

Childhood pneumococcal disease

Immunisation information

The National Immunisation Program Schedule provides free pneumococcal vaccine to all infants at two, four and six months of age. Children less than five years of age with certain medical risk factors are also eligible for free pneumococcal vaccine.

Pneumococcal disease

Pneumococcal disease is a major cause of hospitalisation and death among children less than five years of age in Australia. Children one year of age and under have the highest risk of pneumococcal meningitis. Therefore the earlier this immunisation is given the better.

Most people carry *Streptococcus pneumoniae* bacteria in the nose and throat. The bacteria are spread by droplets from the mouth and nose such as coughing and sneezing or by contact with articles contaminated by infected droplets. Most of the time this doesn't cause any illness, however, vulnerable people may develop pneumococcal disease. The immune system is unable to keep the bacteria in check, which then multiply out of control and spread to other areas of the body.

Pneumococcal infections are bacterial infections that attack different parts of the body.

For example:

- If the pneumococcal bacteria gets into the blood stream it's called bacteraemia
- If it attacks a specific part of the brain, it's known as meningitis
- If the pneumococcal bacteria attacks the lungs, it's known as pneumonia
- If it infects the middle ear, it's called otitis media

In Australia pneumococcal disease has now become one of the two major causes of bacterial meningitis in childhood since the decline of *Haemophilus influenzae* type b infection due to the introduction of the Hib vaccine in the early 90's. While pneumococcal disease peaks at around 12 months of age, cases of meningitis may start to occur from two months of age.

Pneumococcal vaccine

A vaccine called Prevenar® has been shown to be almost 100% effective against pneumococcal disease. However there are more than 90 strains of pneumococcal disease. The vaccine covers seven strains but these strains cause 80% to 90% of cases of severe pneumococcal disease.

The vaccine contains sugars of seven different strains of pneumococcal bacteria that are individually joined with an inactive protein of diphtheria toxoid. It also contains small concentrations of additives of aluminium phosphate, salt and water.

Who is eligible for the free vaccine in Victoria?

1. All infants at two, four and six months of age.
2. Children less than five years of age with medical risk factors which put them at higher risk of pneumococcal infection. These children need extra doses of pneumococcal vaccine at 12 months and at four to five years of age.

Please see medical risk factors.

Children less than five years of age with certain medical risk factors are eligible for free pneumococcal vaccine.

The vaccine is recommended but not funded for children between five and ten years of age with certain medical risk factors.

Medical risk factors for children less than ten years of age

- Congenital immune deficiency including symptomatic IgG subclass or isolated IgA deficiency (but children who require monthly immunoglobulin infusion are unlikely to benefit from vaccination)
- Immunosuppressive therapy (including corticosteroid therapy ≥ 2 mg/kg per day or prednisolone or equivalent for more than 2 weeks) or radiation therapy, where there is sufficient immune reconstitution for vaccine response to be expected
- Compromised splenic function due to sickle haemoglobinopathies or congenital or acquired asplenia
- Haematological malignancies
- HIV infection before and after development of AIDS
- Renal failure or relapsing or persistent nephrotic syndrome
- Down syndrome
- Cardiac disease associated with cyanosis or cardiac failure
- Proven or presumptive cerebrospinal fluid leak (CSF)
- All premature infants with chronic lung disease
- All infants born less than 28 weeks gestation
- Cystic fibrosis
- Insulin-dependent diabetes mellitus
- Intracranial shunts and cochlear implants

Possible side effects of Prevenar[®] vaccine

Common side effects

- Pain, redness and swelling at the injection site
- Low grade temperature

Extremely rare side effect

- Severe allergic reaction

If mild reactions do occur, the side effects can be reduced by:

- Placing a cold wet cloth on the sore injection site
- Not overdressing your child
- Paracetamol might be required to ease discomfort and/or high fever (check label for correct use)
- Giving your child extra fluids to drink

If reactions are severe or persistent, or if you are worried about your child, contact your doctor or hospital.

Pre-immunisation checklist

Before you have your child immunised, tell the doctor or nurse if your child:

- Is unwell on the day of immunisation
- Has had a severe reaction to any vaccine
- Is allergic to any component of the vaccine

The following websites offer resources and further information

www.health.vic.gov.au/immunisation

www.immunise.health.gov.au



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