

Diphtheria, tetanus, pertussis (whooping cough), hepatitis B, polio (poliomyelitis) and Hib (Haemophilus influenzae type b)

Immunisation Information

OFFICIAL

The National Immunisation Program provides free diphtheria, tetanus, whooping cough, hepatitis B, polio and Hib vaccine to infants at two, four and six months of age.

Diphtheria

Diphtheria is caused by bacteria which are found in the mouth, throat and nose. Diphtheria causes a membrane to grow around the inside of the throat. This can make it difficult to swallow, breathe and can even lead to suffocation.

The bacteria produce a poison which can spread around the body and cause serious complications such as paralysis and heart failure. Around 10 per cent of people who contract diphtheria die from it.

Diphtheria can be caught through coughs and sneezes from an infected person.

Tetanus

Tetanus is caused by bacteria which are present in soils, dust and manure. The bacteria can enter the body through a wound which may be as small as a pin prick. Tetanus cannot be passed from person to person.

Tetanus is an often fatal disease which attacks the nervous system. It causes muscle spasms first felt in the neck and jaw muscles.

Tetanus can lead to breathing difficulties, painful convulsions and abnormal heart rhythms.

Because of the effective immunisation, tetanus is now rare in Australia, but it still occurs in people who have never been immunised against the disease or who have not had their booster vaccines.

Whooping cough

Whooping cough is a highly contagious disease which affects the air passages and breathing. The disease causes severe coughing spasms. Between these spasms, the child gasps for breath. Coughing spasms are often followed by vomiting and the cough can last for months.

Whooping cough is most serious in babies under 12 months of age and often requires admission to hospital. Whooping cough can lead to complications such as haemorrhage, convulsions, pneumonia, coma, inflammation of the brain, permanent brain damage and long-term lung damage. Around one in every 200 children under six months of age who catches whooping cough will die.

Whooping cough can be caught through coughs and sneezes from an infected person. Parents and family members are the main source of infection for babies.

Hepatitis B

The hepatitis B virus affects the liver and can cause:

- fever

- nausea and diarrhoea
- tiredness
- dark urine and yellow skin.

Hepatitis B virus is usually spread through contact with the body fluids (blood, saliva, semen) of an infected person, or from mother to child at birth. Most young children who catch the hepatitis B virus become 'carriers'. This means they can pass the disease onto other people even if they don't have symptoms.

If your child contracts hepatitis B and becomes a 'carrier', they will have an increased risk of liver disease and cancer later in life.

Polio

Polio may cause mild symptoms or very severe illness. It is a virus which affects the digestive and nervous systems. It causes fever, vomiting and muscle stiffness and can affect the nerves, causing permanent crippling.

The disease can paralyse breathing and swallowing muscles, leading to death. Between two and five per cent of people with polio die from it and about half of all patients who survive suffer permanent paralysis.

Polio can be caught if the faeces of an infected person contaminate food, water or hands.

Hib

Hib disease was the most frequent cause of life-threatening infection in children under five years of age before the introduction of routine Hib vaccines in 1993. The incidence of Hib infection before a vaccine was available was highest in children under five years of age and rarely occurred after five years of age. Despite its name it is not related in any way to influenza. *Haemophilus influenzae* is a bacteria which lives normally in a person's upper respiratory tract.

Hib disease may cause:

- meningitis, an infection of the membrane covering the brain
- epiglottitis, swelling of the throat which can block breathing

- septic arthritis, infection of a joint
- cellulitis, infection of the tissue under the skin, usually on the face
- pneumonia.

These conditions can develop quickly and if left untreated, they can rapidly cause death.

Diphtheria, tetanus, whooping cough, hepatitis B, polio and Hib immunisation

Diphtheria, tetanus, whooping cough, polio, hepatitis B and Hib can be prevented with a safe and effective combination vaccine called *Infanrix hexa®*. Several injections are needed before good protection is provided.

Infanrix hexa® vaccine contains a small amount of diphtheria and tetanus toxins, which are modified to make them harmless. It also contains purified parts of the pertussis bacterium, an inactivated part of the hepatitis B virus, three types of inactivated polio viruses and Hib 'sugars'. The vaccine also contains a small amount of aluminium salts, small amounts of antibiotics, preservative and may also contain yeast proteins.

Possible side effects of diphtheria, tetanus, whooping cough, hepatitis B, polio and Hib vaccine

Reactions to diphtheria, tetanus, whooping cough, hepatitis B, polio and Hib vaccine are much less frequent than the complications of the diseases.

Common side effects

- Irritable, crying, unsettled and generally unhappy
- Drowsiness or tiredness
- Low grade fever

- Soreness, redness and swelling at the injection site
- A temporary small lump at the injection site.

If mild reactions do occur, they may last one to two days. The side effects can be reduced by:

- placing a cold wet cloth on the sore injection site
- giving extra fluids and not overdressing if your child has a fever
- giving paracetamol to reduce discomfort (note the recommended dose for the age of your child).

Extremely rare side effects

- Hypotonic-hyporesponsive episode (HHE). Infant may show signs of paleness, limpness and be unresponsive. This may occur one to 48 hours following vaccination. The whole episode may last from a few minutes to 36 hours. Follow-up of children with HHE shows no long-term neurological or other side effects.

- A severe allergic reaction.

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

Pre-immunisation checklist

Before your child is immunised, tell the doctor or nurse if any of the following apply.

- ☐ Is unwell on the day of immunisation (temperature over 38.5°C)
- ☐ Has had a severe reaction to any vaccine
- ☐ Has a severe allergy to any vaccine component (for example, neomycin).

Further information

www.betterhealth.vic.gov.au

www.health.vic.gov.au/public-health/immunisation

Translating and interpreting service, call 131 450

To receive this document in another format, [email the Immunisation Unit <immunisation@health.vic.gov.au>](mailto:immunisation@health.vic.gov.au).

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