

ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES
VACCINES FOR CHILDREN PROGRAM

DIPHTHERIA, TETANUS, AND PERTUSSIS

VACCINES TO PREVENT DIPHTHERIA, TETANUS AND PERTUSSIS

The purpose of this resolution is to revise the previous resolution to incorporate the use of a pentavalent vaccine: diphtheria and tetanus toxoids, acellular pertussis, hepatitis B, and polio vaccines.

VFC resolution 2/99-2 is repealed and replaced by the following:

Eligible Groups

Children 6 weeks of age through 18 years.*

***DTaP-Hep B-IPV (PEDIARIX™) combination is approved for children ≥ 6 weeks to < 7 years of age.**

Recommended Schedule for Diphtheria, Tetanus and Pertussis Vaccines

<u>Dose</u>	<u>Age</u>
Primary 1	2 months
Primary 2	4 months
Primary 3	6 months
First Booster	15-18 months
Second Booster †	Age 4-6 years
Td Booster	11-12 or 14-16 years*

† The second booster is not necessary before entering kindergarten or elementary school if fourth dose is administered on or after the fourth birthday.

* A Td booster is recommended at any age from 11 through 18 years, if five years have elapsed since the previous booster dose.

Use diphtheria and tetanus toxoids, adsorbed (DT) if encephalopathy has occurred after administration of a previous dose of pertussis-containing vaccine.

Catch-UP Vaccination

The ACIP recommends catch-up vaccination of previously unvaccinated children and adolescents.

DTaP Vaccine Preference

Diphtheria, tetanus, and acellular pertussis (DTaP) vaccine is preferred for all doses in the vaccination schedule. DTaP vaccines are efficacious when administered to infants as the primary series (i.e., dosed 1-3). In addition, local reactions, fever and other systemic events occur substantially less often after DTaP administration than after administration of whole-cell DTP. Whenever possible, the same DTaP product should be used for all doses. If the same product is not available, DTaP vaccines can be used interchangeably. For children who have started the vaccination series with one, two, three, or four doses of whole-cell DTP, DTaP is also recommended for all remaining doses in the schedule. However, diphtheria and tetanus toxoids and whole-cell pertussis vaccine (DTP) is an acceptable alternative to DTaP for any of the five doses.

The DTaP-HepB-IPV combination vaccine (PEDIARIX™)* can be used for the 1st, 2nd, and/or 3rd doses of DTaP if the child is scheduled to receive the other components of the combination and if the other components are not contraindicated.

** Use of brand name is not meant to preclude the use of other comparable licensed DTaP-HepB-IPV vaccines.*

Dosage Intervals

Vaccine	Minimum Age	Minimum interval from dose 1 to 2	Minimum interval from dose 2 to 3	Minimum interval from dose 3 to 4	Minimum interval dose 4-5
DTP (DT)	6 weeks	4-8 weeks	4-8 weeks	6-12 mos*	6-12 mos**
DTP/Hib***	6 weeks	4-8 weeks	4-8 weeks	6-12 mos*	
DTaP	6 weeks	4-8 weeks	4-8 weeks	6-12 mos*	
‡DTaP-HepB-IPV Td****	6 weeks	4 weeks	8 weeks‡	-----	-----

* If the interval between the third and fourth doses is ≥ 6 months and the child is not likely to return for a visit at the recommended age, the fourth dose of either DTaP or DTP may be administered as early as age 12 months.

** A fifth dose is not necessary if the fourth dose in the series is administered on or after the fourth birthday.

*** The combined DTP/Haemophilus influenzae type b (Hib) vaccine may be used whenever administration of any components of the combination are indicated and if other components are not contraindicated. The combined DTaP/Hib vaccine may only be used for the fourth doses.

**** After age 11, if five years have lapsed since the previous booster doses.

‡ **The combined DTaP-HepB-IPV vaccine may be used when any component of the combination is indicated, and if the other components are not contraindicated. The combined DTaP-HepB-IPV vaccine is approved for the primary series only. For adequate immune response, the last dose of hepatitis B vaccine should be given at ≥ 24 weeks of age and therefore this combination vaccine should not be administered as a complete primary series on an accelerated schedule at 4 week intervals for prevention of pertussis.**

NOTE: Pertussis vaccination is not recommended for children > 6 years of age.

Recommended Dosages

Refer to product package inserts.

Contraindications and Precautions

The following conditions are contraindications to the administration of DTP or DTaP vaccine; if either of the following two events occurs after administration of DTaP or whole-cell DTP, subsequent vaccination with DTaP or whole-cell DTP is contraindicated:

1. An immediate anaphylactic reaction.

Further vaccination with any of the three components of DTaP or whole-cell DTP or with any component of a combination vaccine with DTaP should be deferred because of uncertainty as to which component of the vaccine might be responsible. However, because of the importance of tetanus vaccination, persons who experience anaphylactic reactions may be referred to an allergist for evaluation and (if specific allergy can be demonstrated) desensitized to tetanus toxoid.

2. Encephalopathy not attributed to another identifiable cause.

An acute, severe central nervous system disorder occurring within 7 days after vaccination and generally consisting of major alterations in consciousness, unresponsiveness, or generalized or focal seizures that persist more than a few hours, without recovery within 24 hours. In such cases, DT vaccine should be administered for the remaining doses in the vaccination schedule to ensure protection against diphtheria and tetanus.

3. Acute, moderate or severe illnesses with or without fever.

The following conditions are precautions to receipt of DTP vaccine:

If any of the following events occurs within the specified period after administration of either whole-cell DTP or DTaP, vaccine providers and parents should evaluate the risks and benefits of administering subsequent doses of a pertussis-containing vaccine:

1. Temperature of \geq to 105° F (\geq to 40.5°C) within 48 hours, not attributable to another identifiable cause.
2. Collapse or shock-like state (hypotonic hyporesponsive episode) within 48 hours.
3. Persistent crying lasting \geq 3 hours, occurring within 48 hours.
4. Convulsions with or without fever, occurring within 3 days.

The following conditions are contraindications to the administration of DT vaccine:

1. A history of neurologic or severe hypersensitivity reaction following a previous doses.
2. Moderate or severe illness with or without fever.

The following condition is a precaution to receipt of DT vaccine:

1. Arthus-type hypersensitivity reactions
Persons who experienced Arthus-type hypersensitivity reactions or a temperature of $>103^{\circ}\text{F}$ (39.4°C) following a prior dose of tetanus toxoid usually have high serum tetanus antitoxin levels and should not be given DT or even emergency doses of Td more frequently than every 10 years, even if they have a wound that is neither clean nor minor.

The following conditions are contraindications to the administration of Td vaccine:

1. History of a neurologic or severe hypersensitivity reaction following a previous dose.
2. Moderate or severe illnesses with or without fever.

The following condition is a precaution to receipt of Td vaccine:

1. Arthus-type hypersensitivity reactions
Persons who experienced Arthus-type hypersensitivity reactions or a temperature of $>103^{\circ}\text{F}$ (39.4°C) following a prior dose of tetanus toxoid usually have high serum tetanus antitoxin levels and should not be given even emergency doses of Td more frequently than every 10 years, even if they have a wound that is neither clean nor minor.

Adopted and Effective: February 26, 2003

Note: Vaccines approved by the ACIP for inclusion in the VFC program are not available for use in the program until after the CDC has established a contract for the purchase of the vaccines.