

Tetanus

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Tetanus is caused by a toxin (poison) produced by the bacteria *Clostridium tetani*. It affects the nervous system and causes painful, uncontrolled muscle spasms. Another name for tetanus is lockjaw.

Tetanus spores are hardy forms of the bacteria that can survive in the environment in an inactive state for a long time. They are found throughout in soil, dust, and animal waste.

Tetanus is now rare because of widespread immunisation. Less than five cases of tetanus are reported each year in NZ now compared with 20 to 30 per year forty years ago. Most of the cases are aged over 50.

Tetanus is a major problem in developing countries where immunisation levels in children are low.

What are the symptoms?

The first signs of tetanus infection are usually a headache and spasms or cramping of the jaw muscles (lockjaw). As the toxin spreads, it progressively attacks more groups of muscles, causing spasms in the neck, arms, legs, and stomach, and sometimes violent convulsions or seizures.

Symptoms usually appear less than 2 weeks after exposure but can range from 2 days to months. Generally the shorter the time between exposure and symptoms, the more severe the disease.

Tetanus is diagnosed by its symptoms.

How is it caught?

Tetanus spores can enter the body through a wound that is contaminated with soil, dust, or animal waste. Spores need only a tiny pinprick or scratch, but they usually enter through a deep puncture wound or cut. Tetanus spores can also get into the body when skin is damaged by burns or by injecting contaminated drugs.

Tetanus occurs in NZ mostly in older adults who are either not immunised or not adequately immunised. Injecting drug users are also at risk.

How is it treated?

Persons with tetanus require hospitalisation and usually must spend several weeks in intensive care to manage the complications. Treatment involves antibiotics, wound care, medications to control the spasms, tetanus immune globulin and vaccination.

Tetanus is often fatal. For those who survive, recovery can be long (1-2 months) and difficult. Muscle spasms usually decrease after about two weeks and disappear after another week or two, but the person may be weak and stiff for a long time. Other complications include breathing problems, bone fractures, high blood pressure, abnormal heartbeats, clotting in the blood vessels of the lung, pneumonia, and coma.

How is it prevented?

The most important way to prevent tetanus is through complete immunisation and proper wound care.

Immunisation

An effective vaccine against tetanus has been available for many years. It is usually given to children combined with diphtheria, pertussis and polio vaccines. Five doses are necessary as part of the childhood National Immunisation Schedule. Boosters (with diphtheria) are recommended for adults at 45 years and 65 years.

Tetanus booster shots are recommended every 10 years if travelling overseas.

Wound care

Cleaning all wounds, removing dead tissue, and using antibiotics for contaminated or infected wounds can reduce the likelihood of getting tetanus.

Persons with wounds that are deep or dirty may need a tetanus booster shot if more than 5 years have passed since the last dose.

An injection of tetanus immune globulin (TIG) given as soon as possible after a tetanus-prone injury can also help neutralize the poison that has not entered the nervous system.

Information adapted from US Directors of Health Promotion and Education (www.dhpe.org).