

## Dehydration

### Introduction

You should steadily increase your fluid intake while exercising and during hot weather

How much should I drink?

Studies have tried to establish a recommended daily fluid intake, but it can vary depending on the individual and factors such as age, climate and physical activity.

Studies recommend that adults should drink 1.2 litres (6-8 glasses of water) a day to replace lost fluids and prevent dehydration.

A good rule is to drink enough fluid so that you're not thirsty for long periods, and to steadily increase your fluid intake when exercising and during hot weather.

You should drink plenty of fluid if you have symptoms of dehydration, such as feeling thirsty and lightheaded, or passing dark-coloured urine. It is also important to replace fluid lost after an episode of diarrhoea.

Dehydration occurs when your body loses more fluid than you take in.

When the normal water content of your body is reduced, it upsets the balance of minerals (salts and sugar) in your body, which affects the way that it functions.

Water makes up over two-thirds of the healthy human body. It lubricates the joints and eyes, aids digestion, flushes out waste and toxins and keeps the skin healthy.

Some of the early warning signs of dehydration include:

feeling thirsty and lightheaded

having dark coloured, strong-smelling urine

passing urine less often than usual

A baby may be dehydrated if they:

have a sunken soft spot (fontanelle) on their head

have few or no tears when they cry

have fewer wet nappies

are drowsy

The body is affected even when you lose a small amount of fluid.

What causes dehydration?

Dehydration is usually caused by not drinking enough fluid or by fluid that is lost and not replaced. The climate, the amount of physical exercise you are doing and your diet can also contribute to dehydration.

You can also become dehydrated as a result of an illness, such as persistent vomiting and diarrhoea or sweating from a fever, or exercising in hot conditions.

Who is at risk from dehydration?

Anyone can become dehydrated, but certain groups are particularly at risk. These include:

babies and infants – they have a low body weight and are sensitive to even small amounts of fluid loss

older people – they may be less aware that they are becoming dehydrated and need to keep drinking fluids

people with a long-term health condition – such as diabetes or alcoholism

athletes – they lose a large amount of body fluid through sweat

What to do

Drink plenty of fluids if you're dehydrated. This can be water, semi-skimmed milk, diluted squash or fruit juice, but it's best to avoid caffeine and fizzy drinks.

If you're finding it difficult to keep water down because you're vomiting or have diarrhoea, try drinking small amounts more frequently.

Infants and children who are dehydrated shouldn't be given water as the main replacement fluid because it can dilute the already low level of minerals in their body and make the problem worse.

Instead, they should be given diluted squash, diluted fruit juice or a rehydration solution (available from pharmacies). You might find a teaspoon or syringe can be helpful for getting fluid into a young child.

If left untreated, severe dehydration can be serious and cause fits (seizures), brain damage and death.

## When to see your DOCTOR

See your DOCTOR if your symptoms continue, despite drinking plenty of fluids, or if you suspect that your baby or toddler is dehydrated.

If your DOCTOR suspects dehydration, you may have a blood test or a urine test to check the balance of salts (sodium and potassium) in your body.

Contact your DOCTOR or out-of-hours service straight away if you have any of the following symptoms:

feeling tired (lethargic) or confused

dry mouth and eyes that don't produce tears

not passing urine for eight hours

dry skin that sags slowly into position when pinched up

rapid heartbeat

blood in your stools (faeces) or vomit

low blood pressure (hypotension)

You should also contact your DOCTOR if your baby has passed six or more diarrhoeal stools in the past 24 hours, or if they have vomited three times or more in the past 24 hours.

## Symptoms of dehydration

Dehydration can be mild, moderate or severe, depending on how much of your body weight is lost through fluids.

Thirst is the first sign of dehydration. Other symptoms may include:

dizziness or light-headedness

headache

tiredness

dry mouth, lips and eyes

dark coloured urine

passing small amounts of urine infrequently (less than three or four times a day)

Dehydration can also lead to a loss of strength and stamina. It's the main cause of heat exhaustion.

You should be able to reverse dehydration at this stage by drinking more fluids, without medical attention.

If dehydration is ongoing (chronic), it can affect your kidney function and cause kidney stones to develop. It can also lead to:

liver, joint and muscle damage

cholesterol problems

constipation

## When to see your DOCTOR

See your DOCTOR if your symptoms continue despite drinking fluids, or if you suspect that your baby or toddler is dehydrated.

You should also contact your DOCTOR if your baby has passed six or more diarrhoeal stools in the past 24 hours, or if they have vomited three times or more in the past 24 hours.

If dehydration is suspected, you may be given a blood test or a urine test to check the balance of salts (sodium and potassium) in your body.

### Severe dehydration

If dehydration is left untreated it can become severe.

Severe dehydration is a medical emergency and requires immediate medical attention.

Contact your DOCTOR or out-of-hours service straight away if you have any of the following symptoms:

feeling tired (lethargic) or confused

dry mouth and eyes that do not produce tears

not passing urine for eight hours

dry skin that sags slowly into position when pinched up

rapid heartbeat

blood in your stools (faeces) or vomit

low blood pressure (hypotension)

irritability

sunken eyes

a weak pulse

cool hands and feet

fits (seizures)

a low level of consciousness

If severe dehydration is not treated immediately, it can lead to complications. You can even die from severe dehydration because the blood stops circulating.

This level of dehydration needs hospital treatment and you will be put on a drip to restore the substantial loss of fluids.

## Causes of dehydration

Dehydration is caused by not drinking enough fluid or by losing more fluid than you take in. Fluid is lost through sweat, tears, vomiting, urine or diarrhoea.

The severity of dehydration can depend on a number of things, such as climate, level of physical activity and diet.

## Types of dehydration

There are two types of dehydration. They are:

isotonic dehydration – where water and salt are lost in the same proportion as the water and salt in the fluid surrounding your cells; this type of dehydration is commonly caused by diarrhoea

hypernatraemic dehydration – which usually affects infants or children; 'hypernatraemic' means high levels of salt in the blood, so hypernatraemic dehydration is where a child loses relatively more water than salt – for example, when they have watery diarrhoea or excessive vomiting

There are several causes of dehydration, described below.

### Illness

Dehydration is often the result of an illness, such as gastroenteritis, where fluid is lost through persistent bouts of diarrhoea and vomiting.

### Sweating

You can also become dehydrated if you sweat excessively due to a fever, exercise and sport, or carrying out heavy, manual work in hot conditions.

In these situations, it's important to drink regularly to replace lost fluids. It doesn't necessarily need to be hot for you to lose a significant amount of fluid from sweating.

Children and teenagers are particularly at risk because they may ignore the symptoms of dehydration, or not know how to recognise and treat them.

## Alcohol

Dehydration can also occur as a result of drinking too much alcohol. Alcohol is a diuretic, which means that it makes you pee more.

The headache associated with a hangover indicates that your body is dehydrated. You should try to drink plenty of water when you have been drinking alcohol.

## Diabetes

If you have diabetes, you're at risk of becoming dehydrated because you have high levels of glucose in your bloodstream. Your kidneys will try to get rid of the glucose by creating more urine, so your body becomes dehydrated from going to the toilet more frequently.

## Who's at risk?

The groups of people most at risk of dehydration are:

babies and infants – their low body weight makes them sensitive to even small amounts of fluid loss

older people – they may be less aware that they're becoming dehydrated and need to drink fluids

people with a long-term health condition – such as diabetes or alcoholism

athletes – they lose a large amount of body fluid through sweat

## Treating dehydration

The best way to treat dehydration is to rehydrate the body by drinking plenty of fluids, such as water, semi-skimmed milk, diluted squash or diluted fruit juice.

A sweet drink can help replace lost sugar and a salty snack can help replace lost salt.

Infants and children who are dehydrated shouldn't be given only water because it can dilute the already low level of minerals in their body and make the

problem worse. Instead, they should have diluted squash, diluted fruit juice or a special rehydration solution (see below).

If you or your child is finding it difficult to hold down fluids because of vomiting or diarrhoea, take smaller amounts more frequently. You may find it easier to use a spoon or a syringe to give your child small amounts of fluid.

## Rehydration solutions

When you're dehydrated, you lose sugar and salts as well as water. Drinking a rehydration solution will enable you to re-establish the right balance of body fluids. The solution should contain a mixture of potassium and sodium salts, as well as glucose or starch.

There are several different rehydration products available over-the-counter from pharmacies or on prescription from your DOCTOR, including solutions that are suitable for infants and children.

Ask your DOCTOR or pharmacist for advice about the most suitable rehydration solution for you or your child.

## Severe dehydration

Seek immediate medical help if you suspect someone is severely dehydrated (see symptoms of severe dehydration).

They may need to be admitted to hospital for treatment. In particular, babies, infants and elderly people will need urgent treatment if they become dehydrated.

Fluid may be given up the nose using a nasogastric tube or using a saline drip into a vein (intravenously). This will provide essential nutrients faster than using solutions that you drink.

If you have had bowel surgery, some rehydration solutions may not contain enough salt. In this case, you will need a higher-strength solution. Your DOCTOR or surgeon will be able to recommend a suitable rehydration solution for you.



## Preventing dehydration

You should drink plenty of fluids to avoid becoming dehydrated.

You should drink 1.2 litres (6-8) glasses of fluid every day.

As well as water, the FSA recommends drinking semi-skimmed milk, diluted squash and diluted fruit juice.

### Drink regularly

If you're active, or if the weather is particularly hot, there's a greater risk that you will become dehydrated. To prevent becoming dehydrated, you should increase your fluid intake.

As different people sweat at different rates, it's very difficult to provide specific recommendations about how much fluid you should drink. However, you should drink more than normal while exercising, and it's particularly important to keep well hydrated if you're exercising in warm conditions. This is because you will sweat more and fluid will be lost from your body more rapidly.

However, drinking more fluid than your body can process can reduce the amount of sodium (salt) in your blood. This can lead to a serious and potentially fatal condition called hyponatremia. If you start to feel discomfort and bloating from drinking, stop drinking and allow time to recover.

## Illness

If you, your child or someone you are caring for is ill, particularly with a fever, vomiting or diarrhoea, there's a high risk of becoming dehydrated so it's important to start replacing fluid as soon as possible.

### Advice for children

There are no specific recommendations regarding the amount of water or other fluids that children need.

However, it's important for children to replace lost fluid to prevent dehydration. Like adults, children lose more water when they are in hotter climates and when they are physically active.

You should give your child healthy drinks as part of an overall healthy, balanced diet.

See drinks and cups for more information and advice about specific drinks for young children.