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## **Education**

### **HIV and Children**

#### **What are HIV and AIDS?**

HIV stands for human immunodeficiency virus. HIV is the virus that causes AIDS (acquired immunodeficiency syndrome), a life-threatening disease.

HIV attacks the body's immune system. It destroys infection-fighting cells. When these cells are destroyed, the immune system can no longer defend the body against infections and cancers.

HIV infection becomes AIDS when you lose your ability to fight off serious infections or tumors. Various infections called opportunistic infections develop. They are called opportunistic because they take advantage of the weakened immune system. These infections would not normally cause severe or fatal health problems. However, when you have AIDS, the infections and tumors are serious and can be fatal.

Women who are pregnant and infected with HIV may infect their babies with the virus before or during birth. The baby can also get the virus from breast milk. Babies who are infected may become very sick and die.

Women should be tested for HIV at the first prenatal visit. Treatment can help prevent spread of the infection to the baby.

#### **What causes HIV?**

HIV is transmitted through direct contact with the blood or body fluid of someone who is infected with the virus. HIV can be passed to an unborn baby through the placenta, by exposure to blood and body fluids during labor and at delivery, or through breast-feeding.

Among teens, the virus is most commonly spread through:

- unprotected sexual activity
- shared needles
- contact with infected blood or semen
- transfusion with infected blood (now rare in the US because of current screening tests).

HIV is not spread through:

- casual contact, such as hugs or handshakes
- dishes or drinking glasses
- sneezes or coughs
- mosquitoes or other insects
- towels
- toilet seats
- doorknobs
- typical baby secretions (urine, drool, spit up, vomit, feces).

#### **What are the symptoms?**

A baby born with HIV often has no signs of HIV infection at birth. When babies are 2 to 3 months old, they may start

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having problems such as:

- poor weight gain
- yeast infections that can cause constant diaper rash and infections in the mouth and throat that make eating difficult
- enlarged lymph nodes
- swollen bellies
- neurological problems (seizures, slower to walk and talk than other children their age)
- many bacterial infections, such as pneumonia.

A child with HIV tends to get more infections, and get sicker than other children from common childhood infections such as the flu.

Teens who get HIV may not have symptoms at the time of infection. It may take years for symptoms to show. During this time, they can pass on the virus without even knowing they have it. Symptoms of AIDS may include:

- fever that lasts from a few days to longer than a month
- loss of appetite and rapid weight loss
- intense fatigue
- swollen lymph nodes
- diarrhea, especially if it lasts longer than a month
- repeated, severe yeast infections in the mouth or vagina despite treatment
- night sweats
- pneumonia.

### **How is it diagnosed?**

Every pregnant woman should be tested for HIV. If you are pregnant and have tested positively for HIV, your health care provider will probably prescribe HIV-fighting drugs to help prevent spread of the virus to the baby.

If a woman is HIV-infected and already has children, all of her children should be tested for HIV.

The baby will be tested for HIV antibodies after birth. However, because some of the mother's antibodies to HIV may be passed on to the baby, the test results are not always completely accurate. Babies may be HIV-antibody positive for up to 18 months after birth, even if they are not actually infected. Infants start to make their own HIV antibodies after 18 months of age.

The most accurate way to check for HIV in babies is to check for the virus itself (not antibodies). This can be done with an HIV viral culture and a blood test called an HIV DNA PCR.

Older children and teens are tested for HIV infection by a blood test known as an ELISA test. If this test is positive, another more specific blood test, usually the Western blot test, is done to confirm the results.

### **How is it treated?**

Having a cesarean section (C-section) instead of a vaginal delivery reduces the risk of infecting the baby. Taking antiviral medicine during pregnancy and having a C-section greatly reduces the mother's risk of passing on the infection.

Babies born to HIV-infected mothers may be treated with antiviral drugs for at least the first 6 weeks of life to help prevent infection. Mothers with HIV should not breast-feed their babies. Giving formula instead of breast milk helps prevent spread of the virus to the baby.

Anti-HIV drugs are used to treat HIV in babies and children. These include antiviral medicines, such as zidovudine (ZDV or AZT), didanosine (ddI), and lamivudine (3TC), and protease inhibitors, such as indinavir (Crixivan), lopinavir/ritonavir (Kaletra), ritonavir (Norvir), saquinavir (Fortovase), and nelfinavir (Viracept).

The doses of anti-HIV drugs that babies and children receive are different to those given to adults. The dose may increase as children grow. Babies and children's bodies process drugs more quickly than adults. Children might also need to take larger doses of a drug than an adult. Children may also need drugs such as antibiotics to prevent other kinds of infections.

Children will need to visit their health care providers often for blood tests and physical exams. Some immunizations may be different for infants or children with HIV/AIDS. Children whose immune systems are very weak will not receive live virus vaccines such as measles-mumps-rubella, varicella (chickenpox), and rotavirus.

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To work properly, anti-HIV drugs need to be taken at the right time and in the right way. This can be hard for children. Kids may not want to take bad-tasting medicines, or may not want to take medicines in front of other people. Talking with health care providers and support groups can help.

For more information, call the National Pediatric AIDS Network at 800-646-1001 or visit their Web site at <http://www.npan.org/>.

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