

**DEPARTMENT OF HUMAN SERVICES
HEALTH SERVICES, OFFICE OF FAMILY HEALTH
IMMUNIZATION PROGRAM**

DTaP VACCINE

Diphtheria and Tetanus (Toxoids) and Pertussis (Acellular Vaccine)

I. ORDER:

1. Screen for contraindications
2. Provide a current Vaccine Information Statement (VIS), answering any questions.
3. Obtain a signed Vaccine Administration Record (VAR).
4. Give DTaP vaccine (0.5 ml), intramuscularly (IM) to infants and children <7 years of age.
 - a. Give according to age appropriate schedule and anatomic site.
 - b. Give DTaP simultaneously with all routine childhood immunizations according to age and immunization status of recipient.

Signature

Health Officer or Medical Provider

Date

II. LICENSED DTaP (diphtheria, tetanus, and acellular pertussis) VACCINES¹			
Product Name	Vaccine Components	Acceptable Age Range	Thimerosal
DAPTACEL®	DTaP	6 weeks through 6 years of age	None
INFANRIX® ²	DTaP	6 weeks through 6 years of age	None
Tripedia® ²	DTaP	6 weeks through 6 years of age	Trace
Pediarix® ³	DTaP (INFANRIX®), IPV, Hepatitis B (ENGERIX-B®)	6 weeks through 6 years of age	None
TriHIBit® ⁴	DTaP (Tripedia®), Hib (ActHIB®)	12 months through 4 years of age	Trace (Tripedia®)

¹ When feasible, the same brand of DTaP vaccine should be used for all doses of the series. If a previous brand is unknown or unavailable, any DTaP vaccine should be used to complete the series rather than defer vaccination.

² Tripedia® and Infanrix® are currently approved for the 5th dose of the DTaP series.

³ Pediarix® is licensed for the primary DTaP series (first three doses) only. It is not approved for the 4th or 5th DTaP dose and should not be administered to an infant < 6 weeks of age or to children ≥7 years of age. Pediarix® can be used interchangeably before or after any individual DTaP, Hep-B, or IPV dose in the primary series.

⁴ TriHIBit® (ActHib® reconstituted with Tripedia®) should only be used for the 4th dose of the DTaP series. TriHIBit® may be used in children ≥12 months of age if the previous dose of Hib was given at least 8 weeks prior and the TriHIBit® dose will be the last dose (i.e. booster) of Hib series, and it has been at least 6 months since the third dose of DTaP. DO NOT give TriHIBit® if the child has had no prior Hib vaccinations.

III. VACCINE SCHEDULE

Dose/Route: 0.5 mL IM

DOSE ^{1, 2, 3, 4, 5,}	MINIMUM AGE ^{6, 7}	MINIMUM SPACING ^{6, 7}	RECOMMENDED AGE
1	6 weeks	Not applicable	2 months
2	10 weeks	4 weeks after dose #1	4 months
3	14 weeks	4 weeks after dose #2	6 months
4	12 months ⁸	6 months ⁹ after dose #3	15 months
5 ^{10,11}	4 years	6 months after dose #4	4 years

¹ If 6 doses of DTaP are given before age 7 years, a Td booster is due 10 years after the 6th dose. If a child less than 4 years of age has had 5 doses of DTaP (valid and invalid doses), the 6th dose will be due at 4-5 years of age and 6 months after dose 5. A Td booster is due 10 years after dose 6.

² Td should not be given before 7 years of age. However, if Td appears in a patient's history before the minimum acceptable age of 7 years, for retrospective analysis it will be treated as DTaP, DTP, or DT.

³ Infants and children with a stable neurologic condition, including well-controlled seizures, may be given DTaP.

⁴ If pertussis vaccine is contraindicated, do not give DTaP; use DT instead.

⁵ The use of a DTaP-containing combined vaccine is acceptable as long as one antigen is indicated and the other antigens are not contraindicated.

⁶ For retrospective checking, doses that violate the minimum spacing or age by 4 or fewer days do not need to be repeated. Doses administered 5 days or earlier than the minimum interval or age should be repeated as age appropriate.

⁷ When an invalid dose needs to be repeated, the repeat dose should be spaced after the invalid dose by a time equal to or greater than the minimum interval between doses.

⁸ If the spacing between the 3rd and 4th dose is 6 months or longer, and the child is not likely to return at the recommended age, the fourth dose of DTaP may be given as early as 12 months of age.

⁹ While the recommended minimum spacing between DTaP3 and DTaP4 is 6 months, if DTaP4 is administered ≥ 4 months after DTaP3, it does not need to be repeated.

¹⁰ The final dose of DTaP is due at school entry.

¹¹ The 5th dose is not required if the 4th dose was given on or after the fourth birthday.

<p>IV. CONTRAINDICATIONS¹</p> <p>A. Anaphylactic reaction (hives, swelling of the mouth and throat, difficulty breathing, hypotension or shock) after a previous dose of DTaP or after the use of thimerosal, or any other components of the vaccine. DTP, DT, or Td should not be given either.</p> <p>Note: Because of the importance of the tetanus vaccine, persons who experience anaphylactic reactions may be referred to an allergist for evaluation and possible desensitization to tetanus toxoid.</p> <p>B. Encephalopathy occurring within 7 days of a previous dose of DTaP or DTP that is not due to another identifiable cause. Encephalopathy is defined as a major alteration in consciousness, unresponsiveness, or generalized or focal seizures that persist more than a few hours, without recovery within 24 hours. After consulting with your Health Officer or client's Primary Care Provider may give DT vaccine for the remaining doses</p>	<p>V. PRECAUTIONS²</p> <p>A. Moderate or severe illness. Delay immunization until illness resolved.</p> <p>B. Underlying unstable, evolving neurologic disorder. Consult physician for direction.</p> <p>Any of these conditions within the specified time after a previous dose of DTaP:</p> <p>C. Fever of $\geq 40.5^{\circ}\text{C}$ (105°F) within 48 hours (due to unknown cause) after vaccination with a prior dose DTaP. A physician needs to evaluate the child and write an order to continue the DTaP series. May use pediatric DT to complete the series.</p> <p>D. Collapse or shock-like state (hypotonic or hyporesponsive episode) within 48 hours of receiving a prior dose of DTaP. A physician needs to evaluate the child and write an order to continue the DTaP series. May use pediatric DT to complete the series.</p> <p>E. Persistent, inconsolable crying lasting 3 hours or longer and occurring within 48 hours of receiving a prior dose of DTaP. May give DT (or DTaP with physician's order).</p> <p>F. Seizure or convulsion within 72 hours. May give DT (or DTaP with a physician's order).</p> <p>G. Guillian-Barré syndrome within 6 weeks.</p> <p>H. Children with impaired immune responses, i.e., immunosuppressive therapies (including irradiation, corticosteroids, antimetabolites, alkylating agents, and cytotoxic drugs), a genetic defect, or HIV infection may experience a reduced immune response to vaccines. Deferring DTaP may be considered for children receiving immunosuppressive therapy.</p>
<p>¹ An acellular pertussis vaccine should NOT be used in children who have a valid contraindication to whole cell pertussis vaccine</p>	<p>² In circumstances where the benefits of immunizing outweigh the risks, such as in the event of a pertussis outbreak, DTaP should be given for subsequent doses</p>

VI. SIDE EFFECTS AND ADVERSE EVENTS

<u>Event</u>	<u>Frequency</u>
Local reactions (pain, erythema, induration, swelling)	More common following 4 th and 5 th doses
Exaggerated local reactions (Arthus-type)	rare*
Mild systemic reactions (fever, drowsiness, fretfulness, and anorexia)	infrequently
Moderate to severe systemic reactions (fever of 105° F (40.5° C) or higher, febrile seizures, persistent crying lasting 3 hours or longer, and hypotonic-hyporesponsive episode)	rarely reported with DTaP

*Persons experiencing an Arthus-type hypersensitivity reaction following a prior dose of tetanus toxoid usually have high serum tetanus antitoxin levels. Do not give DTaP or emergency doses of tetanus-toxoid containing vaccine more frequently than every 10 years, even if they have a wound that is neither clean nor minor.

VII. OTHER CONSIDERATIONS

- A. Normally no more than 6 doses of a diphtheria/tetanus-containing vaccine are recommended by 7 years of age. However, in some situations, the benefits of a pertussis containing vaccine being added to a series needs to be weighed against the risk of a local reaction occurring after receiving 7 or 8 doses of a DT-containing vaccine.
- B. Acetaminophen or ibuprofen may be given just prior to DTaP administration, and every 4 hours for 24 hours following immunization, to reduce the risk of post-immunization fever.
- C. Infants and children with a stable neurologic condition, including well-controlled seizures, may be given DTaP.
- D. A family history of convulsions is not a contraindication for pertussis vaccination^L
- E. Children with well-documented history of pertussis (positive culture or PCR for *Bordetella pertussis* and clinical course with epidemiologic linkage to a culture-positive case) should complete the immunization series with DT. When such confirmation of a pertussis diagnosis is lacking vaccination should be completed with DTaP.
- F. Internationally Adopted Children: Vaccination providers can revaccinate a child with DTaP without regard to recorded doses; however, if a revaccination approach is adopted and a severe local reaction occurs, serologic testing for specific IgG antibody to tetanus and diphtheria toxins can be measured before administering additional doses. Protective concentration indicates that further doses are unnecessary and subsequent vaccination should occur as age-appropriate. (Consult 2/8/02 ACIP General Recommendations for further clarification)
- G. For someone with a history of fainting with injections, a 15-minute observational period is recommended post immunization.

VIII. TETANUS WOUND MANAGEMENT RECOMMENDATIONS

Vaccination History	Clean, minor wounds		All other wounds	
	DTaP	TIG	DTaP	TIG
Unknown or < than 3 doses	Yes	No	Yes	Yes
≥ 3 or more doses	No*	No	No**	No
<p>* Yes, if > 10 years since last dose ** Yes, if > 5 years since last dose TIG=tetanus immune globulin.</p>				

Taken from the 2004 "Pink Book" page 67

IX. 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 at (800) 822-7967, and the website address is www.vaers.org

Events Reportable to VAERS

Vaccine	Illness, disability, injury or condition covered	Time period for first symptom or onset of significant reaction following vaccine administration
Vaccines containing tetanus toxoid (e.g., DTaP, DTP, DT; Td)	<ol style="list-style-type: none"> 1. Anaphylaxis or anaphylactic shock 2. Brachial neuritis 3. Any acute complication sequela (including death) 	<p>Within 4 hours</p> <p>2-28 days</p> <p>Not applicable</p>
Vaccines containing whole cell pertussis bacteria, or specific pertussis antigen(s)	<ol style="list-style-type: none"> 1. Anaphylaxis or anaphylactic shock 2. Encephalopathy (or encephalitis) 3. Any acute complication (including death) 	<p>Within 4 hours</p> <p>5-15 days</p> <p>Not applicable</p>

X. REFERENCES

1. Diphtheria, Tetanus, Pertussis. In: *Epidemiology and Prevention of Vaccine-Preventable Diseases* ("Pink Book"). Atkinson W, Hamborsky J, Wolfe S, eds. 8th ed. Washington, DC: Public Health Foundation, 2004: 55-88. Available at <http://www.cdc.gov/nip/publications/pink/dip.pdf>.
2. General Recommendations on Immunizations, MMWR Vol. 51, RR-2, 2/8/02.
3. Pertussis Vaccination: Use of Acellular Pertussis Vaccine Among Infants and Young Children Recommendations of ACIP; MMWR, Vol. 46, RR-7, 3/28/97.
4. Product inserts.

For more information and to clarify any part of this order, consult with your health officer or call the Health Services Immunization Program at (503) 731-4020.

**Visit our website at <http://www.healthoregon.org/imm>
To request this material in an alternate format (e.g., braille),
please call (503) 731-4020.**