

1. Vaccine indication

Tetanus toxoid vaccine is indicated for the active primary prevention of tetanus in persons not previously infected with *Clostridium tetani*.

2. Rationale for vaccination

The primary objective of tetanus toxoid immunisation is to prevent infection with *Cl. tetani*, and thereby prevent:

- Maternal tetanus
- Neonatal tetanus

3. Type of vaccine

Inactivated tetanus toxin.

4. Composition of the vaccine

Tetanus toxoid is prepared from tetanus toxin produced from the growth of a highly toxigenic strain of *Cl. tetani*. The toxin is converted to a toxoid by treatment with formaldehyde. To enhance its immunogenicity, tetanus toxoid is adsorbed onto aluminium salts. The vaccine is stored at 2°C to 8°C and must never be frozen. The vaccine may be available as in combination with other antigens such as diphtheria (Td) or as a monovalent monovalent.

5. Immunogenicity of the vaccine

Tetanus toxoid is a highly potent immunising agent routinely used in children. However, the immune response to tetanus toxoid may be impeded by the presence of circulating maternal antitoxin. During the first year of life, the older the child is at the time of receiving the third dose of tetanus toxoid, the higher the immune response. In adults, the immune response decreases with increasing age.

6. Efficacy and long term protection

Studies have shown that the vaccine is very efficacious in preventing maternal and neonatal tetanus, with efficacy ranging between 80% and 100%. To maintain protective levels of tetanus vaccine, a booster dose is needed every 10 ten years.

7. Candidates for vaccination

In South Africa, tetanus toxoid vaccine (pentaxim or Td) is given to babies and children as part of the EPI-SA schedule starting from 6 weeks of age. Infants with HIV infection should be vaccinated within the EPI-SA schedule as the vaccine is completely safe.

In addition, the following persons are also at risk of *Cl. tetani* infection and should be vaccinated:

- Women of childbearing age
- Fire-fighters
- Farm labourers
- Construction workers
- Military personnel
- Penetrating trauma patients

8. Vaccination regimen and route of administration

The tetanus toxoid vaccine is available in combination with diphtheria toxoid, and pertussis vaccines (both acellular and whole cell) as DTP and is administered by intramuscular injection to the anterolateral aspect of the thigh for infants, or the deltoid muscle for older children. DTP in combinations such as DTP-IPV/Hib or DTP-Hib-Hep B can be given into one limb. If Hep B or Hib vaccines are available as monovalents and are to be administered on the same day as DTP, then the vaccines should preferably be given in different limbs.

9. Interchangeability of vaccines

Tetanus toxoid vaccines from different manufactures can be used interchangeably with no effect on efficacy, to complete a vaccination schedule.

10. Side effects and special precautions

Reactions to tetanus-toxoid containing vaccines are usually mild, although in rare events, cases of allergic reactions to the vaccines have been observed. In such cases, vaccination should be discontinued. Common side-effects include:

- Pain and swelling at the site of injection
- Fever that usually disappears within a day
- Irritability and loss of appetite.

Where to find us:

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