

# **Tetanus (lockjaw)**

## **What is tetanus?**

Tetanus, commonly called lockjaw, is a serious bacterial disease that affects muscles and nerves. It is characterized by muscle stiffness that usually involves the jaw and neck that then progresses to involve other parts of the body. Death can result from severe breathing difficulties or heart abnormalities.

## **Who gets tetanus?**

As a result of widespread immunization, tetanus is now a rare disease in the United States. Tetanus occurs more often in older people and in agricultural workers for who contact with animal manure is more likely and immunization is inadequate. In the United States, neonatal (newborn) tetanus is rare but can occur if mothers are not immunized appropriately against tetanus.

## **How is tetanus spread?**

In unvaccinated individuals, tetanus is contracted through a cut or deep wound which becomes contaminated with the organism. Tetanus has also been associated with clean wounds, surgical procedures, insect bites, dental infections, and intravenous drug use. It is not transmitted from person to person.

## **Where is the tetanus bacteria found?**

The tetanus bacteria are everywhere in environment and is commonly found in soil, dust and manure.

## **What are the symptoms of tetanus?**

A common first sign of tetanus is muscular stiffness in the jaw (lockjaw). Other symptoms include stiffness of the neck, trouble swallowing, and painful muscle stiffness all over the body, spasms, sweating, and fever.

## **How soon after infection do symptoms occur?**

The incubation period is usually 8 days but may range from 3 days to 3 weeks. Shorter incubation periods are associated with more heavily contaminated wounds.

## **What are the complications associated with tetanus?**

Complications include spasm of the vocal cords and/or spasms of the respiratory muscles causing interference with breathing. Other complications include fractures of the spine or long bones from stiff muscles, elevated blood pressure, abnormal heartbeats, coma, clotting in the blood vessels of the lung, and pneumonia. Even with modern intensive care, tetanus is associated with death rates of 10-20%.

## **What is the treatment for tetanus?**

The use of tetanus toxoid-containing vaccine and tetanus immune globulin (TIG) or antitoxin in the management of wounds depends on the nature of the wound and the history of immunization. Persons with clean, minor wounds may need to catch-up their tetanus toxoid-containing vaccine. For more severe wounds, persons may need TIG in addition to vaccine.

If the disease develops, supportive care and therapy to control severe spasms are indicated.

## **Does past infection with tetanus make a person immune?**

Recovery from tetanus may not result in immunity. Second attacks can occur and immunization is needed after recovery.

## **Is there a vaccine for tetanus?**

An effective vaccine called tetanus toxoid has been available for many years. It is contained in the DTP (diphtheria, tetanus, pertussis), DT (diphtheria, tetanus), DTaP (diphtheria, tetanus, acellular pertussis), Tdap (tetanus, diphtheria and acellular pertussis), and Td (tetanus and diphtheria) vaccines. A tetanus booster shot is recommended every 10 years after the completion of a 3-dose series.

In New York State, children born after 1/1/2005 are required to have at least 3 doses of DTaP to attend pre-kindergarten programs and school. Children born on or after 1/1/94 are required to have one dose of Tdap. Tetanus vaccine is highly recommended for all children.

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

Being fully immunized is the best tool to prevent tetanus.