Patient information from BMJ

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Hyponatraemia (low blood sodium)

Hyponatraemia happens when you don’t have enough of a mineral called **sodium** in your blood. You may have heard it being called 'low blood sodium' too. It is common in people being treated in hospital.

Treating hyponatraemia is fairly simple in most cases. But leaving it untreated can cause serious problems.

What is hyponatraemia?

Hyponatraemia means that you don’t have enough of a mineral called sodium in your blood. Sodium is important because it helps to control how water flows through the cells in your body. It also helps your nerves and muscles to work properly.

Hyponatraemia can be caused by having too much water in your body, but also by having too little (being dehydrated).

It's very common in people treated in hospital, especially older people.

In very severe cases, where it’s not treated, hyponatraemia can cause serious problems such as confusion, seizures, and swelling in the brain.

What causes hyponatraemia?

Hyponatraemia can be caused either by having too much water in your body or too little. Sometimes, there is a clear cause for this, but in other cases, there is no clear reason.

Several conditions can cause you to have **too much water** in your blood. They include:

- Kidney problems (such as kidney injury and nephrotic syndrome)
- Congestive heart failure
- Cirrhosis (a serious problem that causes scarring of the liver), and
- Conditions that cause the release of a hormone involved in your body’s sodium and water balance (e.g., cancer, meningitis, pneumonia).

Conditions that can cause you to have **too little water** in your blood (dehydration) include:

- Severe diarrhoea or vomiting
- A kidney condition called salt-wasting nephropathy, and
- Pancreatitis (a serious condition that happens when your pancreas becomes inflamed).

Some **medicines** can cause hyponatraemia. These include:

- Opioid painkillers
- Non-steroidal anti-inflammatory drugs (drugs that treat swelling and the pain it causes)
- Antidepressants
- Diuretics (drugs that help your body to get rid of extra water)
- Some drugs used to treat epilepsy.

What are the symptoms of hyponatraemia?

The symptoms of hyponatraemia depend on how quickly it develops. But in many cases, there won't even be any symptoms at all.

Symptoms of hyponatraemia can include:

- Changes in your personality
- Feeling tired and slow, and
- Confusion.

Cerebral oedema (swelling in the brain) is more likely when hyponatraemia develops quickly (usually within 24 hours).

People with cerebral oedema usually have more severe symptoms, which can include:

- Nausea and vomiting
- Drowsiness
- Seizures, and
- Coma.

If your doctor thinks that you may have hyponatraemia, they will want to ask you more questions. For example, they may ask you about:

- Your medical history
- How much water or other fluids you have drunk recently
- Whether you have had diarrhoea or vomiting
- What medicines, if any, you are taking.

Your doctor will also want to do a physical examination, as well as some blood and urine tests, if they think you might have hyponatraemia.

What are the treatment options for hyponatraemia?

Treatment for hyponatraemia will depend on:

- how **quickly** the hyponatraemia developed, and
- how **much** water is in your system (i.e., too much or too little water in your blood).

You may be given fluids through a drip (directly into your vein). These fluids contain sodium. Or, in some cases, you may be restricted from having fluids to help your sodium levels get back to normal.

In very specific cases where treatment doesn't work, your doctor might suggest specialist drugs to help.

Many people with hyponatraemia are already in hospital being treated for other reasons. If you're not in hospital, you'll only usually be admitted and treated in severe cases where you need urgent care.

If your hyponatraemia has been caused by another condition, such as heart failure or kidney problems, your doctor will want to discuss treatment for this too.

What happens next?

Hyponatraemia is common in people who are being treated in hospital for a variety of reasons, and it's often hard to avoid.

But there are things that some people can do to help prevent it. For example, if you are taking certain medicines, such as some antidepressants, you should avoid drinking excessive amounts of water or other fluids.

This also applies if you have certain medical conditions, including heart failure, cirrhosis, and kidney problems. If you are not sure about what is a safe amount of fluid to drink for your condition, speak to your doctor.

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