

## Meningitis

Meningitis is when the membranes that surround the brain and spinal cord (meninges) become infected. Meningitis can be caused by bacteria or viruses. You must get treatment immediately because meningitis can cause death.

Immunisation can protect against some forms of meningitis.

### Bacterial meningitis

Meningitis caused by bacteria is called 'bacterial meningitis'. The organisms (germs) that cause bacterial meningitis may live in the nose and throat. People of any age can carry them without becoming ill, but they can infect others through coughing or sneezing. Meningitis caused by these bacteria is serious and requires very prompt medical attention.

Some common examples of bacterial meningitis are:

- **Haemophilus (Hib) meningitis** – caused by *Haemophilus influenzae* type b.
- **Meningococcal meningitis** – caused by *Neisseria meningitides*.
- **Pneumococcal meningitis** – caused by *Streptococcus pneumoniae*.

Meningitis caused by bacteria is serious. Antibiotics are used to treat the infection but death does occur in a small number of those affected: Hib (5%), meningococcal (7%) and pneumococcal meningitis (20%). One in five children are left with permanent disabilities, such as cerebral palsy and deafness.

### Viral meningitis

Meningitis caused by a virus is called 'viral meningitis'. This type of meningitis is relatively common and can occasionally be serious. It can be caused by a variety of different viruses. It is often a complication of another viral illness.

Some of the viruses that can cause meningitis include:

- Enteroviruses
- Coxsackieviruses
- Mumps virus
- Adenovirus.

### Signs and symptoms of meningitis – babies and young children

The symptoms and signs of meningitis in babies and young children include:

- Fever
- Refusing feeds
- Fretfulness
- Being difficult to wake
- Purple-red skin rash or bruising
- High moaning cry
- Pale or blotchy skin.

### Signs and symptoms of meningitis – older children and adults

The symptoms and signs of meningitis in adults and older children include:

- Headache
- Fever
- Vomiting
- Neck stiffness and joint pains
- Drowsiness and confusion
- Purple–red skin rash or bruising
- Discomfort looking at bright lights (photophobia).

## Diagnosis of meningitis

Your doctor is the only person who can make a diagnosis to determine if meningitis is viral or bacterial. Meningitis is sometimes difficult to diagnose. Your doctor may order several tests or seek specialist advice. The diagnosis may include:

- Taking a detailed history of signs and symptoms
- Clinical examination
- Blood tests
- A lumbar puncture, which may be done in hospital (spinal fluid is removed using a needle and examined for bacteria).

## Preventing bacterial meningitis

Some forms of meningitis can be prevented by immunisation:

- ***Haemophilus influenzae* type b** – can be prevented with Hib vaccine, which is offered to all infants in Australia.
- **Meningococcal group C** – a vaccine is now available that can give long-lasting protection against group C meningococcal disease, which is one of the most common groups in Australia. Unfortunately, no vaccine is available for group B meningococcal disease, which is also a common type of meningococcal bacteria in Australia.
- **Pneumococcal disease** – two types of vaccine are available. They are available to anyone in the community but are provided free for certain high-risk groups, including all babies and adults 65 years of age and over.
- **Types not common in Australia** – vaccines are available for travellers to cover some forms of meningitis that are not common in Australia.

## Preventing viral meningitis

You can prevent the spread of many viral infections by using a handkerchief and washing your hands thoroughly after using the toilet. You should also avoid close contact, sneezing and coughing over other people if you have a viral infection.

## Treatment for bacterial meningitis

Early and rapid diagnosis is very important in the treatment of bacterial meningitis. Treatment may include:

- Antibiotics (often given intravenously)
- Hospital care
- Anticonvulsant, cortisone and sedative medications, which may be used to treat complications.

## Treatment for viral meningitis

Treatment depends on the severity of the symptoms. Treatment is the same as for any viral infection and may include supportive care such as:

- Resting

- Keeping warm and comfortable
- Drinking plenty of fluids.

Viral meningitis **cannot** be treated with antibiotics.

## Get further medical help if you are still worried

You are the expert in your family's health. If you think a person has symptoms that suggest meningitis, contact your doctor **immediately**, call triple zero (000) for an ambulance or go to the nearest hospital emergency department. Early diagnosis and treatment are vital.

## Where to get help

- If you suspect meningitis, see your doctor straight away,
- In an emergency, call triple zero (000)
- Go to the emergency department of your nearest public hospital
- Nurse-on-Call Tel. 1300 606 024 – for expert health information and advice (24 hours, 7 days)
- Your local community health centre
- Your local council immunisation service
- Immunisation Program, Department of Health Victoria Tel. 1300 882 008
- National Immunisation Infoline Tel. 1800 671 811

## Things to remember

- Bacterial meningitis is serious and requires very prompt medical attention.
- Different germs can cause meningitis.
- Viral meningitis is relatively common and may also be serious.
- Vaccination can protect against some forms of meningitis.

**This page has been produced in consultation with, and approved by:**

Department of Health - Communicable Disease Prevention and Control Unit

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