



Beginning HIV Treatment

Despite extensive research, there is still no cure for human immunodeficiency virus (HIV). However, with good medical care, your child can probably remain healthy for a long time. He or she can lead a productive life, attending school or holding a job. Children who maintain a close relationship with their doctor and who have strong support from family and friends have a very good chance at achieving and maintaining a healthy lifestyle.

Your child will probably need to take antiretroviral medicines at some point to control the progression of his or her HIV infection. Unfortunately, these medications can be difficult to use and have significant side effects. Your child will need to visit his or her HIV specialist every one to three months for a check-up. Your child may need to visit the doctor more often when starting new medicines or making any medication changes.

Without treatment, the virus will continue to multiply and weaken your child's immune system. Once his or her immune system is weakened to a certain critical point, your child becomes more likely to develop life-threatening infections.

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The decision to start your child on HIV medicine requires thought and commitment by you and your child's doctor. If your child is old enough, his or her wishes factor into the decision, too.

If your child is less than 1 year old, he or she will need treatment as soon as he or she is diagnosed with HIV. Babies have immature immune systems, so they have a much greater risk of developing life-threatening illnesses. Infants also have much higher viral loads and poor control of the HIV in their body. They often require treatment with three medications and very frequent monitoring by the doctor.

Sometimes children are diagnosed with HIV when they are older – preschoolers or school-aged or even in their teens. They may have had HIV since birth, but their mother's HIV infection was not recognized because she was not screened before giving birth. Often a mother's HIV infection is not diagnosed until her child becomes ill and is diagnosed with HIV.

Some older children and teenagers become infected after birth. They may not be diagnosed until they have been HIV-positive for a while. In these children, the decision to begin medications is based on many factors.

How the HIV Program at Riley at IU Health Treats HIV

Treatment with antiretroviral medications is called highly activated antiretroviral therapy (HAART). HAART attacks HIV aggressively in different ways at the same time by using combinations of two to seven medications. Each medicine works differently in controlling HIV. We rarely recommend taking only one antiretroviral medication at a time.

Compliance With Medications

Once you and your child's doctor decide to treat your child, it is critical that your child **take every dose of every medicine at the scheduled time**. Strict compliance is absolutely necessary to maintain the effectiveness of the medications and your child's long-term health.



Skipping doses of medication can cause the virus to become resistant to medication. When the virus becomes resistant, the medicines will no longer control the progress of the HIV infection. Your child's immune system will be weakened and eventually destroyed.

When the virus is exposed to medications in a stop-start fashion (by not adhering to the medication schedule), it can change in ways that make it able to resist the medications. A change can also happen if the virus is exposed to one medicine at a time.

Resistance to one medicine may result in resistance to other medicines – even some your child has never taken before. This is called cross-resistance. Cross-resistance limits the medication options available for future treatment.

To help you and your child learn how to stay compliant, we try to start with effective medications that:

- Do not taste too bad
- Fit into busy schedules
- Have the fewest side effects

We encourage you to call for information and support at any time. We particularly want you to call us with any concerns during the first few weeks of medication therapy. This is when side effects can be worst.

Compliance With Clinic Visits

It is also very important to keep all scheduled appointments with your child's doctor. These appointments allow the doctor and your child's care team to see how effective the medicines are in fighting your child's infection. We monitor side effects and your medication compliance as well.

Your family is part of your child's care team. We want to be able to discuss your concerns and answer your questions openly as you work to maintain a healthy lifestyle for your child.

What happens during therapy?

Once your child starts taking HIV medicines, we will draw blood every three to four weeks. This helps us monitor the effectiveness of the medicines and their side effects on your child's organs.

The maximum effect of the medications on viral load generally happens after eight to 16 weeks of therapy. The goal is to reach an undetectable level of virus, but this is achieved in only about half of the children we treat. The other half may not reach the undetectable level but may have their HIV viral load decreased to a point where it does not weaken their immune systems as quickly.

It is important to remember that an undetectable viral load does not mean your child no longer has HIV. Viral load levels can go up and down slightly from one measurement to the next. Your child's viral load may not decrease with medicines, or it may decrease for a period of time but then go back up to very high levels. If this happens, we will try to determine why.

There are generally four reasons why viral load increases:

- Another illness or infection



- Immunizations
- Not taking the medications
- Resistance of the virus

CD4 levels may respond more slowly than viral load levels. Even if the medicines are effective, it may take months or even years for your child's CD4 count to increase to higher levels.

Medications Can Lose Their Effectiveness

Noncompliance will cause medicines to lose their effectiveness, but there can be other causes as well. Other medications may interfere with antiretrovirals and change the way they work in your child's body. When this happens, we may need to adjust the dose of HIV medications your child is taking. It is important to tell your child's care team about any other medication your child takes regularly, including over-the-counter (OTC) medicines.

If another doctor or other healthcare provider gives your child a prescription or an OTC medication, tell your child's care team before your child starts taking the medication. That way, we can tell you whether the medication will interact with the antiretrovirals your child is taking and adjust medications if necessary.