

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Updated: April 23, 2026

Reviewed: April 23, 2026

Indication	First Choice	Alternative	Comments/Special Issues
Bacterial Infections (<i>S. pneumoniae</i> and other invasive bacteria)	<ul style="list-style-type: none"> Pneumococcal, meningococcal, and Hib vaccines IVIG 400 mg/kg body weight every 2–4 weeks (only in cases of hypogammaglobulinemia, IgG <400 mg/dL) 	TMP-SMX, 75/375 mg/m ² BSA per dose by mouth twice daily	<p>See CDC website for detailed immunization schedule.</p> <p>Criteria for Discontinuing IVIG</p> <ul style="list-style-type: none"> Resolution of hypogammaglobulinemia <p>Criteria for Restarting IVIG</p> <ul style="list-style-type: none"> Relapse of hypogammaglobulinemia
Candida Infections	Not routinely recommended	N/A	N/A
Coccidioidomycosis	N/A	N/A	Primary prophylaxis is not routinely indicated in children.
COVID-19	COVID-19 vaccines and updated vaccines	<p>Pemivibart (Pemgarda)</p> <p><i>Aged ≥12 Years and ≥40 kg</i></p> <ul style="list-style-type: none"> Pemivibart injection solution: 4,500 mg administered as a single IV infusion 	<p>COVID-19 Vaccination Indicated for—</p> <ul style="list-style-type: none"> All children with HIV aged ≥6 months regardless of CD4 cell count or viral load Household members and close contacts of children with HIV aged ≥6 months <p>For up-to-date vaccine guidance, see CDC's Use of COVID-19 Vaccines in the United States webpage. Children with HIV may qualify for additional doses of COVID-19 vaccines if they have stage 3 HIV infection, history of an AIDS-defining illness without immune reconstitution, clinical manifestations of symptomatic HIV, or untreated HIV infection.</p> <p>Pemivibart Indicated for—</p> <ul style="list-style-type: none"> Adults and adolescents aged ≥12 years and who weigh ≥40 kg with moderate-to-severe immunocompromise

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
			(including those with advanced or untreated HIV infection) who are unlikely to have an adequate response to COVID-19 vaccination.
Cryptococcosis	Not recommended	Not recommended	N/A
Cryptosporidiosis	ARV therapy to avoid advanced immune deficiency	N/A	N/A
Cytomegalovirus Infection (CMV)	<ul style="list-style-type: none"> For older children who can receive adult dose (based on their BSA), valganciclovir tablets 900 mg orally once daily with food For children aged 4 months to 16 years, valganciclovir oral solution 50 mg/mL at dose in milligrams = $7 \times \text{BSA} \times \text{CrCl}$ (up to maximum CrCl of 150 mL/min/1.73 m²) orally once daily with food (maximum dose 900 mg/day) 	N/A	<p>Primary Prophylaxis Can Be Considered for—</p> <ul style="list-style-type: none"> CMV antibody positivity and severe immunosuppression (i.e., CD4 count <50 cells/mm³ in children age ≥6 years; CD4 percentage <5% in children age <6 years). <p>Criteria for Discontinuing Primary Prophylaxis</p> <ul style="list-style-type: none"> Age ≥6 years with CD4 count >100 cells/mm³ Age <6 years with CD4 percentage >10% <p>Criteria for Considering Restarting Primary Prophylaxis</p> <ul style="list-style-type: none"> Age ≥6 years with CD4 count <50 cells/mm³ Age <6 years with CD4 percentage <5%
Giardiasis	ART to avoid advanced immunodeficiency	N/A	N/A
Hepatitis B Virus Infection (HBV)	<p>All Children</p> <ul style="list-style-type: none"> HepB vaccine <p>Infants Born to Women With HBV</p> <ul style="list-style-type: none"> HepB vaccine plus HBIG 	HBIG following exposure	<p>See Figure 1. Recommended Immunization Schedule for detailed vaccine recommendations.</p> <p>Primary Prophylaxis Indicated for—</p> <ul style="list-style-type: none"> All individuals who are not infected with HBV <p>Criteria for Discontinuing Primary Prophylaxis</p> <ul style="list-style-type: none"> N/A

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
			Criteria for Restarting Primary Prophylaxis <ul style="list-style-type: none"> • N/A
Hepatitis C Virus Infection (HCV)	N/A	N/A	N/A
Herpes Simplex Virus Infection (HSV)	N/A	N/A	Primary prophylaxis not indicated
Histoplasmosis	N/A	N/A	Primary Prophylaxis Indicated for— <ul style="list-style-type: none"> • Selected HIV-infected adults but not children Criteria for Discontinuing Primary Prophylaxis <ul style="list-style-type: none"> • N/A Criteria for Restarting Primary Prophylaxis <ul style="list-style-type: none"> • N/A
Human Papillomavirus Disease (HPV)	HPV vaccine	N/A	See Figure 1. Recommended Immunization Schedule for detailed vaccine recommendations.
Isosporiasis (Cystoisosporiasis)	There are no U.S. recommendations for primary prophylaxis of isosporiasis.	N/A	Initiation of ART to avoid severe immunodeficiency may reduce incidence; TMP-SMX prophylaxis may reduce incidence.

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
Malaria	<p>For Travel to Chloroquine-Sensitive Areas:</p> <ul style="list-style-type: none"> Chloroquine base 5 mg/kg body weight base by mouth, up to 300 mg once weekly (equivalent to 7.5 mg/kg body weight chloroquine phosphate). Start 1–2 weeks before leaving, take weekly while away, and then take once weekly for 4 weeks after returning home. Atovaquone/proguanil once daily started 1–2 days before travel, for duration of stay, and then for 1 week after returning home <ul style="list-style-type: none"> 11–20 kg; one pediatric tablet (62.5 mg/25 mg) 21–30 kg, two pediatric tablets (125 mg/50 mg) 31–40 kg; three pediatric tablets (187.5 mg/75 mg) >40 kg; one adult tablet (250 mg/100 mg) Doxycycline 2.2 mg/kg body weight (maximum 100 mg) by mouth once daily for children aged ≥8 years. Must be taken 1–2 days before travel, daily while away, and then up to 4 weeks after returning. Mefloquine 5 mg/kg body weight orally given once weekly (maximum 250 mg) 	N/A	<p>Recommendations are the same for HIV-infected and HIV-uninfected children. Please refer to the following website for the most recent recommendations based on region and drug susceptibility: https://www.cdc.gov/malaria/.</p> <p>For travel to chloroquine-sensitive areas. Equally recommended options include chloroquine, atovaquone/proguanil, doxycycline (for children aged ≥8 years), and mefloquine; primaquine is recommended for areas with mainly <i>P. vivax</i>.</p> <p>G6PD screening must be performed prior to primaquine use.</p> <p>Chloroquine phosphate is the only formulation of chloroquine available in the United States; 10 mg of chloroquine phosphate = 6 mg of chloroquine base.</p> <p>For travel to chloroquine-resistant areas, preferred drugs are atovaquone/proguanil, doxycycline (for children aged ≥8 years), or mefloquine.</p>

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
	<p>For Areas With Mainly <i>P. Vivax</i>:</p> <ul style="list-style-type: none"> Primaquine phosphate 0.6 mg/kg body weight base once daily by mouth, up to a maximum of 30 mg base/day. Starting 1 day before leaving, taken daily, and for 3–7 days after return <p>For Travel to Chloroquine-Resistant Areas:</p> <ul style="list-style-type: none"> Atovaquone/proguanil once daily started 1–2 days before travel, for duration of stay, and then for 1 week after returning home <ul style="list-style-type: none"> 11–20 kg; one pediatric tablet (62.5 mg/25 mg) 21–30 kg; two pediatric tablets (125 mg/50 mg) 31–40 kg; three pediatric tablets (187.5 mg/75 mg) >40 kg; one adult tablet (250 mg/100 mg) Doxycycline 2.2 mg/kg body weight (maximum 100 mg) by mouth once daily for children aged ≥8 years. Must be taken 1–2 days before travel, daily while away, and then up to 4 weeks after returning. Mefloquine 5 mg/kg body weight orally given once weekly (maximum 250 mg) 		
Microsporidiosis	N/A	N/A	Not recommended

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
<i>Mycobacterium avium</i> Complex (MAC)	<ul style="list-style-type: none"> • Clarithromycin 7.5 mg/kg (maximum 500 mg/dose) PO twice daily, <i>or</i> • Azithromycin 20 mg/kg (maximum 1,200 mg) PO once weekly <p>Note: Careful monitoring of drug–drug interactions is critical when using clarithromycin in children on ARVs.</p>	<ul style="list-style-type: none"> • Azithromycin 5 mg/kg (maximum 250 mg) PO once daily • For children who cannot tolerate azithromycin or clarithromycin, rifabutin (5 mg/kg/daily, maximum dose 300 mg) is an alternative prophylactic agent for MAC, although drug interactions and a lack of efficacy data in children limit its use. 	<p>Primary Prophylaxis Indicated for Children With HIV Who Have Advanced Immunosuppression, as Defined by CD4 Count Below, and Who Are Not on a Fully Suppressive ARV Regimen</p> <ul style="list-style-type: none"> • <i>Aged <1 Year:</i> CD4 count <750 cells/mm³ • <i>Aged 1 to 5 Years:</i> CD4 count <500 cells/mm³ • <i>Aged ≥6 Years:</i> CD4 count <200 cells/mm³ <p>Criteria for Discontinuing Primary Prophylaxis</p> <ul style="list-style-type: none"> • Do not discontinue in children aged <2 years. • After ≥6 months of ART, <i>and</i> <ul style="list-style-type: none"> ○ <i>Aged 2 to <6 Years:</i> CD4 count >200 cells/mm³ for >3 consecutive months ○ <i>Aged ≥6 Years:</i> CD4 count >100 cells/mm³ for >3 consecutive months <p>Criteria for Restarting Primary Prophylaxis</p> <ul style="list-style-type: none"> • <i>Aged 2 to <6 Years:</i> CD4 count ≤200 cells/mm³ • <i>Aged ≥6 Years:</i> CD4 count ≤100 cells/mm³
<p><i>Mycobacterium tuberculosis</i></p> <p>Treatment of LTBI, Also Known as TB Preventive Therapy</p>	<p>Source Case Drug Susceptible</p> <ul style="list-style-type: none"> • Age 2 to <12 years <ul style="list-style-type: none"> ○ 12 weekly doses of isoniazid (25 mg/kg for children aged 2–12 years) and rifapentine (10–14.0 kg: 300 mg; 14.1–25.0 kg: 450 mg; 25.1–32.0 kg: 600 mg; 32.1–49.9 kg: 750 mg; ≥50.0 kg: 900 mg maximum) 	<ul style="list-style-type: none"> • Rifampin 15–20 mg/kg (max 600 mg) daily for 4 months duration, <i>or</i> • Isoniazid 10–15 mg/kg (max 300 mg) daily and rifampin 15–20 mg/kg (maximum 600 mg/day) for 3 months duration, <i>or</i> • Isoniazid 10–15 mg/kg (max 300 mg) daily for 6–9 months 	<p>Indications</p> <ul style="list-style-type: none"> • Positive TST (TST ≥5 mm in children with HIV) or IGRA without previous TB treatment • Close contact with any infectious TB case (repeated exposures warrant repeated post-exposure prophylaxis) <p>Considerations</p> <ul style="list-style-type: none"> • TB disease must be excluded before starting treatment for latent TB infection.

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
	<ul style="list-style-type: none"> Age ≥12 years <ul style="list-style-type: none"> 12 doses of weekly isoniazid (15 mg/kg rounded up to the nearest 50 or 100 mg; 900 mg maximum) and rifapentine (10–14.0 kg: 300 mg; 14.1–25.0 kg: 450 mg; 25.1–32.0 kg: 600 mg; 32.1–49.9 kg: 750 mg; ≥50.0 kg: 900 mg maximum) Source Case Drug Resistant <ul style="list-style-type: none"> For isoniazid-resistant source cases, daily rifampin 15–20 mg/kg (maximum 600 mg/day) for 4 months is recommended. For isoniazid- and rifampin-resistant (i.e., MDR-TB) source cases, consult a TB expert and local public health authorities. 		<ul style="list-style-type: none"> Drug–drug interactions with ART should be considered for all rifamycin-containing alternatives. <p>Criteria for Discontinuing Prophylaxis</p> <ul style="list-style-type: none"> Only with documented severe adverse event, such as hepatotoxicity, hypersensitivity, or other adverse drug reactions, which are rare in children and adolescents. <p>Adjunctive Treatment</p> <ul style="list-style-type: none"> Pyridoxine 1–2 mg/kg body weight once daily (maximum 25–50 mg/day) with isoniazid; pyridoxine supplementation is recommended for exclusively breastfed infants and for children and adolescents on meat- and milk-deficient diets; children with nutritional deficiencies, including all children with HIV; and pregnant girls and women.
<i>Pneumocystis</i> Pneumonia	<ul style="list-style-type: none"> TMP-SMX: 5–10 mg/kg/DAY (TMP component) Maximum individual dose: 160 mg/DOSE (TMP component). Several dosing regimens have been used successfully: <ul style="list-style-type: none"> 3 days per week on consecutive or alternate days in divided doses every 12 hours Daily as a single dose Administration 2 days per week on consecutive or alternate 	<p>Dapsone and atovaquone are both first-line alternatives (see text for relative risks and benefits), followed by aerosolized pentamidine as second line and IV pentamidine as third line.</p> <p>Dapsone</p> <ul style="list-style-type: none"> <i>Children Aged ≥1 Month:</i> 2 mg/kg/dose (maximum: 100 mg/dose) PO once daily or 4 mg/kg/dose (maximum 200 mg/dose) PO once weekly 	<p>Primary Prophylaxis Indicated for—</p> <ul style="list-style-type: none"> All infants with HIV or in whom HIV infection cannot be presumptively excluded beginning from age 4–6 weeks to 12 months, regardless of CD4 count or percentage Children With Stage 3 CD4 Count (see HIV Infection Stage Table for more information): <ul style="list-style-type: none"> <i>Children Aged 1 Year to <6 Years:</i> <500 cells/mm³ or <22% <i>Children Aged ≥6 Years:</i> <200 cells/mm³ or <14% <p>Criteria for Discontinuing Primary Prophylaxis</p> <ul style="list-style-type: none"> <i>Children Aged <1 Year:</i> Continue primary prophylaxis in children with HIV throughout the first year of life

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
	<p>days in doses divided every 12 hours has been used successfully in pediatric oncology patients.</p>	<p>Atovaquone</p> <ul style="list-style-type: none"> • <i>Children Aged 1–3 Months or >24 Months to 12 Years:</i> 30–40 mg/kg/dose PO once daily with food (maximum: 1,500 mg/dose) • <i>Children Aged 4–24 Months:</i> 45 mg/kg/dose PO once daily with food (maximum: 1,500 mg/dose) • <i>Children Aged ≥13 Years:</i> 1,500 mg PO once daily <p>Aerosolized Pentamidine Via Respigard II Nebulizer</p> <p><i>For Children Able to Comply With Its Use:</i></p> <ul style="list-style-type: none"> • <i>Children Aged <5 Years:</i> Limited data regarding dosing. 9 mg/kg/dose or 150 mg/dose every month have been suggested. • <i>Children Aged ≥5 Years:</i> 300 mg every month <p>IV Pentamidine</p> <ul style="list-style-type: none"> • 4 mg/kg/dose every 3–4 weeks; maximum dose: 300 mg/dose • Limited data regarding dosing frequency; based on use in oncology patients 	<ul style="list-style-type: none"> • Children Aged 1 Year and Older on ART for ≥6 Months With CD4 Count Above Age-Specific Stage 3 Cutoff for >3 Consecutive Months: <ul style="list-style-type: none"> ○ <i>Children Aged 1 Year to <6 Years:</i> ≥500 cells/mm³ or ≥22% ○ <i>Children Aged ≥6 Years:</i> ≥200 cells/mm³ or ≥14% • Discontinuation can be considered in children ≥6 Years if on ART for ≥6 months with undetectable viral load and CD4 count 101–200 cells/mm³ if intolerant of prophylaxis medications <p>Criteria for Restarting Primary Prophylaxis</p> <ul style="list-style-type: none"> • CD4 count below age-specific stage 3 cutoff (see above)

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
Syphilis	N/A	Same as for primary prophylaxis.	<p>Primary Prophylaxis Indicated for—</p> <ul style="list-style-type: none"> • N/A <p>Criteria for Discontinuing Primary Prophylaxis</p> <ul style="list-style-type: none"> • N/A <p>Criteria for Restarting Primary Prophylaxis</p> <ul style="list-style-type: none"> • N/A
Toxoplasmosis	TMP-SMX 150/750 mg/m ² BSA once daily PO	<p>For Children Aged ≥1 Month:</p> <ul style="list-style-type: none"> • Dapsone 2 mg/kg body weight or 15 mg/m² BSA (maximum 25 mg) PO once daily, <i>plus</i> • Pyrimethamine 1 mg/kg body weight or 15 mg/m² BSA (maximum 25 mg) PO once daily, <i>plus</i> • Leucovorin 5 mg PO every 3 days (continued for 1 week after pyrimethamine completed due to long half-life) <p>For Children Aged 1–3 Months and >24 Months:</p> <ul style="list-style-type: none"> • Atovaquone 30 mg/kg body weight (maximum 1,500 mg) PO once daily with food <p>For Children Aged 4–24 Months:</p>	<p>Primary Prophylaxis Indicated for—</p> <p><i>Children With IgG Antibody to Toxoplasma and Severe Immunosuppression Who Are:</i></p> <ul style="list-style-type: none"> • Aged <1 year with CD4% ≤26% or CD4 ≤750 cells/mm³, or • Aged 1–5 years with CD4% ≤22% or CD4 ≤500 cells/mm³, or • Aged ≥6 years with CD4 count ≤100 cells/mm³ <p>Criteria for Discontinuing Primary Prophylaxis</p> <p>Note: Do not discontinue in children aged <1 year.</p> <ul style="list-style-type: none"> • Aged 1–5 years with CD4 count >500 cells/mm³ for >3 consecutive months or • Aged ≥6 years with CD4 count >200 cells/mm³ for >3 consecutive months <p>Criteria for Restarting Primary Prophylaxis:</p> <ul style="list-style-type: none"> • Aged 1–5 years with CD4 count <500 cells/mm³ or • Aged ≥6 years with CD4 count <200 cells/mm³

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
		<ul style="list-style-type: none"> Atovaquone 45 mg/kg body weight (maximum 1,500 mg) PO once daily with food, <i>with or without</i> Pyrimethamine 1 mg/kg body weight or 15 mg/m² BSA (maximum 25 mg) PO once daily, <i>plus</i> leucovorin 5 mg PO every 3 days <p>Acceptable Alternative Dosage Schedules for TMP-SMX</p> <ul style="list-style-type: none"> TMP-SMX 150/750 mg/m² BSA per dose PO three times weekly on 3 consecutive days per week TMP-SMX 75/375 mg/m² BSA per dose twice daily PO every day TMP-SMX 75/375 mg/m² BSA per dose twice daily PO three times weekly on alternate days 	
Varicella-Zoster Virus Disease (VZV) Pre-exposure Prophylaxis	VAR (Varivax) vaccine 2-dose series	N/A	VAR is indicated for children aged ≥12 months with HIV stage 1 or 2 . VAR is not recommended for children with HIV stage 3 . See the Varicella Vaccine section of Figure 1. Recommended Immunization Schedule for detailed vaccine recommendations information.
Varicella-Zoster Virus Disease (VZV) Primary (Post-exposure) Prophylaxis	Varicella-zoster immune globulin (human [VariZIG]) administered IM, ideally within 96 hours (up to 10 days) after exposure	If VariZIG Is Not Available <ul style="list-style-type: none"> IGIV 400 mg/kg actual body weight administered ideally within 96 	Primary (Post-exposure) Prophylaxis Is Indicated for— <ul style="list-style-type: none"> Children with HIV stage 1 or 2 and substantial exposure to varicella or HZ with no verified history of prior infection, no

**Table 1. Primary Prophylaxis of Opportunistic Infections in Children With and Exposed to HIV—
Summary of Recommendations**

Indication	First Choice	Alternative	Comments/Special Issues
	Dosing Based on Body Weight <ul style="list-style-type: none"> • ≤2 kg: 62.5 international units • 2.1–10 kg: 125 international units • 10.1–20 kg: 250 international units • 20.1–30 kg: 375 international units • 30.1–40 kg: 500 international units • ≥40.1 kg: 625 international units 	<p>hours (up to 10 days) after exposure</p> <p>If Passive Immunization Is Not Possible</p> <p>Consider acyclovir 20 mg/kg/dose (max: 800 mg/dose) PO four times daily OR valacyclovir 20 mg/kg/dose (max: 1,000 mg/dose) PO three times daily for 7 days, beginning 7 days after exposure.</p>	<p>evidence of vaccination, or who are seronegative for VZV on a sensitive and specific antibody assay; or</p> <ul style="list-style-type: none"> • Children with HIV stage 3 and substantial exposure to varicella or HZ, regardless of immunity history to varicella <p>Note: VariZIG is commercially available in the United States from a broad network of specialty distributors.</p> <p>Varicella vaccine should be administered 5 months after receipt of VariZIG in eligible children.</p> <p>Some experts start acyclovir upon first appearance of rash in children with HIV, rather than providing acyclovir as prophylaxis.</p>

Key to Acronyms: ART = antiretroviral therapy; ARV = antiretroviral; BSA = body surface area; CD4 = CD4 T lymphocyte; CDC = Centers for Disease Control and Prevention; CMV = cytomegalovirus; CrCl = creatinine clearance; HBIG = hepatitis B immune globulin; HBV = hepatitis B virus; HepB = hepatitis B [vaccine]; Hib = *Haemophilus influenzae* type b; HPV = human papillomavirus; IgG = immunoglobulin G; IGRA = interferon-gamma release assay; IM = intramuscular; IV = intravenous; IVIG = intravenous immunoglobulin; LTBI = latent TB infection; MDR-TB = multidrug-resistant tuberculosis; PO = orally; TB = tuberculosis; TMP-SMX = trimethoprim-sulfamethoxazole; TST = tuberculin skin test; VZV = varicella-zoster virus