

HIV and AIDS: Are You at Risk?



What is HIV and how can I get it?

HIV - the **human immunodeficiency virus** - is a virus that kills your body's "CD4 cells." CD4 cells (also called T-helper cells) help your body fight off infection and disease. HIV can be passed from person to person if someone with HIV infection has sex with or shares drug injection needles with another person. It also can be passed from a mother to her baby when she is pregnant, when she delivers the baby, or if she breast-feeds her baby.

What is AIDS?

AIDS - the **acquired immunodeficiency syndrome** - is a disease you get when HIV destroys your body's immune system. Normally, your immune system helps you fight off illness. When your immune system fails you can become very sick and can die. A diagnosis of AIDS is made by a physician using specific clinical or laboratory standards.

What are the AIDS-defining conditions?

In December 1992, the Centers for Disease Control and Prevention (CDC) published the most current list of AIDS-defining conditions². The AIDS-defining conditions are:

- Candidiasis
- Cervical cancer (invasive)
- Coccidioidomycosis, Cryptococcosis, Cryptosporidiosis
- Cytomegalovirus disease
- Encephalopathy (HIV-related)
- Herpes simplex (severe infection)
- Histoplasmosis
- Isosporiasis
- Kaposi's sarcoma
- Lymphoma (certain types)
- Mycobacterium avium complex
- Pneumocystis carinii pneumonia
- Pneumonia (recurrent)

- Progressive multifocal leukoencephalopathy
- Salmonella septicemia (recurrent)
- Toxoplasmosis of the brain
- Tuberculosis
- Wasting syndrome

People who are not infected with HIV may also develop these diseases; this does not mean they have AIDS. To be diagnosed with AIDS, a person must be infected with HIV.

What is the difference between HIV and AIDS?

When HIV enters your body, it infects your "CD4 cells" and kills them. CD4 cells (sometimes called T-helper cells) help your body fight off infection and disease. Usually, CD4 cell counts in someone with a healthy immune system range from 500 to 1800. When you lose CD4 cells, your immune system breaks down and you can't fight infections and diseases as well. When your CD4 cell count goes under 200, doctors say you have AIDS. Doctors also say you have AIDS if you have HIV and certain diseases, such as tuberculosis or Pneumocystis carinii [NEW-mo-SIS-tis CA-RIN-nee-eye] pneumonia (PCP), even if your CD4 cell count is over 200.

What do I need to know about HIV?



The first cases of AIDS were identified in the United States in 1981, but AIDS most likely existed here and in other parts of the world for many years before that time. In 1984 scientists proved that HIV causes AIDS. Anyone can get HIV.

The most important thing to know is how you can get the virus.

You can get HIV:

- By having unprotected sex- sex without a condom- with someone who has HIV. The virus can be in an infected person's blood, semen, or vaginal secretions and can enter your body through tiny cuts or sores in your skin, or in the lining of your vagina, penis, rectum, or mouth.
- By sharing a needle and syringe to inject drugs or sharing drug equipment used to prepare drugs for injection with someone who has HIV.
- From a blood transfusion or blood clotting factor that you got before 1985. (But today it is unlikely you could get infected that way because all blood in the United States has been tested for HIV since 1985.)
- Babies born to women with HIV also can become infected during pregnancy, birth, or breast-feeding.



You cannot get HIV:

- By working with or being around someone who has HIV.
- From sweat, spit, tears, clothes, drinking fountains, phones, toilet seats, or through everyday things like sharing a meal.
- From insect bites or stings.
- From donating blood.
- From a closed-mouth kiss (but there is a very small chance of getting it from open-mouthed or "French" kissing with an infected person because of possible blood contact).

How can I protect myself?

- The surest way to avoid transmission of sexually transmitted diseases is to abstain from

sexual intercourse, or to be in a long-term mutually monogamous relationship with a partner who has been tested and you know is uninfected.

- Don't share needles and syringes used to inject drugs, steroids, vitamins, or for tattooing or body piercing. Also, don't share equipment ("works") used to prepare drugs to be injected. Many people have been infected with HIV, hepatitis, and other germs this way. Germs from an infected person can stay in a needle and then be injected directly into the next person who uses the needle.
- Don't share razors or toothbrushes because of the possibility of contact with blood.
- If you are pregnant or think you might be soon, talk to a doctor or your local health department about being tested for HIV. Drug treatments are available to help you and reduce the chance of passing HIV to your baby if you have it.

Effectiveness of Condoms

Condoms are classified as medical devices and are regulated by the Food and Drug Administration (FDA). Condom manufacturers in the United States test each latex condom for defects, including holes, before it is packaged. The proper and consistent use of latex or polyurethane (a type of plastic) condoms when engaging in sexual intercourse--vaginal, anal, or oral--can greatly reduce a person's risk of acquiring or transmitting sexually transmitted diseases, including HIV infection. There are many different types and brands of condoms available--however, only latex or polyurethane condoms provide a highly effective mechanical barrier to HIV. In laboratories, viruses occasionally have been shown to pass through natural membrane ("skin" or lambskin) condoms, which may contain natural pores and are therefore not recommended for disease prevention (they are documented to be effective for contraception). Women may wish to consider using the female condom when a male condom cannot be used.

For condoms to provide maximum protection, they must be used *consistently* (every time) and *correctly*. Several studies of correct and consistent condom use clearly show that latex condom breakage rates in this country are less than 2 percent. Even when condoms do break, one study showed that more than half of such breaks occurred prior to ejaculation. When condoms are used reliably, they have been shown to prevent pregnancy up to 98 percent of the time among couples using them as their only method of contraception. Similarly, numerous studies among sexually active people have demonstrated that a properly used latex condom provides a high degree of protection against a variety of sexually transmitted diseases, including HIV infection.

How do I know if I have HIV or AIDS?



You might have HIV and still feel perfectly healthy. **The only way to know for sure if you are infected or not is to be tested.** Talk with a knowledgeable health care provider or counselor both before and after you are tested. You can go to your doctor or health department for testing or buy a home collection kit (for testing for HIV antibodies) at many pharmacies. To find out where to go in your area for HIV counseling and testing, call your local health department or the CDC National AIDS Hotline, at **1-800-342-AIDS**

(2437).

In Denver:

Denver AIDS Prevention
605 Bannock Street, Room 161
Denver, CO 80204
303-436-7221

In Lakewood:

Jefferson County Health Department

260 South Kipling Street
Lakewood, CO 80226
303-239-7036

Your doctor or health care provider can give you a confidential HIV test. The information on your HIV test and test results are confidential, just as your other medical information. This means it can be shared only with people authorized to see your medical records. You can ask your doctor, health care provider, or HIV counselor at the place you are tested to explain who can obtain this information. For example, you may want to ask whether your insurance company could find out your HIV status if you make a claim for health insurance benefits or apply for life insurance or disability insurance.

In many states, you can be tested anonymously. These tests are usually given at special places known as anonymous testing sites. When you get an anonymous HIV test, the testing site records only a number or code with the test result, not your name. A counselor gives you this number at the time your blood, saliva, or urine is taken for the test, then you return to the testing site (or perhaps call the testing site, for example with home collection kits) and give them your number or code to learn the results of your test.

You are more likely to test positive for (be infected with) HIV if you:

- Have ever shared injection drug needles and syringes or "works."
- Have ever had sex without a condom with someone who had HIV.
- Have ever had a sexually transmitted disease, like chlamydia or gonorrhea.
- Received a blood transfusion or a blood clotting factor between 1978 and 1985.
- Have ever had sex with someone who has done any of those things

Testing Positive and Living with HIV/AIDS

A positive HIV test result means that you are infected with HIV (Human Immunodeficiency Virus), the virus that causes AIDS (Acquired Immune Deficiency Syndrome). Being infected with HIV does not mean that you have AIDS right now. However, if left untreated, HIV infection damages a person's immune system and can progress to AIDS. Although HIV is a very serious infection, many people with HIV and AIDS are living longer, healthier lives today, thanks to new and effective treatments. It is very important to make sure you have a doctor who knows how to treat HIV. If you don't know which doctor to use, talk with a health care professional or trained HIV counselor. If you are pregnant or are planning to become pregnant, this is especially important.

What kind of doctor do I need?

Your doctor (or other healthcare provider) should be experienced in treating HIV and AIDS. You may want to see an infectious disease specialist. You will need to work closely with your doctor to make informed decisions about your treatment, so it is important to find a doctor with whom you are comfortable.

What can I expect at the doctor's office?

Your doctor will ask you questions about your health, do a physical exam, and order blood tests. This is a good time to ask your doctor questions. Write down any questions you have and take them with you to your appointment. Women should have a pregnancy test and a gynecologic examination with Pap smear.

What questions should I ask my doctor?

You should ask your doctor about:

- Risks and benefits of HIV treatment
- Other diseases you may be at risk for
- How your lifestyle will change with HIV infection
- How you can avoid transmitting HIV to others

What tests will my doctor order?

It is very important to have a CD4 count and a viral load test done at your first doctor's visit. The results will provide a baseline measurement for future tests.

- *CD4 count* – CD4 cells, also called CD4⁺ T cells, are a type of white blood cell that fights infection. HIV destroys CD4 cells, weakening your body's immune system. A CD4 count is the number of CD4 cells in a sample of blood.
- *Viral load test* – A viral load test measures the amount of HIV in a sample of blood. This test shows how well your immune system is controlling the virus.

The two viral load tests commonly used for HIV are:

- HIV RNA amplification (RT-PCR) test
- Branched chain DNA (bDNA) test

To ensure accurate results, viral load testing should be done at two different times, by the same laboratory, using the same type of test. The results of different types of tests may differ.

Your doctor may also order:

- Complete blood count
- Blood chemistry profile (including liver function tests)
- Tests for other sexually transmitted diseases (STDs)

Tests for other infections, such as hepatitis, tuberculosis, or toxoplasmosis

Do I need to take anti-HIV medications?

You do not necessarily need to take anti-HIV (also called antiretroviral) medications just because you are HIV positive. You and your doctor will determine the best time to start treatment. When to take anti-HIV medications depends on your overall health, the amount of virus in your blood (viral load), and how well your immune system is working.

Am I ready to begin HIV treatment?

Once you begin taking anti-HIV medications, you may need to continue taking them for the rest of your life. Deciding when or if to begin treatment depends on your health and your readiness to follow a treatment regimen that may be complicated. You and your doctor should discuss your readiness to begin treatment as well as strategies to make your treatment work for you.

If my doctor and I decide to delay treatment, will I need to have my CD4 count and viral load tested again?

Yes. HIV infected people who have not started drug therapy should have a viral load test every 3 to 4

months and a CD4 count every 3 to 6 months. You and your doctor will use the test results to monitor your infection and to decide when to start treatment.

How will I know when to start anti-HIV medications?

You and your doctor should consider three factors in deciding when to start treatment: 1) symptoms of advanced HIV disease, 2) viral load, and 3) CD4 count.

You should start treatment if:

- you are experiencing severe symptoms of HIV infection or have been diagnosed with AIDS
- your viral load is 55,000 copies/mL or more
- your CD4 count is 200 cells/mm³ or less

You may also consider starting treatment if your CD4 count is between 200 and 350 cells/mm³; this is something you should discuss with your doctor.

There also are other things you can do for yourself to stay healthy. Here are a few:

- Follow your doctor's instructions. Keep your appointments. Your doctor may prescribe medicine for you. Take the medicine just the way he or she tells you to because taking only some of your medicine gives your HIV infection more chance to grow.
- Get immunizations (shots) to prevent infections such as pneumonia and flu. Your doctor will tell you when to get these shots.
- If you smoke or if you use drugs not prescribed by your doctor, quit.
- Eat healthy foods. This will help keep you strong, keep your energy and weight up, and help your body protect itself.
- Exercise regularly to stay strong and fit.
- Get enough sleep and rest.

If the anti-HIV medications can help me stay healthy, why wait to start treatment?

Once you begin treatment, you may need to continue taking anti-HIV medications for the rest of your life. Although newer anti-HIV medications are easier to take, starting treatment usually means a significant adjustment in your lifestyle. Some anti-HIV medications need to be taken several times a day at specific times and may require a change in meals and mealtimes.

In addition to their desired effects, anti-HIV medications may have negative side effects, some of which are serious. If the virus is not suppressed completely, drug resistance can develop. Side effects and drug resistance may limit your future treatment choices.

What treatment is right for me?

There are 20 anti-HIV medications approved by the U.S. Food and Drug Administration (FDA) for adults and adolescents. The U.S. Department of Health and Human Services (DHHS) provides HIV treatment guidelines to doctors and patients. These guidelines recommend that you take a combination of three or more medications in a regimen called **Highly Active Antiretroviral Therapy (HAART)**. The guidelines list "preferred" HAART regimens. However, your regimen should be tailored to your needs. Factors to consider in selecting a treatment regimen include:

- number of pills
- how often the pills must be taken

- if pills can be taken with or without food
- how the medications interact with one another
- other medications you take
- other diseases or conditions
- pregnancy

What are some of the negative side effects?

You may experience negative side effects (drug toxicity) when you take HIV drugs. Some of these side effects are serious, even life-threatening; you may have to change drugs due to intolerable side effects. You and your doctor or pharmacist should discuss the side effects of each medication.

Possible side effects include:

- liver problems
- diabetes
- abnormal fat distribution (lipodystrophy syndrome)
- high cholesterol
- increased bleeding in patients with hemophilia
- decreased bone density
- skin rash
- pancreatitis (inflammation of the pancreas)
- nerve problems

Side effects that may seem minor, such as fever, nausea, and fatigue, can mean there are serious problems. Always discuss any side effects you are having with your doctor.

How will I know if my HIV treatment regimen is working?

In general, viral load is the most important indicator of how well your regimen is working. Your viral load should decrease if your medications are effective. Other factors that can tell you and your doctor how well your regimen is working are:

- Your CD4 count. This should remain stable or go up if your drugs are working.
- Your recent health and results of physical examinations. Your treatment regimen should help keep you healthy.

How often should I have a viral load test?

Your viral load should be tested 2 to 8 weeks after you start treatment, then every 3 to 4 months throughout treatment to make sure your drugs are still working. HIV treatment should reduce your viral load to the point at which it is undetectable. An undetectable viral load does not mean that your HIV infection is gone; it simply means that the test is not sensitive enough to detect the small amount of HIV left in your blood.

If your viral load is still detectable within 4 to 6 months after starting treatment, you and your doctor should discuss how well you have adhered to your regimen. Missing medication doses is the most common reason for treatment failure and development of drug resistance. Your doctor should do a drug resistance test, which will determine if the HIV in your body has mutated into a strain that your current treatment regimen can't control.

How fast or how much your viral load decreases depends on factors other than your treatment regimen. These factors include your baseline viral load and CD4 count, whether you have taken HIV drugs before, whether you have HIV-related medical conditions, and how closely you have followed (adhered to) your treatment. Talk with your doctor if you are concerned about the results of your viral

load tests.

My doctor wants to change my treatment regimen. Why?

There are several reasons why you may need to change your treatment regimen. Two of the most important reasons are *drug toxicity* and *regimen failure*.

Drug toxicity means that your treatment regimen creates side effects that make it difficult for you to take the drugs. *Regimen failure* means that the drugs are not working well enough.

Ask your doctor to explain why you need to change your treatment. If the reason is drug toxicity, your doctor may change one or more of the drugs in your regimen. If the reason is regimen failure, your doctor should change all of your drugs to medications that you have never taken before. If you have been taking three drugs and all three drugs cannot be changed, at least two drugs should be changed. Using new drugs will reduce the risk of drug resistance.

What is regimen failure?

Regimen failure occurs when the anti-HIV medications you are taking do not adequately control the infection. Factors that may cause regimen failure include:

- Poor health before starting the treatment regimen
- Poor adherence to the regimen (not taking medications exactly as instructed by your doctor, including missed doses)
- Previous anti-HIV treatment and/or drug resistance
- Alcohol or drug abuse
- Medication side effects, medication toxicity, or interactions with other medications
- Medication poorly absorbed by the body
- Medical conditions or illnesses other than HIV infection

What are the three types of regimen failure?

1. **Virologic failure:** Regimens should lower the amount of HIV in your blood to undetectable levels. Virologic failure has occurred if HIV can still be detected in the blood 48 weeks after starting treatment, or if it is detected again after treatment had previously lowered your viral load to undetectable.
2. **Immunologic failure:** An effective regimen should increase the number of CD4 cells in your blood or at least prevent the number from going down. Immunologic failure has occurred if your CD4 count decreases below a baseline count or does not increase above the baseline count within your first year of therapy.
3. **Clinical failure:** Clinical failure has occurred if you experience an HIV-related infection or a decline in physical health despite at least 3 months of anti-HIV treatment.

Virologic failure is the most common kind of regimen failure. People with virologic failure who do not change to an effective drug regimen usually progress to immunologic failure within about 3 years. Immunologic failure may be followed by clinical failure.

What happens if my regimen fails?

If your treatment regimen fails, your doctor will evaluate your treatment history, medication side effects, problems you may have had with taking the medications as directed, your physical condition, and results of drug resistance testing to determine why your regimen is failing. You and your doctor

may then select a new drug regimen to better control your infection.

Resources for people living with HIV/AIDS in the Denver Metro Area

There are several organizations in the Denver Metro Area that can help people living with HIV/AIDS with basic services. To view the organizations currently funded through the Mayor's Office of HIV Resources to provide services for people living with HIV/AIDS, please [click here](#)

How can I find out more about HIV and AIDS?

For more information about living with HIV or AIDS, call:

CDC National AIDS Hotline

English	(800) 342-AIDS(2437) (24 hours/day)
Spanish	(800) 344-SIDA(7432) (8 am - 2 am EST al día) (including STDS)
TTY	(800) 243-7889 (Deaf and Hard of Hearing) (Monday -Friday/10 am-10 pm EST)