

Crown Pharmacy
Specializing in providing world class
HIV pharmaceutical care



LIVE A
LONG AND
HEALTHY
LIFE

What is HIV?

HIV stands for human immunodeficiency virus. It is the virus that can lead to acquired immunodeficiency syndrome or AIDS if not treated. Unlike some other viruses, the human body can't get rid of HIV completely, even with treatment. So once you get HIV, you have it for life.

HIV attacks the body's immune system, specifically the CD4 cells (T cells), which help the immune system fight off infections. Untreated, HIV reduces the number of CD4 cells (T cells) in the body, making the person more likely to get other infections or infection-related cancers. Over time, HIV can destroy so many of these cells that the body can't fight off infections and disease. These opportunistic infections or cancers take advantage of a very weak immune system and signal that the person has AIDS, the last stage of HIV infection.

No effective cure currently exists, but with proper medical care, HIV can be controlled. The medicine used to treat HIV is called antiretroviral therapy or ART. If taken the right way, every day, this medicine can dramatically prolong the lives of many people infected with HIV, keep them healthy, and greatly lower their chance of infecting others. Before the introduction of ART in the mid-1990s, people with HIV could progress to AIDS in just a few years. Today, someone diagnosed with HIV and treated before the disease is far advanced can live nearly as long as someone who does not have HIV.

Living With HIV

Today, an estimated 1.2 million people are living with HIV in the United States. Thanks to better treatments, people with HIV are now living longer and with a better quality of life—than ever before. If you are living with HIV, it's important to make choices that keep you healthy and protect others.

Stay healthy.

You should start medical care and begin HIV treatment as soon as you are diagnosed with HIV. Taking medicine to treat HIV, called antiretroviral therapy or ART, is recommended for all people with HIV. Taking medicine to treat HIV slows the progression of HIV and helps protect your immune system. The medicine can keep you healthy for many years and greatly reduces your chance of transmitting HIV to sex partners if taken the right way, every day.

If you're taking medicine to treat HIV, visit your health care provider regularly and always take your medicine as directed to keep your viral load (the amount of HIV in the blood and elsewhere in the body) as low as possible.

Visit [HIV Treatment Works](#) to find information on getting in care and staying in care if you have HIV.

Do tell.



It's important to disclose your HIV status to your sex and needle-sharing partners even if you are uncomfortable doing it. Communicating with each other about your HIV status allows you and your partner to take steps to keep both of you healthy.

Many resources can help you learn ways to disclose your status to your partners. For tips on how to start the conversation with your partner, check out CDC's [Let's Stop HIV Together](#) and [Start Talking](#) campaigns.

Also, ask your health department about free [partner notification services](#). Health department staff can help find your sex or needle-sharing partners to let them know they may have been exposed to HIV and provide them with testing, counseling, and referrals for other services. These partner notification services will not reveal your name unless you want to work with them to tell your partners.

Many states have [laws](#) that require you to tell your sexual partners if you're HIV-positive before you have sex (anal, vaginal, or oral) or tell your needle-sharing partners before you share drugs or needles to inject drugs. In some states, you can be charged with a crime if you don't tell your partner your HIV status, even if your partner doesn't become infected.

Get support.

Receiving a diagnosis of HIV can be a life-changing event. People can feel many emotions—sadness, hopelessness, and even anger. Allied health care providers and social service providers, often available at your health care provider’s office, will have the tools to help you work through the early stages of your diagnosis and begin to manage your HIV.

Talking to others who have HIV may also be helpful. Find a local HIV support group. Learn about how other people living with HIV have handled their diagnosis.

You can view stories and testimonials of how people are living well with HIV on the websites for [Let’s Stop HIV Together](#) and [HIV Treatment Works](#). You can also find many other resources on HIV Treatment Works for people living with HIV.

Reduce the risk to others.



HIV is spread through certain body fluids from an HIV-infected person: blood, semen (cum), pre-seminal fluid (pre-cum), rectal fluids, vaginal fluids, and breast milk. In the United States, HIV is most often [transmitted](#) by having anal or vaginal sex with someone who has HIV without using a condom or taking medicines to prevent or treat HIV. In addition, a mother can pass HIV to her baby during pregnancy, during labor, through breastfeeding, or by pre-chewing her baby's food.

The higher your viral load, the more likely you are to transmit HIV to others. When your viral load is very low (called viral suppression, with less than 200 copies per milliliter of blood) or undetectable (about 40 copies per milliliter of blood), your chance of transmitting HIV is greatly reduced. However, this is true only if you can stay virally suppressed. One thing that can increase viral load is not taking HIV medicines the right way, every day. You can also protect your partners by [getting tested](#) and treated for other STDs. If you have both HIV and some other STD with sores, like syphilis, your risk of transmitting HIV can be about 3 times as high as if you didn't have any STD with sores.

[Taking other actions](#), like using a condom the right way every time you have sex or having your partners take daily medicine to prevent HIV (called [pre-exposure prophylaxis or PrEP](#)) can lower your chances of transmitting HIV even more. [Learn](#) the right way to use a male condom.

[Read more about medicines \(antiretroviral treatments\)](#) for people living with HIV.

[Read more on HIV and opportunistic infections](#) (infections that are more frequent or more severe because of immunosuppression in HIV-infected persons).

Treatment = Restore + lower + lead

Even though there is no cure to HIV/AIDS yet, however treatment can help in three ways:

- 1) RESTORE immune system**
- 2) LOWER the chance of passing HIV to others**
- 3) LEAD a long and healthy life.**

HELP STOP THE DAMAGE

HIV damages your immune system by raising your **viral load** and lowering your **CD4 count**.

The damage to your immune system can cause inflammation.

Inflammation is your body's normal response when you get sick or injured. Inflammation stops when you get well or when the injury heals.

But when you have HIV, the inflammation continues. Left untreated, inflammation can cause heart, liver, and kidney diseases, and early aging.

That is why starting HIV treatment is so important.

The damage to your immune system can also lead to infections, cancer, and AIDS. But it does not have to happen.

There is no cure for HIV. But treatment reduces inflammation and the harm HIV does to the immune system.

A LOT HAS CHANGED ABOUT HIV TREATMENT



Concerns about treatment? Well, HIV medicines have improved.

- **More effective and easier to take**
- **Most are between one and three pills per day**
- **Side effects are fewer and less severe**

When to start: A low CD4 count was once the signal that it was time to start HIV treatment. Today, the **U.S. DHHS** recommends starting treatment early, no matter what your CD4 count is. Still, it is a good idea to share any concerns with a healthcare provider before starting treatment.

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Treatment helps lower your viral load.

A lower viral load means you can:

- **Preserve** and restore your immune system
- **Fight** infections and cancers
- **Stop** the virus before it leads to AIDS

MOST IMPORTANT:

Treatment means you are taking care of your health.

And makes it possible to live as long as someone without HIV.

TREATMENT AS PREVENTION

Staying on treatment and being undetectable means there is less virus in your body to pass on. It is called Treatment as Prevention, or TasP. TasP can help lower the chance of spreading HIV by 96%. That means 96 times out of a hundred. That's a lot. But it is not 100%. So keep using condoms and safer sex to protect yourself and the people you care about.

Adherence and Resistance- Frequently Asked Questions

What is Adherence and How Much Is Enough?

Adherence is when you take your HIV medication correctly at the same time every day as instructed by your healthcare provider and pharmacist. If you do not take your HIV medication correctly, as instructed by your doctor and pharmacist, the HIV virus may multiply out of control. Studies have found that for the best viral load results (the goal should be undetectable), people have to take over 90% of their HIV medication correctly. This means that if you are on a once a day regimen for your medication, you cannot miss more than two doses in a month.

The fewer doses you miss the better are the chances of keeping your HIV under control.

How Do The HIV Medications Work?

The HIV virus can make 10 billion copies of itself every day in uncontrolled HIV. The antiretroviral (ARV) HIV medication cannot cure HIV or eliminate it from your body, but they can almost stop the virus from multiplying.

The “viral load” test measures the amount of HIV virus in your blood. It measures the number of HIV virus in each milliliter (ml) of blood. If you take your HIV medication the amount of virus in your blood should go down. When your viral load is very low or undetectable you probably wont develop any AIDS related illnesses or opportunistic infections.

When your viral load is undetectable it does not mean that there is no virus in your blood; it just means that there is not enough virus for the test to find and count. Undetectable depends on the sensitivity of the test used. When viral load testing first came out in 1995 the test could only measure down to 10,000 copies/ml. By 1996-97 the next generation of tests could measure down to 400 or 500 copies/ml. Today the standard is down to 20 copies/ml and in some research settings the test is even more sensitive down to 5 or even 1 copy/ml.

What Is Resistance?

When the HIV virus makes new copies of itself it can be sloppy, and many of the new copies of the virus are slightly different from the original. These changes in the original HIV virus or “wild type” virus are called mutations. Some of these mutations can multiply easily even though you are taking HIV medicines that stop the “wild type” HIV virus. These changes in the HIV virus cause resistance to the medication. If the virus develops resistance to your medication then the virus multiplies faster, your viral load goes up and your T-cells will probably start to drop.

HIV usually becomes resistant when the drugs you are taking do not control it. People that are newly infected may get infected a virus that is already resistant to one or more ARV's.

The best way to prevent resistance is to practice good **ADHERENCE** and not miss any doses of your medication. If you miss doses of your medication, more mutations will occur and HIV will multiply more easily and resistance develops. Once resistance develops it can become harder to treat your HIV.

How Do You Keep Pressure On The HIV Virus?

When you take your HIV medications they get absorbed into your bloodstream where they travel around your body where they do their work. Your liver and kidneys start to clean the medicine out of your system and the amount of the medication in your bloodstream goes down.

Some medications get into your bloodstream better if they are taken with food in your stomach, some drugs work better if your stomach is empty, and with some drugs food doesn't matter. If you skip a dose, reduce the dose, or don't follow the eating instructions the drug levels in your blood will drop; the HIV virus continues to multiply and there is a greater chance resistance to the medication will develop.

Always follow the advice of your physician and HIV pharmacist and when and how to take your medications. It is very important to get a consultation from your HIV pharmacist and make sure you understand the instructions, how many pills to take and when to take it. If you take the medicine exactly as instructed this will help you keep enough medicine in your bloodstream and help you to avoid resistance.

The best way to keep pressure on HIV is to take all the pills you're supposed to, every time you're supposed to, and follow the directions about food.

How Can I Make Taking My Meds Easy For Myself?

Now you know how important good adherence is; that is taking your medicine more than 95 % of the time. It can be difficult to take your medicines every single day the way you are supposed to. Making it as easy as possible for you is key. Here are some good tips to making taking your meds easy:

- ✓ When you and your healthcare provider are choosing the best medicine for you, make sure you tell them about your daily schedule so that you can select a medication regimen that will be easiest for you to take

- ✓ Adherence becomes easier when all the medications that you take are on the same schedule; once a day or twice a day

- ✓ Taking your meds is all about you and your health, so make sure that you understand your medications: Remember getting a consultation from your HIV pharmacist is VERY important
 - Which medications to take
 - How many pills to take
 - How many times a day should you take the medication

 - What time of the day should you take the medication
 - Whether to take your medications with food or on an empty stomach or doesn't it matter
 - How to store your medications
 - Side effects and what to do about them if some happen

- Drug-Drug interactions and how to avoid them. Make sure you tell your healthcare provider and your HIV pharmacist about any over the counter medications, vitamins & supplements and even street drugs that you are using. Drug interactions can be very serious and in some cases life threatening and your providers MUST know everything you are taking.

- ✓ Plan ahead for refills or trips so that you don't run out of medication. If you run out of medication it will cause you to be non-adherent! Make sure that you are enrolled in your pharmacy's automatic refill program

- ✓ Make sure that you know what will happen with your medications if you change insurance plans. Always notify your pharmacy ahead of time if your insurance plan has change

- ✓ Using a pillbox may be helpful to remember to take your medication. Your HIV pharmacy can help you with pillboxes and supply your medications to you in pillboxes if that will help you to remember to take your medications

- ✓ If pillboxes and vials don't work for you, you could try bubble packs. Work with your HIV pharmacist so they can customize the best packaging for your medication to help you be adherent

- ✓ Set a timer or alarm to go off when it's time to take your medication. There are some excellent Smartphone APPS that are great for adherence. A couple of examples are
 - [Care4 Today™ Mobile Health Manager and Medication Reminder](http://bit.ly/CARE4TODAY) (<http://bit.ly/CARE4TODAY>)
 - [Mango Health- Medication Manager, Pill Reminder, Drug Interactions](http://bit.ly/MangoHealth) (<http://bit.ly/MangoHealth>)

- ✓ Try and get into a habit of taking your medication at the same time each day. Choose a regular daily activity to help you remember and get into the habit of taking your meds: here are some examples:
 - Making your morning coffee
 - Getting out of bed
 - Going to the bathroom first thing in the morning or last thing at night
 - A favorite TV show
 - Coming home from work
 - Leaving for work

- ✓ Make sure your family members know how important it is for you to
- ✓ take your meds. Ask them to help you remember

- ✓ If you have ANY problems or side effects it is important to contact your healthcare provider and your HIV pharmacist right away. . ***Don't cut back or stop taking your medications until you have talked to your healthcare provider.*** If you are in distress and it's an emergency call 911. Don't cut back or stop.

What's The Bottom Line?

Good adherence is not a one-time thing. Good adherence must continue as long as you are taking HIV medicines. What we know today is that you have to take the medicines "for the rest of your life". In order for the medications to work they must be taken exactly according to the instructions. If you don't take the medications correctly resistance can develop and your medication regimen will fail. For best results you must take your medications correctly over 95% of the time. Remember if you take your meds once a day that means you cant miss more than 2 doses in a month. If you take your meds twice a day it means you cant miss more than 4 doses in a month.

Make sure you understand what all your medications are for and that you know exactly how and when to take them- with food or without food and what time. Your healthcare providers and HIV pharmacist are very important members of your healthcare team so make sure you work with them to make it easy for you to take your medications.

Use whatever tools you need to help you keep on track, tools such as pillboxes; timers & alarms; APPS; friends & family and support groups.

Always talk to your health care provider before you make any changes in your medications or how you take them