

Patient information from BMJ

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Sepsis in adults

Sepsis is a medical emergency. It happens when the body has a bad reaction to an infection. Without treatment, sepsis can quickly lead to multiple organ failure and death. Spotting the signs of sepsis can help in getting treatment quickly.

What is sepsis?

People get infections all the time, from simple viral infections like colds, to more serious infections that need treatment.

The body's usual reaction to an infection is to help fight it. But sometimes our bodies react to infections in ways that harm us. This is called sepsis. It can cause damage to major organs and even death.

Many types of infection can lead to sepsis. But the most common ones are infections that affect the lungs, the urinary tract, and the bowels (intestines).

Anyone with an infection can develop sepsis. But it is more likely in people who:

- are aged over 65
- have a weakened immune system
- have diabetes
- have recently had surgery
- have recently had an injury that broke the skin
- are pregnant or who have recently been pregnant
- inject recreational ('street') drugs, such as heroin
- have an indwelling catheter (this means it's inside your body) for draining urine.

Septic shock

Septic shock is a dangerous complication of severe sepsis. It can cause dangerously low blood pressure. This means that your major organs don't get enough blood supply and can't work properly. When sepsis develops into septic shock it becomes harder to treat.

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What are the symptoms?

If you have sepsis, getting treatment quickly gives you the best chance of a good recovery. But sepsis can be hard to spot, as the symptoms, such as fever and feeling unwell, can be similar to those of many common illnesses.

But if someone has sepsis or septic shock they often have other symptoms, including:

- fast breathing (called tachypnoea)
- a fast heartbeat (called tachycardia)
- a change in mental state, such as being confused or struggling to make sense
- skin that is very pale or mottled (patchy looking), or that has a bluish appearance
- not needing to urinate as much as usual.

If your doctor thinks that you might have sepsis, he or she will arrange some tests. If this is your regular, general doctor, he or she might also arrange transport to hospital for you.

The tests you have will include blood tests, and possibly a chest x-ray and an electrocardiogram (ECG) to check your heart rhythm.

With these tests your doctor will try to find out exactly what has caused the infection so that you can get the best treatment. These tests can also show if you are in danger of any organ damage.

What treatments work?

If you have sepsis it helps to get treatment as soon as possible. So if you think that you or someone you know has sepsis, get medical help immediately.

Antibiotics

The main treatment for sepsis is antibiotics. These are drugs that kill bacteria. Most infections that lead to sepsis are caused by bacteria. You might be given antibiotics as tablets or as an intravenous (IV) drip.

You will have blood tests to try to find out exactly what bacteria has caused your infection. This is because different antibiotics work better for different bacterial infections.

But if your doctor thinks that there is a good chance that you have sepsis, he or she will not wait for test results. After your blood tests you will be given general antibiotics straight away. Your doctor can then change your antibiotics, if needed, based on your test results.

Other treatments

You might need treatments as well as antibiotics. This might include:

- medicines to raise low blood pressure. This helps increase the blood flow to your organs so that they can work as well as possible
- oxygen to help you breathe regularly

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- fluids through an intravenous (IV) drip, to keep you hydrated.

If you have severe sepsis, or if you have septic shock, you will need to be treated in an intensive care unit (ICU).

What will happen?

Many people have successful treatment for sepsis and make a full recovery. But it is a life-threatening condition and many people don't survive, even with treatment.

- About 30 in 100 adults treated for sepsis do not survive
- About 40 in 100 adults treated for septic shock do not survive.

For people who recover from sepsis, the organ damage caused by the condition, such as kidney damage, is usually temporary.

But sepsis can cause long-term problems, including damage to the nerves. This can cause numbness, weakness, and pain in some parts of the body.

The nervous system can often repair itself over time, and there are treatments that can help with this nerve damage. But some people need long-term treatment for complications of sepsis.

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