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Pregnancy and Postpartum HIV Testing and Identification of Perinatal and Postnatal HIV Exposure

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Panel's Recommendations

- HIV testing is recommended for all sexually active people and should be a routine component of pre-pregnancy care **(AII)**.
- For all pregnancies, opt-out HIV testing should be done as early as possible during each pregnancy (see [Laboratory Testing for the Diagnosis of HIV Infection: Updated Recommendations](#) and [2018 Quick Reference Guide: Recommended Laboratory HIV Testing Algorithm for Serum or Plasma Specimens](#) from the Centers for Disease Control and Prevention [CDC]) **(AII)**.
- For all pregnancies, partners should be referred for HIV testing when their status is unknown **(AIII)**.
- Repeat HIV testing in the third trimester is recommended during pregnancies in which there are negative initial HIV tests and increased risk of acquiring HIV, including pregnancies in which the care is received in facilities that have an HIV incidence of ≥ 1 case per 1,000 patients experiencing pregnancy per year, those who reside in jurisdictions (states or counties) with elevated HIV incidence among females aged 15 to 45 years (>17 per 100,000 females aged 15–45 years), or those who reside in states or territories that require third-trimester testing **(AII)**. Annual state and county-level HIV diagnosis rates are available at CDC's National Center for HIV, Viral Hepatitis, Sexually Transmitted Diseases, and Tuberculosis Prevention [AtlasPlus webpage](#).
- Repeat HIV testing is recommended when there is a sexually transmitted infection during pregnancy, when there are signs and symptoms of acute HIV infection, or when there is ongoing exposure to HIV **(AIII)**. Initiation of pre-exposure prophylaxis (PrEP) is recommended if HIV testing is negative **(AIII)**. See [Pre-exposure Prophylaxis \(PrEP\) to Prevent HIV During Periconception, Antepartum, and Postpartum Periods](#) for more information.
- Expedited^a HIV testing should be performed during labor or after delivery when HIV status is undocumented as well as when HIV tests were negative early in pregnancy but there is increased risk of HIV infection and there was no retest in the third trimester **(AII)**. HIV antigen/antibody testing should be available 24 hours a day, and results should be available within 1 hour. If results of expedited^a HIV testing are positive, intrapartum intravenous zidovudine prophylaxis should be initiated immediately **(AI)**; see [Intrapartum HIV Care](#).
- When acute HIV infection is suspected during pregnancy or the intrapartum period or while breastfeeding, a plasma HIV RNA assay should be performed in conjunction with an antigen/antibody immunoassay **(AIII)**.
- When there is a positive HIV test result during labor and delivery or postpartum, a maternal HIV-1/HIV-2 antibody differentiation assay and an HIV RNA assay should be performed **(AI)**. In these situations, an HIV nucleic acid test (NAT) should be performed on the infant, with immediate initiation of presumptive HIV therapy appropriate for an infant at high risk of perinatal HIV transmission **(AI)**; see [Diagnosis of HIV Infection in Infants and Children](#) for additional information.
- If maternal HIV test results are unavailable at birth, the newborn should be tested using an expedited^a antibody test to identify perinatal HIV exposure **(AI)**. If positive, an HIV NAT should be performed on the infant, and standard maternal HIV diagnostic testing should be offered as soon as possible **(AI)**.
 - In this situation, presumptive HIV therapy appropriate for infants who are at high risk of perinatal HIV transmission should be initiated immediately **(AI)**. See [Antiretroviral Management of Infants With In Utero, Intrapartum, or Breastfeeding Exposure to HIV](#) for guidance.
 - When there is an initial positive HIV test during labor or delivery or immediately postpartum and there are plans to breastfeed, the Panel [on Treatment of HIV During Pregnancy and Prevention of Perinatal Transmission](#) recommends

against breastfeeding. Breast milk should be expressed and stored appropriately until all supplemental HIV tests are reviewed and are negative **(AI)**.

- When there is increased risk of HIV acquisition postpartum, HIV testing and PrEP should be offered. If breastfeeding is occurring, consult an HIV specialist regarding frequency of HIV testing for the breastfeeding dyad **(AIII)**.
- Maternal HIV test results should be documented in the newborn's medical record and communicated to the newborn's primary care provider **(AIII)**.
- To identify perinatal HIV exposure and possible HIV infection, HIV testing is recommended for infants and children in foster care and adoptees for whom maternal HIV status is unknown **(AIII)** (see [Diagnosis of HIV Infection in Infants and Children](#)).

^a The term "expedited" is used to designate HIV testing performed in situations when a very short turnaround time is optimal. Expedited testing is dependent on the available HIV tests in each facility and may include antigen/antibody immunoassays or antibody-only assays; see Approved HIV Tests in the text below.

Rating of Recommendations: A = Strong; B = Moderate; C = Optional

Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion

[†]Studies that include children or children and adolescents, but not studies limited to postpubertal adolescents

Preventing HIV Transmission During Infant Feeding

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Reviewed: December 19, 2024

Panel's Recommendations

- When there is potential for perinatal HIV transmission, evidence-based, patient-centered counseling should be provided to support shared decision-making about infant feeding. Counseling about infant feeding should begin prior to conception or as early as possible in pregnancy; information about and plans for infant feeding should be reviewed throughout pregnancy and again after delivery (AIII). During counseling, inform that—
 - Replacement feeding with properly prepared formula or pasteurized donor human milk from a milk bank eliminates the risk of postnatal HIV transmission to the infant through breastfeeding.
 - Achieving and maintaining viral suppression through antiretroviral therapy (ART) during pregnancy and postpartum decreases breastfeeding transmission risk to less than 1%, but not zero.
- Replacement feeding with formula or banked pasteurized donor human milk is recommended to eliminate the risk of HIV transmission through breastfeeding when ART is not being taken and/or viral suppression has not been achieved during pregnancy (at a minimum throughout the third trimester), as well as at delivery (AI).
- When ART is being taken for HIV and a sustained undetectable viral load is achieved, counseling about the options of formula feeding, use of banked donor milk, or breastfeeding should be provided. Those who choose to breastfeed should be supported in this decision (AIII).
- If formula feeding is chosen, providers should support in this decision. Providers should ask about potential barriers to formula feeding and explore ways to address them (AIII).
- In the case of a detectable viral load during breastfeeding, the Panel on Treatment of HIV in Pregnancy and Prevention of Perinatal Transmission and the Panel on Antiretroviral Therapy and Medical Management of Children Living with HIV recommend breastfeeding be stopped temporarily or discontinued and replacement feeding initiated while the viral load is rechecked, causes for the viremia are assessed, and, when applicable, adherence counseling is reinforced (AII) (see Situations to Consider Stopping or Modifying Breastfeeding in the text below). Most experts recommend permanent discontinuation of breastfeeding when HIV RNA is ≥ 200 copies/mL (CIII).
 - Depending on the level and persistence of viremia, next steps may include initiating or modifying infant antiretroviral prophylaxis, permanently stopping breastfeeding, and considering the need for additional infant HIV testing (see [Antiretroviral Management of Infants With In Utero, Intrapartum, or Breastfeeding Exposure to HIV](#), Table 12. [Antiretroviral Management of Infants With Exposure to HIV During Breastfeeding](#), and Table 13. [Recommended Virologic Testing Schedules for Infants With Perinatal and Breastfeeding Exposure to HIV](#) in [Diagnosis of HIV Infection in Infants and Children](#)).
 - If the repeat parental viral load is undetectable, a joint decision should be made by the parent and providers about whether breastfeeding may resume (AIII).
- Engaging Child Protective Services or similar agencies is not an appropriate response to infant feeding choices impacted by HIV (AIII).
- Clinicians are encouraged to consult the [National Perinatal HIV/AIDS Hotline](#) (1-888-448-8765) with HIV-related questions about infant feeding (AIII).

Rating of Recommendations: A = Strong; B = Moderate; C = Optional

Rating of Evidence: I = One or more randomized trials with clinical outcomes and/or validated laboratory endpoints; II = One or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; III = Expert opinion

Diagnosis of HIV Infection in Infants and Children

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Panel's Recommendations

- Virologic assays (HIV RNA or HIV DNA nucleic acid tests [NATs]) that directly detect HIV must be used to diagnose HIV in infants and children aged <18 months with perinatal HIV exposure; HIV antibody and HIV antigen/antibody tests should not be used **(AII)**.
- Plasma HIV RNA or cell-associated HIV DNA NATs are generally equally recommended **(AII)**.
- An assay that detects HIV non-B subtype viruses or Group O infections (e.g., an HIV RNA NAT or a total DNA/RNA test) is recommended for use in infants and children perinatally exposed to known or suspected non-B subtype virus or Group O infections **(AII)**.
- Virologic diagnostic testing **using an HIV NAT** (see [Table 13](#) below) is recommended for all infants with perinatal HIV exposure at the following ages:
 - Birth **(AII)**
 - The test at birth generally should be performed in all infants with perinatal HIV exposure but is not necessary for infants at low risk of HIV acquisition (HIV RNA levels <50 copies/mL from 20 weeks of gestation through delivery put infants at low risk of HIV acquisition). Birth testing should be performed in infants at low risk of HIV acquisition if there are plans to breastfeed or there are concerns about loss to follow-up **(BIII)**.
 - 14 to 21 days **(AII)**
 - 1 to 2 months **(AII)**
 - 4 to 6 months **(AII)**
- For infants **who receive presumptive HIV therapy**, additional virologic diagnostic testing is recommended 2 to 6 weeks after **antiretroviral** (ARV) drugs are discontinued **(BII)**.
- A positive virologic test should be confirmed as soon as possible by a repeat virologic test **(AII)**.
- Definitive exclusion of HIV infection in non-breastfed infants is based on two or more negative virologic tests **(and no positive virologic tests)**, with one negative test obtained at age ≥ 1 month (and at least 2–6 weeks after discontinuation of infant ARVs) and one at age ≥ 4 months, or two negative HIV antibody tests from separate specimens that were obtained at age ≥ 6 months **(AII)**.
- Additional HIV testing (e.g., HIV NAT, HIV antibody, HIV antigen/antibody) is not needed routinely for non-breastfed infants who meet the criteria for definitive exclusion of HIV and who have had no known or suspected HIV exposure after birth **(AII)**.
- For infants with perinatal HIV exposure who are being breastfed, virologic diagnostic testing is recommended at birth, 14 to 21 days, 1 to 2 months, and 4 to 6 months of age **(AII)**. An additional virologic test should be performed if the gap between the **tests at ages** 1 to 2 months and 4 to 6 months is greater than 3 months. See [Preventing HIV Transmission During Infant Feeding](#).
 - Virologic diagnostic testing should be performed **at least** every 3 months during breastfeeding **(BII)**;
 - After cessation of breastfeeding, irrespective of when breastfeeding ends, virologic diagnostic testing should be performed at 4 to 6 weeks and **4** to 6 months after cessation **(BII)**.

Infants with potential HIV exposure after birth (e.g., **diagnosis of HIV during breastfeeding**, premasticated feeding, sexual abuse, contaminated blood products, percutaneous exposure) require additional testing using **HIV antigen/antibody and/or HIV NAT assays, based on age at time of exposure** and the maternal HIV status at delivery **(AII)**.

- Age-appropriate HIV testing is also recommended for infants and children with signs and/or symptoms of HIV, even in the absence of documented or suspected HIV exposure **(AII)**.
- For children aged **≥18 months**, HIV antibody (or HIV antigen/antibody) tests are recommended for diagnostic testing **(AII)**.
 - When **early** (acute **or recent**) HIV infection is suspected, additional testing with an HIV NAT may be necessary to diagnose HIV infection **(AII)**.

Note: The [National Perinatal HIV Hotline](#) provides consultations on issues related to the management of perinatal HIV infection, including diagnostic testing (1-888-448-8765; 24 hours a day, 7 days a week).

Rating of Recommendations: A = Strong; B = Moderate; C = Optional

Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion

[†] Studies that include children or children/adolescents, but not studies limited to post-pubertal adolescents

Clinical and Laboratory Monitoring of Pediatric HIV Infection

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Reviewed: September 30, 2025

Panel's Recommendations
<ul style="list-style-type: none">• Plasma HIV RNA (viral load) and absolute CD4 T lymphocyte (CD4) cell count should be measured at the time of HIV diagnosis, and, if a child is not started on antiretroviral therapy (ART) after diagnosis, this monitoring should be repeated at least every 3 to 4 months thereafter (AIII).• Absolute CD4 count is recommended for monitoring immune status in children of all ages with HIV, with CD4 percentage as an alternative for children aged <5 years (AII).• After initiation of ART or after a change in antiretroviral (ARV) regimen, children should be evaluated for treatment adherence and clinical adverse effects within 1 to 2 weeks; laboratory testing for viral load response and toxicity is recommended at 2 to 4 weeks after treatment initiation or change in ARV regimen and every 3 to 4 months thereafter (see Table 6 below) (AIII).• Children on ART should be monitored for therapy adherence, effectiveness, and toxicities routinely (every 3–4 months) (see Table 6 below) (AII*), see Adherence to Antiretroviral Therapy in Children and Adolescents With HIV and Management of Medication Toxicity or Intolerance.<ul style="list-style-type: none">○ Viral load measurement every 3 to 4 months is generally recommended to monitor ART adherence (AIII).○ CD4 count can be monitored less frequently (every 6–12 months) in children and adolescents who are adherent to therapy, have sustained virologic suppression and CD4 count values that are well above the threshold for opportunistic infection risk, and have stable clinical status (AII).• To evaluate children with suspected clinical, immunologic, or virologic deterioration or to confirm an abnormal value, additional plasma viral load and CD4 count monitoring should be performed (AIII).• ARV drug resistance testing is recommended at the time of HIV diagnosis, before initiation of therapy in all people who are ART-naive, and before switching regimens in patients with treatment failure (AII). Genotypic resistance testing is preferred for this purpose (AIII). See Drug-Resistance Testing in the Adult and Adolescent Antiretroviral Guidelines. <p>Review the history of all previously used ARVs and available resistance test results when making decisions about the choice of new ARVs because mutations may not be detected once the prior drugs have been discontinued (AII).</p>
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†]Studies that include children or children/adolescents, but not studies limited to postpubertal adolescents</p>

When to Initiate Antiretroviral Treatment in Children With HIV Infection

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Reviewed: September 30, 2025

Panel's Recommendations
<ul style="list-style-type: none">● Antiretroviral therapy (ART) should be initiated in all infants and children with HIV infection (AI for children aged <3 months, AI* for older children).<ul style="list-style-type: none">○ Rapid ART initiation (defined as initiating ART immediately or within days of HIV diagnosis), accompanied by a discussion of the importance of adherence and provision of subsequent adherence support, is recommended for all children with HIV (AI*).○ However, in ART-naive children and adolescents with cryptococcal meningitis, tuberculous meningitis, and disseminated <i>Mycobacterium avium</i> complex disease, the Panel on Antiretroviral Therapy and Medical Management of Children Living With HIV recommends initiation of treatment for the opportunistic infection first, before ART initiation (see Guidelines for the Prevention and Treatment of Opportunistic Infections in Children With and Exposed to HIV) (AII). The timing of ART initiation in these cases should be discussed with a pediatric HIV specialist.● If a child with HIV has not initiated ART, health care providers should closely monitor the virologic, immunologic, and clinical status at least every 3 to 4 months (AIII).<ul style="list-style-type: none">○ ART initiation should be discussed and strongly encouraged at every visit (AIII).
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†]Studies that include children or children/adolescents, but not studies limited to postpubertal adolescents</p>

What to Start: Antiretroviral Treatment Regimens Recommended for Initial Therapy in Infants and Children With HIV

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Panel's Recommendations
<ul style="list-style-type: none">• The selection of an initial antiretroviral regimen for the treatment of HIV in infants and children should be individualized based on factors that include patient characteristics (e.g., age, weight), regimen characteristics (e.g., efficacy, safety, tolerability), clinical and practical considerations, patient and family preferences, and the results of HIV resistance testing (AIII) (see Table A below and Appendix A. Pediatric Antiretroviral Drug Information).• For infants and children initiating treatment for HIV for the first time, the Panel on Antiretroviral Therapy and Medical Management of Children Living With HIV recommends initiating antiretroviral therapy (ART) with three drugs: a dual-nucleoside/nucleotide reverse transcriptase inhibitor (NRTI) backbone plus an integrase strand transfer inhibitor anchor drug, when possible. In some circumstances, an ART regimen of two NRTIs plus a non-nucleoside reverse transcriptase inhibitor or a boosted protease inhibitor as the anchor drug may be indicated for initial treatment (AI*). See Table 8. Antiretroviral Treatment Regimens Recommended for Initial Therapy in Infants and Children With HIV below.
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†] Studies that include children or children/adolescents, but not studies limited to postpubertal adolescents</p>

Antiretroviral Management of Infants With *In Utero*, Intrapartum, or Breastfeeding Exposure to HIV

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Panel's Recommendations

Antiretroviral Management for Infants With Exposure to HIV During the *In Utero* and Intrapartum Periods

- All newborns with *in utero* (antepartum) or intrapartum exposure to HIV should receive one or more antiretroviral (ARV) drugs, dosed appropriately for the infant's gestational age and weight and initiated as close to the time of birth as possible, preferably within 6 hours (AII).

ARV regimen selection for infants with *in utero* or intrapartum exposure to HIV should be based on predicted risk for transmission, determined by maternal HIV RNA levels (see [Table 10](#), [Table 11](#), [Table 11.1](#), and [Figure 1](#) below) (AII).

Infants at high risk of HIV infection from *in utero* or intrapartum exposure, defined as being perinatally exposed to viremia (HIV RNA ≥ 50 copies/mL) in the 4 weeks prior to delivery, should be provided a three-drug ARV regimen, administered from birth for 2–6 weeks, that serves as presumptive HIV therapy or enhanced prophylaxis. If the duration of the three-drug regimen is shorter than 6 weeks, zidovudine (ZDV) should be continued alone to complete a total of 6 weeks of prophylaxis (AII).

- Infants at low risk of *in utero* and intrapartum HIV acquisition, defined as being perinatally exposed to HIV RNA levels < 50 copies/mL from 20 weeks of gestation through delivery, should receive ZDV alone for a duration of 2 weeks (AII).
- Infants not meeting criteria for high or low risk should have ARV regimens and durations based on case-specific factors related to the level and timing of viremia during the pregnancy (AII) (see [Table 11](#)).
- An HIV nucleic acid test (NAT) should generally be performed at birth for all infants (AII) but is not necessary for infants at low risk who are not being breastfed (BIII). See [Diagnosis of HIV Infection in Infants and Children](#) and [Table 13. Recommended Virologic Testing Schedules for Infants With Perinatal and Breastfeeding Exposure to HIV](#) for guidance about infant testing.

Antiretroviral Management for Infants With Exposure to HIV During the Breastfeeding^a Period

- Recommendations about extended ARV prophylaxis are based on the current and anticipated maternal virologic status during breastfeeding (see [Table 12](#) and [Table 12.1](#) below). Ideally, plans should be made during the antepartum period; reassessment should take place both at delivery and regularly during the breastfeeding period (AII).

For infants at low risk of HIV acquisition during breastfeeding, some Panel members do not recommend extended ARV prophylaxis; however, other Panel members do recommend extended ARV prophylaxis with either nevirapine (NVP) or lamivudine (3TC) (CIII). The Panel on Treatment of HIV During Pregnancy and Prevention of Perinatal Transmission and the Panel on Antiretroviral Therapy and Medical Management of Children Living With HIV (the Panels) did not reach consensus. Infants are considered at low risk of transmission during breastfeeding when (1) maternal antiretroviral therapy is being taken while breastfeeding and sustained maternal virologic suppression (HIV RNA < 50 copies/mL) was achieved for at least 3 months prior to delivery and (2) the provider and patient are confident that maternal ART adherence will be maintained during breastfeeding (AII).

- For infants currently at low risk of HIV acquisition during breastfeeding but with concerns for future risk, the Panels recommend extended ARV prophylaxis with either NVP or 3TC (BIII). Adherence support should always be provided during breastfeeding (Table 12) (AIII).
- Extended ARV prophylaxis during breastfeeding, when used, should ensure continuous prophylaxis through the postnatal period. Most experts recommend transitioning to NVP or 3TC after the completion of initial ZDV prophylaxis. However, either NVP or 3TC can be given from birth, replacing ZDV and providing both initial postnatal prophylaxis and extended prophylaxis during breastfeeding (BIII).
- Extended ARV prophylaxis during breastfeeding, when used, should continue until either 6 weeks after the last exposure to breast milk or 6 weeks after concerns about maternal virologic suppression have resolved—whichever occurs first (BIII).

Recommendations for Infant Antiretroviral Management When the Infant is Exposed to New Viremia

- Breastfeeding should be stopped temporarily or discontinued and replacement feeding initiated (see Situations to Consider Modifying or Stopping Breastfeeding in Preventing HIV Transmission During Infant Feeding) (AII). Most experts recommend permanent discontinuation of breastfeeding when HIV RNA is ≥ 200 copies/mL (CIII).
- An infant HIV NAT should be performed (AII) (see Diagnosis of HIV Infection in Infants and Children and Table 13. Recommended Virologic Testing Schedules for Infants With Perinatal and Breastfeeding Exposure to HIV for guidance about infant testing).
- **New viremia with HIV RNA ≥ 200 copies/mL:** If a maternal HIV RNA level ≥ 200 copies/mL (viremia) develops or there is presumed viremia (e.g., reports nonadherence to ARVs), the Panels recommend the initiation of a three-drug ARV regimen for the infant for 4–6 weeks (AII) (see Table 12 and Table 12.1).
- **New viremia with HIV RNA < 200 copies/mL:** When maternal viremia that is quantifiable but < 200 copies/mL develops, some Panel members recommend the initiation of a three-drug presumptive HIV therapy, other members recommend the initiation of single-drug ARV prophylaxis (NVP or 3TC), and others recommend infant ARV management based on repeat maternal HIV RNA testing (CII). The Panels did not reach consensus on management; consultation with an expert is suggested (see Table 12).

Infant ARV Management When Perinatal HIV Exposure is Related to a New Diagnosis of HIV During Breastfeeding

- Infants exposed to newly diagnosed maternal HIV infection during breastfeeding should be managed like infants at high risk of *in utero* or intrapartum HIV acquisition and receive a three-drug presumptive HIV therapy regimen for 2–6 weeks (see Table 12) and replacement feeding. If the duration of the three-drug regimen is shorter than 6 weeks, ZDV should be continued alone to complete a total of 6 weeks of prophylaxis (AII). See Diagnosis of HIV Infection in Infants and Children and Table 13. Recommended Virologic Testing Schedules for Infants With Perinatal and Breastfeeding Exposure to HIV for guidance about infant testing.

Providers with questions about ARV management of perinatal HIV exposure or exposure to HIV during breastfeeding should consult an expert in pediatric HIV infection or the [National Perinatal HIV Hotline](#) (1-888-448-8765), which provides free clinical consultation on all aspects of perinatal HIV, including newborn care (AIII).

Rating of Recommendations: A = Strong; B = Moderate; C = Optional

Rating of Evidence: I = One or more randomized trials with clinical outcomes and/or validated laboratory endpoints; II = One or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; III = Expert opinion

Special Considerations for Antiretroviral Therapy Use in Adolescents with HIV

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Panel's Recommendations
<ul style="list-style-type: none"> • All adolescents with HIV should receive maximally suppressive antiretroviral therapy (ART); this is urgent for those who are sexually active, considering pregnancy, or pregnant (AII). • ART regimen selection should include consideration of the adolescent's individual needs and preferences (AIII). See What to Start: Antiretroviral Treatment Regimens Recommended for Initial Therapy in Infants and Children With HIV and Management of Children Receiving Antiretroviral Therapy for more information. • All adolescents with HIV should be screened for mental health and substance use disorders (AII). • Reproductive and sexual health issues—including pregnancy intentions, contraceptive methods, safer sex techniques to prevent transmission of HIV and other sexually transmitted infections (STIs), regular STI screening, pre-exposure prophylaxis for partners, pregnancy planning, and preconception care—should be discussed regularly (AII). • Adolescents with HIV can use all available hormonal contraceptive methods (e.g., pill, patch, ring, injection, implant); however, providers should consider potential drug–drug interactions between hormonal contraceptives and antiretroviral medications that could affect contraceptive efficacy (AII*). See Table 3. Drug Interactions Between Antiretroviral Agents and Hormonal Contraceptives in the Perinatal Guidelines. • Pediatric and adolescent care providers should prepare adolescents for the transition into adult care settings (AIII).
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†] Studies that include children or children/adolescents, but not studies limited to postpubertal adolescents.</p>

Adherence to Antiretroviral Therapy in Children and Adolescents with HIV

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Panel's Recommendations
<ul style="list-style-type: none">• Strategies to maximize adherence should be discussed before and/or at initiation of antiretroviral therapy (ART) and before changing regimens (AIII).• Adherence to ART must be assessed and promoted at each visit, and strategies to maintain and/or improve adherence must be continually explored (AIII).• In addition to viral load monitoring, at least one other method of measuring adherence to ART should be used (AIII).• To facilitate adherence, simplified oral ART regimens (e.g., once daily, low pill burden) should be prescribed whenever feasible (AII*).• The option of long-acting injectable ART to facilitate and support adherence should be discussed with eligible children and adolescents and their caregivers (AIII).
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†] Studies that include children or children/adolescents, but not studies limited to postpubertal adolescents</p>

Management of Medication Toxicity or Intolerance

Updated: September 30, 2025

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Panel's Recommendations
<ul style="list-style-type: none">• In children with HIV who have severe or life-threatening toxicity (e.g., a hypersensitivity reaction), all antiretroviral (ARV) drugs should be stopped immediately (AIII). Once symptoms of toxicity have resolved, ARV therapy should be resumed with substitution of a different ARV drug or drugs for the offending agent(s) (AII*).• When modifying ARV therapy because of toxicity or intolerance to a specific drug in children with virologic suppression, changing one drug in a multidrug regimen is permissible; if possible, an agent with a different toxicity and adverse effect profile should be chosen (AI*).• The toxicity and the medication presumed responsible should be documented in the medical record of the patient, and the caregiver and patient should be advised of the drug-related toxicity (AIII).• In general, dose reduction is not a recommended option for management of ARV toxicity (AII*).
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†] Studies that include children or children/adolescents but not studies limited to postpubertal adolescents</p>

Management of Children Receiving Antiretroviral Therapy

Updated: September 30, 2025

Reviewed: September 30, 2025

Modifying Antiretroviral Regimens in Children with Sustained Virologic Suppression on Antiretroviral Therapy

Panel's Recommendations
<ul style="list-style-type: none">• Children who have sustained virologic suppression on their current antiretroviral (ARV) regimen should be evaluated regularly for opportunities to change to a new regimen that facilitates adherence, simplifies administration, increases ARV potency or barrier to drug resistance, and decreases the risk of drug-associated toxicity (AII).• Before changing a child's ARV regimen, clinicians must carefully consider the child's and caregiver's preferences, previous regimens, past episodes of ARV therapy failure, prior drug-resistance test results, drug cost, insurance coverage, and the child's ability to tolerate the new drug regimen (AIII). Archived drug resistance can limit the antiviral activity of a new drug regimen.• Children should be monitored carefully after a change in treatment. Viral load measurement is recommended 2 to 4 weeks after a change in a child's ARV regimen (BIII).
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†] Studies that include children or children/adolescents, but not studies limited to postpubertal adolescents</p>

Recognizing and Managing Antiretroviral Treatment Failure

Updated: September 30, 2025

Reviewed: September 30, 2025

Panel's Recommendations
<ul style="list-style-type: none">• The causes of antiretroviral (ARV) treatment failure—which include poor adherence, drug resistance, poor absorption of medications, inadequate dosing, and drug–drug interactions—should be assessed and addressed (AII).• Perform ARV drug-resistance testing when virologic failure occurs, while the child is still taking the failing regimen (AI*) (see Drug-Resistance Testing in the Adult and Adolescent Antiretroviral Guidelines for more information).• New ARV regimens should be chosen based on treatment history and drug-resistance testing, including both past and current resistance test results (AI*).<ul style="list-style-type: none">○ The new regimen should include preferably two or three fully active ARV medications; the assessment of anticipated ARV activity should be based on treatment history and past resistance test results (AI*).○ When using a new regimen with only two fully active ARV medications, at least one should have a high barrier to resistance (i.e., second-generation integrase strand transfer inhibitor [INSTI] or boosted protease inhibitor [PI]) (AI*). See the Therapeutic Options to Achieve Complete Virologic Suppression After Virologic Failure section below for recommended regimens, as some ARVs, such as zidovudine, are not recommended in this scenario.○ If two fully active ARV medications are not available, at least one fully active medication with high barrier to resistance (i.e., second-generation INSTI, boosted PI) should be used plus two partially active nucleos(t)ide reverse transcriptase inhibitors, (i.e., tenofovir disoproxil fumarate or tenofovir alafenamide with lamivudine (3TC) or emtricitabine; abacavir and 3TC). In this case, frequent viral load monitoring is recommended for early detection of virologic failure (BI).• The goal of therapy following treatment failure is to achieve and maintain virologic suppression, which is defined as a plasma viral load that is below the limits of detection as measured by highly sensitive assays with lower limits of quantification of 20 copies/mL to 75 copies/mL (AI*).• When complete virologic suppression cannot be achieved, the goals of therapy are to preserve or restore immunologic function (as measured by CD4 T lymphocyte cell values), prevent clinical disease progression, and prevent the development of additional drug resistance that could further limit future ARV drug options (AII).• Children who require evaluation and management of treatment failure should be managed by or in collaboration with a pediatric HIV specialist (AIII).
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†] Studies that include children or children/adolescents, but not studies limited to postpubertal adolescents</p>

Antiretroviral Treatment Interruption in Children with HIV

Updated: September 30, 2025

Reviewed: September 30, 2025

Panel's Recommendations
<ul style="list-style-type: none">• Outside the context of clinical trials, treatment interruptions of antiretroviral therapy (ART) are not recommended for children.• Treatment interruption is not recommended as a strategy in clinical settings to confirm diagnosis or to assess remission or cure (AII).• Families should receive education and counseling about common causes of temporary unplanned treatment interruptions and ways to prevent them (e.g., automatic refills, mailed prescriptions, planning for the adequate supply of medications when traveling). See Adherence to Antiretroviral Therapy in Children and Adolescents With HIV (BIII).• At times, ART may need to be interrupted or changed due to drug-related side effects or toxicity. See Management of Medication Toxicity or Intolerance for guidance (AIII).
<p>Rating of Recommendations: A = Strong; B = Moderate; C = Optional</p> <p>Rating of Evidence: I = One or more randomized trials in children[†] with clinical outcomes and/or validated endpoints; I* = One or more randomized trials in adults with clinical outcomes and/or validated laboratory endpoints with accompanying data in children[†] from one or more well-designed, nonrandomized trials or observational cohort studies with long-term clinical outcomes; II = One or more well-designed, nonrandomized trials or observational cohort studies in children[†] with long-term outcomes; II* = One or more well-designed, nonrandomized trials or observational studies in adults with long-term clinical outcomes with accompanying data in children[†] from one or more similar nonrandomized trials or cohort studies with clinical outcome data; III = Expert opinion</p> <p>[†] Studies that include children or children/adolescents, but not studies limited to postpubertal adolescents</p>