

Meningococcal disease is caused by a bacterial infection and can lead to serious illness. It is uncommon in NSW, and occurs more often in winter and spring. Infants, small children, adolescents and young adults are most at risk. Early treatment is vital.

Meningococcal disease

Last updated: 17 January 2008

What is meningococcal disease?

- Meningococcal disease is a serious illness that usually causes meningitis (inflammation of the lining of the brain and spinal cord) and/or septicaemia (blood poisoning). Rare forms of the disease include septic arthritis (joint infection), pneumonia (lung infection) and conjunctivitis (infection of the outer lining of the eye and eyelid).
- People with meningococcal disease can become extremely unwell very quickly. Five to ten per cent of patients with meningococcal disease die, even despite rapid treatment.
- The disease has become less common in recent years and about 100 to 130 cases are now seen in NSW each year. Winter and spring are the peak seasons for meningococcal disease.
- Meningococcal disease is caused by infection with meningococcus bacteria of which there are several serogroups. In NSW, the most common form is serogroup B. There is no vaccine that is effective against serogroup B in NSW. Compared with serogroup B, disease caused by serogroup C is rare in NSW, especially since the introduction of the meningococcal C vaccine.
- Between 5 and 25 per cent of people carry meningococcal bacteria at the back of the nose and throat without showing any illness or symptoms.

What are the symptoms?

- Symptoms of meningococcal disease are non-specific but may include sudden onset of fever, headache, neck stiffness, joint pain, a rash of red-purple spots or bruises, dislike of bright lights nausea and vomiting.
- Not all of the symptoms may be present at once.
- Young children may have less specific symptoms. These may include irritability, difficulty waking, high-pitched crying, and refusal to eat.
- The typical meningococcal rash doesn't disappear with gentle pressure on the skin. Not all people with meningococcal disease get a rash or the rash may occur late in the disease.
- Sometimes the classic symptoms may follow less specific symptoms including leg pain, cold hands and abnormal skin colour.
- Meningococcal disease can sometimes follow on from other respiratory infections.
- People who have symptoms of meningococcal disease should see a doctor urgently, especially if there is persistent fever, irritability, drowsiness or lethargy, or a child is not feeding normally.

How is it spread?

- Meningococcal bacteria are not easily spread from person to person and the bacteria do not survive well outside the human body.
- The bacteria are passed between people in the secretions from the back of the nose and throat. This generally requires close and prolonged contact with a person carrying the bacteria who is usually completely well. An example of 'close and prolonged contact' is living in the same household or intimate (deep) kissing.
- Meningococcal bacteria are not easily spread by sharing drinks, food or cigarettes.

Who is at risk?

While the disease can affect anyone, those at higher risk include:

- household contacts of patients with meningococcal disease
- infants, small children, adolescents and young adults
- people who are exposed to cigarette smoke and people who are exposed to smokers
- people who practice intimate (deep mouth) kissing with more than one partner
- people who have recently had a viral upper respiratory tract

illness

- travellers to countries with high rates of meningococcal disease
- people with no working spleen or who have certain other rare medical conditions.

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 (for example, if they performed mouth-to-mouth resuscitation or intubated the case without using a face mask).

How is it prevented?

Quitting smoking helps to reduce the risk of spreading the bacteria. Keep cars and homes smoke-free.

Two types of vaccine are available.

- *Meningococcal C conjugate vaccine* protects against meningococcal group C disease. It is recommended for all children at one year of age (as part of free routine immunisation) and for people who have had meningococcal disease.
- *Meningococcal polysaccharide vaccine* protects against groups A, C, Y and W135. It is recommended for travellers to countries where there are epidemics of meningococcal disease (eg. sub-Saharan Africa and people travelling to the Hajj in Saudi Arabia).

Both vaccines should be given to laboratory workers dealing with meningococci and to people without a working spleen and with certain other medical problems.

Because vaccines do not protect against the more common meningococcal group B disease, vaccinated people must still be alert for the symptoms and signs of meningococcal disease.

How is it diagnosed?

Diagnosis is based on the patient's history and examination. This is sometimes difficult in the early stages of the disease.

Confirmation of the diagnosis involves testing samples from the patient, including blood, cerebrospinal fluid or skin samples. The time taken to get a test result can vary from case to case and depends on the tests performed.

How is it treated?

Patients with meningococcal disease need urgent treatment with

antibiotics and treatment is usually started before the diagnosis is confirmed by tests.

What is the public health response?

Hospitals and laboratories notify cases of meningococcal disease to the local Public Health Unit. PHU staff will work with the doctor, the patient or the patient's family to identify the people who have been close to the ill person (depending on the duration and the nature of their exposure, these people are called contacts). Contacts are given information about meningococcal disease. A smaller group of close contacts are carefully identified and are given clearance antibiotics because they are the people most likely to be carrying the bacteria. These antibiotics eliminate the bacteria from the throat and prevent the bacteria from being transmitted to others. Clearance antibiotics are different to the antibiotics used to treat the infection and people who receive clearance antibiotics are still at some risk of developing the disease. *All* contacts should therefore be aware of the symptoms of meningococcal disease and should see a doctor urgently if these occur.

Further information - Public Health Units in NSW					
For more information please contact your doctor, local public health unit or community health centre - look under NSW Government at the front of the White Pages					
Metropolitan Areas	Location	Number	Rural Areas	Location	Number
Northern Sydney/Central Coast	Hornsby	02 9477 9400	Greater Southern	Goulburn	02 4824 1837
	Gosford	02 4349 4845		Albury	02 6080 8900
South Eastern Sydney/Illawarra	Randwick	02 9382 8333	Greater Western	Broken Hill	08 8080 1499
	Wollongong	02 4221 6700		Dubbo	02 6841 5569

Sydney South West	Camperdown	02 9515 9420		Bathurst	02 6339 5601
Sydney West	Penrith	02 4734 2022	Hunter/New England	Newcastle	02 4924 6477
	Parramatta	02 9840 3603		Tamworth	02 6767 8630
Justice Health Service	Matraville	02 9311 2707	North Coast	Port Macquarie	02 6588 2750
				Lismore	02 6620 7500

See full details of Public Health Units at

www.health.nsw.gov.au/publichealth/infectious/phus.asp