

Meningococcal Disease

Invasive meningococcal disease (IMD) is a severe but uncommon infection that occurs when meningococcal bacteria invade the body from the throat or nose. At any given time, meningococcal bacteria are carried harmlessly at the back of the throat or in the nose in about 10% of the community. Although most people who have these bacteria in their throat or nose remain quite well, they are able to spread the bacteria to others, and a few of these people may subsequently become ill. Older adolescents and young adults who carry this bacteria commonly spread the meningococcal bacteria.

Meningococcal disease occurs in two main forms (or a combination of these two forms):

- meningococcal meningitis - when the bacteria infect the lining around the brain and spinal cord
- meningococcal septicaemia - when the bacteria invade the bloodstream and cause blood poisoning.

Signs and Symptoms:

The symptoms of meningococcal disease don't appear in any particular order and may appear differently in different people. Typical symptoms of meningococcal disease are listed below:

Symptoms in babies

- fever, hands and feet may also feel cold
- refusing feeds or vomiting
- high pitched moaning cry or whimpering
- dislike of being handled, fretful
- rash of red-purple spots or bruises that do not fade under pressure
- blank and staring expression
- bulging fontanelle
- difficult to wake, lethargic
- pale blotchy complexion.

Symptoms in older children and adults

- vomiting
- fever
- headache
- stiff neck
- dislike of bright lights
- drowsiness
- joint pain
- rash of red-purple spots or bruises that do not fade under pressure.

If anyone has any of these symptoms, seek urgent medical attention. Early treatment can sometimes prevent serious complications. Not all symptoms or signs may be present at disease onset, for example the characteristic rash described above, is not always present.

People who are immunocompromised due to certain conditions, including inherited defects or deficiency of properdin or complement components, current or future treatment with eculizumab, functional or anatomical asplenia, after haematopoietic stem cell transplantation or HIV infection, have an increased risk of acquiring IMD.

Treatment:

A person with meningococcal disease usually needs to be admitted to hospital for appropriate care and treated with antibiotics.

Control

Close contacts of a person with meningococcal disease have an increased, although still quite low, risk of also developing the disease. As a precaution, public health authorities identify contacts to explain the nature of the disease, and if necessary, prescribe a short course of antibiotics to get rid of any meningococcal bacteria they may be carrying in their throat or nose. In general, only household contacts and other close household like contacts (such as sexual partners) require antibiotics.

Vaccination is also recommended for any recent household, household-like and sexual contacts of people infected with certain strains of meningococcal disease which are preventable through vaccination. When test results are available, public health authorities will inform all contacts and advise them if the strain is vaccine preventable and if so to be promptly vaccinated by a general practitioner. Because antibiotics and vaccination may not always prevent meningococcal disease, all contacts, whether or not they have been given antibiotics or vaccination, need to be alert for the symptoms of the disease for around 2 weeks after their last contact with the infected person (see the meningococcal disease symptom chart under Other Resources). If any symptoms of meningococcal disease develop in close contacts or people close to them, it is important to seek

urgent medical advice.

Anyone who has been in contact with a person diagnosed with meningococcal disease is able to continue to attend child care, school or work, and all other activities should continue as normal, whether or not they have received antibiotics or vaccination.

Transmission:

It is not easy to catch meningococcal disease. While the bacteria can be spread via droplets from the nose or throat during coughing and sneezing, close and prolonged contact with a person who has the bacteria in their nose or throat is usually needed for the bacteria to spread. For example, the disease is not spread by sharing saliva through sharing cups, drinks or cigarettes. As meningococcal bacteria cannot live long outside of the body, the infection can also not be picked up from water supplies, swimming pools, bed linen or pillows.

After exposure to the bacteria, it usually takes from three to four days to become ill, although sometimes it can be as little as one day or as long as 10 days.

Prevention:

Immunisation

There are a number of different strains of meningococcal bacteria. The main strains that cause meningococcal disease worldwide are A, B, C, W and Y. Some types of meningococcal disease can be prevented by vaccination and under the National Immunisation Program (NIP) certain groups in the community are eligible for meningococcal vaccine.

Who is eligible?

From 1 July 2020, recommendations for meningococcal vaccines have changed to make meningococcal vaccines more readily available and give extra protection to people who are most at risk of invasive meningococcal disease. Recommendations for the use of meningococcal vaccines, including scheduling and dose requirements, remain unchanged. However, some of the recommended vaccine doses are now funded under the NIP. For further information refer to the [Australian Immunisation Handbook](https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/meningococcal-disease) (<https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/meningococcal-disease>).

The Meningococcal B (Bexsero®) and meningococcal ACWY (Nimenrix®) vaccines are funded for people of all ages with medical conditions associated with the highest risk of invasive meningococcal disease, namely; asplenia and hyposplenia, complement deficiency and those receiving treatment with eculizumab. People with ongoing increased risk of invasive meningococcal disease due to these specified medical conditions are also eligible for NIP-funded booster doses of MenACWY vaccine as recommended in the [Australian Immunisation Handbook](https://immunisationhandbook.health.gov.au/search/meningococcal) (<https://immunisationhandbook.health.gov.au/search/meningococcal>).

Meningococcal B

From 1 July 2020 the meningococcal B vaccine (Bexsero®) is also available for Aboriginal and Torres Strait Islander infants at 2, 4 and 12 months of age. An additional dose at 6 months of age is required for Aboriginal and Torres Strait Islander infants with specified [medical conditions](https://immunisationhandbook.health.gov.au/resources/handbook-tables/list-specified-medical-conditions-associated-with-increased-risk-of) (<https://immunisationhandbook.health.gov.au/resources/handbook-tables/list-specified-medical-conditions-associated-with-increased-risk-of>).

A catch-up program is also available until June 2023 (up to 23 months) for Aboriginal and Torres Strait Islander children under 2 years of age. These children can receive Bexsero® at the same time as other vaccines currently included on the NIP schedule.

Meningococcal B vaccine is also available under the NIP for any individual with a medical condition associated with an increased risk of invasive meningococcal disease.

Meningococcal ACWY

Under the NIP, the meningococcal ACWY vaccine is provided for free to:

- children at 12 months of age
- year 10 students through the School Immunisation Program
- young adults aged 15 to 19 years through their doctor or immunisation provider.

From 1 July 2020, meningococcal ACWY vaccine (Nimenrix®) is funded under the NIP for people of all ages with certain medical conditions that increase their risk of [invasive meningococcal disease](https://immunisationhandbook.health.gov.au/resources/publications/meningococcal-vaccination-for-people-in-a-special-risk-group) (<https://immunisationhandbook.health.gov.au/resources/publications/meningococcal-vaccination-for-people-in-a-special-risk-group>).

Like all medications, vaccines may have side effects. Most side effects are minor, last a short time and do not lead to any long-term problems. Possible side effects of meningococcal vaccine may include soreness, redness and swelling at the injection site, fever, loss of appetite and headache. These side effects should last only for a short time. More serious side effects are extremely rare.

Prophylactic use of paracetamol for children aged <2 years receiving Bexsero

It is recommended that paracetamol be given to children aged <2 years with each dose of Bexsero, 30 minutes before vaccination followed by 2

post-vaccination doses at 6 hourly intervals, regardless of the presence of fever. Further doses of paracetamol may be given afterwards if required.

Contact your immunisation provider if you or your child has a reaction following vaccination which you consider serious or unexpected.

Smoking

Smoking increases the chance of someone carrying the bacteria and spreading it to others. It is especially important not to smoke around young children who are particularly vulnerable to meningococcal disease.

Other resources:

[Queensland Health immunisation](https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/diseases-infection/immunisation/schedule) (<https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/diseases-infection/immunisation/schedule>)

[13 HEALTH](https://www.qld.gov.au/health/contacts/advice/13health/index.html) (<https://www.qld.gov.au/health/contacts/advice/13health/index.html>) (call 13 43 25 84)

[Australian Immunisation Handbook](https://immunisationhandbook.health.gov.au/resources?search_api_views_fulltext=meningococcal&=Apply) (https://immunisationhandbook.health.gov.au/resources?search_api_views_fulltext=meningococcal&=Apply)

Help and assistance:

You or your child can be vaccinated at your local doctor or medical centre. Check with your local council, community child health and community health centre regarding free immunisation clinics. For further information, please contact your local doctor or nearest [public health unit](https://www.health.qld.gov.au/system-governance/contact-us/contact/public-health-units) (<https://www.health.qld.gov.au/system-governance/contact-us/contact/public-health-units>).

References

Heymann, D., ed. 2015. Control of Communicable Diseases Manual, 20th edition. Washington, DC: American Public Health Association.

The online version of the [Australian Immunisation Handbook](https://immunisationhandbook.health.gov.au) (<https://immunisationhandbook.health.gov.au>)

[NCIRS fact sheet - Meningococcal vaccines for Australians](http://ncirs.org.au/ncirs-fact-sheets-faqs/meningococcal-vaccines-australians) (<http://ncirs.org.au/ncirs-fact-sheets-faqs/meningococcal-vaccines-australians>)

[Clinical update: National Immunisation Program \(NIP\) schedule changes from 1 July 2020 – advice for vaccination providers](https://www.health.gov.au/news/clinical-update-national-immunisation-program-nip-schedule-changes-from-1-july-2020-advice-for-vaccination-providers) (<https://www.health.gov.au/news/clinical-update-national-immunisation-program-nip-schedule-changes-from-1-july-2020-advice-for-vaccination-providers>)

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