

## Tetanus

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Tetanus is a vaccine-preventable disease caused by a toxin produced by bacteria called *Clostridium tetani*. Tetanus spores are found in soil throughout the world. The disease is acquired when material containing these spores, such as soil, contaminates a wound. The toxin released from the bacteria may then attack the nerves of the brain and spinal cord. Tetanus is not spread by person to person contact.

Tetanus-prone wounds include the following:

- Certain animal bites and scratches.
- Burns.
- Puncture type wounds in an contaminated environment e.g. gardening injuries.
- Eye injuries.
- Wounds containing foreign bodies.
- Bone fractures with broken skin.
- Wounds in people with bloodstream infections.

Tetanus is found worldwide, but is more common in resource-poor countries with low vaccine coverage.

Generalised tetanus is responsible for most cases; this is associated with intense, painful contraction and spasm of skeletal muscles. It usually causes lockjaw (trismus) characterised by facial muscles spasm. Other symptoms include: a stiff neck, forceful arching of the back, abnormal breathing and difficulty swallowing. Even with intensive medical support, death occurs in 10 to 20 percent of cases.

### Prevention

All travellers should be aware of the risk of accidents, thoroughly clean all wounds and seek appropriate medical attention. Further vaccines and / or immunoglobulin treatment may be recommended.

### Tetanus vaccines

Travellers should have completed (or be up to date with) a primary UK vaccine course according to the NHS vaccination schedule. If visiting countries where medical facilities may be limited, a booster dose of a tetanus-containing vaccine is recommended if the last dose was more than ten years ago, even if five doses of vaccine have been given previously. This is a precautionary measure in case immunoglobulin (if recommended) is not available to the individual in the event of a tetanus-prone injury overseas.

### Vaccination schedule

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<b>Vaccine</b>	<b>Schedule and age range</b>
The <a href="#">6-in-1</a> vaccine DTaP/IPV/Hib/HepB	Three doses given one month apart (offered at two, three and four months of age)
The <a href="#">4-in-1</a> vaccine dTaP/IPV	Pre-school: single dose (offered at three years and four months or soon after)
The <a href="#">3-in-1</a> vaccine Td/IPV	Single dose booster (offered at 14 years of age). Also used for adults and children from six years of age, as a booster dose outside the routine UK schedule, e.g. travellers requiring single dose boosters
<a href="#">Boostrix-IPV</a> dTaP/IPV	Single dose booster (for pregnant women 16 to 32 weeks gestation)*

\*Recommended for pregnant women between 16 to 32 weeks to protect unborn child against whooping cough (pertussis).

## Resources

- [NHS: Tetanus](#)
- [UKHSA: Immunisation against infectious disease. Tetanus](#)
- [UKHSA: Tetanus: guidance, data and analysis](#)
- Further details on the vaccines can be found on the [Summary of Product Characteristics \(SPC\) on the electronic medicines compendium](#)