

# Meningitis Vaccines

## The Facts

This fact sheet aims to provide information about the vaccines that protect against different forms of meningitis. For more information about meningitis and vaccines, please phone our 24-hour nurse-staffed helpline on **0800 028 18 28**.

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

**Vaccines are the only way to prevent serious and life-threatening infectious diseases.**

### What are vaccines and how do they work?

Vaccines are given to help the body's immune system fight infection. They contain **antigens** which may be purified, harmless components of the germ (**bacteria** or **virus**) that can cause disease. In the case of some virus vaccines, the antigen can be a weakened (attenuated) version of the virus that is not capable of causing serious infection, but can still stimulate an **immune response**. When a vaccine is injected into the body, the immune system is stimulated to produce **antibodies** in response to these antigens. After vaccination, if someone comes into contact with the germ itself, the body will recognise it and have the ability to fight it. A different vaccine needs to be given to protect against each infection, and some vaccines need to be given more than once to build up enough protection.

### Which vaccines are available to protect against meningitis?

Effective vaccines are available to prevent some types of meningitis. The following vaccines, except BCG, are offered to all infants in the UK as part of the **Childhood Immunisation Programme**. The BCG vaccine is offered to babies, children and older people who are most at risk.

### Key points

- Vaccines are the only way to prevent meningitis.
- Since 1992, vaccines in the UK have prevented many thousands of cases and thousands of deaths.
- There is no vaccine to protect against meningococcal group B infection, the most common bacterial form of meningitis in the UK.

**Hib - *Haemophilus influenzae* type b (Hib)** bacteria can cause meningitis and septicaemia (blood poisoning). Before the vaccine was introduced in 1992, Hib was the leading cause of meningitis in children under 5 years of age, with around 800 cases and 25 deaths reported each year.

Cases of Hib meningitis are now rare, with less than 30 cases reported in 2008. Hib is part of the combined vaccine that protects against Diphtheria, Tetanus, Pertussis (whooping cough), Polio and Hib. This combined vaccine is offered to babies at 2, 3, and 4 months of age, with a booster dose given at around 12 months of age. The booster vaccine is a combined vaccine for Hib and meningococcal group C (MenC).

### **Meningococcal group C (Men C) -**

Meningococcal bacteria can cause meningitis and septicaemia. There are five groups; A, B, C, W135 and Y which commonly cause disease. Since the introduction of the Men C vaccine in 1999, cases of group C disease have fallen by around 90% in all age groups.



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[www.meningitis-trust.org](http://www.meningitis-trust.org)

Men C vaccine is offered to babies at 3 and 4 months of age, with a booster dose given at around 12 months of age. The booster vaccine is a combined vaccine for Hib and Men C.

**There is no vaccine to prevent meningococcal group B disease, which is the most common cause of bacterial meningitis in the UK.**

### **Pneumococcal**

Pneumococcal bacteria can cause meningitis, and less commonly septicaemia. There are over 90 different strains of pneumococcal bacteria. The risk of pneumococcal meningitis is highest in children under 18 months of age. Two vaccines are currently available to prevent pneumococcal disease.

A Pneumococcal **Conjugate Vaccine** (PCV) is available as part of the Childhood Immunisation Programme. It is routinely offered at 2, 4, and 13 months of age. PCV protects against 13 different strains of pneumococcal bacteria which cause invasive disease (including meningitis) in the UK under 5s.

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 routinely offered to people aged 65 years and over.

Pneumococcal vaccinations are recommended 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.

### **TB**

TB meningitis is caused by the bacterium *Mycobacterium tuberculosis*. The BCG vaccine gives good protection against TB meningitis and is effective in babies and young children. The current programme of vaccination in the UK targets babies, children and older people who are most likely to catch the disease. The vaccine is also recommended for healthcare workers who may be exposed to TB.

### **Mumps**

The virus that causes mumps is a common cause of meningitis and, in an unvaccinated population, mumps is a major cause of acquired deafness. The routine MMR vaccine protects against mumps as well as measles and rubella (German Measles). MMR vaccine is given at around 13 months of age with a booster dose before the age of five.

For more information about any of these vaccines, please contact NHS immunisation information - [www.immunisation.nhs.uk](http://www.immunisation.nhs.uk).

### Are vaccines safe?

Yes. Before a vaccine can be licensed for use in the UK, it is thoroughly tested for its safety and effectiveness. All the vaccines available to prevent meningitis have now been used for many years and millions of doses have been given. Vaccines are constantly monitored to ensure that any adverse reactions and rare side effects are recorded for further investigation.

### How effective are the vaccines?

Vaccines have been very successful in reducing the cases of meningitis, with thousands of lives being saved as a result. In the UK, many diseases are no longer a threat and this is because of the high immunisation rates.

Vaccines do not just offer protection to the person receiving them, but also help protect others in the community, particularly children, who for medical reasons cannot be immunised.

Common symptoms that can occur following vaccination, for example, redness and swelling around the injection site and **fever** are natural reactions of the body's immune system.

These symptoms will usually subside in a very short period of time, and are a good indicator of a successful vaccination.

### Meningitis and travel

A travel vaccine is available to prevent some groups of meningococcal disease.

Group A causes epidemics in Sub-Saharan Africa and results in thousands of deaths each year.

In recent years, group W135 has caused outbreaks in pilgrims travelling to the Hajj in Saudi Arabia, and it is now a legal requirement that these visitors are vaccinated against W135.

The vaccine protects against groups A, C, W135 and Y, and is available for travellers to 'at risk' areas of the world. Always check with your GP or travel clinic for the most up-to-date vaccine information.

### Future vaccines

Development of an effective vaccine to prevent meningococcal group B disease is now a major priority in the UK. It is impossible to say how long it will take to develop and introduce this vaccine. However, experts believe the best estimate is between three and five years.

## Find out more

- **Meningitis Trust**  
[www.meningitis-trust.org](http://www.meningitis-trust.org)  
Information about meningitis and the work of the Meningitis Trust.
- **NHS Immunisation information**  
[www.immunisation.nhs.uk](http://www.immunisation.nhs.uk)  
Information about vaccination published by the Department of Health.

## Glossary

### **Antigen**

A substance, usually a protein, that stimulates the production of antibodies.

### **Antibody**

A protein produced by the body as part of the immune response. These proteins help the body to fight infection.

### **Bacteria**

Single-celled micro-organisms, of which there are many types. Some types can cause disease in humans.

### **Childhood Immunisation Programme**

A planned programme of vaccines available to all children, which protects them from a range of infectious diseases. For more information see [www.immunisation.nhs.uk](http://www.immunisation.nhs.uk).

### **Conjugate vaccine**

A vaccine made by attaching the purified outer coating of the disease-causing organism to a carrier protein. These vaccines give long-term protection and are effective in all age groups.

### **Fever**

An abnormal rise in body temperature over 37.5°C.

### **Immunity/immune response**

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

### **Polysaccharide vaccine**

A vaccine made from the purified outer coating of the disease-causing organism. These vaccines give short-term protection and are not effective in children under 18 months of age.

### **Viruses**

Microbes that are smaller than bacteria. There are many types, some of which can cause disease in humans, e.g. enteroviruses.

## The Meningitis Trust

We, the Meningitis Trust, are a registered charity set up in 1986 by families who had been affected by meningitis. We are committed to increasing understanding of the disease and providing specialised professional services to anyone who has been affected. These services offer emotional, practical and financial support to help people rebuild their lives.

Here are some of the ways we do this.

**24-hour helpline** – a Freephone service, staffed by nurses, providing information and support seven days a week

**Home visits** – trained staff offer information and support in people's homes

**Art therapy** – allows children and young adults to use art to help them express how they are feeling in safe and confidential surroundings

**Professional counselling** – confidential counselling for people who have had meningitis and their families

**Financial support grants** – to help fund specialist training, equipment, activities, respite care (to give carers a break from caring) and funeral costs

**One-to-one contacts** – putting people affected by meningitis in touch with volunteers who have also experienced the disease

This is only made possible by donations from people like you, as we rely almost entirely on voluntary support to fund our work.

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



**helpline staffed by nurses**

**0800 028 18 28**

**[www.meningitis-trust.org](http://www.meningitis-trust.org)**

Calls from BT landlines are free. Other service providers and mobile rates may vary.



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