

What is meningococcal disease?

Meningococcal disease is caused by the bacteria *Neisseria meningitidis* (also known as meningococcus). It is a serious disease that can cause meningitis (infection of the membranes around the brain and spinal cord) and/or bacteraemia (infection of the blood). These are both severe infections that may lead to death.

There are different types of meningococcus. Most illness in Australia is caused by serogroup B and C. Other types include A, W135 and Y.

In Australia, meningococcal disease is not very common. Meningococcal disease can affect people of any age, but is most common in children less than five years of age and in those aged 15-25 years. The disease occurs more often in winter and spring.

What are the symptoms?

The typical symptoms of meningococcal disease can include all or some of the following:

- Fever
- Neck stiffness
- Severe headache
- Sensitivity to bright lights
- Vomiting
- Joint or muscle pain
- Drowsiness
- Rash
- Coma

In young children, early signs may include leg pain, cold hands and feet and abnormal skin colour.

In babies, the symptoms of disease can differ and can include all or some of the following:

- Irritability
- High pitched crying
- Refusing to eat
- Vomiting
- Lethargy/drowsiness
- A dislike of being held
- A blank staring expression
- Rash
- A pale, blotchy complexion

Symptoms usually develop very quickly over a few hours. **It is extremely important to seek medical attention as soon as possible.**

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What about the rash?

The rash can start anywhere on the body as tiny red or purple spots but they can spread and enlarge to look like fresh bruises. The rash will not fade when pressure is applied. Seek **urgent** medical attention if this type of rash is present.

It is important to know that the rash may not be present at all or may be a very late sign.

How is it spread?

Around 5-10% of the population carry meningococcal bacteria in their nose and throat, but very few people become unwell as a result. Meningococcal bacteria only survive in humans, and are transmitted from person to person through contact with respiratory secretions.

The bacteria is not easily spread and usually requires very close prolonged contact (e.g. people living in the same household or deep intimate kissing) to be passed from person to person. It is not easily spread by sharing drinks, food or cigarettes.

Who is at risk?

Meningococcal disease can affect anyone, but those at higher risk include:

- Household contacts of patients with meningococcal disease;
- Infants, young children, adolescents and young adults;
- People exposed to second hand cigarette smoke and smokers;
- Travellers to countries with high rates of meningococcal disease;
- People with no spleen.

People who have had only minor exposure to someone with meningococcal disease have a very low risk of developing the disease.

Healthcare workers are not at increased risk unless they have been directly exposed to a case's nasopharyngeal secretions (e.g. performed mouth-to-mouth resuscitation or intubated the case without using a face mask).

How is it diagnosed and treated?

Diagnosis is based on the patient's history and a clinical examination. It can be difficult to diagnose in the early stages. Laboratory samples of blood, cerebrospinal fluid or skin samples can confirm a diagnosis. Meningococcal disease is treated with antibiotics.

What if I have been in contact with someone with the disease?

Public health officers follow up all cases of meningococcal disease. They will determine who is a close contact of someone diagnosed with meningococcal disease. These people are more likely to be carrying the bacteria in the nose and throat and require clearance antibiotics. These antibiotics may not treat or prevent the disease, but will eliminate the bacteria from the nose and throat and aim to prevent it from being passed on to others.

Public health officers will also provide advice on the need for meningococcal vaccination of close contacts of a case of meningococcal disease.

All contacts should be aware of the symptoms of meningococcal disease and should see a doctor urgently if these occur. A separate information sheet is available for close contacts who require clearance antibiotics.

Immunisation recommendations

Meningococcal C vaccination is recommended for all children at 12 months of age as part of the funded National Immunisation Program (NIP).

A meningococcal B vaccine has been registered for use in Australia for people \geq 2 months of age. This vaccine is not funded under the NIP. A vaccine is also available that protects against meningococcal A, C, W135 and Y. Both of these are available for purchase on private prescription from your doctor.

The meningococcal B and the meningococcal A, C, W135 and Y vaccines are recommended, but not funded for the following groups:

- Laboratory personnel who frequently handle *Neisseria meningitidis*.
- Children and adults with high-risk medical conditions such as asplenia;
- Travellers to areas where meningococcal disease is prevalent.
- Pilgrims attending the annual Hajj in Saudi Arabia.

Need more information?

For more information about meningococcal disease, contact your doctor or call the Health Protection Service, Communicable Disease Control Information Line during business hours on **(02) 6205 2155**.

Communicable Disease Control Section at Health Protection Service is responsible for the investigation and surveillance of notifiable or infectious conditions in the ACT in order to control or prevent their spread in the community. This includes the promotion of immunisation, education and other strategies that help to limit the spread of diseases.

Meningococcal disease is a notifiable disease. Cases notified to ACT Health are investigated by Public Health Officers.

Acknowledgements

1. Australian Government, Department of Health, Invasive Meningococcal Disease SoNG 2014.
2. NHMRC, 2013, *The Australian Immunisation Handbook*, 10th edition.
3. Heymann DL, 2015, *Control of Communicable Diseases Manual*, 20th edition.

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