OREGON STATE PUBLIC HEALTH DIVISION, DHS
IMMUNIZATION PROGRAM

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis adsorbed (Tdap) Vaccine

Revision as 7/07

- Healthcare workers working in hospitals or ambulatory clinics have been added to the *Recommendations for Use* list, Section III (p.3).
- Special considerations for when you might choose to vaccinate a pregnant woman with Tdap instead of Td is referenced in the *Other Considerations* Section VIII. C (p.7).
- A reference for handling inadvertent administration of Tdap and DTaP vaccines is in the *Other Considerations*, Section VIII. F (p.7).

I. ORDER

1. Screen for contraindications
2. Provide the current Vaccine Information Statement (VIS), answering any questions.
3. Obtain a signed Vaccine Administration Record (VAR)
4. Give a single dose of Tdap vaccine (0.5 ml) **intramuscularly** (IM) to eligible persons 11– 64 years of age.
   a. The deltoid muscle of the upper arm should generally be used.
   b. May be given simultaneously with all routine childhood and adult immunizations.

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Signature Health Officer or Medical Provider Date

II. LICENSED Tdap VACCINES[1]			
Product Name	**Vaccine Components**	**Acceptable Age Range**	**Thimerosal**
Boostrix®[2] (GSK)	Tetanus toxoid, Diphtheria toxoid, Acellular Pertussis	10–18 years	No
Adacel™[2] (sanofi pasteur)	Tetanus toxoid, Diphtheria Toxoid, Acellular Pertussis	11–64 years	No

[1]Tdap products are interchangeable as long as age requirements are met for each vaccine.
[2]Licensed only for a single dose at this time.

III. RECOMMENDATIONS FOR USE

A. Adolescents 11–18 years of age should receive a single dose of Tdap instead of Td for the booster immunization against tetanus, diphtheria and pertussis if they have completed the recommended childhood DTP or DTaP vaccination series ≥ 5 years ago and have not yet received Td.
   - Adolescents ≥11 years old without documentation of a childhood DTaP schedule should receive a series of 3 doses of an adult Td-containing vaccine. Any one (but only one) of these 3 doses can be Tdap.

B. Adolescents 11–18 years of age who received a prior Td are encouraged to receive a single dose of Tdap to provide protection against pertussis if they have completed the recommended childhood DTP or DTaP vaccination series. A 5-year minimum interval between the Td and Tdap is encouraged. However, intervals shorter than 5 years between Td and Tdap can be used.[1]

C. Administer Tdap (or Td) and MCV4 (Menactra™) during the same adolescent visit if both vaccines are indicated and available. If simultaneous administration is not feasible these vaccines can be administered at any time before or after each other.

D. Adults 19–64 years of age should receive a single dose of Tdap if they have not received a Td booster within the past 10 years.[1,2]

E. Adults who have or will have close contact with infants <12 months of age (e.g., parents, childcare providers, healthcare providers) should receive a single dose of Tdap.[3]

F. Healthcare personnel who work in hospitals or ambulatory care settings and have direct patient contact should receive a single dose of Tdap as soon as feasible. An interval as short as 2 years from the last Td dose is recommended for the Tdap dose.

G. Post–partum women (including those who are breastfeeding) who have not previously received a dose of Tdap should receive Tdap vaccine before hospital discharge, if 2 years or more have elapsed since the last Td.

H. A Td booster, rather than Tdap, is generally recommended during pregnancy if ≥10 years have elapsed since a previous Td.[4]

[1] The safety of intervals as short as 2 years between administration of Td and Tdap is supported by a Canadian study of children and adolescents. The dose of Tdap replaces the next scheduled Td booster.

[2] Tdap vaccine would replace the currently recommended tetanus-diphtheria vaccine that is used as the adult booster vaccine.

[3] Ideally, should try to be immunized one month before close contact with infants.

[4] ACIP suggests that providers can defer Td if sufficient tetanus protection is likely, and then vaccinate with Tdap post-partum.

IV. Tdap VACCINE SCHEDULE[1,2]

Dose and Route: 0.5 ml IM

GROUP	MINIMUM AGE	DOSE	RECOMMENDED AGE
Adolescents	10 years for Boostrix®	1	11–12 years of age[3] OR 13–18 years of age[3]
	11 years for Adacel™	1	
Adults[4,5,6]	19 years for Adacel™	1	19–64 years of age

[1] A 5-year interval between Td and Tdap is encouraged to reduce the chance of a local reaction.

[2] A single dose of either BOOSTRIX® or ADACEL™ may be administered to adolescents who have completed the childhood DTP or DTaP vaccination series. Adolescents who have never been vaccinated against tetanus, diphtheria or pertussis should receive a series of 3 vaccinations. The preferred schedule is a single Tdap dose, followed by a dose of Td ≥ 4 weeks after the Tdap dose and a second dose of Td ≥ 6 months after the Td dose. However, Tdap may substitute for any one (but only one) of the 3 Td doses in the series.

[3] Adolescents 11–18 years of age should receive a single dose of Tdap instead of Td if they have completed the recommended childhood DTP or DTaP vaccination series ≥ 5 years ago, and have not yet received a Td booster. If a Tdap dose is given sooner as part of wound management, the next Td booster should not be given for 10 years.

[4] Adacel™ is the only Tdap vaccine currently licensed for adults ≥19 years of age.

[5] A single Tdap dose should replace the currently recommended Td vaccine that is used as the adult booster vaccine. 10 years later, when another tetanus and diphtheria booster is needed, go back to receiving Td again.

[6] Tdap should be administered with other vaccines that are indicated during the same visit when feasible.

V. Tdap CONTRAINDICATIONS

A. An immediate anaphylactic reaction to any component of the vaccine or following a prior dose.[1]

B. Encephalopathy (e.g. coma, prolonged seizures) within 7 days of administration of a pertussis–containing vaccine that is not attributable to another identifiable cause.[2]

VI. Tdap PRECAUTIONS[3]

A. History of an Arthus-type reaction following a previous dose of a tetanus toxoid–containing vaccine.[4]

B. Unstable neurological condition, uncontrolled epilepsy, or progressive encephalopathy.[5]

C. Severe latex allergy. (the Boostrix®, prefilled needleless syringes contain latex).

D. History of Guillain-Barré syndrome within 6 weeks after a previous dose of tetanus toxoid-containing vaccine.

E. Moderate or severe acute illness.

[1] Because of the importance of tetanus vaccination, individuals with this history should be referred to an allergist to determine whether they can be desensitized to tetanus toxoid**.**

[2] Td vaccine should be administered for the remaining doses in the vaccination schedule to ensure protection against diphtheria and tetanus.

[3] **Not True Precaution** for Tdap:

- -Stable neurological disorder
- -Pregnancy
- -Breastfeeding
- -Immunosupression and HIV
- -Minor illness
- -Antibiotic use
- -Infection
- -History of extensive limb swelling reactions (ELS)
- -Temp ≥105° F after dose of DTaP or DTP
- -Convulsions with or without fever, occurring within 3 days after dose of DTaP or DTP
- -Persistent crying lasting ≥ 3 hours within 48 hours of DTaP or DTP
- -Collapse or shock-like state within 48 hours of DTaP or DTP

[4] If previous arthus reaction was likely, consider deferring Tdap or Td vaccination until at least 10 years have elapsed.

[5] Td may be used if decision made to withhold a pertussis-containing vaccine.

VII. SIDE EFFECTS AND ADVERSE EVENTS

Adverse Event	**Boostrix® 10–18 yrs.[1] (0-15 days post vaccine)**	**Adacel™ 11–17 yrs.[2] (0-14 days post vaccine)**	**Adacel ™ 18–64 yrs.[2]**
	%	**%**	**%**
Any injection site pain	75.3	77.8	65.7
Any swelling at injection site	21.1	20.9	21.0
Any injection site redness	22.5	20.8	24.7
Fever >100.4° F (38° C) > 102° F (38.8° C) > 103.1° F (39.5°C)	5.0 1.4 Not available	5.0 0.9 0.2	1.4 0.4 0.0
GI symptoms – Any Nausea Vomiting Diarrhea	26.0 Not available Not available Not available	Not available 13.3 4.6 10.3	 9.2 3.0 10.3
Any headache	43.1	43.7	33.9
Any fatigue	37.0	30.2	24.3
Sore & swollen joints	Not available	11.3	9.1

[1] Adapted from Boostrix® package insert. Pg.11 Available at: http://www.fda.gov/cber/label/tdapgla050305LB.pdf. In the US-safety study, no serious adverse events were reported to occur within 31 days of vaccination.

[2] Adapted from Adacel™ package insert. Pg.19-21. Available at: http://www.fda.gov/cber/label/tdapave061005LB.pdf. Serious adverse events were reported in 1.5% of Adacel™ vaccine recipients.

VIII. OTHER CONSIDERATIONS

A. **History of pertussis**: Adults with a history of pertussis generally should receive Tdap according to the routine recommendations.

B. **Incomplete or unknown vaccination history**: Adults who have never received tetanus and diphtheria toxoid-containing vaccine should receive a series of three vaccinations. The preferred schedule is a single dose of Tdap, followed by Td ≥4 weeks later, and a 2nd dose of Td 6–12 months later. Tdap should be used for one and only one dose in the series. The other two doses should be Td.

C. **Considerations for use of Tdap in pregnant women**: Pregnancy and breastfeeding are not contraindications to vaccination with Tdap. Healthcare providers can choose to administer Tdap instead of Td to add protection against pertussis in high risk situations.[1] When Tdap is administered during pregnancy, the 2nd or 3rd trimester is preferred.

D. **For someone with a history of fainting with injections**, a 15-minute observational period is recommended after immunization.

E. **Children 7–10 years old** who never received any pediatric DTaP/DT or Td doses should generally receive 3 doses of Td. However, if the 2nd or 3rd dose of the series is given at ≥11 years of age, a Tdap should be substituted for one and only one dose of this 3-dose series.

F. **Inadvertent administration of Tdap or Pediatric DTaP:** Guidance on the best approach to vaccination following misadministration of Tdap to infants or DTaP to adolescents can be found at: www.cdc.gov/mmwr/pdf/rr/rr5503.pdf. P. 27.

[1]CDC. ACIP Prevention of Tetanus, Diphtheria and Pertussis among Pregnant Women: Provisional ACIP Recommendation for Use of Tdap Vaccine, available at: www.cdc.gov/nip/recs/provisional_recs/tdap_preg.pdf.

IX. TETANUS WOUND MANAGEMENT AMONG PERSONS 11– 64 YRS.[1]

Tetanus Vaccination History	Clean, minor wound Administer:		All other wounds[2] Administer:	
	Tdap or Td[3]	**TIG**	**Tdap or Td[3]**	**TIG**
Unknown or <3 doses	Yes	No	Yes	Yes
≥3 doses	No[4]	No	No[5]	No

[1] See Td standing order for wound management of 7–11year olds and >64 year olds. See DTaP standing order for wound management of persons ≤7 years of age.

[2] 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.

[3] Tdap is preferred over Td for adolescents and adults who have never received Tdap. Td is preferred over TT for adolescents and adults who received Tdap or if Tdap is not available; however, TT is acceptable.

[4] **Yes, if >10 years since the last tetanus toxoid vaccine dose**

[5] **Yes, if >5 years since the last tetanus toxoid vaccine dose**

TIG=tetanus immune globulin.

TT=tetanus toxoid

X. ADVERSE EVENT REPORTING

Adverse events following immunization should be reported by public providers to the Immunization Program, Health Services, using a Vaccine Adverse Events Reporting System (VAERS) form, according to state guidelines. Private providers report all adverse events directly to VAERS. VAERS phone number: (800) 822-7967, and the website address is www.vaers.org.

XI. Events Reportable to VAERS

Vaccine	Illness, disability, injury or condition covered	Time period for the onset of a significant reaction following vaccine administration
Vaccines containing tetanus toxoids	1. Anaphylaxis or anaphylactic shock	4 hours
	2. Brachial Neuritis	2–28 days
	3. Any acute complication or sequela (including death)	Not applicable

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XII. REFERENCES

1. Advisory Committee on Immunization Practice (ACIP) Votes to Recommend Routine Use of Combined Tetanus, Diphtheria and Pertussis (Tdap) Vaccines for Adolescents; 6/2005. Available at: http://www.cdc.gov/nip/vaccine/tdap/tdap_ACIP_recs.pdf.
2. CDC: Preventing Tetanus, Diphtheria, and Pertussis Among Adults: Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine. MMWR 2006; 55 (RR-17); Available at: http://www.cdc.gov/mmwr/PDF/rr/rr5517.pdf
3. ACIP, Prevention of Tetanus, Diphtheria and Pertussis among Pregnant Women: Provisional ACIP Recommendations for the Use of Tdap Vaccine. 8/1/06. Available at: www.cdc.gov/vaccines/recs/provisional/downloads/tdap-preg.pdf.
4. ACIP Provisional Recommendations for Tdap in Adults. 3/02/06. Available at: www.cdc.gov/nip/vaccine/tdap/tdap_adult_recs.pdf.
5. Adacel™ package insert. Available at: http://www.fda.gov/cber/label/tdapave061005LB.pdf.
6. Boostrix® package insert. Available at: http://www.fda.gov/cber/label/tdapgla050305LB.pdf.

For more information or to clarify any part of the above order, consult with your health officer, or contact the Oregon State Public Health Division Immunization Program at (971) 673-0300.

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http://oregon.gov/dhs/ph/imm/provider/stdgordr.shtml
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please call (971) 673-0300