

Tetanus (Lockjaw)

Tetanus is a serious bacterial infection that affects the nervous system and causes muscles throughout the body to tighten. It's also called lockjaw because the infection often causes muscle contractions in the jaw and neck. However, it can eventually spread to other parts of the body.

Tetanus infection can be life-threatening without treatment. Approximately 10 to 20 percent of tetanus infections are fatal, according to the [Centers for Disease Control and Prevention \(CDC\)](#)[Trusted Source](#)

Tetanus is a medical emergency that requires immediate treatment in a hospital. Fortunately, tetanus is preventable through the use of a [vaccine](#). However, this vaccine does not last forever. Tetanus booster shots are needed every 10 years to ensure immunity.

Causes Bacteria called *Clostridium tetani* cause tetanus. Spores of the bacteria can be found in dust, dirt, and animal droppings. Spores are small reproductive bodies produced by certain organisms. They're often resistant to harsh environmental conditions, such as high heat.

A person can become infected when these spores enter the bloodstream through a [cut](#) or deep [wound](#). The bacteria spores then spread to the central nervous system and produce a toxin called tetanospasmin. This toxin is a poison that blocks the nerve signals from your spinal cord to your muscles. This can lead to severe muscle spasms.

Tetanus infection has been associated with:

- crush injuries
- injuries with dead tissue
- [burns](#)

- [puncture wounds](#) from piercings, tattoos, injection drug use, or injury (such as stepping on a nail)
- wounds contaminated with dirt, feces, or saliva

Less commonly, it's been associated with:

- [animal bites](#)
- dental infections
- [insect bites](#)
- chronic sores and infections

Tetanus is not contagious from person to person. The infection occurs worldwide, but is more common in hot, damp climates with rich soil. It's also more common in densely populated areas.

Symptoms Tetanus affects the nerves that control your muscles, which can lead to [difficulty swallowing](#). You may also experience spasms and [stiffness](#) in various muscles, especially those in your [jaw](#), [abdomen](#), chest, back, and [neck](#).

Other common tetanus symptoms are:

- [fast heart rate](#)
- [fever](#)
- [sweating](#)
- [high blood pressure](#)

The incubation period — the time between exposure to the bacteria and the onset of illness — is between 3 and 21 days. Symptoms typically appear within [14 days](#) [Trusted Source](#) of initial infection. Infections that occur faster after exposure are typically more severe and have a worse prognosis.

Treatment

Treatment depends on the severity of your symptoms. Tetanus is typically treated with a variety of therapies and medications, such as:

- antibiotics such as [penicillin](#) to kill the bacteria in your system
- tetanus immune globulin (TIG) to neutralize the toxins that the bacteria have created in your body
- [muscle relaxers](#) to control muscle spasms
- a tetanus vaccine given along with the treatment
- cleaning the wound to get rid of the source of the bacteria

In some cases, a surgical procedure called debridement is used to remove dead or infected tissue. If you have difficulty swallowing and [breathing](#), you may need a breathing tube or ventilator (a machine that moves air in and out of the lungs).

Complications

Severe muscle spasms as a result of tetanus can also cause serious health complications, such as:

- breathing problems due to spasms of the vocal cords ([laryngospasm](#)) and spasms of the muscles that control breathing
- [pneumonia](#) (an infection of the lungs)
- brain damage due to lack of oxygen
- [abnormal heart rhythm](#)
- [bone fractures](#) and fractures of the spine due to muscle spasms and [convulsions](#)
- [secondary infections due to prolonged hospital stays](#)

Prevention

Vaccination can prevent tetanus infections, but only if you receive your booster shots on schedule. , the tetanus vaccine is given to children as part of the diphtheria-tetanus-pertussis shot, also called the DTap shot. This is a three-in-one vaccine that protects against [diphtheria](#), [pertussis](#), and tetanus. However, it doesn't provide lifelong protection. Children need to get a booster shot at 11 or 12 years of age. Adults then need a booster vaccine called the Td vaccine (for tetanus and diphtheria) every 10 years after that. Proper treatment and cleaning of wounds can also help prevent the infection. If you're injured outside and think your injury has made contact with soil, call your healthcare provider and ask about your risk of tetanus

Without treatment, tetanus can be fatal. Death is more common in young children and older adults. According to the [CDC Trusted Source](#), roughly 11 percent of reported cases of tetanus have been fatal in recent years. This rate was higher in people who were older than 60 years, reaching 18 percent. In people who were unvaccinated, 22 percent of cases were fatal.

Prompt and proper treatment will improve your outlook. Go to your doctor or emergency room right away if you think you may have tetanus. Even if you get tetanus once, you can still get it again someday if you're not protected by the vaccine. The vaccine is extremely effective, according to the CDC. Reports of tetanus occurring in fully immunized people who have received a vaccine or booster within the last 10 years are very rare.