to prevent constipation
- Helps to keep body temperature regulated

How much water is needed every day?

Dietary Guidelines

Most healthy people can go by their thirst

Purposeful drinking may be required by

those who have heat stress or are

performing strenuous vigorous activity.

Elderly confused and frail may not feel thirsty

Drink at meals and with snacks or about six to eight beverages a day

Benefits of water - Pressure Ulcers

Poorly hydrated individuals are

- twice as likely to develop pressure ulcers because dehydration reduces the padding over bony points.
- Fluid intake to correct impaired hydration, increases levels of tissue oxygen and enhances ulcer healing

Constipation

- Inadequate fluid intake is one of the most frequent causes of chronic constipation. It is more frequent in incapacitated or institutionalised older people and affects 42 % of patients admitted to geriatric wards.
- Individuals who are not adequately hydrated, drinking more water can increase stool frequency and enhance the beneficial effect of daily dietary fibre intake.

Urinary infections and continence

- Water helps maintain a healthy urinary tract and kidneys.
- Maintaining adequate hydration levels, rather than a high fluid intake, per se, is important in the prevention of urinary tract infection.
- Many older people are loath to drink during the evening to eliminate the need to go to the toilet during the night - Evidence shows that the restriction of overall fluid intake does not reduce urinary incontinence frequency or severity.

Kidney and gallstones

- Good hydration can reduce the risk of kidney stone formation by 39 % because dilute urine helps to prevent crystallization of stone-forming salts.
- Consumption of water at regular intervals can also help by diluting bile and stimulating gallbladder emptying, which will help to prevent gallstone formation

Heart Disease

- Adequate hydration reduces the risk of coronary heart disease by 46% in men and 59 % in women.
- Adequate Hydration will protect against blood clot formation by decreasing blood viscosity

Low Blood Pressure

- Many older people suffer a drop in blood pressure on standing which can cause them to pass out.

Drinking a glass of water five minutes before standing helps stabilise blood pressure, and can prevent fainting and falling.

Diabetes

- Water is an essential part of the dietary management of diabetes , dehydration can worsen diabetic control.
- High urine output in poorly controlled diabetic individuals can increase the risk of dehydration.
- Good hydration levels help to slow down the development of diabetic ketoacidosis during insulin deficiency in Type 1 diabetes and will help maintain healthy blood sugar levels

Cognitive impairment

Dehydration adversely affects mental performance.

- Symptoms of mild dehydration include light-headedness, dizziness, headaches and tiredness, reduced alertness and ability to concentrate.

Thirst is felt (0.8-2 % dehydration), by this time mental function may be affected by as much as 10%

Cognitive Impairment

Mental performance deteriorates progressively as the degree of dehydration increases.

In older people this impacts on cognitive function leading to increasing frailty, functional decline, and a reduction in the quality of life.

Falls

The risk of falls increases with age and in older people this can result in injury and fractures.

Dehydration has been identified as one of the risk factors for falls in older people, since it can lead to a deterioration in mental state, and increase the risk of dizziness and fainting.

Falls

The maintenance of adequate levels of hydration in older people could be effective in preventing falls, particularly as part of a multifactorial falls prevention strategy.

In hard water areas, tap water can provide a significant proportion of dietary calcium, essential for good bone mineral density and the prevention of osteoporosis and fractures

Hospitalisation in older people

- Dehydration has been shown to increase by two-fold the mortality of patients admitted to hospital with stroke.
- Dehydration increases the length of hospital stay for patients with community-acquired pneumonia.
- Dehydration can increase the risk of infection.

Skin

Being well hydrated is an excellent way to keep skin healthy and young-looking.

The skin acts as a water reservoir and participates in fluid regulation for the whole body.

Mild dehydration causes skin to appear flushed, dry and loose, with a loss of elasticity, which makes it look older than it is.

The effects of dehydration on the skin are more noticeable on the face than on the lower limbs

Cancer of the large bowel

Large bowel cancer, or colorectal cancer, is the third most common cancer in men, and the second most common cancer in women in the UK. Every year there are 18,500 new cases of colorectal cancer in men, and over 16,000 cases in women.

- Water plays a major role in digestion and gut function and yet it is frequently overlooked in studies considering diet and the risk of cancer of the large bowel.

Cancer of the large bowel

3 studies looked at the effect of water, they found that people who maintained good levels of hydration had a reduced risk of large bowel cancer compared with people whose water intake was low. The extent to which the cancer risk was reduced varied.

- Study 1 - 45 % in women and 32 % in men when they drank four or five glasses of water per day, compared to two or less glasses per day.
- Study 2 & 3 identified the protective effect was found to be greatest for men, with risk reductions for rectal cancer of **92 %** and for colorectal cancer **42 %**

The studies support the potential beneficial effect of adequate water intake in reducing colorectal cancer risk

Breast Cancer

- Breast cancer claims the lives of over 13,000 women a year – 8,000 pre-menopausal women are diagnosed, of which 15 % are from the 20-30 age group. Most women would welcome any opportunity to reduce their chances of developing breast cancer drinking enough water could be one easy way.

Breast Cancer

Good hydration can reduce the risk of breast cancer by **33 %** for premenopausal women and **79 %** for postmenopausal women. (Based on data from one small pilot study and more research is needed to confirm these findings).

Reasons why water may help to protect against breast cancer is cells need to adequately hydrated to function properly. When cells are dehydrated, their internal functions become impaired and they may be less able to remove harmful substances, such as those that cause cancer.

Prostate and urinary tract cancer

Prostate cancer has now overtaken lung cancer to become the most commonly diagnosed cancer in UK men, with around 30,000 cases diagnosed each year. It accounts for around 12 per cent of all male deaths from cancer.

- People with low fluid intake (less than 2.4 litres per day) are more likely to develop urinary tract cancers (including prostate, bladder, kidney, and testicular cancer) than those who are better hydrated.
- In women, the risk of urinary tract cancer (bladder, renal pelvis, ureter) has been shown to decline in proportion to the total amount of fluid consumed, with tap water having the strongest protective effect!

Prostate and urinary tract cancer

Maintaining good hydration can also reduce the risk of bladder cancer in men.

Water has the biggest protective effect, compared with other fluids. One study the consumption of more than 2.5 litres of water per day was associated with a 51 % reduction in bladder cancer risk, compared to the consumption of other fluids, which were associated with only a 37 % risk reduction. The researchers noted that for every additional 240ml of water drunk per day, bladder cancer risk was reduced by 11 per cent.

The evidence of a protective effect for increased fluid intake and bladder cancer is controversial, and other studies have found no association between total fluid intake and the risk of bladder cancer

The role of carers

Carers have a vital role in supporting older, more dependent, individuals to maintain healthy hydration levels.

- Ensuring fluids are freely available
- Are fluids physically accessible day and night as well as with meals.
- Be aware of the individual's need for fluid and encourage them to drink.

The role of carers

Many types of foods contain a substantial amount of water. If an older person finds it difficult to increase the amount of fluid they drink, it may be possible to help maintain adequate hydration levels by increasing the amount of moisture consumed in foods, such as fruit and vegetables which are about 80-90 per cent water.

A. E. I. O. U.

A

Assessment of needs, likes and dislikes.

Ask the person you care for what they prefer to drink

Advice on fluid intake and what fluids may have health benefits.

A. E. I. O. U.

E

Education and information.

Written, verbal, language, repeat.

Important to return to good advice and educational information.

A. E. I. O. U.

I

Input of fluids, remember to estimate when small amounts are taken.

Include food stuffs that have high water content.

Ice and flavours in water can make it taste better.

Increase availability especially at meal times.

Inform relatives and other carers

A. E. I. O. U.

O

Output – record urine output, include and estimate incontinence.

Include loose bowel actions

Indicate colour and odour if any change from normal.

A. E. I. O. U.

U

Urine colour can be a good indicator of hydration levels – use the pee chart

1-3 – Expected levels of hydration

4-8 – Its time to hydrate

Does the odour indicate a change?

Any signs of blood no matter how small seek medical advice.



Hydrating the body

Bottled water vs. tap water

Why do we not routinely drink tap water – its clean is free and its good for us?

- Think of innovative ways to encourage residents to drink more water - iced water, add citrus fruits, carbonated or squash – don't expect residents to drink one day old stale tepid water - would you?
- Individual bottles can be used by elderly – not just for young people – easy to hold and do not spill – makes it more interesting.



Milk with meals

- People who drink milk have higher intakes of: Calcium, Potassium, Vitamins A and D and protein
- The fat content can be whole, 2%, 1% or fat free – but nutrient content stays the same
- Milk provides necessary fluids and nutrients
- Milk shakes, milk drinks, smoothies



Juice



- Juices may be high in calories,
- Juices supply varying amounts of vitamins A & C

Some fruit juices, such as orange juice, contain folate and may be fortified with calcium

- Choose 100% fruit juice but do not give at every meal.
 - Avoid juices and other beverages with added sugar.

Coffees & teas

- Individuals tolerate different amounts of caffeine
- Enjoy caffeinated beverages in moderation
- Choose decaffeinated beverages to maintain hydration
- Fruit teas, green tea and iced teas



Soft drinks

- Regular soft drinks are sweetened with sugar and contain calories
- Diet soft drinks are sweetened with artificial sweeteners and are calorie free
- Squash or carbonated water are a preferred alternative .


Fruits & vegetables

- Fruits and vegetables and other moist foods that we eat contain water and help us to stay hydrated
- Snacks of fruits and vegetables like apples, salads and citrus fruits and water melon will help keep residents hydrated.






Dehydration



Chronic and acute are the two types of dehydration. The most common causes are:

- Flu
- Vomiting
- Diarrheal illnesses
- Blood loss
- Malnutrition
- Prolonged failure to drink plenty of water



Symptoms of dehydration usually begin with thirst and progress to more alarming manifestations as the need for water becomes more dire.

The initial signs and symptoms of mild dehydration in adults appear when the body has lost about **2% of its total fluid**.

Signs of dehydration

- Thirst, dry mouth, flushed skin
- Fatigue
- Headache
- High body temperature
- Increased breathing rate, rapid pulse
- Dark yellow urine
- Skin that stays in the pinched position
- Confusion

Effects of 5% fluid loss

- Increased heart rate
- Increased respiration
- Decreased sweating
- Decreased urination
- Increased body temperature
- Extreme fatigue
- Muscle cramps
- Headaches
- Nausea
- Tingling of the limbs

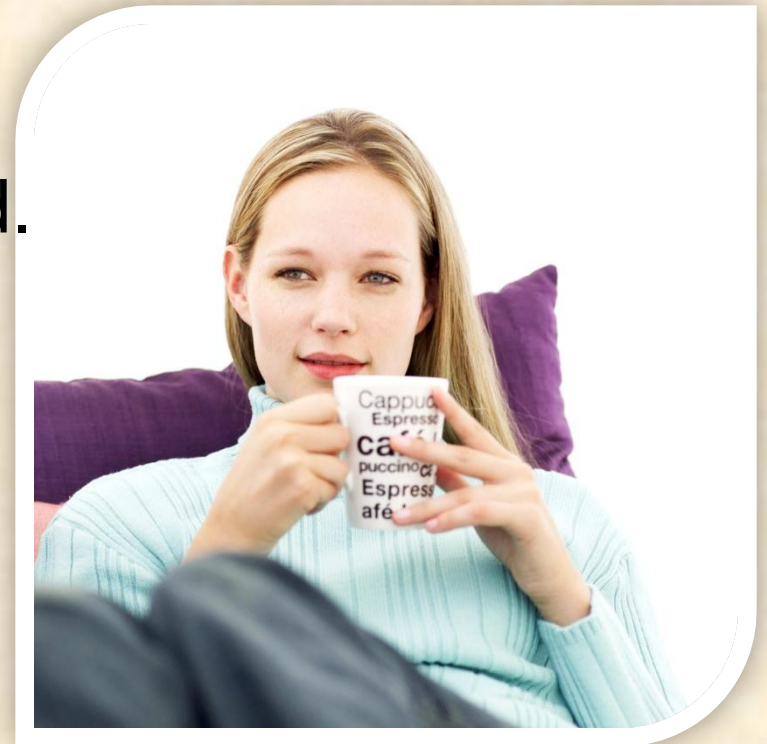
10% fluid loss and above is often fatal!

HELP IS NEEDED IMMEDIATELY

- Vomiting
 - Racing pulse
 - Shriveled skin
 - Muscle spasms
 - Chest and abdominal pain
 - Painful urination
- Difficulty breathing
 - Seizures
 - Dim vision
 - Confusion
 - Unconsciousness

Groups susceptible to dehydration

- Older adults
- Infants and children
- Athletes
- The sick
- Anyone can get dehydrated.





Don't Forget
With age, the ability to
sense thirst is
diminished. That is
why older adults need
to drink fluids
frequently even if they
do not feel thirsty.

Dehydration and the young child


Infants and young children are at greater risk because they

- May be too young to communicate thirst
- May be too irritable to drink
- May be too busy playing
- May ignore their thirst
- Offer children drinks regularly
- Protect children from becoming overheated





Medication Dehydration

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- Many drugs affect the body's water management system.
 - Any substance that can tinker with our physical water management system will have a great effect on our body, health and symptoms.
 - **Its Not just diuretics and laxatives!**

Claritin



Allergy relief

Flomax



Men's
problems

Lexapro



Anti-depressants

Lipitor



High cholesterol/triglycerides

Lithium



Anti-psychotic

Prilosec



Acid reflux

Results of dehydration

- Increased urinary tract infections
- Increased risk of kidney stones
- Poor skin condition
- Hospitalisation
- Dizziness or light headed
- Dry mouth lips or eyes
- Confusion and falls
- Convulsions
- Cardiac arrest




**Maintaining
hydration is
very
important
to optimal
health**



Add water to the diet

- Start lunch or dinner with a bowl of soup
- Assess residents would they drink more if offered individual bottled water?
- Routinely prepare fresh squash, iced water flavored with citrus fruits – drinks displayed in glass jugs may trigger residents to want a drink.
- Drink milk with meals
- Drink water with snacks
- Enjoy fruits and vegetables as snacks
- Enjoy decaffeinated teas and coffees



Follow the rule of thumb to stay hydrated

Offer drink at meals and with snacks
or about six to eight beverages a day

Risk Assess and document.

- Risk assess residents do they need extra encouragement to drink more ?
- Gauge 24 hour fluid intake
- Monitor urine colour
- Look for symptoms and risk factors for dehydration
- Plan and document how fluids can be encouraged and what individuals prefer.
- Engage residents and relatives in completing self monitoring tool.