CONDITION

HIV/AIDS in pregnant women and infants

HIV in pregnancy or infancy is a lifelong viral infection that can pass from parent to baby but is usually preventable with treatment.

WHAT IT IS
HIV during pregnancy or infancy, sometimes progressing to AIDS

BODY SYSTEM
Immune system

MAIN SYMPTOMS
Often none, fever, swollen glands, poor infant growth

WHAT CAUSES IT
Infection with human immunodeficiency virus

HOW IT IS DIAGNOSED
Blood antigen, antibody, or viral genetic tests

MAIN TREATMENT
Antiretroviral medicines and specialist pregnancy or infant care

CAN IT BE CURED?
No - treatment controls but does not remove HIV

IS IT AN EMERGENCY?
Sometimes - breathing trouble, seizures, or extreme sleepiness

LONG-TERM OUTLOOK
Usually good with early, continuous treatment

Overview

Human immunodeficiency virus, or HIV, attacks the immune system. Without treatment, it can weaken the body's ability to fight infections and certain cancers. AIDS is the most advanced stage of HIV, not a separate infection.

A pregnant woman with HIV can pass the virus to her baby during pregnancy, labor, birth, or breastfeeding. This is called perinatal or vertical transmission. However, effective antiretroviral treatment can reduce the amount of HIV in the blood to very low levels. With appropriate treatment and care, transmission during pregnancy and birth can usually be prevented.

HIV does not stop most people from having a healthy pregnancy or raising a healthy child. Care normally involves an HIV specialist, an obstetric team, and a pediatric team. The plan may cover medicines, blood tests, the safest approach to birth, infant medication, feeding, and

follow-up testing.

An infant who acquires HIV needs early treatment. Without it, HIV can progress more quickly in infants than in adults because their immune systems are still developing.

Symptoms

Many pregnant women with HIV feel well and have no symptoms. HIV testing is therefore an important part of prenatal care.

Soon after acquiring HIV, some people develop a flu-like illness. Possible symptoms include fever, sore throat, rash, swollen glands, tiredness, muscle aches, or headache. These symptoms are not specific to HIV and may have many other causes.

Untreated HIV may gradually weaken the immune system. Later symptoms can include unexplained weight loss, repeated infections, persistent fever, night sweats, ongoing diarrhea, mouth infections, or unusual skin problems. Modern treatment usually prevents HIV from reaching this stage.

Infants with HIV may also have no obvious symptoms at first. When symptoms occur, they can include:

These signs do not confirm HIV. Testing is needed because many common childhood conditions can cause similar problems.

- Slow weight gain or growth
- Repeated or unusually severe infections
- Persistent diarrhea or oral thrush
- Swollen lymph nodes, liver, or spleen
- Delayed physical or developmental progress

Causes and risk factors

HIV is caused by infection with the human immunodeficiency virus. It spreads through certain body fluids, including blood, semen, vaginal fluids, rectal fluids, and breast milk.

During pregnancy, HIV can cross the placenta, although this is uncommon when treatment keeps the virus suppressed. Exposure can also happen during labor and birth or through breastfeeding.

The chance of transmission is strongly linked to the viral load, meaning the amount of HIV in

the blood. A detectable or high viral load near delivery raises the chance of transmission. Factors that can contribute include untreated HIV, a recent infection during pregnancy, difficulty taking medicines consistently, or HIV that is resistant to some medicines.

HIV is not spread through everyday contact. It does not pass through hugging, sharing food, using the same toilet, coughing, or mosquito bites.

A baby cannot inherit HIV through genes. The virus must be transmitted through exposure to infected body fluids.

Diagnosis

HIV screening is recommended early in pregnancy because symptoms cannot reliably show whether someone has HIV. Testing usually starts with a blood test that looks for HIV antibodies and part of the virus called the p24 antigen. A positive screening result is followed by tests that confirm the infection and identify the HIV type.

A nucleic acid test, or NAT, detects the virus's genetic material. It may be used when an infection is very recent, when initial results are unclear, or when urgent confirmation is needed.

If HIV is diagnosed during pregnancy, further blood tests measure the viral load and the number of CD4 cells. CD4 cells help coordinate immune defenses. These tests guide treatment and help the care team plan delivery and infant care. Resistance testing checks whether the virus is less responsive to certain medicines.

Standard antibody tests cannot reliably diagnose HIV in a young infant. Antibodies from the mother can remain in the baby's blood for many months, even when the baby does not have HIV. Infants exposed during pregnancy are therefore tested with a NAT that detects the virus itself.

Several tests are usually performed during the first months of life. A breastfed infant needs testing during exposure and after breastfeeding ends. The exact schedule reflects the baby's age, test results, feeding method, and level of exposure.

Treatment and management

Antiretroviral therapy, often called ART, uses a combination of medicines to stop HIV from making copies of itself. Treatment protects the pregnant woman's health and greatly reduces the chance of HIV reaching the baby.

ART is generally continued throughout pregnancy, labor, and after birth. If you already take HIV

medicines, the team will review them rather than asking you to stop treatment on your own. Some medicines have more pregnancy safety information than others, and resistance or drug interactions may affect the choice.

Regular viral load testing shows whether treatment is working. When the viral load is undetectable, laboratory tests cannot find enough virus to measure. This does not mean HIV has been cured, but it is a strong sign that treatment is controlling it.

The recommended approach to birth depends partly on the viral load close to delivery. Many people with a suppressed viral load can plan a vaginal birth. If HIV is not adequately suppressed, the obstetric team may discuss additional medicine during labor or a planned cesarean birth to reduce exposure.

Babies exposed to HIV receive antiretroviral medicine soon after birth. The medicine and length of treatment depend on the estimated transmission risk. A baby with confirmed HIV starts a full treatment combination as soon as possible and remains under specialist care.

Feeding guidance differs by country because access to safe water, formula, medical follow-up, and ART varies. Formula or screened donor milk removes the risk of HIV transmission through breastfeeding. Effective ART greatly lowers the risk from breastfeeding, but does not make it zero. If breastfeeding is being considered, discuss it early with the HIV and maternity teams so that testing, treatment, and feeding support can be planned without judgment.

Complications

Without effective treatment, HIV can damage the immune system and progress to AIDS. AIDS is diagnosed when immune damage is severe or when certain serious infections or cancers develop.

Possible concerns during pregnancy and infancy include:

Treatment and regular monitoring lower many of these risks. Blood tests may be used to check the liver, kidneys, blood cells, viral load, and immune function.

HIV can also affect emotional health. Fear of stigma, concerns about disclosure, and anxiety about the baby's results can be difficult. Confidential counseling, peer support, and practical help with taking medicines can form part of care.

- Transmission of HIV to the baby
- Opportunistic infections that take advantage of weak immunity
- Premature birth or low birth weight

- Medicine side effects or interactions
- Drug-resistant HIV when treatment does not fully suppress the virus
- Faster HIV progression in an untreated infant

Prevention

There is currently no vaccine that reliably prevents HIV, and an established HIV infection cannot be prevented or removed. Treatment can, however, prevent most transmission from a pregnant woman to her baby.

Key measures include early HIV testing, starting or continuing ART, taking medicines consistently, monitoring the viral load, giving preventive medicine to the newborn, and completing infant testing.

People without HIV who may be exposed can ask about pre-exposure prophylaxis, or PrEP. PrEP is medicine taken to reduce the chance of acquiring HIV and may be considered during pregnancy or breastfeeding. Condoms and avoiding shared injecting equipment also reduce exposure.

Post-exposure prophylaxis, or PEP, is a short course of emergency HIV prevention medicine after a possible exposure. It must be started promptly and is not a replacement for routine prevention.

Living with it and what to expect

HIV is a lifelong condition, but modern treatment allows many people to remain healthy for decades. Pregnancy does not usually cause HIV to progress when effective treatment continues.

During pregnancy, appointments and blood tests may be more frequent than usual. After birth, you will still need HIV care even after the baby's follow-up begins. Keeping the viral load suppressed protects your long-term health and helps prevent sexual transmission.

The baby may take medicine for a period after birth and have several blood tests. Waiting for final results can take months, especially if breastfeeding continues. Most babies who receive appropriate preventive care do not acquire HIV.

An infant diagnosed with HIV will need lifelong ART and specialist follow-up. Treatment may change as the child grows. Clinicians monitor growth, development, immune function, viral load, and possible medicine effects. With early and continuous treatment, many children grow

into adulthood, attend school, and take part in ordinary activities.

Missed doses can allow HIV to multiply and develop resistance. If taking medicine becomes difficult because of nausea, cost, privacy, housing, depression, or another problem, tell the care team rather than stopping it. Practical support or a different treatment plan may help.

When to get medical help

Arrange prompt, non-emergency medical advice if you are pregnant and have a positive HIV test, have stopped HIV medicine, are repeatedly missing doses, or think you recently had an HIV exposure. Early assessment allows treatment or preventive medicine to begin as soon as appropriate.

Contact the baby's medical team promptly if an HIV-exposed infant misses medicine, vomits repeated doses, develops persistent fever or diarrhea, feeds poorly, is not gaining weight, or misses a scheduled HIV test.

Seek emergency help for a pregnant woman or infant with:

Routine medication reviews, viral load tests, prenatal visits, and infant testing are important, but they are not emergencies.

- Severe trouble breathing
- A seizure
- Extreme sleepiness, confusion, or difficulty waking
- Blue, gray, or very pale lips or skin
- Signs of severe dehydration, such as very few wet diapers
- A severe allergic reaction with facial swelling or breathing difficulty

Common questions

Can a woman with HIV have an HIV-negative baby?

Yes. Effective ART, viral load monitoring, newborn medicine, and follow-up testing can reduce the chance of transmission to very low levels. No method removes every possibility, so the full care plan still matters.

Does an undetectable viral load mean my baby cannot get HIV?

An undetectable viral load makes transmission during pregnancy and birth extremely unlikely. It does not mean HIV is cured. Breastfeeding can still carry a small transmission risk even when

treatment is working.

Will my baby test positive because I have HIV?

A standard antibody test may be positive because your antibodies crossed the placenta. That does not prove the baby has HIV. Viral genetic tests are used to determine whether the infant acquired the virus.

Can I have a vaginal birth if I have HIV?

Many people can when ART has suppressed the viral load. If the viral load remains detectable near delivery, the team may recommend extra measures, which can include a planned cesarean birth.

Can I breastfeed if I have HIV?

The safest recommendation depends on where you live, access to safe alternatives, and whether your virus remains suppressed. Formula or screened donor milk prevents transmission through breast milk. ART lowers, but does not eliminate, the risk during breastfeeding.

Can HIV medicine harm the baby?

Antiretroviral medicines can have side effects, but untreated HIV creates much greater risks for both parent and baby. Pregnancy specialists choose medicines with established safety information and monitor for problems. Do not stop ART without medical advice.

Sources

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