

Pneumococcal Immunisation

People who should be immunised against the pneumococcus germ are: children under two years old, people aged 65 or older, and anyone at any age with an increased risk of pneumococcal infection (listed below).

What is the pneumococcus?

Pneumococcus is a bacterium (germ) which can cause pneumonia, meningitis and some other infections. Pneumonia caused by pneumococcus occurs in about 1 in 1000 adults each year. About 2 in 10 people who develop this type of pneumonia die from the infection. Pneumococcal infection can affect anybody. However, young children, older people, and some other groups of people are at increased risk of developing a pneumococcal infection.

Who should be immunised against the pneumococcus?

Three groups of people should be immunised: children, older people, and other people 'at risk'.

All children

Immunisation against pneumococcus became part of the routine childhood immunisation programme in the summer of 2006. The routine schedule consists of three injections which are normally given at age at two months, four months and 13 months.

All older people

All people aged 65 or over should be immunised. This consists of a 'one-off' injection.

Other at-risk groups

Any person over the age of two months in an 'at-risk' group should be immunised. That is, if you:

- Do not have a spleen, or if your spleen does not work properly.
- Have a chronic (ongoing) serious lung disease. For example: chronic obstructive pulmonary disease (COPD), emphysema, chronic bronchitis, asthma which requires regular use of steroid tablets, cystic fibrosis, interstitial lung fibrosis, pneumoconiosis, etc.
- Are a child who has previously been admitted to hospital with pneumonia.
- Have a chronic heart disease. For example: if you require regular medication or follow-up for ischaemic heart disease (angina, heart attacks, etc), congenital heart disease, chronic heart failure, hypertensive heart disease (not uncomplicated high blood pressure that is controlled with medication).
- Have a serious chronic kidney disease. For example: nephrotic syndrome, kidney failure, if you have had a kidney transplant.
- Have a chronic liver disease such as cirrhosis or chronic hepatitis.
- Have diabetes which requires insulin or tablets to control it.
- Have a poor immune system (immunosuppression). For example, if you have no spleen, are taking chemotherapy or steroid treatment, if you have HIV/AIDS, etc.
- Have a cochlear implant.
- Have a CSF shunt (a shunt to drain the fluid that surrounds the brain).
- Are a child under five years who has previously had a pneumococcal disease such as pneumococcal meningitis or pneumococcal bacteraemia.

Types of vaccine

There are two types of vaccine to protect against pneumococcal infection:

- pneumococcal conjugate vaccine (PCV), and
- pneumococcal polysaccharide vaccine (PPV)

Both are given by injection. Both of these vaccines contain several components to protect against several types ('strains') of the pneumococcus. They differ in the number of types that they protect against. Also, the PPV does not work very well in young children. Therefore, the vaccine given and the number of doses depends on your age.

The vaccines stimulate your body to make antibodies against pneumococcal bacteria. These antibodies protect you from illness should you become infected with pneumococcal bacteria. The vaccines protect against many (but not all) types of pneumococcus bacteria.

Routine immunisation schedule for children under two years

Children are routinely offered three injections of PCV at aged two months, four months, and about 13 months. The first two are usually given at the same time as the DTP/Hib/Polio injection (but in a different part of the body with a separate needle and syringe). The third dose, at about 13 months, should be given one month after the Hib/MenC vaccine.

If a child between the age of one and two years has not had any previous dose of PCV, or only had one previous dose, then a single dose of PCV should be given. Children aged over two years and who are not in an at-risk group do not need to be immunised.

Immunisation schedule for older people and those 'at risk'

People aged 65 and over, and all other people at any age in any of the at-risk groups listed above should be immunised with PPV. PPV is normally given just once. It provides lifelong protection against many types of pneumococcus.

Children who are in an at-risk group and have previously had their routine immunisations with PCV should also have one injection of PPV as soon as possible after their second birthday (but at least two months after the final dose of PCV).

Children who are in an at-risk group under the age of five years who have not previously had routine immunisations with PCV will need both PCV and PPV. The dose schedules depend on age and circumstances. Your doctor will advise.

Notes for some special groups

- If you are about to have your spleen removed, ideally you should be immunised 4-6 weeks before the operation, but at least two weeks before. If this is not possible, you should be immunised two weeks after the operation.
- If you are about to undergo chemotherapy or radiotherapy, ideally you should be immunised 4-6 weeks before commencing treatment.
- Generally, booster doses of vaccine are not required in addition to those described above. However, in people without a working spleen, or with certain chronic kidney diseases, the antibody level gradually falls over time. Therefore, these people should have a booster dose every five years.

Are there any side-effects?

Pneumococcal immunisation usually causes no problems. Mild soreness and a lump at the injection site sometimes occurs. A mild fever may develop for a day or so. These side-effects are usually minor and soon go away.

Rarely, some people react badly to the vaccine. You will normally be asked by the doctor or nurse to wait several minutes after having the immunisation to make sure that you have not reacted. You should seek urgent medical advice if breathlessness, swelling, or a rash develops within a few days of immunisation, although this is very rare.

Who should not receive the pneumococcal immunisation?

- If you are pregnant. The vaccine is thought to be safe during pregnancy but no research trials have proved this. Therefore, if possible, it is best to postpone the immunisation until after the baby is born.
- If you have had a severe reaction to a previous dose of pneumococcal vaccine.

Further information

Information on immunisation

www.immunisation.org.uk

From the NHS aimed at the general public.

Immunisation Against Infectious Disease (The Green Book)

www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/GreenBook/fs/en

From the Department of Health. Aimed at health professionals but of interest to all.

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Comprehensive patient resources are available at www.patient.co.uk