
Immunisation – DTP, polio, hep B and Hib

Summary

- Diphtheria, tetanus, pertussis (whooping cough), polio, hepatitis B and *Haemophilus influenzae* type b (Hib) are six infectious diseases that are particularly dangerous to babies.
 - Combined vaccinations enable maximum protection to begin as soon as possible after birth.
 - In Victoria, a number of vaccine combinations for children are provided for free under the National Immunisation Program.
 - Serious reactions to the combined vaccines are rare.
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A number of combined immunisations against diphtheria, tetanus, whooping cough and other infectious diseases are available to provide protection at various life stages.

Diphtheria, tetanus, whooping cough (pertussis) or DTP, polio, hepatitis B and *Haemophilus influenzae* type b (Hib) are six infectious diseases that are particularly dangerous to babies. Combined immunisations enable maximum protection to begin as soon as possible after birth.

Combined immunisations minimise the number of injections required, especially for babies and children. Although some types of immunisation are effective after only one dose, others, such as diphtheria, tetanus and whooping cough, require a primary course and lifelong booster doses.

In Victoria, a number of vaccine combinations for children are free under the **National Immunisation Program**.

Six-in-one vaccine against diphtheria, tetanus, whooping cough, polio, hepatitis B and Hib

In Victoria, the six-in-one vaccine is free of charge for:

- children at two months (from six weeks), four months and six months of age – a primary course of immunisations against **diphtheria, tetanus, whooping cough, polio, hepatitis B and Hib**
- children up to and including nine years of age who have not been immunised and require catch-up immunisations.

The three doses of the six-in-one vaccine provide:

- the first three doses of the vaccines against diphtheria, tetanus, whooping cough and polio
- the second, third and fourth doses of the hepatitis B vaccine (the first dose is given at birth against hepatitis B alone).

The final booster dose of Hib vaccine is given at 18 months of age.

Four-in-one vaccine against diphtheria, tetanus, whooping cough and polio

In Victoria, the four-in-one vaccine is free of charge for:

- children at four years of age – booster dose of vaccine against diphtheria, tetanus, whooping cough and polio
- children from four years and one month up to and including nine years of age who have not been immunised and require a catch-up booster dose.

The four-in-one vaccine provides the final dose of polio vaccine.

Three-in-one vaccine against diphtheria, tetanus and whooping cough

In Victoria, the three-in-one vaccine is free for children at 18 months of age as a booster dose of diphtheria, tetanus and whooping cough.

Three-in-one vaccine (reduced antigen) against diphtheria, tetanus and whooping cough

In Victoria, the three-in-one vaccine (reduced antigen), also known as the three-in-one dTpa vaccine, is free for:

- young people at 12 to 13 years of age
- pregnant women from 28 weeks gestation during every pregnancy
- partners of women who are at least 28 weeks pregnant if the partner has not received a pertussis booster in the last ten years
- parents or guardians of babies if their baby is under six months of age and they have not received a pertussis booster in the last ten years
- children who are 10 to 19 years of age, for catch-up immunisation
- Aboriginal and Torres Strait Islander people, refugees and asylum seekers, and vulnerable citizens who are 10 years of age and over for catch-up immunisation.

In Australia, immunity to diphtheria, tetanus and whooping cough begins to decrease in people over the age of 50 years and they are recommended a booster dose of the combination vaccine to provide protection. A prescription is required from your doctor for this vaccine.

Pregnancy and three-in-one dTpa vaccine

The three-in-one dTpa (reduced antigen) vaccine against diphtheria, tetanus and whooping cough is recommended to be given to women between 28 and 32 weeks gestation in every pregnancy, regardless of the interval between pregnancies, to protect both the mother and the newborn baby from whooping cough.

If the dose has not been given in the third trimester, then it is recommended to be given as soon as possible after delivery. The three-in-one vaccine is also recommended for women who are pregnant, and who have a wound that might result in tetanus. This vaccine can be given to women who are breastfeeding.

Speak with your doctor about your immunisation options.

Side effects of the vaccines against diphtheria, tetanus, whooping cough and other infectious diseases

Immunisations containing vaccines against diphtheria, tetanus, whooping cough and other infectious diseases (including the six-in-one, four-in-one and three-in-one vaccines) are effective and safe although all medications can have unwanted side effects.

Side effects from these combined vaccines are uncommon and usually mild, but may include:

- localised pain, redness and swelling at the injection site
- occasionally, an injection-site lump (nodule) that may last many weeks – treatment is not needed
- low-grade temperature (fever)
- children can be unsettled, irritable, tearful, generally unhappy, drowsy and tired.

If a combined immunisation also contains the vaccine against polio (the six-in-one and the four-in-one vaccine), muscle aches may also be experienced.

Extremely rare side effects include

- brachial neuritis in adolescents and adults (severe pain, shoulder and upper arm)
- severe allergic reaction.

Managing fever after immunisation

Common side effects following immunisation are usually mild and temporary (occurring in the first one to two days after vaccination). Specific treatment is not usually required.

There are a number of treatment options that can reduce the side effects of the vaccine including:

- Give extra fluids to drink.
- Do not overdress children or babies if they are hot.
- Although routine use of paracetamol after vaccination is not recommended, if fever is present, paracetamol

can be given. Check the label for the correct dose or speak with your pharmacist, especially when giving paracetamol to children.

Managing injection site reactions

Many vaccine injections may result in soreness, redness, itching or swelling at the injection site for one to two days. Booster doses of DTPa-containing vaccines, routinely given at 18 months and four years of age, are occasionally associated with extensive swelling of the vaccinated arm from the shoulder to the elbow which completely resolves within a few days.

Paracetamol or a cool compress on the injection site might be required to ease the discomfort.

Sometimes, a small, hard lump (nodule) at the injection site may persist for some weeks or months. This should not be of concern and requires no treatment.

Concerns about immunisation side effects

If an adverse event following immunisation is unexpected, persistent or severe, or if you are worried about yourself or your child's condition after immunisation, see your doctor or immunisation nurse as soon as possible, or go directly to a hospital.

It is also important to seek medical advice if you (or your child) are unwell, as this may be due to other illness rather than because of the immunisation.

Adverse events that occur following immunisation may be reported to the **Victorian Surveillance of Adverse Events Following Vaccination in the Community (SAEFVIC)** Line. SAEFVIC is the central reporting service in Victoria for any significant adverse events following immunisations. Visit **AEFI-CAN** for information on how to report adverse events in other states or territories.

Rare immunisation side effects

There is a very small risk of a serious allergic reaction (anaphylaxis) to any vaccine. This is why you are advised to stay at the clinic or medical surgery for at least 15 minutes following immunisation in case further treatment is required.

If any other reactions are severe and persistent, or if you are worried, contact your doctor for further information.

Immunisation and HALO

The immunisations you may need are decided by your health, age, lifestyle and occupation. Together, these factors are referred to as HALO.

Talk to your doctor or immunisation provider if you think you or someone in your care has health, age, lifestyle or occupation factors that could mean immunisation is necessary. You can check your immunisation HALO using the **Immunisation for Life infographic**.

Where to get help

- In an emergency, always call triple zero (000)
- Emergency department of your nearest hospital
- Your **GP (doctor)**
- Local government immunisation service
- **Maternal and Child Health Line** (24 hours, 7 days) Tel. **13 22 29**
- **NURSE-ON-CALL** Tel. **1300 60 60 24** – for expert health information and advice (24 hours, 7 days)
- Immunisation Section, Department of Health and Human Services, Victorian Government Tel. **1300 882 008**
- **National Immunisation Hotline** Tel. **1800 671 811**
- **SAEFVIC** Tel. **1300 882 924** – the line is attended between 9 am and 4 pm and you can leave a message at all other times
- **Pharmacist**

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