

Non-Live Vaccines

All non-live vaccines—whether killed, whole organism, or fractional vaccine—can be administered safely to individuals with altered immunocompetence. For children and adolescents without HIV, some non-live vaccines, such as pneumococcal conjugate vaccine (PCV) and *Haemophilus influenzae* type b conjugate vaccine (Hib), are not routinely recommended after certain ages, even if the recommended series was not completed. However, because children and adolescents with HIV have a risk of increased disease severity, these vaccines remain recommended beyond the routinely recommended ages for children and adolescents without HIV. For children and adolescents with HIV, some non-live vaccines are recommended as additional vaccine doses outside of the routine recommendation; for instance, an additional dose of mRNA COVID-19 vaccine can be administered to any person aged ≥ 6 months who has received a primary series and/or booster dose, as long as 2 months have elapsed since the most recent dose. Another example of additional vaccine doses is for children and adolescents with HIV who have received a complete primary series with PCV15 or PCV20 before 6 years of age. They can receive either one dose of PCV20 or one dose of pneumococcal polysaccharide vaccine (PPSV23), followed by either a second dose of PCV20 (after 8 weeks) or another dose of PPSV23 (after 5 years) if they are aged 2 years or older. Other non-live vaccines might be recommended outside the routine age window, such as quadrivalent meningococcal conjugate (MenACWY-CRM) vaccine beginning at age 2 months for children with HIV. Children with HIV aged 2 to 5 years who were partially vaccinated with a primary series of PCV13, 15, or 20 prior to their second birthday are recommended for catch-up doses of PCV15 or PCV20.

Live Vaccines

Certain live vaccines, such as live attenuated influenza vaccine (LAIV), are **contraindicated** for children and adolescents with HIV because of the potential risk of uninhibited vaccine microbe replication leading to adverse reactions. Annual age-appropriate influenza vaccination with non-live influenza vaccine is recommended for children and adolescents with HIV as part of routine prevention for influenza.¹ The effectiveness of any vaccine may be suboptimal in an individual with an immunocompromising condition.²⁻⁴

Compared with children and adolescents who are immunocompetent, children and adolescents with HIV are at higher risk for complications of some diseases for which only live vaccines are available. Two doses of measles, mumps, and rubella (MMR) vaccine are recommended for all individuals with HIV aged ≥ 12 months who do not have evidence of current severe immunosuppression.⁵ Based on limited safety, immunogenicity, and efficacy data in children and adolescents with HIV, single-antigen varicella vaccine should be considered for children and adolescents with HIV and CD4 T lymphocyte (CD4) cell count percentages $\geq 15\%$ of total lymphocytes (see [Child and Adolescent Immunization Schedule by Medical Indication](#)). Eligible children should receive two doses 3 months apart, with the first dose administered as soon as possible after the child's first birthday. In contrast, the measles, mumps, rubella, and varicella (MMRV) vaccine **should not be administered** to a child or adolescent with HIV, regardless of CD4 parameters.

Limited data are available from clinical trials on the safety of rotavirus vaccines in infants known to have HIV and who were clinically asymptomatic or mildly symptomatic when vaccinated.⁶ The data available do not suggest that the safety profile of rotavirus vaccines in infants with clinically asymptomatic or mildly symptomatic HIV is different from that in infants who do not have HIV.^{7,8} Two other considerations support rotavirus vaccination of infants with or exposed to HIV: first, the