

Patient information from BMJ

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Meningitis and septicemia

Meningitis and septicemia are life-threatening illnesses. It is very important to get treatment immediately. This information is about meningitis and septicemia caused by bacteria called meningococcus. It doesn't look at meningitis from other causes.

What are meningitis and septicemia?

Meningitis and septicemia are **medical emergencies**. If you think you or someone you are with has symptoms of these conditions, get medical help right away.

You get meningitis when germs called bacteria infect the fluid in your spinal cord and around your brain. If the bacteria get into your blood it can also cause blood poisoning, which is called **septicemia**.

Several kinds of germs cause meningitis, including viruses and bacteria. This information looks at meningitis and septicemia caused by **meningococcus** bacteria.

You might also hear these infections called **meningococcal disease**.

When someone is infected the bacteria live in their nose and throat and can be spread through coughs and sneezes. You can have meningitis or septicemia separately or both at the same time.

People with a greater chance of being infected include:

- children aged under 5 years
- young adults aged 16 to 21
- college students living in halls of residence
- children whose parents smoke, and
- people aged 65 and over.

Children in many countries are routinely vaccinated against some types of meningitis, including meningococcal disease. But these bacteria still cause infections every year.

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What are the symptoms?

It's really important to know the symptoms of meningococcal meningitis and septicemia. The sooner you spot the symptoms and get treatment the more likely you are to recover well.

Both meningitis and septicemia usually cause:

- a high temperature (fever)
- sleepiness (including feeling lethargic or having difficulty waking up), and
- a rash.

Symptoms come on quickly, getting worse within a few hours.

People with meningococcal disease sometimes get a particular kind of rash. Unlike most rashes it doesn't go away when you press it. So if you press a glass against it you can see it through the glass. But not everyone gets a rash.

If you have meningitis, you might also have:

- a headache
- a stiff neck
- nausea or vomiting
- loss of appetite
- pain looking at bright lights
- confusion or difficulty thinking clearly
- seizures.

If you have septicemia, you might also:

- have cold hands and feet
- have pale or mottled skin
- feel shivery
- have very rapid breathing
- feel thirsty
- have painful joints and muscles.

Babies and children under 2 may not have these symptoms. Instead they might:

- be slow, sleepy, or irritable
- vomit, or feed poorly
- cry a lot (sometimes this sounds like moaning or high-pitched crying)
- have a fever, but look pale or blotchy
- have a bulging soft spot (fontanelle) on their head

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be stiff or jerky, or have seizures.

If you or your child has symptoms **get medical help right away**. Do not delay. Go to the nearest emergency room or call for an ambulance immediately, whatever time of day or night.

You will need blood tests and possibly other tests to find out whether you have meningitis. But treatment should be started immediately, before the test results.

What treatments work?

The usual treatment for meningococcal disease is antibiotics. If you get treatment quickly you have a better chance of recovering.

Medications

If doctors think you have meningococcal disease you'll be given antibiotics through an intravenous drip (IV) into your arm. You might be given them on the way to the hospital.

It can be difficult to know for certain whether someone has meningococcal disease. Doctors usually start people on antibiotics right away without waiting for the results of tests, because it's so important to start treatment quickly.

Doctors sometimes give injections of medicines called steroids, as well as antibiotics, for meningococcal meningitis. This may prevent nerve damage.

Treating other people

If you've been in close contact with someone who has meningococcal disease, your doctor will recommend that you take antibiotic pills, to stop you catching it. You should start them as soon as possible, usually within a day.

Close contact means that, in the seven days before the person you knew got meningococcal disease, you could have been infected by bacteria from their mouth or nose. For example, you:

- lived in the same house as them
- shared a school dormitory with them
- were their boyfriend, girlfriend, or partner
- shared a kitchen in a university hall of residence with them.

What will happen to me?

Most people who get meningococcal disease recover. But between 10 and 15 in every 100 people will die. And between 10 and 20 in 100 of those who recover will have some kind of complication, such as some hearing loss, muscle and movement problems, blindness, seizures, or mental retardation.

Some people also have problems with blood circulation and need to have operations such as skin grafts and finger amputations.

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If you or your child has had meningococcal disease, your doctor should arrange for regular checks to look for signs of complications. For example, spotting hearing loss as early as possible in young children is important, so that they get treatment quickly and avoid speech problems as they grow.

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