



Pneumococcal Meningitis The Facts

This fact sheet provides information about pneumococcal meningitis and answers some frequently asked questions. This should be read in addition to our 'Meningitis can affect anyone' leaflet, which provides more information on signs and symptoms and emergency action to take. All our information can be found at www.meningitis-trust.org. You can also request any of our information materials by contacting our 24-hour helpline on **0808 80 10 388**.

Words highlighted in **blue** are explained in a glossary on the back page.

What is pneumococcal meningitis?

Pneumococcal meningitis is a life-threatening infectious disease that causes **inflammation** of the membranes that surround the brain and the spinal cord. These membranes are called the meninges – they help protect the brain from injury and infection. Meningitis can strike unexpectedly and the consequences are often severe.

Pneumococcal meningitis is caused by a **bacterium** called the pneumococcus. There are over 90 strains (or serotypes), but only a minority commonly cause disease. The pneumococcus can also cause other serious infections such as pneumonia, blood poisoning and septic arthritis, and less serious infections such as otitis media, glue ear and sinusitis. Together these are known as pneumococcal disease or pneumococcal infection.

Key points

- Pneumococcal meningitis is a life-threatening infection.
- Most cases occur in babies and young children under 18 months of age.
- A routine vaccine is available to help prevent pneumococcal disease.

How many cases of pneumococcal meningitis are there each year?

In recent years there have been around 200 reported cases of pneumococcal meningitis annually in the UK. Approximately 15% of cases will result in death.

Can pneumococcal meningitis be prevented?

A Pneumococcal Conjugate **Vaccine** (PCV) is available as part of the **Childhood Immunisation Programme**. It protects against 13 strains of pneumococcal bacteria and is routinely offered at 2, 4 and 12-13 months of age.

A Pneumococcal Polysaccharide Vaccine (PPV) is also available. This protects against 23 strains of pneumococcal bacteria, but only has a limited period of protection and is not effective in the under 2s. This vaccine is offered to all people aged 65 years and over.



24-hour nurse-led helpline

0808 80 10 388

www.meningitis-trust.org



This organisation has been certified as a producer of reliable health and social care information.
www.theinformationstandard.org

Both pneumococcal vaccinations are recommended, when appropriate, for adults and children who are at increased risk of pneumococcal disease, for example, those with asthma, chronic heart disease, diabetes mellitus and those with cochlear implants. Anyone who has had pneumococcal disease, including meningitis, should actively seek vaccination.

For more information about pneumococcal vaccines, please visit www.nhs.uk

Who gets pneumococcal meningitis and why?

Pneumococcal meningitis can affect any age group, but those at most risk are babies and young children under 18 months of age. The elderly and people with conditions that affect the immune system are also at increased risk. Meningitis may occur following head injury and damage to the meninges; on rare occasions this may be recurrent.

The pneumococcal bacteria can be carried harmlessly in the back of the throat by both adults and children. Virtually all children will become carriers at one time or another. Carriage of bacteria helps us to build natural **immunity** to infection. Bacteria are passed from person to person by coughing, sneezing and intimate kissing.

Babies and young children are more at risk because their body's defences are not fully developed. If the pneumococcus invades their body, the immune system cannot provide resistance to fight off the infection.

How does pneumococcal meningitis develop?

Occasionally pneumococcal bacteria overcome the body's defences and cause infection. Bacteria are transferred to the meninges via the bloodstream. When the bacteria infect the meninges, tiny blood vessels in the membranes are damaged. This allows the bacteria to break through and infect the **cerebrospinal fluid (CSF)**. The meninges then become inflamed and pressure around the brain can cause nerve damage. Pressure on the brain can produce the specific symptoms associated with meningitis:

- Severe headache
- Dislike of bright lights (photophobia)
- Neck stiffness
- Nausea and vomiting
- Confusion and drowsiness
- Loss of consciousness
- Convulsions/seizures

Many other symptoms can occur with pneumococcal meningitis, so it is important to get medical advice if you are worried.

You can request our symptoms card by calling our helpline or download our free app at www.meningitisapp.co.uk.

How is pneumococcal meningitis treated?

Pneumococcal meningitis needs rapid admission to hospital and urgent treatment with antibiotics. In hospital other treatment, procedures and investigations will be carried out depending on the patient's condition. One of the main investigations carried out to test if someone has meningitis is a **lumbar puncture**. This allows the doctor to quickly make a diagnosis of meningitis by analysing the CSF that bathes the meninges. This fluid becomes infected when a patient has meningitis. Sometimes treatment with antibiotics is started because the patient's condition is too serious for a lumbar puncture to be performed. In these cases the lumbar puncture can be done when the patient's condition has improved.

If someone is seriously ill, they will require specialist care and treatment in an intensive care unit. Here the doctors and nurses can closely monitor their condition, respond to emergencies and provide immediate support when it is needed. Appropriate hospital care and treatment are essential if the patient is to make a good recovery.

What happens when there is a case?

Pneumococcal meningitis is reportable to public health, but is not considered to be contagious. Therefore, close contact with someone who has the illness poses no increased risk of infection. There is little chance of a second related case occurring.

What happens after pneumococcal meningitis?

Most people who get pneumococcal meningitis will make a good recovery, but around 25% will be left with severe and often permanent after-effects. However, the exact number of people who experience after-effects is not known.

The after-effects of meningitis usually happen because of damage to various areas of the brain, including the nerves responsible for hearing and sight. The serious and disabling after-effects are well recognised and include hearing loss or deafness, loss of vision or blindness, epilepsy, severe brain damage, speech problems.

After-effects are often complicated and can require ongoing support (for life) from a wide range of health professionals and organisations. In many cases, the after-effects will be helped by various kinds of therapy, for example, physiotherapy and occupational therapy.

Other people may experience one or more of a wide range of less noticeable but still significant after-effects. These can be temporary or permanent and include memory loss, anxiety, depression, headaches, learning difficulties and behaviour problems. Whatever the after-effect, mild or severe, meningitis can change a person's life forever.

Tragically, some patients will die despite receiving the best possible treatment and care. The death of someone close following meningitis or septicaemia can be traumatic, distressing and painful. If someone close to you has died, our trained helpline staff are available 24 hours a day, and can explain the different ways we can help and support you.

For more detailed information about the after-effects of meningitis and support the Meningitis Trust can offer go to www.meningitis-trust.org.

Find out more

- **Meningitis Trust**
www.meningitis-trust.org
Information about meningitis and the work of the Meningitis Trust.
- **NHS Immunisation information**
www.nhs.uk
Information about vaccination published by the Department of Health.
- **Need to know about meningitis (2004)**
Kristina Routh – Publisher, Heinemann Library.
This comprehensive and easy to understand book traces the history, incidence and consequences of meningitis

Glossary

Bacteria / bacterium

Single-celled micro-organisms, of which there are many types. Some types can cause disease in humans. One organism is called a bacterium and more than one are called bacteria.

Cerebrospinal Fluid (CSF)

A protective fluid that flows around the brain and spinal cord, helping to maintain healthy cells.

Childhood Immunisation Programme

A planned programme of vaccines available to all children, which protects them from a range of infectious diseases. For more information, visit www.nhs.uk.

Immunity / immune response

The body's ability to recognise and resist specific infectious diseases. The immune system responds to infection by producing antibodies.

Inflammation

A response of the body tissues to injury or irritation. The response is characterised by redness, swelling, heat and pain.

Lumbar puncture

A procedure to remove CSF from below the base of the spinal cord.

Meninges

Three protective membranes (layers of tissue) that surround the brain. These are called the dura mater, arachnoid mater and pia mater.

Vaccine / vaccination

An injection given to encourage the body to produce antibodies which help fight infectious disease. The injection commonly contains a harmless extract prepared from the disease-causing organism.

If you have any questions or wish to discuss anything in this factsheet in more detail, please phone our helpline.

The Meningitis Trust is here to help you, when you need us and for as long as you need us.

Meningitis can strike in an instant, but its impact can last a lifetime. We know that meningitis and septicaemia can turn your world upside down.

We help and support around 20,000 people every year, providing a range of FREE services. We can:

- Listen; and answer your questions about meningitis and its life-changing impact
- Talk to you about your individual experience and how we can tailor our help to you
- Visit you in your own home and provide support locally to you
- Put you in touch with others who have been through it too
- Provide financial assistance to help make life that little bit easier
- Support you and those closest to you – children, teenagers and adults
- Make you a priority; we have no waiting lists for our services

If you are interested in finding out how we can help, give us a call and we can talk everything through. Requesting a home visit can be a great starting point.



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We are proud of the work we do, but we can't do it alone. We rely on voluntary donations and need help from people like you. Every penny, pound, hour and day given makes a big difference. Find out how you can help www.meningitis-trust.org

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