

Colorado Immunization Manual

SECTION 11 Minimum Intervals (Table)



Colorado Immunization Manual

ISSUED: 9/1/98

REVISED: 5/1/11

SECTION-PAGE: 11-1

SUBJECT: CONTENTS

SECTION 11

Minimum Intervals (Table)

CONTENTS

Recommended and minimum ages and intervals between vaccine doses	11-2
Recommended intervals between administration of immune globulin preparations and measles- or varicella-containing vaccine, by product and indication for vaccination	11-4



**Recommended and Minimum Ages and Intervals Between Doses
of Routinely Recommended Vaccines^{1,2}**

Vaccine and dose number	Recommended age for this dose	Minimum age for this dose	Recommended interval to next dose	Minimum interval to next dose
Hepatitis B (HepB)-1 ³	Birth	Birth	1-4 months	4 weeks
HepB-2	1-2 months	4 weeks	2-17 months	8 weeks
HepB-3 ⁴	6-18 months	24 weeks	—	—
Diphtheria-tetanus-acellular pertussis (DTaP)-1 ³	2 months	6 weeks	2 months	4 weeks
DTaP-2	4 months	10 weeks	2 months	4 weeks
DTaP-3	6 months	14 weeks	6-12 months	6 months ^{5,6}
DTaP-4	15-18 months	12 months	3 years	6 months ⁵
DTaP-5	4-6 years	4 years	—	—
<i>Haemophilus influenzae</i> type b (Hib)-1 ^{3,7}	2 months	6 weeks	2 months	4 weeks
Hib-2	4 months	10 weeks	2 months	4 weeks
Hib-3 ⁸	6 months	14 weeks	6-9 months	8 weeks
Hib-4	12-15 months	12 months	—	—
Inactivated poliovirus (IPV)-1 ³	2 months	6 weeks	2 months	4 weeks
IPV-2	4 months	10 weeks	2-14 months	4 weeks
IPV-3	6-18 months	14 weeks	3-5 years	6 months
IPV-4 ⁹	4-6 years	4 years	—	—
Pneumococcal conjugate (PCV)-1 ⁷	2 months	6 weeks	8 weeks	4 weeks
PCV-2	4 months	10 weeks	8 weeks	4 weeks
PCV-3	6 months	14 weeks	6 months	8 weeks
PCV-4	12-15 months	12 months	—	—
Measles-mumps-rubella (MMR)-1 ¹⁰	12-15 months	12 months	3-5 years	4 weeks
MMR-2 ¹⁰	4-6 years	13 months	—	—
Varicella (Var)-1 ¹⁰	12-15 months	12 months	3-5 years	12 weeks ¹¹
Var-2 ¹⁰	4-6 years	15 months	—	—
Hepatitis A (HepA)-1	12-23 months	12 months	6-18 months ⁵	6 months ⁵
HepA-2	≥18 months	18 months	—	—
Influenza, inactivated (TIV) ¹²	≥6 months	6 months ¹³	1 month	4 weeks
Influenza, live attenuated (LAIV) ¹²	2-49 years	2 years	1 month	4 weeks
Meningococcal conjugate (MCV4)-1 ¹⁴	11-12 years	2 years	5 years	8 weeks
MCV4-2	16 years	11 years (+ 8 weeks)	—	—
Meningococcal polysaccharide (MPSV4)-1 ¹⁴	—	2 years	5 years	5 years
MPSV4-2	—	7 years	—	—
Tetanus-diphtheria (Td)	11-12 years	7 years	10 years	5 years
Tetanus-diphtheria-acellular pertussis (Tdap) ¹⁵	≥11 years	7 years	—	—
Pneumococcal polysaccharide (PPSV)-1	—	2 years	5 years	5 years
PPSV-2 ¹⁶	—	7 years	—	—
Human papillomavirus (HPV)-1 ¹⁷	11-12 years	9 years	2 months	4 weeks
HPV-2	11-12 years (+ 2 months)	9 years (+ 4 weeks)	4 months	12 weeks ¹⁸
HPV-3 ¹⁸	11-12 years (+ 6 months)	9 years (+24 weeks)	—	—
Rotavirus (RV)-1 ¹⁹	2 months	6 weeks	2 months	4 weeks
RV-2	4 months	10 weeks	2 months	4 weeks
RV-3 ²⁰	6 months	14 weeks	—	—
Herpes zoster ²¹	≥60 years	60 years	—	—

- 1 Combination vaccines are available. Use of licensed combination vaccines is generally preferred to separate injections of their equivalent component vaccines. When administering combination vaccines, the minimum age for administration is the oldest age for any of the individual components; the minimum interval between doses is equal to the greatest interval of any of the individual components.
- 2 Information on travel vaccines including typhoid, Japanese encephalitis, and yellow fever, is available at www.cdc.gov/travel. Information on other vaccines that are licensed in the US but not distributed, including anthrax and smallpox, is available at www.bt.cdc.gov.
- 3 Combination vaccines containing a hepatitis B component (Comvax, Pediarix, and Twinrix) are available. These vaccines should not be administered to infants younger than 6 weeks because of the other components (i.e., Hib, DTaP, HepA, and IPV).
- 4 HepB-3 should be administered at least 8 weeks after HepB-2 and at least 16 weeks after HepB-1, and should not be administered before age 24 weeks.
- 5 Calendar months.
- 6 The minimum recommended interval between DTaP-3 and DTaP-4 is 6 months. However, DTaP-4 need not be repeated if administered at least 4 months after DTaP-3.
- 7 Children receiving the first dose of Hib or PCV vaccine at age 7 months or older require fewer doses to complete the series.
- 8 If PRP-OMP (Pedvax-Hib) was administered at ages 2 and 4 months, a dose at age 6 months is not required.
- 9 A fourth dose is not needed if the third dose was administered on or after the 4th birthday and at least 6 months after the previous dose.
- 10 Combination measles-mumps-rubella-varicella (MMRV) vaccine can be used for children aged 12 months through 12 years. (See CDC. General recommendations on Immunization: recommendations of the ACIP. *MMWR* 2011;60[No. RR-2],7.)
- 11 For persons beginning the series on or after the 13th birthday, the minimum interval from varicella-1 to varicella-2 is 4 weeks.
- 12 One dose of influenza vaccine per season is recommended for most people. Children younger than 9 years of age who are receiving influenza vaccine for the first time, or received only 1 dose the previous season (if it was their first vaccination season) should receive 2 doses this season.
- 13 The minimum age for inactivated influenza vaccine varies by vaccine manufacturer and formulation. See package inserts for vaccine-specific minimum ages.
- 14 Revaccination with meningococcal vaccine is recommended for previously vaccinated persons who remain at high risk for meningococcal disease. (See CDC. Updated recommendations from the ACIP for vaccination of persons at prolonged increased risk for meningococcal disease. *MMWR* 2009;58:[1042-3])
- 15 Only one dose of Tdap is recommended. Subsequent doses should be given as Td. For one brand of Tdap (Adacel), the minimum age is 11 years. For management of a tetanus-prone wound in a person who has received a primary series of a tetanus-toxoid containing vaccine, there is no minimum interval between a previous dose of any tetanus-containing vaccine and Tdap.
- 16 A second dose of PPSV 5 years after the first dose is recommended for persons ≤ 65 years of age at highest risk for serious pneumococcal infection, and for those who are likely to have a rapid decline in pneumococcal antibody concentration. (See CDC. Prevention of pneumococcal disease: recommendations of the ACIP. *MMWR* 1997;46[No. RR-8].)
- 17 Bivalent HPV vaccine (Cervarix) is approved for females 10 through 25 years of age. Quadrivalent HPV vaccine (Gardasil) is approved for males and females 9 through 26 years of age.
- 18 The minimum age for HPV-3 is based on the baseline minimum age for the first dose (108 months) and the minimum interval of 24 weeks between the first and third doses. Dose 3 need not be repeated if it is given at least 16 weeks after the first dose.
- 19 The first dose of rotavirus must be administered between 6 weeks 0 days and 14 weeks 6 days. The vaccine series should not be started after age 15 weeks 0 days. Rotavirus should not be administered to children older than 8 months 0 days, regardless of the number of doses received before that age.
- 20 If two doses of Rotarix are administered as age appropriate, a third dose is not necessary.
- 21 Herpes zoster vaccine is recommended as a single dose for persons 60 years of age and older.

Recommended intervals between administration of immune globulin preparations and measles- or varicella-containing vaccine

Product / Indication	Dose, including mg immunoglobulin G (IgG)/kg body weight	Recommended interval before measles or varicella-containing vaccine administration
Tetanus IG (TIG)	250 units (10 mg IgG/kg) IM	3 months
Hepatitis A IG		
- Contact prophylaxis	0.02 mL/kg (3.3 mg IgG/kg) IM	3 months
- International travel	0.06 mL/kg (10 mg IgG/kg) IM	3 months
Hepatitis B IG (HBIG)	0.06 mL/kg (10 mg IgG/kg) IM	3 months
Rabies IG (RIG)	20 IU/kg (22 mg IgG/kg) IM	4 months
Varicella IG	125 units/10 kg (60-200 mg IgG/kg) IM, maximum 625 units	5 months
Measles prophylaxis IG		
- Standard (i.e., nonimmunocompromised) contact	0.25 mL/kg (40 mg IgG/kg) IM	5 months
- Immunocompromised contact	0.5 mL/kg (80 mg IgG/kg) IM	6 months
Blood transfusion		
- Red blood cells (RBCs), washed	10 mL/kg (negligible IgG/kg) IV	None
- RBCs, adenine-saline added	10 mL/kg (10 mg IgG/kg) IV	3 months
- Packed RBCs (hematocrit 65%) ²	10 mL/kg (60 mg IgG/kg) IV	6 months
- Whole blood (hematocrit 35%-50%) ²	10 mL/kg (80-100 mg IgG/kg) IV	6 months
- Plasma/platelet products	10 mL/kg (160 mg IgG/kg) IV	7 months
Cytomegalovirus IGIV	150 mg/kg maximum	6 months
IGIV		
- Replacement therapy for immune deficiencies ³	300-400 mg/kg IV	8 months
- Immune thrombocytopenic purpura treatment	400 mg/kg IV	8 months
- Immune thrombocytopenic purpura treatment	1,000 mg/kg IV	10 months
- Kawasaki disease	2 g/kg IV	11 months
- Postexposure varicella prophylaxis ⁴	400 mg/kg IV	8 months
Monoclonal antibody to respiratory syncytial virus F protein (Synagis™) ⁵	15 mg/kg (IM)	None

This table is not intended for determining the correct indications and dosages for using antibody-containing products. Unvaccinated persons might not be fully protected against measles during the entire recommended interval, and additional doses of IG or measles vaccine might be indicated after measles exposure. Concentrations of measles antibody in an IG preparation can vary by manufacturer's lot. Rates of antibody clearance after receipt of an IG preparation also might vary. Recommended intervals are extrapolated from an estimated half-life of 30 days for passively acquired antibody and an observed interference with the immune response to measles vaccine for 5 months after a dose of 80 mg IgG/kg.

1 Does not include zoster vaccine. Zoster vaccine may be given with antibody-containing blood products.

2 Assumes a serum IgG concentration of 16 mg/mL.

3 Measles and varicella vaccinations are recommended for children with asymptomatic or mildly symptomatic human immunodeficiency virus (HIV) infection, but are contraindicated for persons with severe immunosuppression from HIV or any other immunosuppressive disorder.

4 The investigational product VarizIG, similar to licensed VZIG, is a purified human IG preparation made from plasma containing high levels of anti-varicella antibodies (IgG). The interval between VarizIG and varicella vaccine (Var or MMRV) is 5 months.

5 Contains antibody only to respiratory syncytial virus

Adapted from Table 5, ACIP General Recommendations on Immunization