

Tetanus is a severe disease that can result in serious illness and death. Tetanus vaccination protects against the disease.

Tetanus

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What is tetanus?

Tetanus (sometimes called lock-jaw) is a disease caused by a bacteria (*Clostridium tetani*) often found in soil. The bacteria can enter wounds and produce a toxin that attacks a person's nervous system.

What are the symptoms?

Early symptoms of tetanus include:

- painful muscle spasms that begin in the jaw (lock jaw)
- stiff neck, shoulder and back muscles
- difficulty swallowing
- violent generalized muscle spasms
- convulsions
- breathing difficulties.

A person may have a fever and sometimes develop abnormal heart rhythms. Complications include pneumonia, broken bones (from the muscle spasms), respiratory failure and cardiac arrest.

How is it spread?

The disease usually occurs after an incubation period of 3 to 21 days, but ranges from 1 day to several months.

Tetanus is sometimes found in dust and animal faeces. Infection may occur after minor injury (sometimes unnoticed punctures to the skin that are contaminated with soil, dust or manure) or after major injuries such as open fractures, dirty or deep penetrating wounds, and burns.

Tetanus is not passed on from one person to another.

Neonatal tetanus (affecting new born babies) can occur in babies born to inadequately immunised mothers, especially after unsterile treatment of the umbilical cord stump. This is very rare in Australia.

Who is at risk?

In Australia, tetanus mostly occurs in older adults who were not adequately immunised.

In countries with lower childhood immunisation rates, newborn babies, children and young adults are also at risk.

Injecting drug users may have a greater risk of being infected with the bacteria from contaminated injection sites or contaminated drugs.

How is it prevented?

Immunisation

Immunisation protects against tetanus toxin. Tetanus-containing vaccines prevent disease by making antibodies that bind to the toxin, rather than the bacteria.

Infants and children are recommended to receive tetanus-containing vaccine in a five-dose schedule given at 2, 4, 6 and 18 months of age, and 4 years of age. A booster dose of tetanus-containing vaccine is recommended for adolescents between 11 and 13 years of age.

A tetanus-containing vaccine booster is recommended for all adults at 50 years of age and at 65 years of age if it is more than 10 years since the last dose.

Vaccination is recommended every 10 years for travellers to countries where health services are difficult to access. Travellers with a higher risk of a tetanus-prone wound are recommended to be vaccinated every 5 years.

Adolescents and adults who have never had a tetanus-containing vaccine are recommended to receive 3 doses of tetanus-containing vaccine with at least 4 weeks between doses, and booster doses at 10 years and 20 years after the primary course.

For further information on tetanus vaccination recommendations see the Australian Immunisation Handbook website at <https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/tetanus> .

Tetanus-prone wound management

All wounds other than clean, minor cuts are considered 'tetanus-prone'.

Seek medical advice for dirty wounds or wounds where the skin has been penetrated such as with a rose thorn or rusty nail. First aid treatment should always include cleaning the wound and using an antiseptic.

Some wounds are even more likely to encourage the growth of tetanus bacteria, such as

- compound fractures (where the broken bone pierces the skin)
- burns
- animal bites
- any type of penetrating wound, such as from a rusty nail or rose thorns
- wounds contaminated with soil, horse manure or foreign objects such as wood fragments.

The need for tetanus-containing vaccine in people with a tetanus-prone wound, with or without tetanus immunoglobulin, depends on the nature of the wound and the person's vaccination history.

The doctor may advise you to have a tetanus booster shot, depending on how long it is since your last tetanus dose. If you have not had any previous vaccinations against tetanus, a full course of three doses should be given.

For further information on tetanus vaccination recommendations for people with tetanus-prone wounds, see the Australian Immunisation Handbook website at <https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/tetanus#people-who-have-a-tetanus-prone-wound> .

How is it diagnosed?

A doctor can diagnose tetanus from the symptoms and an examination. Laboratory testing is rarely helpful.

How is it treated?

Treatment includes tetanus immunoglobulin or antitoxin. Antibiotics may also be used together with surgical treatment of the infected area.

Prolonged treatment in the intensive care unit of a hospital to mechanically assist breathing and to treat muscle spasms is often required.

What is the public health response?

Doctors and hospital staff must confidentially notify cases of tetanus to their local public health unit.

Public health unit staff will talk to the treating doctor and patient or their carer to identify risk factors that the patient may have, and to enquire about vaccination history.

Further information

For further information please call your local public health unit on 1300 066 055 or visit the NSW Health website at <https://www.health.nsw.gov.au/> .