



What is meningococcal disease?

Meningococcal disease is an uncommon life-threatening infection with one of several strains of *Neisseria meningitidis* bacteria, which are usually carried harmlessly in the nose and throat, but occasionally invade the bloodstream and infect the body. In 2004, 39 cases of meningococcal infection (including 2 deaths) were notified to the Department of Health. The strains of meningococcal bacteria that most commonly cause disease in WA are Group B (80%) and Group C (15%).

The most severe forms of meningococcal disease are meningococcal **septicaemia** (infection of the blood) and meningococcal **meningitis** (infection of the membranes that cover the brain and spinal cord). Some patients have meningococcal septicaemia and meningitis at the same time.

How severe is it?

Meningococcal disease is very severe, but most people make a full recovery. About 10% of cases suffer a long term disability (e.g. deafness, amputation). Meningococcal septicaemia is more often fatal than meningococcal meningitis.

Who is at risk?

Meningococcal disease can occur at any age, but babies and young children are most at risk, followed by older teenagers. The overall risk of meningococcal disease in WA is currently about 1 case per 50,000 people per year. About 25% of cases occur in children less than 2 years of age, 15%: 2-4 years, 10%: 5-9 years, 10%: 10-14 years, 20%: 15-19 years, 10%: 20-24 years, 5%: 25-29 years, and 5%: 30 or more years of age.

What are the symptoms?

The early symptoms of meningococcal infection are often like those associated with common viral infections. However, as meningococcal infection progresses, the symptoms become much worse. Some deaths from meningococcal infection have occurred within hours of onset of symptoms.

Common symptoms in **babies** include fever, rapid breathing, rash, vomiting, irritability, drowsiness, and pallor.

Common symptoms in **older children and adults** include fever, rash, headache, neck stiffness, vomiting, chills, muscle and joint pains, and abdominal pain.

What is the treatment?

Antibiotic treatment in hospital is essential for patients with meningococcal disease. The sooner the antibiotic treatment is started, the better the chances of a full recovery.

What is the risk for contacts of someone with meningococcal disease?

The risk of meningococcal disease for "higher risk" contacts of a patient with meningococcal disease is low. Even without antibiotic treatment, only about 1 in every 250 household contacts will also develop meningococcal disease.

"Higher risk" contacts include people who, during the 7 days prior to the onset of the patient's illness, were living in the same household as the patient or who attended the same child care group as the patient for more than 4 continuous hours. Other contacts, including pre-primary, school, or workplace contacts, or contacts who visited or kissed or shared a drink or food or cigarette with the patient, are not considered "higher risk".

"Higher risk" contacts of a patient with meningococcal disease are offered preventive antibiotic treatment to kill any meningococcal bacteria in their nose and throat that they may have picked up from (or given to) the patient. Preventive antibiotic treatment cannot stop a meningococcal infection once it has started, so "higher risk" contacts must still be observed carefully for signs and symptoms of meningococcal disease for two weeks after they last had contact with the patient. Preventive antibiotic treatment should not routinely be offered to non-"higher risk" contacts.

How do "higher risk" contacts get their preventive antibiotic treatment?

Department of Health staff arrange the tracing and preventive antibiotic treatment of "higher risk" contacts. Family contacts are usually given preventive antibiotics by the patient's doctors while they are visiting the patient in hospital. Other "higher risk" contacts are usually given preventive antibiotics by public health staff (e.g. at the child care facility or patient's home) or by their GP or local hospital staff.

How is it spread?

Meningococcal bacteria are spread by respiratory secretions, but not by saliva. Hours of close personal contact are usually required to transmit meningococcal bacteria through the air. The bacteria do not survive more than a few seconds in the environment, so they cannot be picked up from surfaces or objects (e.g. a pillow) that might have been contaminated by the patient's respiratory secretions.

About 80% of adults have been "infected" by one or more strains of meningococcal bacteria during their life without developing meningococcal disease (i.e. without developing an illness) and about 10% of the population are carrying meningococcal bacteria harmlessly in their nose and throat at any one time.

Is there a vaccine?

Yes, but only for some strains of meningococcal bacteria. There are three new vaccines against Group C meningococcal bacteria (i.e. Meningitec™, Menjugate™, NeisVac-C™) currently available in Australia. Only one dose of one of these vaccines is required for long-term (possibly life-long) protection in people 12 months of age or older. See the [Group C Meningococcal Vaccination Fact Sheet](http://www.health.wa.gov.au/meningococcal) at www.health.wa.gov.au/meningococcal for more information about this Australian and WA Government-sponsored program.

In WA, the risk of Group C meningococcal disease per year is about 1 per 33,000 for children 1-4 years of age, 1 per 125,000: 5-9 years, 1 per 125,000: 10-14 years, 1 per 63,000: 15-19 years, 1 per 42,000: 20-24 years, 1 per 125,000: 25-29 years and 1 per 543,000: 30 years of age or older. There is currently no vaccine for Group B meningococcal bacteria, the most common cause of meningococcal disease.

There are also two "older" meningococcal vaccines (Mencevax™, Menomune™) that protect against Groups A, C, W₁₃₅, and Y. These vaccines are most useful for people older than 2 years of age who travel to high risk areas (e.g. from sub-Saharan Africa through the Middle East to Nepal). These vaccines require a booster dose every 3 years.

Even if you are vaccinated against Group C meningococcal disease, you can still catch the more common Group B meningococcal disease, so you must always be alert for the signs and symptoms of meningococcal disease.

The Hib (*Haemophilus influenzae* type B) meningitis vaccine for babies protects them against different bacteria - it is not effective against meningococcal bacteria.

What should I do if I think my child or I could have meningococcal disease?

CALL YOUR DOCTOR OR THE NEAREST HOSPITAL EMERGENCY DEPARTMENT IMMEDIATELY - MENINGOCOCCAL DISEASE CAN DEVELOP VERY QUICKLY, SO DON'T DELAY.

The diagnosis is not always obvious in the beginning, so if the patient is sent home by the doctor or hospital and the symptoms get worse or don't improve, take the patient straight to the nearest hospital.

FOR SPECIFIC ADVICE, CONTACT HEALTHDIRECT ON 1800 022 222 (24 HOURS).

For more information contact your GP, your Regional Population Health Unit (see below), the Communicable Disease Control Directorate (9388 4999), or The Meningitis Centre (1800 250 223).

Mirrabooka	9345 7100	Broome	9194 1643
East Perth	9224 1625	Geraldton	9956 1985
Fremantle	9431 0200	Kalgoorlie	9021 2622
Albany	9842 7500	Northam	9622 4320
Bunbury	9792 2500	Port Hedland	9140 2377
Carnarvon	9941 0560		

Internet

WA Department of Health: www.health.wa.gov.au/meningococcal

Australian Department of Health and Aging: www.health.gov.au/pubhlth/

The Meningitis Centre: www.meningitis.com.au/

Centers for Disease Control: www.cdc.gov/

Health Protection Agency: www.hpa.org.uk/