Diphtheria

What is diphtheria?

Diphtheria is a serious and contagious disease that is caused by bacteria. The bacteria release a toxin (poison) into the body that can cause a thick grey coating to build up at the back of the throat. This coating makes it very hard for people to breathe or swallow.

The early symptoms of diphtheria are much like a common cold, and include a sore throat, a low fever and chills. However, as the diphtheria toxin (poison) spreads through the bloodstream, it can lead to life-threatening complications that affect the nerves and body organs (such as the heart and kidneys).

Babies and children are most at risk of becoming infected with diphtheria and its complications.

How is diphtheria spread?

Diphtheria is very contagious. It spreads easily through the air when an infected person coughs or sneezes. People can also catch it by touching an infected surface or object (for example, a toy), and then touching their nose or mouth.

Prevention

You can protect against diphtheria with a safe and effective vaccine. For the best protection, there are five recommended doses of the vaccine in childhood, another dose in the teen years, and booster shots every 10 years for adults. The vaccine is given at:

- **two months, four months, six months and 18 months of age**
- **four to six years of age**
- **14 to 16 years of age**

Adults should receive a booster shot every 10 years.

Is it serious?

Diphtheria is a very serious medical emergency that requires immediate treatment in a hospital. Even with treatment, about one in 10 people who get the disease will die. Without treatment, one in two people will die. The diphtheria toxin can cause:

- blocking of the airways so a person can't breathe
- myocarditis (damage to the heart, causing abnormal heart rhythms and even heart failure)
- paralysis (the inability to move)
- polyneuropathy (nerve damage)
- pneumonia (an infection in the lungs)

In North America, vaccines have reduced deaths caused by diphtheria by more than 99%

Ontario

Symptoms

In its early stages, diphtheria can be mistaken for a common cold. Some people who are infected with diphtheria will not show any symptoms. For others, symptoms begin two to five days after exposure.

When the bacteria that causes diphtheria invades the breathing airways, it produces a toxin (poison) that can cause:

- weakness
- fever
- sore throat
- a swollen neck

Within two to three days, a thick, grey coating can build up in the throat, tonsils or nose, making it very hard to breathe and swallow. If the toxin enters a person's blood stream, it can cause damage to the heart, kidneys and nerves.

What are the risks?

Diphtheria used to be one of the most common causes of death in children in Canada between one and five years of age. However, routine immunization against diphtheria in babies and children has been widely practised in Canada since 1930. Thanks to immunization, in the last twenty years fewer than five cases of diphtheria are reported each year in this country.

The disease continues to happen in other countries and the death rate for diphtheria has changed very little during the last 50 years. The highest death rates occur in the very young and the elderly.

Stay up to date with your vaccinations

The best way to protect against diphtheria is through vaccination. The vaccines are part of the publicly funded vaccine schedule and are offered free to all people in Ontario. The diphtheria vaccine is required for children to attend school in Ontario and for children attending a daycare centre, unless they have a valid exemption.

Diphtheria still occurs in countries where many people are not immunized against the disease. People who have not been immunized, or are not fully immunized, are at higher risk of getting the disease if they travel to countries where diphtheria is still common.

Talk to your health care provider before you travel. For more information on global outbreaks of diphtheria, please visit the Government of Canada website **travel.gc.ca/travelling/health-safety**.
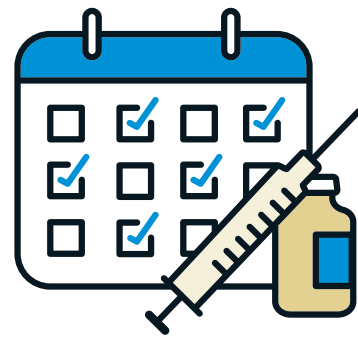
It takes all of us to protect each of us.

Talk to your health care provider or your local public health unit about the diphtheria vaccine.

For more information about immunization, please visit ontario.ca/vaccines.

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