

Tetanus

Tetanus is a serious illness contracted through exposure to the spores of the bacterium, *Clostridium tetani*, which live in soil, saliva, dust, and manure. The bacteria can enter the body through a deep cuts, wounds or burns affecting the nervous system. The infection leads to painful muscle contractions, particularly of the jaw and neck muscle, and is commonly known as "lockjaw".

People of all ages can get tetanus but the disease is particularly common and serious in newborn babies and their mothers when the mothers` are unprotected from tetanus by the vaccine, tetanus toxoid. Tetanus occurring during pregnancy or within 6 weeks of the end of pregnancy is called "maternal tetanus", while tetanus occurring within the first 28 days of life is called "neonatal tetanus".

The disease remains an important public health problem in many parts of the world, but especially in low-income countries or districts, where immunization coverage is low and unclean birth practices are common. WHO estimates that in 2017 (the latest year for which estimates are available), 30,848 newborns died from neonatal tetanus, 85% reduction from the situation in 2000.

Symptoms

Nearly all cases of tetanus occur in people who have never been vaccinated or in adults who have not kept up to date on their booster shots.

Signs and symptoms of tetanus appear anytime from 3 to 21 days after tetanus bacteria enter the body through a wound. Most cases occur within 14 days.

Symptoms can include:

- jaw cramping or the inability to open the mouth
- muscle spasms often in the back, abdomen and extremities
- sudden painful muscle spasms often triggered by sudden noises
- trouble swallowing
- seizures
- headache
- fever and sweating
- changes in blood pressure or fast heart rate.

In neonatal tetanus, symptoms include muscle spasms, which are often preceded by the newborn's inability to suck or breastfeed, and excessive crying.

Tetanus is diagnosed on the basis of clinical features and does not require laboratory confirmation. Tetanus requires treatment in a medical facility, often in a referral hospital. People who recover from tetanus do not have natural immunity and can be infected again and therefore need to be immunized.

Prevention

Tetanus can be prevented through immunization with tetanus-toxoid-containing vaccines (TTCV), which are included in routine immunization programmes globally and administered during antenatal care contacts.

To be protected throughout life, WHO recommends that an individual receives 6 doses (3 primary plus 3 booster doses) of TTCV. The 3-dose primary series should begin as early as 6 weeks of age, with subsequent doses given with a minimum interval of 4 weeks between doses.

The 3 booster doses should preferably be given during the second year of life (12–23 months), at 4–7 years of age, and at 9–15 years of age. Ideally, there should be at least 4 years between booster doses.

There are many kinds of vaccines used to protect against tetanus:

- Diphtheria and tetanus (DT) vaccines
- Diphtheria, tetanus, and pertussis (whooping cough) (DTaP) vaccines
- Tetanus and diphtheria (Td) vaccines
- Tetanus, diphtheria, and pertussis (Tdap) vaccines

Neonatal tetanus can be prevented by immunizing women of reproductive age with TTCV, either during pregnancy or outside of pregnancy. Additionally, robust medical practices can also prevent tetanus disease including clean delivery and cord care during childbirth, and proper wound care for surgical and dental procedures.