

Pneumococcal Polysaccharide Vaccine PPV23

COMMUNICABLE DISEASE CONTROL

What are vaccines?

Vaccines are also called “needles,” “shots” or “immunizations.” Vaccines help your immune system learn to recognize the germs that cause diseases and fight them. Vaccines protect those who are immunized and may also protect those who cannot be immunized for medical reasons.

Vaccines prevent serious diseases such as tetanus, diphtheria, pertussis (whooping cough), polio, measles and rubella (german measles). Very few Canadians get sick or die from these diseases because people are protected by immunizations. These diseases could become a serious health issue in Canada if we do not continue to immunize against them.

What is pneumococcal disease?

Pneumococcal disease is a serious infection caused by bacteria (or germs) called *Streptococcus pneumoniae*. The bacteria is often found in the nose, mouth and throat of healthy persons who may have no symptoms and who do not become sick. The bacteria can be unknowingly passed to others who may be at risk for serious complications.

Symptoms in adults may include: high fever, cough with secretions, shivering (chills), shortness of breath and chest pain that increases with breathing and coughing. The symptoms of pneumococcal meningitis include stiff neck, fever, mental confusion and sensitivity to light. The symptoms of bloodstream infection may be similar to some of the symptoms of pneumonia and meningitis, along with joint pain, fever and chills.

Symptoms in infants and small children may not be specific and may include fever, cough, rapid breathing or grunting. The symptoms of meningitis may vary depending on the age of the child, but may include diarrhea, vomiting and/or fever. Among older children, symptoms may include headache, sensitivity to light and/or a stiff neck. Bloodstream infections usually have non-specific symptoms including fever and fussiness. Children with an ear infection typically have a painful ear and may have a fever. Other symptoms can include being sleepy and fussy or cranky.

How common is pneumococcal disease?

Anyone can get pneumococcal disease. The disease occurs worldwide and is a leading cause of serious illness in children and adults. It is spread from person to person through close contact, such as sneezing, coughing, or sharing food, drinks or children's toys. It is more common in winter months and when respiratory viruses such as influenza (the flu) are circulating.

What is the pneumococcal shot ?

- The pneumococcal shot is an inactivated (killed virus) vaccine that provides protection against some of the serious infections caused by the 23 types of *Streptococcus pneumoniae* bacteria.
- The pneumococcal shot does not contain “live” germs, therefore it cannot cause pneumococcal disease.
- There are two types of pneumococcal shots:

- **The Pneumococcal Polysaccharide Vaccine 23 (PPV23)** shot is recommended for children (two years old and older) and adults with chronic health conditions.
- **The Pneumococcal Conjugate Vaccine (PCV7)** is recommended for healthy children under two years of age and sick children under five years of age.
- The pneumococcal “shot” is the best way to protect children and adults against pneumococcal infections.
 - chronic kidney disease
 - chronic fluid leak of the brain/spinal cord
 - diabetes
 - a spleen that does not work well because of sickle-cell disease, inflammatory bowel disease, celiac disease, thalassemia, lupus or low platelet levels of an unknown cause
 - no spleen
 - diseases that make the immune system weak (such as generalized cancer, HIV/AIDS or Hodgkin’s disease)

Why is the pneumococcal “shot” important?

Children **under** two years of age are at high risk for pneumococcal disease, but PPV23 vaccine is not effective for this group. The PCV7 vaccine is recommended.

Children **over** two years of age and adults aged 65 years and older with certain medical problems are also at risk for the disease and its complications. These include:

- blood poisoning (bacteremia)
- infection of the fluid surrounding the brain and spinal cord (meningitis)
- pneumonia
- ear or sinus infections (especially in children)

Severe or invasive pneumococcal infections can lead to hospitalization and sometimes death.

Who should get the pneumococcal shot?

Manitoba Health recommends and provides the pneumococcal shot free to people in the following high-risk groups:

- seniors 65 years of age and older
- anyone who lives in a personal care home or a chronic care facility
- people two years of age and older who have a high-risk health problem such as:
 - chronic heart disease
 - chronic lung disease
 - cirrhosis of the liver or alcoholism

How is the vaccine given?

The vaccine is given by needle into the muscle or into the tissue below the skin, usually in the upper arm.

Is a second dose needed?

At present, a second dose is not routinely recommended.

Only people at very high risk of invasive pneumococcal infection may need a second dose. These include people who have problems with their spleen, kidney, liver; those diagnosed with sickle cell disease, celiac disease, liver disease, HIV infection, or who have a weak immune system due to a disease or medications. The need for a booster dose and the time you get it will depend on factors such as your health condition and your age. Your doctor or public health nurse can tell you **if and when** you need a second dose.

Can the pneumococcal shot be given at the same time as other vaccines?

Yes. It is safe to get more than one kind of vaccine at the same time. Pneumococcal vaccine can be given at any time during the year. It can be given at the same time as the influenza vaccine (one shot in each arm).

Who should NOT get this vaccine?

- Children under two years of age. Another vaccine (pneumococcal conjugated vaccine-PCV7) is available for children under two years of age. Your doctor or public health nurse can provide information about the right vaccine for your child.
- People who had a severe allergic reaction to the pneumonia shot when they got it in the past.
- Anyone who has a severe allergy to any vaccine ingredients or its container. Vaccine content and packaging varies by manufacturer. Check with the public health nurse or the doctor if you are not sure about getting the vaccine.

Having a mild illness, such as a cold (with or without a fever) is **NOT** a reason to avoid having this vaccine. You can still get vaccinated.

Individuals receiving radiation or chemotherapy should discuss with their doctor when is the best time to be vaccinated.

If you are “at risk” and do not know if you have received a pneumococcal shot, please check with your doctor or public health nurse.

What are the side effects?

- Approximately 60 per cent of people who get this vaccine experience soreness, redness or swelling at the injection site, decreased arm mobility, and swelling of the arm. This is usually mild and may last from one to three days.
- Some individuals may experience a fever of 38.5° C or higher, chills, general muscle pain, joint pain, weakness, fatigue, nausea, vomiting and headache. These symptoms usually occur soon after the shot was given and last for about one to two days.
- **Severe side effects may occur but are rare.** These include:
 - a severe allergic reaction (rash, hives, wheezing, shortness of breath, swelling of the face, mouth or throat; low blood pressure causing loss of consciousness)

- Guillain-Barré syndrome, a form of paralysis that is usually temporary, occurs rarely, and is estimated at one in every 1,000,000 vaccinations.

If you have one of these rare side effects or any others that you are concerned about, please report it to your doctor or public health nurse. Vaccine reactions are recorded and monitored in Manitoba and across Canada.

What should I do if side effects occur?

Fever can be treated by:

- keeping the room temperature at about 18°C;
- removing clothing (for children);
- encouraging rest and liquids, such as watered-down apple juice or flat soft drinks (for children);
- taking acetaminophen (Tylenol® or Tempra®) — check with your doctor or local pharmacist if you are not sure you can take this pain medication.

NOTE: DO NOT give acetylsalicylic acid (ASA or aspirin) to children.

- applying a cool, damp cloth to the needle site to relieve discomfort.

Where can I get the pneumococcal shot?

You can get it from your family doctor or at a public health clinic all year round, including at the time you get your flu shot in the fall. Some doctors' offices may charge a fee for supplies.

Your record of protection

Make sure the doctor or nurse gives you a card to record that you have had the pneumococcal vaccine. Keep the card in a safe place.

In Manitoba, vaccination is voluntary.

Recommended resources

Available on the Internet:

- Government of Manitoba – Public Health Branch
www.gov.mb.ca/health/publichealth/index.html
- Division of Immunization and Respiratory Diseases – Public Health Agency of Canada
www.phac-aspc.gc.ca/im/index.html
- Canadian Coalition for Immunization Awareness and Promotion – Canadian Public Health Association
www.immunize.cpha.ca/
- National Immunization Program – Centres for Disease Control and Prevention – USA
www.cdc.gov/vaccines/
- Immunization Action Coalition
www.immunize.org/

Information about the shots that you or your children receive may be recorded in the Manitoba Immunization Monitoring System (MIMS). This computerized database allows your doctor, your child's doctor or your public health nurse to find out what shots you or your child have had or need to have. Information collected in MIMS may be used to produce vaccination records, or notify you or your doctor if someone has missed a particular shot. Manitoba Health may use the information to monitor how well different vaccines work in preventing disease.

If you need information on the shots that you or your child has received, contact your doctor, your local public health unit or nursing station.

If you have any questions or concerns, contact your doctor, local public health nurse; or Health Links-Info Santé in Winnipeg at 788-8200 or toll-free at 1-888-315-9257 or access our website at www.gov.mb.ca/health/publichealth/index.html.

Local Public Health Unit Stamp