

# DaPTP/Hib Vaccine to Prevent Diphtheria, Pertussis, Tetanus, Polio, Haemophilus influenzae type B

Manitoba  
Health  
Public Health



C O M M U N I C A B L E   D I S E A S E   C O N T R O L

## Why should you have your child immunized?

Only one generation ago, serious diseases caused many deaths every year in Canada. Some of these diseases included:

- diphtheria;
- pertussis (whooping cough);
- polio;
- tetanus (lockjaw); and
- Haemophilus influenzae type b (Hib diseases), which cause meningitis, an infection of the brain.

Before vaccines were available, there was little you could do to protect your child from getting these serious diseases.

Now, very few Canadians get sick or die from these diseases because we use vaccines. Vaccines are also called needles, baby shots or immunizations. Vaccines help your immune system learn how to recognize and fight the germs that cause diseases. They are the best way to protect your child against these deadly diseases.

In countries where they do not routinely use vaccines, these diseases still affect millions of people and cause thousands of deaths. These diseases could become common in Canada again, if we stop immunizing our children.

## What are these diseases?

### Diphtheria

Diphtheria used to be a common disease in Canada.

- About 12,000 people a year became sick with diphtheria.
- About 1,000 people died every year.

In Canada, cases of diphtheria have dropped because children and adults are protected through immunization. Today only a few cases of diphtheria occur each year. It usually infects people who are not protected through immunization.

Diphtheria bacteria, or germs, infect the throat, nose or skin. The germs are passed on to others by:

- coughing,
- sneezing, or
- close face-to-face contact with an infected person.

Diphtheria can affect people in several ways:

- breathing problems,
- weakness, or loss of muscle movement, also called paralysis,
- heart failure, or
- death.

Diphtheria kills one of every 10 people who get the disease.

Diphtheria is now very rare in Canada because we immunize our children. Recently, large outbreaks of diphtheria have occurred in other countries such as the former Soviet Union, because fewer people were getting immunized.

### Pertussis (Whooping Cough)

Pertussis, also called whooping cough, is another serious disease, especially in children. Whooping cough germs, or bacteria, are spread easily by:

- coughing,
- sneezing, or
- close face-to-face contact with an infected person.

Pertussis causes long coughing spells that make it hard for your child to eat, drink or even breathe.

The disease may last up to three months and sometimes causes serious complications. In Canada:

- about one in five infants with pertussis has to be hospitalized;
- of these infants, one in 200 dies;
- about one in 400 suffers brain damage.

Pertussis causes several deaths each year. In Britain, fewer people were immunized against pertussis in the 1970s and the 1980s. As a result:

- two large pertussis outbreaks (epidemics) happened, and
- dozens of children died.

After these outbreaks, people started getting immunized again. When more people became immunized, the number of pertussis cases dropped.

## **Tetanus**

Tetanus is caused by tetanus bacteria, or germs, which get into cuts, puncture wounds or burns. Tetanus germs are common, especially in dirt, dust and manure.

- Tetanus germs in a wound form a poison, or toxin, that causes your muscles to tighten and go into spasms. A spasm is a painful tightening of the muscles that cannot be controlled.
- Tetanus can be very serious if the breathing muscles are affected by these spasms.
- About two out of every 10 people who get tetanus die from the disease.

## **Polio**

Polio is a serious infection that can cause permanent muscle paralysis. In severe cases, polio kills people who catch it. This happens because polio can paralyze the muscles that help people to breathe.

The polio virus, or germ, used to be quite common in Canada. Thousands of people became paralyzed and hundreds died every year from polio before we had a vaccine to protect against it.

Although there have been no new cases of polio in Canada in several years, it is still common in other parts of the world. It would only take one case of polio from another country to start new cases of

polio here, if we are not protected through immunization.

## **Haemophilus influenzae type b (Hib disease)**

Haemophilus influenzae type b, also known as Hib disease, is especially dangerous to children under five years of age. Hib bacteria, or germs, are spread by:

- coughing,
- sneezing, or
- close face-to-face contact with an infected person.

Hib causes serious infections such as:

- meningitis, an infection of the covering of the brain; and
- pneumonia, an infection of the lungs.

One child of every 20 children under age five who has a Hib infection, dies from the disease. One of every four with meningitis suffers permanent brain damage or deafness.

Before we started using the Hib vaccine in Canada:

- about one in every 200 children got some form of serious Hib infection before age five;
- about 2,000 people became sick each year with Hib infections; and
- about 1,000 of these people were sick with meningitis.

Since vaccination began in 1988, the number of cases each year has dropped by 90 per cent.

## **Will the DaPTP/Hib vaccine protect your child?**

The DaPTP/Hib vaccine protects against all five diseases described in this fact sheet: diphtheria, pertussis, tetanus, polio and Hib disease.

When the DaPTP/Hib vaccine is given in the recommended number of shots, it protects

- 85 out of 100 children against pertussis,
- more than 85 out of 100 children against diphtheria,
- more than 95 out of 100 children against tetanus,
- 99 out of 100 children against polio, and
- about 90 out of 100 children against serious Hib infections.

If a person who has received the vaccine catches one of these diseases, the disease may be milder. This means the person will not get as sick as he or she would have become without the vaccine.

## When should the DaPTP/Hib vaccine be given?

Children should get the DaPTP/Hib vaccine at:

- two months of age;
- four months of age;
- six months of age;
- 18 months of age; and
- five years of age, except for the Hib vaccine, which is not given at this time.

One shot is not enough. Your child must get the needles at the recommended ages to get the best protection from these five diseases.

### Manitoba's Childhood Immunization Schedule

| Age            | DaPTP* | Hib* | MMR | HBV | Td |
|----------------|--------|------|-----|-----|----|
| 2 months       | X      | X    |     |     |    |
| 4 months       | X      | X    |     |     |    |
| 6 months       | X      | X    |     |     |    |
| 12 months      |        |      | X   |     |    |
| 18 months      | X      | X    |     |     |    |
| 5 years        | X      |      | X   |     |    |
| Grade 4        |        |      |     | XXX |    |
| 14-16 years    |        |      |     |     | X  |
| Every 10 years |        |      |     |     | X  |

\*DaPTP and Hib are given as "one needle"

D or d – diphtheria

aP – acellular pertussis (whooping cough)

T – tetanus

P – polio

Hib – Haemophilus influenzae type B

M – measles (red measles)

M – mumps

R – rubella (german measles)

HBV – hepatitis B

In Manitoba, vaccination is voluntary.

## What are the side effects?

The DaPTP/Hib vaccine has been shown to be safe. But as with any medicine, minor side effects sometimes occur.

For a day or two after getting the needle, about half of immunized children may:

- have a slight fever,
- be cranky or fussy,
- feel drowsy, and/or
- not want to eat.

Your child may also have:

- soreness,
- swelling,
- redness, or
- a small painless lump that usually disappears within two months, at the spot where the needle is given in the arm or leg.

A cold damp cloth can help to ease the pain.

If your child develops a fever:

- keep the room temperature at 18° C (64° F).
- keep your child lightly dressed (unless the child is shivering);
- have your child rest;
- give your child lots of clear fluids; and
- give acetaminophen, also called Tylenol or Tempra, as directed on the bottle.

**Note: Acetylsalicylic acid, such as ASA or aspirin, must NOT be given to children.**

In rare cases, more serious side effects can happen.

These include:

- temporary blueness and swelling of the legs, sometimes with a rash, when the injection is given in the leg. This happens in about one in 10,000 immunizations;
- high fever over 40° C (104° F), about one in every 1,900 immunizations;
- seizures (convulsions), with about one in 1,750 immunizations;

- paleness, limpness or drowsiness, occurring in about one in 8,000 immunizations;
- a severe allergic reaction, also called anaphylactic shock. Symptoms of anaphylactic shock are:
  - hives,
  - wheezing,
  - being short of breath, or having difficulty in breathing,
  - swelling of the face, mouth, or throat, which may occur in one of every 50,000 immunizations; or
- any change in your child's ability to feel, or move his or her arms or legs, (including paralysis), in fewer than one of every one million immunizations.

**Always report any of these more serious reactions to your doctor or public health nurse.**

### **Who should not get the DaPPTP/Hib vaccine?**

Your doctor or public health nurse may decide not to give the injection in the following situations:

- If your child has a high fever or serious infection worse than a cold. The immunization will be postponed and given another day.

- If your child has a severe allergy to the antibiotics neomycin or polymyxin B, or any other materials in the vaccine.
- If your child has had a severe allergic reaction, or anaphylactic shock, after a previous dose of DaPPTP/Hib vaccine.

**All *severe* allergies should be reported to the doctor or public health nurse before any vaccine is given.**

### **Your record of protection**

Make sure the doctor or public health nurse updates the yellow Childhood Immunization Record card after your child receives an immunization. Keep it in a safe place!

### **For more information**

Talk to your doctor, public health nurse or call Health Links in Winnipeg: 788-8200 or toll-free: 1-888-315-9257.

