



Loss Control Insights

Tetanus – Quick Facts

What is tetanus?

Tetanus is an acute, often-fatal disease of the nervous system that is caused by the nerve toxins of the bacterium called *Clostridium tetani*. This bacteria is found throughout the world as a normal element in the soil and in animal and human intestines.

Where do tetanus bacteria grow in the body?

Contaminated wounds are the sites where tetanus bacteria multiply. Deep wounds or those with devitalized (dead) tissue are particularly prone to tetanus infection.

Puncture wounds such as those caused by nails, splinters, or insect bites are favorite locations of entry for the bacteria. The bacteria can also be introduced through burns, any break in the skin, and injection-drug sites. Tetanus can also be a hazard to both the mother and newborn child (by means of the uterus after delivery and through the umbilical cord stump).

What is the incubation period for tetanus?

The incubation period between exposure to the bacteria in a contaminated wound and development of the initial symptoms of tetanus ranges from 2 days to 2 months, but is commonly within 14 days of injury.

What is the course of the tetanus disease?

During a 1 to 7 day period, progressive muscle spasms caused by the tetanus toxin in the immediate wound area may progress to involve the entire body in a set of continuous muscle contractions. Restlessness, headache, and irritability are common.

The tetanus neurotoxin causes the muscles to tighten up into a continuous ("tetanic" or "tonic") contraction or spasm. The jaw is "locked" by muscle spasms, giving the name "lockjaw" (also called "trismus"). Muscles throughout the body are affected, including the vital muscles necessary for normal breathing. When the breathing muscles lose their power, breathing becomes difficult or impossible and death can occur without life-support measures. Even with breathing support, infections of the airways within the lungs can lead to death.

How is tetanus treated?

General measures to treat the sources of the bacterial infection with antibiotics and drainage are carried out in the hospital while the patient is monitored for any signs of compromised breathing muscles. Treatment is directed toward stopping toxin production, neutralizing its effects, and controlling muscle spasms.

The toxin already circulating in the body is neutralized with antitoxin drugs. The tetanus toxin causes no permanent damage to the nervous system after the patient recovers. After recovery, patients still require active immunization because having the tetanus disease does not provide natural immunization against a repeat episode!

How is tetanus prevented?

Active immunization ("tetanus shots") plays an essential role in preventing tetanus. Preventative measures to protect the skin from being penetrated by the tetanus bacteria are also important. For instance, precautions should be taken to avoid stepping on nails by wearing shoes. If a penetrating wound should occur, it should be thoroughly cleansed with soap and water and medical attention should be sought.

What are the side effects of tetanus immunization?

Side effects of tetanus immunization can occur with the most frequent side effects are usually quite mild (and familiar) and include soreness, swelling and/or redness at the site of the injection. More significant reactions are extraordinarily rare.