

A Guide to Tetanus-Containing Combination Vaccines

Purpose of this guide

There are multiple tetanus-containing vaccines, and although they are similar, each has a specific recommended use. Incorrect vaccine selection or administration before the minimum interval between doses can result in inadequate protection, requiring additional vaccine doses to meet childcare and school requirements. This guide is meant to assist healthcare providers with the assessment of immunization records for childcare- and school-aged patients.

Available tetanus-containing vaccines:

Antigen Code	Products Available	Antigen protection included in vaccine
DTaP-IPV-Hib	Pediacel	diphtheria (D), tetanus (T), acellular pertussis (aP), polio (IPV), and haemophilus influenzae type b (Hib)
Tdap-IPV	Adacel-Polio	tetanus (T), diphtheria (d), acellular pertussis (ap), and polio (IPV)
Tdap	Adacel	tetanus (T), diphtheria(d), and acellular pertussis (ap)

Note: Td (Td-Adsorbed) is available for use in older adults but will not be included in this guide.

What is the difference between these vaccines?

- The case (upper- or lower-case) of the letter in the antigen code indicates the strength of the dose for the corresponding antigen.
 - DTaP-IPV-Hib contains a higher strength dose of diphtheria and pertussis than Tdap-IPV and Tdap (D and aP vs. d and ap).
 - All tetanus containing vaccines contain the same strength dose against tetanus. DTaP-IPV-Hib and Tdap-IPV also contain the same strength dose against polio.

DTaP-IPV-Hib = HIGH STRENGTH DOSE DIPHTHERIA & PERTUSSIS



Tdap-IPV / Tdap = low strength dose diphtheria & pertussis

Infants and young children aged six weeks to less than four years old

RULE #1: for an infant or young child between six weeks and less than four years-old, DTaP-IPV-Hib is the ONLY OPTION.

- Doses administered before a child is six weeks old are considered invalid and dose must be repeated at a minimum interval of four weeks.
- If a child under the age of four deviates from the routine schedule, doses must follow at least minimum spacing (see chart on next page). Doses administered sooner than the minimum spacing are invalid.
- If Tdap-IPV is administered to a child less than four years old, it is considered invalid, and DTaP-IPV-Hib must be administered following the minimum spacing depending on the dose number.

Table 1: Infants and Children six weeks to less than four years old

Dose #	Age and Interval of Administration
First dose DTaP-IPV-Hib	Recommended at two months old <ul style="list-style-type: none"> Can be administered as early as six weeks old
Second dose DTaP-IPV-Hib	Recommended at two months after the first dose (routinely at four months old) <ul style="list-style-type: none"> Must be a minimum of four weeks after the first dose
Third dose DTaP-IPV-Hib	Recommended at two months after second dose (routinely at six months old) <ul style="list-style-type: none"> Must be a minimum of four weeks after the second dose
Fourth dose DTaP-IPV-Hib	Recommended between six and 12 months after third dose AND on/after first birthday (routinely at 18 months old) <ul style="list-style-type: none"> Must be a minimum of 24 weeks after third dose AND on/after first birthday

Children four to six years old (inclusive)

RULE #2: if child is between the ages of four and six years old and has received at least three previous doses of DTaP-IPV-Hib spaced appropriately (valid), administer Tdap-IPV. If child has received between zero and two valid doses, administer DTaP-IPV-Hib.

- Children between the ages of four and six years old who have yet to have a minimum of three doses of DTaP-IPV-Hib with appropriate spacing, will need the high strength dose offered by DTaP-IPV-Hib. If Tdap-IPV is administered in error, the dose is considered invalid, and DTaP-IPV-Hib is needed at an interval between six and 12 months from the invalid dose.

Table 2: Children between the ages of four and six years old (inclusive)

# of Valid DTaP-IPV-Hib Doses between the ages of six weeks and less than four years old	Schedule for child to complete primary series (child must have had their fourth birthday for all doses noted below) (If child turns seven at any time during schedule to complete primary series, see Table 3)
Three or four	<ul style="list-style-type: none"> Administer one dose Tdap-IPV six to 12 months (or a minimum of 24 weeks) after last dose of DTaP-IPV-Hib.
Two	<ul style="list-style-type: none"> Administer one dose DTaP-IPV-Hib two months (or a minimum of four weeks) after last dose. <ul style="list-style-type: none"> Next, administer one dose Tdap-IPV six months (or a minimum of 24 weeks) later
One	<ul style="list-style-type: none"> Administer one dose DTaP-IPV-Hib two months (or a minimum of four weeks) after last dose. <ul style="list-style-type: none"> Next, administer another dose DTaP-IPV-Hib two months (or a minimum of four weeks) later. <ul style="list-style-type: none"> Next administer one last dose Tdap-IPV six months (or a minimum of 24 weeks) later.
Zero	<ul style="list-style-type: none"> Administer three doses DTaP-IPV-Hib each two months (or a minimum of four weeks) apart. <ul style="list-style-type: none"> Next, administer one dose Tdap-IPV six months (or a minimum of 24 weeks) later.

Children and Teens seven to 17 years old

RULE #3: if child is between the ages of seven and 17 years old, Tdap-IPV or Tdap are used, depending on the number of valid doses of polio the child has received.

Table 3: Children and Teens seven to 17 years old	
# of Valid DTaP-IPV-Hib / Tdap-IPV under age 7	Schedule for child to complete primary series
Four doses, including one over age four	Primary series is complete. Booster dose is due 10 years from last.
Four doses, all under age four	<ul style="list-style-type: none"> • Administer one dose Tdap-IPV now.
Three doses	<ul style="list-style-type: none"> • Administer one dose *Tdap-IPV six months (or a minimum of 24 weeks) after last dose. <p>*Tdap can be considered (no IPV) if child has already received three doses of polio appropriately spaced with one dose on or after their fourth birthday.</p>
Two doses	<ul style="list-style-type: none"> • Administer one dose Tdap-IPV six months (or a minimum of 24 weeks) after last dose. <ul style="list-style-type: none"> ○ Next, administer one dose Tdap 6 months (or a minimum of 24 weeks) later.
One dose	<ul style="list-style-type: none"> • Administer one dose Tdap-IPV two months (or a minimum of four weeks) after last dose. <ul style="list-style-type: none"> ○ Next, administer one dose Tdap two months (or a minimum of four weeks) later. <ul style="list-style-type: none"> ▪ Next administer a last dose of Tdap-IPV six months (or a minimum of 24 weeks) later.
Zero doses	<ul style="list-style-type: none"> • Administer one dose Tdap-IPV now. <ul style="list-style-type: none"> ○ Next, administer one dose Tdap-IPV two months (or a minimum of four weeks) later. <ul style="list-style-type: none"> ▪ Next, administer a last dose of Tdap-IPV six months (or a minimum of 24 weeks) later.

Polio

- Only three doses of polio are required for students to meet school legislation requirements:
 - Second dose a minimum of four weeks after the first dose.
 - Third dose a minimum of 24 weeks after the second dose and on or after the child’s fourth birthday.
 - Additional doses noted in the routine schedule are included out of convenience due to the use of combination vaccine products.

Booster doses

- A booster dose of Tdap is required 10 years after the primary series. If a student has followed the routine schedule, they will be due for their booster dose at the 10-year mark, between 14 and 16 years old.
- One dose of Tdap is recommended in adulthood 10 years after the last dose followed by a dose of Td every 10 years thereafter.
 - Exception: One dose of Tdap is recommended during each pregnancy, regardless of when the individual received their last dose. This dose is ideally administered between 27 and 32 weeks gestation.

Questions? Contact the Health Unit’s Vaccine Preventable Disease Team at 519-663-5317 or *email shots@mlhu.on.ca.
 *Email is not a secure method of communication and should not include client identifying information.