
Immunization - Diphtheria, Tetanus, Pertussis and Polio (DTaP-IPV) Vaccine

This fact sheet provides basic information only. It must not take the place of medical advice, diagnosis or treatment. Always talk to a health care professional about any health concerns you have, and before you make any changes to your diet, lifestyle or treatment.

Vaccines (injections or shots) are the best way to protect against some very serious infections. The Canadian Paediatric Society and the National Advisory Committee on Immunization strongly recommend routine immunization.

DTaP-IPV is a combined vaccine that protects children against four diseases — diphtheria, tetanus, pertussis and polio. The abbreviation "aP" stands for "acellular pertussis." This vaccine is recommended for use in infants and children younger than seven years.

Vaccination against diphtheria, tetanus and polio is required by law for all children attending school in Ontario (unless exempted).

What is diphtheria?

Diphtheria is a serious disease of the nose, throat and skin. It causes sore throat, fever and chills. It can be complicated by breathing problems, heart failure and nerve damage. Diphtheria kills about one out of every 10 people who get the disease. It is most often passed to others through coughing and sneezing.

What is tetanus?

Tetanus or lockjaw is a serious disease that can happen if dirt with the tetanus germ gets into a cut in the skin. Tetanus germs are found everywhere, usually in soil, dust and manure. It does not spread from person to person. Tetanus causes cramping of the muscles in the neck, arms, leg and stomach and painful convulsions which can be severe enough

to break bones. Even with early treatment, tetanus kills two out of every 10 people who get it.

What is pertussis?

Pertussis or whooping cough is a serious disease especially in children. Children who get this disease have spells of violent coughing. This cough can cause them to vomit or stop breathing for a short period of time. The cough can last for weeks and make it hard for a child to eat, drink or even breathe. Pertussis can cause serious complications. Pneumonia can occur in more than two out of 10 children with pertussis. Pertussis can also cause brain damage, seizures and death. These problems happen most often in babies. Pertussis spreads very easily from an infected person to others through coughing or sneezing.

What is polio?

Polio is a dangerous disease that people can get from drinking water or eating food with the polio germ in it. It is also spread from person to person. This disease can cause nerve damage and paralyze a person for life. It can paralyze muscles used for breathing, talking, eating and walking. It can also cause death.

How well does DTaP-IPV vaccine protect my child?

When DTaP-IPV vaccine is given in the recommended number of shots, it protects over 95 per cent of children against diphtheria, virtually 100 per cent of children against tetanus, 85 per

cent of children against pertussis and 99 per cent of children against polio. Vaccination also makes these diseases milder for those who may catch them.

At what age should my child be vaccinated with the DTaP-IPV vaccine?

DTaP-IPV vaccine is given before starting kindergarten or school, when your child is four to six years old. Before that, your child should have received four shots of the DTaP-IPV + Hib (five-in-one) vaccine at two, four, six and 18 months of age.

A booster shot against tetanus, diphtheria and pertussis is given around the 15th birthday (ten years after the 4 to 6 year old booster dose of DTaP-IPV). After this shot, booster doses against tetanus and diphtheria are required every 10 years for continued protection.

What if my child misses this shot?

Your child should get the shot as soon as possible. DTaP-IPV is not given to children older than six years of age, therefore the tetanus, diphtheria and pertussis (Tdap) shot plus IPV (separate needle) will be given to children seven years and over who missed the four to six year old booster dose of DTaP-IPV.

Is the DTaP-IPV vaccine safe?

Yes. Serious side effects are rare. Mild pain, swelling and redness for a few days are common at the spot where the needle was given. Some children get a fever, rash, lose their appetite or are fussy or drowsy for a day or two after the shot. Your doctor may suggest that you give your child a medicine called acetaminophen to prevent pain and fever.

An extremely rare side effect, which occurred in about one out of every million children who received the pertussis vaccine used before July 1997 (called "whole cell" pertussis vaccine), was encephalopathy.

Encephalopathy (irritation of the brain or the covering of the brain) results in a range of symptoms which may include headaches, stiff neck, changes in behaviour, confusion or irritability, or speech disturbances. Those who had this side effect recovered completely, in a short

period of time, with no permanent damage. This newer vaccine (acellular pertussis vaccine-aP) causes even fewer of the minor reactions, and the chances of brain irritation following this vaccine remain extremely rare. The benefits of this vaccine are much greater than the risks.

There is no risk of a pregnant woman or anyone else catching any disease from a child who has been recently vaccinated. You should always discuss the benefits and risks of any vaccine with your doctor/nurse practitioner.

When should I call my doctor/nurse practitioner?

Call your doctor/nurse practitioner or go to the nearest hospital emergency department if your child has any of the following within three days of getting the shot:

- high fever (over 40 C or 104 F);
- crying for more than three hours;
- convulsions or seizures;
- very pale colour and serious drowsiness;
- hives;
- swelling of the face or mouth;
- trouble breathing;
- other serious problems.

Who should not get the DTaP-IPV vaccine?

The doctor/nurse practitioner may decide not to give your child's shot if your child:

- has a high fever or serious infection worse than a cold;
- has a severe allergy to an antibiotic called neomycin or polymyxin B;
- has a serious allergic reaction (anaphylaxis) to DTaP-IPV or DTaP-IPV-Hib vaccine;
- a severe allergy to any component of the vaccine;
- is 7 years of age or older.

Who should I talk to if I have any more questions about the DTaP-IPV vaccine?

Talk to your doctor/nurse practitioner or call your local public health unit for more information.

Your record of protection

After any immunization, make sure your personal immunization record (i.e., the "yellow card") is

updated. If your child is attending child care or school, inform your local public health unit each time your child receives an immunization. An immunization record is required for school and child care attendance and for certain types of travel and work, so keep it in a safe place.