

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-led helpline on **1800 523 196**.

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 our body's immune system fight disease. They contain a tiny part of a germ (**bacteria** or **virus**) that can cause disease, or tiny amounts of the **toxins** they produce. On the surface of germs are substances called **antigens** and these are present in vaccines. When the vaccine is injected into the body, the immune system produces **antibodies** that recognise these antigens. Each different germ produces its own specific antigen and the immune system needs to produce a specific antibody to recognise it. Therefore a different vaccine is needed to protect against each disease. Following vaccination, if someone comes into contact with that disease, the body will recognise it and have the ability to fight it. Some vaccines may need to be given more than once to build up enough protection.

Which vaccines are available to protect against meningitis?

The following vaccines provide protection against three major bacteria that cause meningitis. These vaccines are offered to all infants in Ireland as part of the **Childhood Immunisation Schedule**. The risk of meningitis is highest in babies and young children, but it can affect anyone.

Key points

- Vaccines are the only way to prevent meningitis.
- In Ireland, over the last 15 years, vaccines have prevented many thousands of cases of meningitis and prevented hundreds of deaths.
- There is no vaccine to protect against meningococcal group B infection, the most common bacterial form of meningitis in Ireland.

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 100 cases each year.

Cases of Hib meningitis are now rare with only 1 case reported in 2007.

Hib is part of the combined vaccine that protects against Diphtheria, Tetanus, Pertussis (whooping cough), Polio, Hepatitis B and Hib. This combined vaccine is routinely given to babies at 2, 4 and 6 months of age, with a booster dose given at 13 months of age.

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.



Freephone 24-hour nurse-led helpline

1800 523 196

www.meningitis-trust.ie

Group B is the most common in Ireland. Before the introduction of the meningococcal group C (Men C) vaccine in 2000 group C bacteria caused approximately 140 cases of meningitis and septicaemia and up to 11 deaths. Cases of group C disease have fallen by around 96% in all age groups.

The Men C vaccine is routinely given in the Childhood Immunisation Schedule at 4 and 6 months with a booster dose given at 13 months. It is also available to anyone under the age of 23 years.

There is no vaccine to prevent meningococcal group B disease, which causes most cases of bacterial meningitis in Ireland.

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 Schedule. It is routinely offered at 2, 4, and 12 months of age. PCV currently protects against seven different types of pneumococcal bacteria that commonly cause the disease in Ireland in the under 5's.

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 an 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 meningitis

TB meningitis is caused by the bacterium *Mycobacterium tuberculosis*. BCG is routinely offered at birth to all babies in Ireland. This vaccine is effective in babies and young children. It gives good protection against the more severe forms of TB, such as TB meningitis.

Are vaccines safe?

Yes. Before a vaccine can be licensed for use in Ireland, it is thoroughly tested for its safety and effectiveness. A licence is given by the European Medicines Agency (EMA) and the Irish Medicines Board (IMB). 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.

Common symptoms that can occur following vaccination, for example **fever**, and redness and swelling around the injection site 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.

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 Ireland, many diseases are no longer a threat and this is because of the high immunisation rates as in the cases of Hib and Meningococcal C meningitis.

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

Can vaccinations give you meningitis?

The vaccines available to prevent bacterial meningitis only use tiny parts of 'dead' bacteria or the **toxins** they produce. These vaccines cannot cause meningitis.

Meningitis and travel

Travel vaccines are 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. Two different vaccines are available if you are travelling to at risk areas of the world; one protects against groups A and C, the other protects against groups A, C, W135 and Y. These vaccines offer protection which lasts for three to five years, but they are not effective in infants and young children. Your GP or health centre will have specific, up to date information on all vaccines needed before travelling.

Vaccines and viral meningitis

Some viruses that cause diseases such as measles and mumps, can also cause meningitis. The routine MMR vaccine protects against measles, mumps and rubella (German Measles). Before its introduction, mumps was the most common cause of viral meningitis in children. MMR vaccine is given at around 12 months of age with a booster dose given between the age of 4-5 years. For more information about MMR vaccination please contact HSE, Immunisation Information www.immunisation.ie.

Future vaccines

Development of an effective vaccine to prevent meningococcal group B disease is now a major priority in Ireland. 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.ie
Information about meningitis and the work of the Meningitis Trust.
- **Health Protection Surveillance Centre**
www.hpsc.ie
The Health Protection Surveillance Centre (HPSC) is Ireland's specialist agency for the surveillance of communicable diseases
- **HSE Immunisation Information**
www.immunisation.ie
Information about vaccination published by the Health Services Executive (HSE)
- **Tropical Medical Bureau**
www.tmb.ie
Comprehensive information on travel vaccines and general travel advice.

The Meningitis Trust

We, the Meningitis Trust, are a registered charity set up in Ireland in 2001. We are committed to increasing understanding of the disease and providing specialised professional services to anyone who has been affected. These services offer emotional and practical support to help people rebuild their lives.

Here are some of the ways we do this.

24-hour nurse-led helpline – a Freephone service, providing information and support seven days a week

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

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

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.

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 Schedule

A planned programme of vaccines available to all children, which protects them from a range of infectious diseases. For more information see www.immunisation.ie

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.

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.

Toxin

A poison, either produced by or occurring in a micro-organism.

Viruses

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

If you have any questions or wish to discuss anything in this fact sheet in more detail, please phone our 24-hour nurse-led helpline.

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1800 523 196

www.meningitis-trust.ie



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