Tdap Booster Vaccine

Frequently asked questions for healthcare professionals

What is Tdap booster vaccine?

Tdap is a low dose tetanus (T), diphtheria (d) and acellular pertussis (ap) booster vaccine which protects against tetanus, diphtheria and pertussis. The childhood schedule as per the Immunisation Guidelines for Ireland from the National Immunisation Advisory Committee (NIAC) is:

- Primary immunisation course of 3 doses of DTaP containing vaccines at 2, 4, and 6 months of age
- A booster dose at 4-5 years as DTaP/IPV (Tdap/IPV from 2016/2017)
- A second low dose booster aged 12-13 years as Tdap.

The aim is that each child should be given at least 5 doses of tetanus and diphtheria containing vaccines. (DTaP = Diphtheria, Tetanus & acellular Pertussis; IPV = inactivated polio virus)

How is Tdap booster vaccine given to adolescents?

The HSE provides Tdap vaccine to students in First year of second level schools. This vaccination programme was introduced to the schools immunisation programme in September 2011 replacing Td vaccine and has been in place in all areas nationally since 2012/2013.

Why has pertussis booster been added to the diphtheria and tetanus booster at 12 to 13 years?

NIAC recommended that children aged 12-13 should receive a booster dose of pertussis as more cases of pertussis have been occurring in adolescents and adults due to the waning immunity that occurs over time combined with a reduction in natural boosting. In addition, 30% of adults with a cough lasting longer than 2 weeks may have pertussis and most infants and young children who contract pertussis are infected by a family member.

Are there any reasons why Tdap should not be given?

- Tdap should not be given if there is a history of anaphylaxis to a previous dose of the vaccine or one of its constituents.

- If there is a history of an Arthus-type reaction to a previous dose, a further routine or emergency booster dose of tetanus or diphtheria containing vaccines should not be given more frequently than every 10 years. (Very rarely a major local (Arthus) reaction occurs, involving swelling and erythema of most of the diameter of the upper arm from shoulder to elbow. This usually begins 2-8 hours after vaccination and is more common in adults. This resolves without sequelae. This severe reaction is usually associated with very high serum tetanus or diphtheria antitoxin levels).
- In the event of acute severe febrile illness defer until recovery.

Note: The following are no longer considered either contraindications or precautions to pertussis vaccination. They have not been shown to cause permanent harm and are significantly less common after acellular than after whole-cell pertussis vaccines

1. Temperature of more than 40.5°C within 48 hours of a previous dose of a pertussis- containing vaccine
2. Hypotonic-hyporesponsive episode within 48 hours of a previous dose of a pertussis- containing vaccine
3. Seizures within 72 hours of a previous dose of a pertussis containing vaccine
4. Persistent, inconsolable crying lasting more than 3 hours within 48 hours of a previous dose of a pertussis-containing vaccine.
5. Active or progressive neurological disease.

What interval should there be between Tdap and a previous dose of a tetanus or diphtheria containing vaccine?
NIAC recommends that no interval is required between Tdap booster at 12-13 years and any previous tetanus or diphtheria toxoid containing vaccine.

If a student has received 3 primary immunisations and 1 booster at 4-5 years of age and also got a tetanus booster following tetanus prone injury should they get Tdap?

Yes. The student should get the Tdap booster because of the benefit of the pertussis component even if this is the sixth dose of a tetanus and diphtheria containing vaccine. NIAC recommends that each child should be given a minimum of 5 doses of tetanus and diphtheria toxoids.

If a student has come to Ireland from another country, e.g. United States, and has had 4 primary doses of Diphtheria and Tetanus + 1 preschool booster, so already has had 5 doses should they have a 6th dose of tetanus containing vaccine?
The US recommends a Tdap at 11-12 years, i.e. the US recommends 6 doses by 12 years. This is also the recommended

in other countries. The Immunisation Guidelines for Ireland recommend a minimum of 5 doses, and no maximum number of doses. Therefore, the recommendation is that they have the Tdap booster.

What advice should be given to parents regarding the need for further Td doses?

In the event of an injury, a risk assessment should be carried out in relation to the nature of injury and time since last dose of tetanus containing vaccine to determine if Td or Tetanus Immunoglobulin (TIG) is required – see Immunisation Guidelines for Ireland Tetanus Chapter 21 available at http://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/chapter21.pdf and

Tetanus Vaccination following a Wound at https://www.hse.ie/eng/health/immunisation/hcpinfo/othervaccines/tetanus/tetanusafterwound.html

Can other vaccines be given at the same time as Tdap?

Yes. Tdap is an inactivated vaccine so this can be administered at the same time as any other live (e.g. MMR) or inactivated (e.g. HPV) vaccine. They should be administered preferably in separate limbs or else in the same limb separated by at least 2.5cm (1 inch).

Can Tdap be given during pregnancy?

Tdap is recommended for pregnant women as early as possible after 16 weeks and before 36 weeks gestation to allow optimal transfer of pertussis antibodies to their baby to protect them from pertussis in the first months of life. However, Tdap can be given later in pregnancy but may not be as effective.

Does Tdap vaccine contain thiomersal?

No. Tdap vaccine does not contain thiomersal.

How safe is Tdap vaccine?

Tdap vaccine is safe and well tolerated.

See reported adverse events below: Table 1: Adverse reactions reported in clinical trials with Boostrix

System Organ Class	**Frequency**	**Adverse Reactions**	
		Subjects aged 4 – 8 years (N=839)	Subjects aged 10 – 76 years (N=1931)

Infections and infestations	Uncommon	upper respiratory tract infection	upper respiratory tract infection, pharyngitis
Blood and lymphatic system disorders	Uncommon		lymphadenopathy
Metabolism and nutrition disorders	Common	anorexia	
Psychiatric disorders	Very common	irritability	
Nervous system disorders	Very common Common Uncommon	somnolence headache disturbances in attention	headache dizziness syncope
Eye disorders	Uncommon	Conjunctivitis	
Respiratory, thoracic and mediastinal disorders	Uncommon		Cough
Gastrointestinal disorders	Common Uncommon	diarrhoea, vomiting, gastrointestinal disorders	nausea, gastrointestinal disorders diarrhoea, vomiting
Skin and subcutaneous	Uncommon		rash hyperhidrosis, pruritus, rash

tissue disorders			
Musculoskeletal and connective tissue disorders	Uncommon		arthralgia, myalgia, joint stiffness, musculoskeletal stiffness
General disorders and administration site conditions	Very common Common Uncommon	injection site reactions (such as redness and/or swelling), injection site, pain, fatigue pyrexia (fever ≥ 37.5°C including fever > 39.0°C), extensive swelling of vaccinated limb (sometimes involving the adjacent joint) other injection site reactions (such as induration), pain	injection site reactions (such as redness and/or swelling), malaise, fatigue, injection site pain pyrexia (fever ≥ 37.5°C), injection site reactions (such as injection site mass and injection site abscess sterile) pyrexia (fever > 39.0°C), influenza like illness, pain

See information at https://www.hpra.ie/img/uploaded/swedocuments/Licence_PA1077-020-001_06062019113754.pdf

Very common (≥1 in 10): Local injection site reactions (pain, redness and swelling). Common (≥ 1 in 100 to <1 in 10): Pyrexia, malaise, fatigue Serious side effects are very rare