

Tetanus, Diphtheria, Pertussis Vaccine

Vaccines have saved more lives compared to any other medical intervention. Vaccines help the immune system to recognize and fight bacteria and viruses that cause serious diseases.

Tetanus, diphtheria and pertussis are vaccine preventable diseases.

Tetanus ('lockjaw') is caused by bacteria found in the soil worldwide. The bacteria make a strong toxin within 3-21 days after entering the body through a cut or injury to the skin. The toxin causes painful tightening of muscles in the body. In severe cases, breathing muscles are affected. Without treatment, up to 8 in 10 people could die. It cannot be spread from person to person.

Diphtheria is a serious disease occurs in many countries worldwide. The bacteria spread through the air by sneezing or coughing, and direct skin contact. Symptoms include a mild fever, sore throat, difficulty swallowing, tiredness and loss of appetite. A grayish white membrane appears in the throat within 2 to 3 days of illness which causes severe breathing problems like airway obstruction and suffocation. Within 2 to 5 days, the bacteria produce a strong toxin that can cause heart failure and paralysis. Without treatment, 1 in 10 people could die.

Pertussis ('whooping cough') is a serious and highly contagious bacterial infection of the lungs and throat. Pertussis can cause pneumonia, collapsed lungs, brain bleeding, inflammation and permanent damage, seizures or death. The bacteria spread easily by coughing, sneezing or close face-to-face contact. Pertussis causes severe coughing that often ends with a whooping sound before the next breath and breathing is very difficult. This cough can last several months. Even with treatment, 1 to 4 deaths occur each year in Canada.

How can these diseases be prevented?

- Be immunized. When you and your child are immunized, you help protect others as well.
- Practice good hygiene (e.g. hand washing). Cover your mouth when coughing.

Who can get this vaccine for free?

- Grade 8 students as a **booster dose** (unless they have received it since becoming 11 years old).

- Pregnant individuals in **every pregnancy** (ideally between 27-32 weeks gestation) to provide passive, temporary protection against pertussis to the infant.
- Caregivers of babies younger than 6 months old if they have not received a pertussis vaccine as an adult.
- Adults as a booster dose every 10 years if they received a tetanus series earlier in life.
- Adults who have not been immunized or do not have a record of prior immunization.
- People with serious cuts or deep wounds whose last tetanus vaccine was given more than five years ago.

Who should not get this vaccine?

- Individuals who have a serious acute illness, with or without a fever, should delay immunizations.
- Persons who had a life-threatening reaction to a previous dose of tetanus, diphtheria, or pertussis vaccine, or any components of the vaccine.
- Children younger than 4 years of age.
- People who developed Guillain-Barré Syndrome (GBS) within 6 weeks of getting a tetanus-containing vaccine. GBS is a rare condition that can result in weakness and paralysis of the body's muscles.
- Individuals who have experienced transient thrombocytopenia or other neurological complications following an earlier immunization against diphtheria and/or tetanus.
- **Precaution:** Pertussis-containing vaccine may be administered to persons with the following conditions once a treatment regimen has been established and their condition has stabilized:
 - Progressive or unstable neurologic disorder (including infantile spasms for DTaP)
 - Uncontrolled seizures
 - Progressive encephalopathy
- **Contraindication:** People who developed encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) within 7 days of a previous dose of a pertussis-containing vaccine, that is not attributable to another identifiable cause.

What are common reactions to this vaccine?

- **Vaccines are very safe and effective. It is much safer to get this vaccine than to get any of these serious diseases.**
- Pain, redness and swelling at the injection site.
- Some individuals may experience fatigue, headache, mild fever, dizziness, body aches or nausea.
- These reactions are mild and generally last 1 to 2 days.
- Numbness, tingling, brachial neuritis (pain in arm and shoulder nerve), facial paralysis, convulsions, myelitis (inflammation of the spinal cord) and myocarditis (inflammation of the heart) have been reported as rare events after immunization.
- Only treat a child's fever (at least 6 to 8 hours after immunization) if they are uncomfortable, refusing fluids and not sleeping.

Use **Acetaminophen** (Tylenol[®], Tempra[®]) or **Ibuprofen** (Advil[®], Motrin[®]) to treat fevers and pain in children and adults. **Never give ASA** (Aspirin[®]) to anyone younger than 18 years old because of the serious risk of Reye's syndrome.

It is important to stay in the clinic for 15 minutes after getting any vaccine because there is an extremely rare possibility of a life-threatening allergic reaction called anaphylaxis. This may include hives, difficulty breathing, or swelling of the throat, tongue or lips. **If this happens after you leave the clinic, call 911 or the local emergency number.** This reaction can be treated, and occurs in less than one in one million people who get the vaccine.

Who should you report reactions to?

- Report any adverse or unexpected reactions to 811, your local public health nurse, your doctor, or nurse practitioner as soon as possible.

Talk to a public health nurse:

- If you have questions or concerns about your or your child's reaction to an immunization.

- If you or your child had to go to a doctor, a hospital or to a health centre with a symptom that might be related to immunization.

What does this vaccine contain?

BOOSTRIX[®] contains diphtheria toxoid, acellular pertussis toxoid, filamentous haemagglutinin, pertactin, tetanus toxoid, aluminum salts, sodium chloride and water for injection. Residues: disodium phosphate, formaldehyde, glutaraldehyde, glycine, monopotassium phosphate, polysorbate 80, and potassium chloride. Thimerosal-free. Latex-free. Antibiotic-free.

ADACEL[®] contains tetanus toxoid, diphtheria toxoid, acellular pertussis toxoid, filamentous haemagglutinin, pertactin and fimbriae types 2 and 3, aluminum phosphate, 2-phenoxyethanol and trace amounts of formaldehyde and glutaraldehyde. Thimerosal-free. Latex-free. Antibiotic-free.

Mature Minor Consent

It is recommended that parents/guardians discuss consent for immunization with their children. Efforts are first made to get parental/guardian consent for immunizations. However, children at least 13 years of age up to and including 17 years of age, who are able to understand the benefits and possible reactions for each vaccine and the risks of not getting immunized, can legally consent to or refuse immunizations in Saskatchewan by providing mature minor informed consent to a healthcare provider.

Provincial immunization fact sheets are available at www.saskatchewan.ca/immunize.

For more information, contact your local public health office, your physician, nurse practitioner, HealthLine online or by calling 811.

References: Product monographs (BOOSTRIX[®] 2022; ADACEL[®] 2023).