

# Tetanus Quicksheet

September 2022



## Background

Tetanus infection is caused by the toxin-producing, Gram-positive, spore-forming bacterium *Clostridium tetani*. Tetanus bacteria are not transmitted from person to person. Tetanus infection primarily occurs when the bacteria enter the body through cuts or wounds. Tetanus bacteria are present worldwide and are commonly found in soil, dust, and manure. Although now rare in the United States, tetanus cases continue to occur among unimmunized persons and persons who are not up to date on their 10-year booster shots.

## Clinical symptoms

Symptoms of tetanus include: sudden, involuntary muscle spasms and “locking” of the jaw, painful muscle stiffness all over the body, trouble swallowing, jerking or staring (seizures), headache, and fever.

## Incubation period

The incubation period for tetanus is typically 10 days (range: 3-21 days).

## Laboratory testing

There are no laboratory tests that can confirm tetanus. Healthcare providers diagnose tetanus by looking for clinical signs and symptoms.

## Case definition

- **Confirmed:** Not applicable
- **Probable:** In the absence of a more likely diagnosis, an acute illness with muscle spasms or hypertonia AND diagnosis of tetanus by a healthcare provider; OR death, with tetanus listed on the death certificate as the cause of death or a significant condition contributing to death.

## Immunization

DTaP (diphtheria, tetanus, and acellular pertussis), Td (tetanus, diphtheria), and Tdap (tetanus, diphtheria, and acellular pertussis) vaccines all protect against tetanus. Children need five doses of DTaP between ages 2 months and 6 years, and a Tdap booster at age 11 or 12. Adults need a booster every 10 years after the primary series has been completed. The Tdap vaccine is recommended for one of the booster doses in adults aged 18-64 years.

## Postexposure prophylaxis

Even minor wounds or abrasions can result in tetanus. Healthcare providers should assess vaccination status in patients with wounds, particularly those considered at increased risk for tetanus: older adults, injection-drug users, patients with diabetes, and patients with chronic wounds. Tetanus prophylaxis is dependent on the patient’s history of vaccination with tetanus

## Tetanus Quicksheet September 2022

toxoid-containing vaccinations (TT) and the nature of the wound.

### CDC's Guide to Tetanus Prophylaxis with TIG in Routine Wound Management

(<https://www.cdc.gov/tetanus/clinicians.html>)

History of adsorbed tetanus toxoid-containing vaccines (doses)	<i>Clean, minor wound</i> <u>DTaP, Tdap or Td<sup>†</sup></u>	<i>Clean, minor wound</i> <u>TIG<sup>‡</sup></u>	<i>All other wounds*</i> <u>DTaP, Tdap or Td<sup>†</sup></u>	<i>All other wounds*</i> <u>TIG<sup>‡</sup></u>
Fewer than 3 or unknown	Yes	No	Yes	Yes
3 or more doses	No <sup>§</sup>	No	No <sup>¶</sup>	No

#### Footnotes

**Abbreviations:** DTaP = Diphtheria and Tetanus toxoids and acellular pertussis vaccine; Tdap = tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis; Td = tetanus and diphtheria toxoids; TIG = Tetanus immune globulin

\*Such as, but not limited to, wounds contaminated with dirt, feces, soil, and saliva; puncture wounds; avulsions; and wounds resulting from missiles, crushing, burns, and frostbite.

† DTaP is recommended for children <7 years of age. Tdap is preferred to Td for persons aged 11 years or older who have not previously received Tdap. Persons aged 7 years or older who are not fully immunized against pertussis, tetanus, or diphtheria should receive one dose of Tdap (preferably the first) for wound management and as part of the catch-up series; if additional tetanus toxoid-containing doses are required, either Td or Tdap vaccine can be used.

‡ People with HIV infection or severe immunodeficiency who have contaminated wounds (including minor wounds) should also receive TIG, regardless of their history of tetanus immunizations.

§ Yes, if ≥10 years since the last tetanus toxoid-containing vaccine dose.

¶ Yes, if ≥5 years since the last tetanus toxoid-containing vaccine dose.

When TIG is recommended for wound prophylaxis, the standard dose is 250 U IM, regardless of age or weight.

#### Treatment of tetanus infection

CDC and the AAP Red Book recommends that patients with tetanus be treated immediately with 500 IU of TIG, which appears to be as effective as 3,000–6,000 IU of TIG while causing less discomfort. The optimal therapeutic dose for TIG has not been established. TIG should be administered intramuscularly, and most experts recommend administering a single dose. Part of the dose may be infiltrated around the wound if it can be identified, but efficacy of this strategy has not been proven.

#### Additional information

[CDPH tetanus web page](#)

[CDC tetanus web page](#)