

## Tetanus

**2006 Case Total 1**  
**2005 Case Total 0**

**2006 Rate 0.03 per 100,000**  
**2005 Rate 0.00 per 100,000**

Tetanus is a rare but severe disease in the United States. In Oklahoma, five cases have been reported since 1996. Tetanus is a reportable disease in Oklahoma due to the severity of disease and availability of an immunoglobulin for those contracting the disease. Cases reported to the OSDH CDD are investigated to determine how the disease was acquired, history of tetanus vaccination and whether immunoglobulin is recommended. One case of tetanus was reported to the OSDH during 2006. Prior to 2006, the last case of tetanus in Oklahoma occurred in 2001.

In December 2006, a 19-year-old LeFlore County resident presented to the emergency room with a two-day history of painful muscular contractions, spasms induced by sensory stimuli and trismus. Blood cultures revealed no growth. Investigation of the case revealed a history of self-body piercing, and a wound on foot due to a nail. The patient reported his last tetanus shot was received prior to entering kindergarten with no booster doses administered sequentially. The patient was administered Tetanus Immune Globulin (TIG) based on the history of a recent puncture wound and symptoms suggestive of tetanus.

Since the introduction of the tetanus vaccine during the 1940's, reported tetanus incidence rates decreased in the United States from approximately 500 to 600 cases annually to approximately 30 cases. Almost all reported cases of tetanus are in persons who have either never been vaccinated, or who completed a primary series but have not had a booster dose in the preceding 10 years.<sup>1</sup> The most common sources of tetanus are acute injuries or wounds including puncture wounds, lacerations, and abrasions. Common exposures to tetanus include stepping on nails or barbed wire, animal bites, self-piercing, and self-performed tattoos. Drug injection users are also at high risk for tetanus. Neonatal tetanus is a form that occurs in newborn infants. This type of tetanus usually occurs through the infection of the unhealed umbilical stump, particularly when the stump is cut with an unsterile instrument. Neonatal tetanus is common in developing countries, but very rare in the US.<sup>1</sup>

There are no laboratory findings characteristic of tetanus. If tetanus is suspected, tetanus immune globulin should be administered. If tetanus vaccination is uncertain or the patient has had less than 3 doses of tetanus vaccine, Td toxoid should be given along with the TIG.<sup>1</sup> This is because early doses of toxoid may not induce immunity but prime the immune system, and TIG provides only temporary immunity. Giving both the vaccination and the TIG ensures that protective levels of antitoxin are achieved.<sup>1</sup> It is important that persons receive the vaccine regardless of their disease status, since disease does not confer immunity.

---

<sup>1</sup> CDC. Epidemiology and Prevention of vaccine-Preventable Disease. Atkinson W, Hamborsky J, McIntyre L, Wolfe S, eds. 9<sup>th</sup> ed. Washington DC: Public Health Foundation, 2006. pp 69-78.