



Meningococcal infection

Meningococcal infection (or meningococcal disease) is caused by a bacteria called meningococcus. There are 13 strains of meningococcus and five of these can be prevented by vaccines (A, B, C, W and Y strains). Meningococcal infection is uncommon, and not easily spread, but it can cause serious complications, including:

- meningitis – an infection of the covering of the brain and spinal cord
- septicaemia – an infection of the blood
- infections in other parts of the body, such as in the joints.

Meningococcal infections can start suddenly and become extremely serious very quickly. They can cause life-long disabilities, or death in about one in 10 people affected.

If your child has meningococcal infection, early diagnosis and treatment with antibiotics is vital.

Signs and symptoms of meningococcal infection

Children may have one or more of these symptoms if they have meningococcal infection:

- high fever (temperature over 39°C)
- severe headache
- stiffness and pain in the neck, shoulders, back and other muscles
- skin rash (small bright red spots or purple spots or unexplained bruises) that does not turn skin-coloured (blanch) when you press on them with a finger (you could also press the side of a clear drinking glass over the rash and watch to see if it blanches through the glass)
- dislike of bright lights (photophobia)
- lethargy, drowsiness or confusion
- nausea and vomiting.

In babies, the typical symptoms may be harder to detect, but they may include:

- a fever (temperature above 38°C)
- a high-pitched, moaning cry
- being irritable, agitated or unsettled
- refusing or not waking for feeds
- vomiting
- being difficult to wake, lethargic or floppy
- pale or blotchy skin
- a skin rash (small bright red spots or purple spots or unexplained bruises) that does not turn skin-coloured (blanch) when you press on them with a finger or the side of a clear drinking glass.

Symptoms will show up within two to 10 days (but usually about three to four days) after your child has been in contact with meningococcus. Symptoms often begin suddenly.

When to see a doctor

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Anyone showing signs of meningococcal infection needs to immediately see a doctor or be taken to the nearest hospital emergency department.

If meningococcal infection is suspected, samples of blood and the fluid around the spinal cord are taken and tested for the presence of meningococcus bacteria, but antibiotics will usually be started without delay, as a precaution.

Treatment for meningococcal infection

If your child has symptoms of meningococcal infection they will be treated in hospital with antibiotics. Early treatment with antibiotics is the key to saving their life and avoiding long-term disability.

Diagnosis is not always easy to make in the beginning. If your child is sent home by the doctor or hospital after some initial symptoms, but becomes worse or doesn't improve, **take them straight back to the nearest hospital emergency department.**

How is meningococcal infection spread?

Meningococcus bacteria is spread by tiny drops of fluid from the nose and throat via coughing, sneezing, spluttering and sharing cups, drink bottles and cutlery. However, it is not easily caught, because once out of the body, the bacteria do not live for long.

Many people carry the meningococcus bacteria in their noses and throats without getting sick. These people are called healthy carriers. Healthy carriers can spread the bacteria to other people, who may then become sick.

To help protect your child from meningococcal infection:

- Have your child vaccinated against meningococcal disease. Some strains are included in the National Immunisation Program. Additional vaccines can be purchased privately, you should discuss this with your GP or paediatrician.
- Children who are exposed to cigarette smoke are at a greater risk of getting meningococcal disease. Do not allow anyone to smoke in your home or around your child.

Good hygiene reduces the chance of getting bacterial infections or passing them onto others. Good hygiene includes:

- regularly washing hands thoroughly
- not sharing cups or cutlery
- encouraging children to cough or sneeze into their elbow
- teaching your child to throw tissues into the bin as soon as they have used them and to wash their hands afterwards.

Treatment for contact people

By law, doctors treating patients with suspected or confirmed meningococcal infection must notify the Department of Health and Human Services (DHHS). You may be contacted by DHHS staff for more information.

People who have been in contact with someone who has meningococcal infection in the seven days before they became unwell may be at higher risk of developing meningococcal infection themselves. Some contact people will need to have antibiotic treatment to help prevent them from becoming sick – your doctor will advise you if this is necessary. Contact people may include:

- people who come into contact with an infected person's mouth or nose secretions, e.g. through using the same cutlery or kissing
- somebody who lives in the same house and shares meals and living space
- children who chew and suck on shared toys, such as in child care centres, playgroup or kindergarten.

Rifampicin is the antibiotic medication that is commonly used for contacts. Rifampicin is not suitable for all people, and has some possible temporary side effects (e.g. stomach aches, headaches, body fluids such as saliva and urine turning red or orange). Your doctor will provide you with all the necessary information.

Taking rifampicin does not guarantee prevention of meningococcal infection. If any of the symptoms of the disease develop, you should still seek urgent medical attention.

Key points to remember

- The bacteria meningococcus can cause serious infections including meningitis, septicaemia and infections in the joints. These infections can be deadly in about one in 10 people affected.
- If your child has symptoms of meningococcal infection, seek urgent medical attention. Early treatment with antibiotics is the key to saving their life.
- If your child is sent home by the doctor or hospital and becomes worse or doesn't improve, take them straight back to the nearest hospital emergency department.
- People who have come into contact with a person with meningococcal infection may need antibiotic treatment as a precaution.

For more information

- Kids Health Info fact sheet: [Meningitis \(http://www.rch.org.au/kidsinfo/fact_sheets/Meningitis\)](http://www.rch.org.au/kidsinfo/fact_sheets/Meningitis)
- Better Health Channel: [Meningococcal disease \(https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/meningococcal-disease\)](https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/meningococcal-disease)
- Australian Government Department of Health: [Meningococcal immunisation service \(https://beta.health.gov.au/services/meningococcal-immunisation-service\)](https://beta.health.gov.au/services/meningococcal-immunisation-service)

Common questions our doctors are asked

Does the rash always appear with meningococcal infection?

A rash will not always appear with meningococcal infection, or it may be one of the last symptoms to appear. If your child has other symptoms of meningococcal infection, seek urgent medical attention, as early treatment is crucial. Do not wait until a rash appears to seek medical advice.

I've heard that even if a child recovers from meningococcal infection, they can have some serious after effects. What might these be?

About one in four people experience some after-effects after recovering from meningococcal infection. These can include headaches, scarring of the skin, deafness or ringing in the ears, blurring or double vision, aching joints and learning difficulties. However, most of these after-effects get better with time.

Developed by The Royal Children's Hospital General Medicine department. We acknowledge the input of RCH consumers and carers.

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