

MENINGOCOCCAL DISEASE

Neisseria meningitidis Invasive Disease

ADVICE FOR GP DIAGNOSIS AND MANAGEMENT

Neisseria meningitidis causes meningitis or meningococcal septicaemia.

Early diagnosis and treatment of meningococcal disease is important because it may be fulminant. Prompt treatment with antibiotics may prevent permanent disability or death.

Those most at risk are children under five and young adults. Māori and Pacific children have the highest rates of disease. In infants the illness may be very non-specific.

SYMPTOMS AND SIGNS OF MENINGOCOCCAL DISEASE (may include)

- Fever, malaise, prostration
- Nausea, vomiting
- Headache
- Rash - petechial or purpuric or maculopapular – a rash may not be present in the early stages of the disease
- Neck stiffness
- Young children refusing drinks or feeds
- Sleepy, difficult to rouse
- Arthritis/arthritis
- Dislike of bright lights.

YOUNG INFANTS AND CHILDREN

Meningococcal septicaemia is more common in infants and young children and the illness may be non-specific and rapidly fatal. The signs include:

- tachycardia
- altered responsiveness
- irritability and floppiness
- poor peripheral perfusion.

Suspect meningococcal disease in the sick, febrile child.

Start antibiotic treatment (before transfer) and arrange referral and transfer to hospital as soon as possible.

ASSESSMENT AND ACUTE MANAGEMENT IN OLDER CHILDREN AND ADULTS

- Assess the severity of the illness - check vital signs, including pulse, respiratory rate, blood pressure and peripheral perfusion
- Check all skin areas for the presence of a rash
- Administer antibiotics on suspicion of diagnosis prior to transfer to hospital (see over).

Notify all suspected cases to the Medical Officer of Health

MENINGOCOCCAL DISEASE

IF YOU DO NOT SUSPECT MENINGOCOCCAL DISEASE:

- Plan a review
- Advise early return (give parents guidelines of the anticipated course of the illness and encourage prompt return if the illness is outside those guidelines)
- Advise parents/caregiver to check child at regular intervals
- Advise young adults not to remain on their own if they are sick.

Transfer to hospital should be arranged urgently. If transport time is significant consider IV fluids. Discuss with receiving hospital. For children 20mls/kg 0.9% saline IV initially then as recommended by paediatric department.

RECOMMENDED ANTIBIOTICS

Prior to transfer to hospital, medical practitioners should administer parenteral antibiotics to:

- all suspected cases of meningococcal disease in whom there is any haemorrhagic rash; and
- all other suspected cases in whom the delay to assessment in hospital is likely to be greater than 30 minutes.

The recommended antibiotics are:

benzyl penicillin	- adults 1.2 g IV (or IM)
	- children 25–50 mg/kg IV (or IM)
amoxicillin	- adults 1–2 g IV (or IM)
	- children 50–100 mg/kg IV (or IM)

- If these antibiotics are not available almost any parenterally administered antibiotic in appropriate dosage will inhibit the growth of meningococci.
- If possible, take a throat swab (*the swab should sample the nasopharyngeal area*) when antibiotics are administered, as it may be of assistance in establishing an aetiological diagnosis. The swab should be sent to the hospital with the patient.
- Patients with a documented history of anaphylaxis to penicillin and who are suspected of suffering from meningococcal disease should be sent immediately to hospital without pre-admission antibiotics.

RISK FACTORS

A case-control study to examine risk factors for meningococcal disease in Auckland children (1999) found:

- Household crowding is the most important risk factor for meningococcal disease in Auckland children under the age of eight years.
- The most important aspect of crowding is the number of household members ten years of age or over living in the house.

ADVICE TO PARENTS/CAREGIVERS

GPs may advise parents/caregivers the risk may be reduced if they:

- Avoid keeping children at large social gatherings for more than 4 hours (this does not include early childhood services or schools)
- Minimise food, drink and dummy sharing by children (particularly with adults, who are more likely to be carriers of the bacterium)
- Quit smoking or don't smoke inside.

Notify all suspected cases to the Medical Officer of Health

This resource is available from www.health.govt.nz or the Authorised Provider at your local DHB.

Revised August 2003. Reprinted May 2008. • Code HE9058