

# Recommendations for Pneumococcal Vaccines Use in Children and Teens

Recommendations for pneumococcal vaccines in children are based upon the child's age, pneumococcal vaccination history, and (in children age 2 years or older) the presence of immunocompromising (IC) or non-immunocompromising (non-IC) risk factors for pneumococcal disease. For a specific child, locate the relevant table and follow the recommendations based on the child's vaccination history and risk conditions.

**Table 1. Recommended schedule for administering pneumococcal conjugate vaccine (PCV) to all children (healthy and those with risk conditions) age 2 through 23 months**

Child's age now	Number of previous PCV13, PCV15 or PCV20 doses	Number PCV15 or PCV20 doses to complete series by age 24 mos*†
2 through 6 months	0	4 doses: 3 doses 8 weeks apart; last dose at age 12–15 months
	1	3 additional doses: 2 doses, 8 weeks apart; last dose at age 12–15 months
	2	2 additional doses: 1 dose 8 weeks after most recent dose; last dose at least 8 weeks later at age 12–15 months
	3	1 additional dose at age 12–15 months
7 through 11 months	0 before age 7 months	3 doses; 2 doses 8 weeks apart; last dose at age 12–15 months
	1 or 2 before age 7 months	2 additional doses: 1 dose 8 weeks after most recent dose; last dose at least 8 weeks later, at age 12–15 months
	3 before age 7 months	1 additional dose at age 12–15 months
	1 at age 7 months or older	2 additional doses; 1 dose 8 weeks after most recent doses; last dose at least 8 weeks later, at age 12–15 months
	2 at age 7 months or older	1 additional dose at least 8 weeks later, at age 12–15 months
12 through 23 months	0 before age 12 months	2 doses: 2 doses 8 weeks apart
	1 before age 12 months	2 additional doses: 1 dose at least 8 weeks after most recent dose; last dose at least 8 weeks later
	2 or 3 before age 12 months	1 additional dose, at least 8 weeks after most recent dose
	1 dose at age 12 months or older	1 additional dose, at least 8 weeks after the most recent dose

\* If only PCV13 is available when the child is scheduled to receive PCV, PCV13 may be given as previously recommended.

† Minimum interval between doses: for children younger than age 12 months = 4 weeks; for children age 12 months or older = 8 weeks

**Table 2. Recommended schedule for administering pneumococcal conjugate vaccine (PCV) to healthy children age 24 months through 18 years**

Child's age now	Number of previous PCV13, PCV15, or PCV20 doses	Number of PCV15 or PCV20 doses needed*
24 through 59 months	Completed any PCV schedule, including an all-PCV13 schedule by 24 mos	No additional doses
	No previous doses, or any incomplete PCV schedule by age 24 months	1 additional dose, at least 8 wks after most recent PCV dose
5 through 18 years	No previous doses or any incomplete PCV schedule by 24 months	No additional doses

\* If only PCV13 is available when the child is scheduled to receive PCV, PCV13 may be given as previously recommended.

**Table 3. Risk conditions for which additional doses of PCV15, PCV20, or pneumococcal polysaccharide (PPSV23) vaccines are indicated for children age 24 months through 18 years**

Non-immunocompromising conditions (non-IC)	Immunocompromising conditions (IC)
Chronic lung disease ( including moderate persistent or severe persistent asthma)	Asplenia or splenic dysfunction
Chronic heart disease	Congenital or acquired immunodeficiency
Chronic liver disease	Treatment with immunosuppressive drugs or radiation therapy
Diabetes mellitus	HIV infection
Cerebrospinal fluid leak	Solid organ transplant
Cochlear implant	Sickle cell disease or other hemoglobinopathies
Chronic kidney disease (except as specified in the IC list)	Kidney disease and on maintenance dialysis
	Kidney disease with nephrotic syndrome

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**Table 4. Recommended schedule for administering pneumococcal vaccine to children age 24 months through 18 years with immunocompromising (IC) and non-immunocompromising (non-IC) risk conditions (see Table 3 for risk conditions)**

Child's age now	Number of previous PCV13, PCV15, or PCV20 doses	Option A	Option B (if applicable)
24 through 71 months (any risk condition)	Any incomplete schedule of 0, 1, or 2 PCV doses by age 24 months	2 doses of PCV20 or PCV15, <sup>‡</sup> given at least 8 weeks apart	
24 through 71 months (any risk condition)	3 doses of PCV, all before 12 months	1 dose of PCV20 or PCV15 <sup>‡</sup>	
2 through 18 years (any risk condition)	Completed PCV series before age 6 years, including one or more doses of PCV20	No additional doses	
2 through 18 years (non-IC only)	Completed PCV series before age 6 years with PCV13 and/or PCV15 (no PCV20, no PPSV23 <sup>§</sup> )	1 dose of PCV20 at least 8 weeks after most recent PCV dose	1 dose of PPSV23 at least 8 weeks after most recent PCV dose
2 through 18 years (IC only)	Completed PCV series before age 6 years with PCV13 and/or PCV15 (no PCV20, no PPSV23 <sup>  </sup> )	1 dose of PCV20 at least 8 weeks after most recent PCV dose	1 dose of PPSV23 at least 8 weeks after most recent PCV dose; at least 5 years later, give 1 dose of PCV20 or a second dose of PPSV23 <sup>  </sup>
6 through 18 years (non-IC)	No previous dose of PCV13, PCV15, or PCV20	1 dose of PCV20 at least 8 weeks after most recent pneumococcal vaccination	1 dose of PCV15 at least 8 weeks after most recent pneumococcal vaccination. At least 8 weeks later, give 1 dose of PPSV23, if PPSV23 not previously given. If PPSV23 previously given, do not give another dose of PPSV23.
6 through 18 years (IC)	No previous dose of PCV13, PCV15, or PCV20	1 dose of PCV20 at least 8 weeks after most recent pneumococcal vaccination	1 dose of PCV15 at least 8 weeks after most recent pneumococcal vaccination. At least 8 weeks later, give 1 dose of PPSV23, if PPSV23 not previously given. If PPSV23 previously given, do not give another dose of PPSV23.
6 through 18 years (non-IC)	PCV13 only, given at or after age 6 years	1 dose of PCV20 at least 8 weeks after most recent PCV13 dose	1 dose of PPSV23 at least 8 weeks after most recent PCV13 dose
6 through 18 years (IC)	PCV13 only, given at or after age 6 years	1 dose of PCV20 at least 8 weeks after most recent PCV13 dose	1 dose of PPSV23 at least 8 weeks after most recent PCV13 dose; at least 5 years after the first PPSV23 dose, give 1 dose of PCV20 or a second dose of PPSV23

<sup>‡</sup> If PCV15 is used, one or two additional pneumococcal vaccine doses will be needed. For options, refer to the appropriate row of this table for a child age 2 through 18 years (IC or non-IC) who completed the PCV series before age 6 years without a dose of PCV20.

<sup>§</sup> If PPSV23 previously given, then child is complete.

<sup>||</sup> If PPSV23 previously given, options are (a) give one dose of PCV20 at least 8 weeks after most recent pneumococcal vaccination, or (b) give a second dose of PPSV23 five years after the first dose of PPSV23.

**Table 5. Recommended schedule for administering pneumococcal conjugate vaccine to any child younger than age 19 years following a hematopoietic stem cell transplant (HSCT)**

Current age	Previous pneumococcal vaccination	Recommended schedule
Younger than 19 years	Any	4 doses of PCV20, beginning 3 to 6 months after HSCT: give 3 doses 4 weeks apart, then a 4th dose at least 6 months after dose 3 and at least 12 months after HSCT <sup>¶</sup>

<sup>¶</sup>If PCV20 is unavailable: give 3 doses of PCV15, beginning 3 to 6 months after HSCT (administer 4 weeks apart), then give a dose of PPSV23 at least 12 months after HSCT. If the patient has chronic graft-versus-host disease (GVHD), administer a 4th dose of PCV15 at least 12 months after HSCT, instead of PPSV23.

**Note:** For additional decision support, use the CDC PneumoRecs VaxAdvisor mobile app for vaccination providers. To learn more or download the app, visit [www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html](http://www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html).