

**What is diphtheria?**

Diphtheria is caused by *Corynebacterium diphtheriae*, a type of bacteria that may produce a toxin. It is a vaccine-preventable disease. All children attending child cares and entering schools are required to be immunized against diphtheria.

**Who is at risk for diphtheria?**

Children and adults who are unimmunized, people living in crowded or unsanitary conditions, and travelers to areas where diphtheria is endemic are all at risk.

**What are the symptoms of diphtheria?**

Symptoms of diphtheria are usually a low-grade fever, sore throat and a sticky grayish/white film on the tonsils, throat or nose. Complications can include severe neck swelling (called bull neck) and upper airway blockage, which make breathing and swallowing more difficult.

Diphtheria can also cause infections of the skin, vagina, eye or ear, but this is less common. Skin infections caused by diphtheria may appear as a scaling rash or sores with distinct edges and a membrane.

**How soon do symptoms appear?**

Symptoms usually appear between two to seven days after exposure to the disease. Sometimes it may take longer for symptoms to appear.

**How is diphtheria spread?**

Diphtheria is spread by direct contact with respiratory droplets of an infected person, such as those produced during coughing and sneezing, or contact with the discharge from sores on the skin of an infected person.

**When and for how long is a person able to spread the disease?**

In an untreated person, the disease can be spread for two to six weeks. In a person treated with antibiotics, it can be spread for fewer than four days.

**How is a person diagnosed?**

A lab test is needed to diagnose diphtheria.

**What is the treatment?**

The toxin that may be produced by diphtheria bacteria must be inactivated. A single dose of antitoxin should be administered by IV. An antibiotic should also be given.

**Does past infection make a person immune?**

No. People who have had diphtheria may still contract it again.

## **Should children or others be excluded from child care, school, work or other activities if they have diphtheria?**

Yes. Children who have diphtheria should be excluded from activities, including attending school or child care, until the North Dakota Department of Health determines it is safe for them to return.

## **What can be done to prevent the spread of diphtheria?**

There are vaccines that protect against diphtheria. The childhood vaccine is called DTaP. Generally a child will receive five doses of DTaP, given in a series starting at two months with a final dose prior to starting elementary school. The childhood DTaP vaccine is not given to anyone seven or older. North Dakota state law requires all children attending early childhood facilities or schools to be vaccinated against diphtheria. A vaccine containing tetanus, diphtheria and pertussis (called Tdap) is also available for older children, adolescents and adults. It is recommended that adolescents receive one dose of Tdap at age 11 or 12. Tdap is required for entry into seventh grade. Adults should also receive one dose of Tdap. It is recommended that women receive a dose of Tdap during each pregnancy. A tetanus vaccine given along with diphtheria (called Td) is also available for those who cannot receive Tdap or who have already received one dose of Tdap. A vaccine containing protection against diphtheria should be given to all adults every 10 years to ensure that immunity to diphtheria is maintained.

### **Additional Information:**

Additional information is available by calling the North Dakota Department of Health at 800.472.2180.

**This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.**

Resource:

American Academy of Pediatrics. [Diphtheria]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30<sup>th</sup> ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 325-329.