

# Human Immunodeficiency Virus (HIV) Fact Sheet

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#### SOURCES:

Centers for Disease Control and Prevention

- HIV Basics
- Basic Information About HIV and AIDS
- 2010 STD Treatment Guidelines

National Institute of Allergies and Infectious Diseases

Understanding HIV

U.S. Department of Health and Human Services

- http://aids.gov/
- http://aidsinfo.nih.gov/contentfiles/HI
  VandItsTreatment\_cbrochure\_en.pdf
- http://aidsinfo.nih.gov/ContentFiles/St artingAnti-HIVMeds\_FS\_en.pdf



#### What is HIV?

HIV stands for the **H**uman **I**mmunodeficiency **V**irus. HIV damages white blood cells (CD4+ or T cells) that are very important and help the body fight infection and disease. As the disease progresses, people have fewer of these cells in their blood and the immune system becomes weak and damaged. When this happens, HIV can lead to AIDS, or **A**cquired **I**mmun**od**eficiency **S**yndrome.

# How

#### How common is HIV?

- Every 9½ minutes, someone in the U.S. is infected with HIV. It is estimated that there are over 56,000 new cases of HIV in the U.S. each year.
- It is estimated that 1.7 million people in the U.S. have been infected with HIV since 1981 and approximately 1.1 million Americans are currently be living with the infection.
- About 1 in 5 infected Americans doesn't know he/she has the virus. The fact so many individuals with HIV are unaware of their status is important:
  - o unknowing transmission of HIV to partners
  - o not able to take steps (medication, for example) that are important to protect their health.
- HIV affects people from <u>all</u> backgrounds. Anyone who has sex can be at risk regardless of age, race, gender, or sexual orientation, although some groups are at higher risk.
- Social factors such as poverty, discrimination, and lack of access to health care put communities of color at increased risk. Nearly half of all new HIV infections occur in African-Americans, for example, even though they comprise only about 12% of the U.S. population
- Gay and bisexual men account for more than half of all new HIV cases and about 48% of those currently living with the virus.
- Women account for a growing portion of individuals living with HIV in the U.S –more than a quarter according to the Centers for Disease Control and Prevention. Over 180,000 women in the U.S. have HIV: women of color and younger women are hit especially hard



#### How do people get HIV?

HIV is transmitted through body fluids such as blood, semen (cum), pre-seminal fluid (pre-cum), vaginal fluids, and breast milk.



- Unprotected vaginal and anal sex are the most common ways the virus is transmitted. It's also possible to contract HIV from oral sex (primarily through performing oral sex), although this is less common than with vaginal and anal sex.
- Injection drug use is also a risk for HIV if needles, syringes, and other equipment is shared with someone who is infected. Reusing "spoons" and "cookers" (such as bottle caps, spoons, or water used to dissolve or heat drugs) also carries a risk for transmitting HIV and other blood-borne infections.
- An HIV-positive pregnant woman can pass HIV to her fetus before or during labor and through breastfeeding. All pregnant women should be tested for HIV. In the United States, HIV-positive pregnant women who are in care and take medication (antiretroviral therapy)and do not breastfeed have a less than 2% chance of transmitting HIV to their fetus. Without treatment, the transmission rate is about 25%.
- Healthcare workers exposed to infected fluids, most often through needle sticks, are also at risk of HIV. Those workers may benefit by taking medication after exposure (post-exposure prophylaxis or PEP). PEP usually consists of two or three antiretroviral drugs that are effective against HIV. PEP works best within 72 hours after exposure For more information go to <a href="http://www.aids.gov/hiv-aids-basics/prevention/reduce-your-risk/post-exposure-prophylaxis/">http://www.aids.gov/hiv-aids-basics/prevention/reduce-your-risk/post-exposure-prophylaxis/</a>. This treatment can also be given to individuals who may be exposed to HIV outside the workplace, usually through sexual assault, condom breakage, or sharing needles with someone who has HIV (non-occupational post-exposure prophylaxis, or nPEP).
- Patients receiving blood transfusion or organ/tissue transplants can be at risk for contracting HIV. However, this risk is <u>extremely rare</u> in the U.S., given the strict testing done with blood products and all donated organs/tissues
- Having another sexually transmitted disease (STD) increase the risk of to contracting HIV. Talk with your healthcare provider to see if any STD testing is recommended for you.

HIV is not transmitted by day-to-day contact in social settings, schools or in the workplace, such as:

- Shaking someone's hand or hugging them;
- Kissing;
- Using the same toilet, sheets, towels, eating utensils or drinking from the same glass:
- Playing sports.



#### What are the symptoms and stages of HIV?

**Acute HIV Infection:** Some people develop flu-like symptoms early after infection, usually in a few weeks up to a month. Not everyone feels ill, though, and symptoms might be mild. At this point there is a large amount of HIV in the blood, and the immune system is beginning to respond to the virus.

**Latent or Asymptomatic HIV Infection:** After a few weeks, the level of HIV in the blood decreases and people enter a latent or asymptomatic stage. During this stage – which can



last 8 to 10 years – a person usually feels fine. The virus is still active, though, and can be transmitted to others.

**Symptomatic HIV Infection:** The immune system weakens and symptoms related to *opportunistic infections* begin to develop (these are infections that are more likely to occur in someone with a weakened immune system).

**AIDS:** Untreated, virtually all cases of HIV will lead to AIDS. At this stage, the immune system is severely weakened and serious illnesses emerge. An AIDS diagnosis can be made when someone who has HIV develops an opportunistic infection and/or their CD4 count falls below 200 (this is the number or "count" of CD4 cells in small sample of blood). A normal CD4 count is between 500 and 1000.

Symptoms might include extreme weight loss, chills and fevers, night sweats, fatigue and weakness, sores of the mouth and genitals, diarrhea, and swollen glands. In addition, there are other infections that tend to occur that indicate AIDS



Most HIV tests done in the U.S. detect substances the body's immune system produces (antibodies) in response to the infection. Some rapid HIV tests can provide results in as little as 20 minutes. HIV also can be detected by testing blood, but some tests use urine or take a swab of fluid from inside your mouth. Many of these tests are done in a lab and it can take a few days or a week to receive results.

Many types of clinics offer HIV tests. For more on HIV testing or to find a clinic in your area, go to www.aids.gov. There is also a home test, the *Home Access HIV-1 Test System*.

Most tests can detect the disease 2-8 weeks after infection, but in some people this takes longer. The disease can be detected in almost everyone with HIV three months after infection, so it's a good idea for anyone tested earlier than that to have a follow-up test three months after a potential exposure to the virus. In very rare cases, it may take six months or longer for a person to test accurately for HIV. A different test is used for donated blood.



A healthcare provider usually orders several tests, including one to check viral load (how much HIV is present in the blood), CD4 count (to assess the health of the immune system in fighting infections), and drug resistance (to determine if the individual specific strain of HIV might be resistant to certain medications). These tests not only provide a baseline for



future tests, but (along with the patient's overall state of health) help determine when treatment should begin.

Other tests commonly done for those newly diagnosed with HIV include:

П	Comple	ete	blood	count:
	COLLIDI	cic	DIOOG	COULT

☐ Liver and kidney function tests;

□ Urinalysis;

Tests for other sexually transmitted diseases and hepatitis

#### Talk to your Partner

Your current and former sexual partners need to know if you are diagnosed with HIV. This is also true of anyone with whom you have shared needles. Talking about HIV is difficult, but it's the best thing you can do to help others protect their health. You don't have to do

## Treatment

There are approximately 30 drugs available to treat HIV, and they are divided into classes based on the way they work against the virus. The recommended treatment for HIV involves a combination or "cocktail" of at least three medications from two or more different classes.

Not everyone uses the same medications to treat HIV. The choice of treatment depends on your general health, the results of any tests ordered by your healthcare provider, the number of pills you feel comfortable taking each day, if you're pregnant or plan to be pregnant soon, and potential side effects. Be sure to ask your healthcare provider any questions you might have about treatment.

### Treatment

Beyond medications, there are many things you can do to take care of your health.

- Follow your healthcare provider's instructions and adhere to your treatment plan.

  Take medications as directed it's important you do not skip doses.
- Let your provider know if you have side effects or feel ill from your medications.
- Ask your provider if there are vaccinations that are recommend for you (such as a flu shot or hepatitis B vaccine)



Eat healthy foods, exercise moderately, and get plenty of sleep. Find ways to relax and handle your stress.

Often people with HIV need emotional support and counseling. Family, friends, peers, and support groups can help people who are HIV positive learn how to take care of themselves and lead a full life.



There are several things that can lower the risk of HIV:

- Using condoms for each sex act (oral, anal, and vaginal). A condom should be put on before any sexual contact takes place. Latex and polyurethane (plastic) condoms work best. Go to <a href="http://www.cdc.gov/condomeffectiveness/brief.html">http://www.cdc.gov/condomeffectiveness/brief.html</a> for more on how to use a condom correctly.
- Having sex with only one partner (who only has sex with you)
- Appropriate testing and treatment. Talk with your healthcare provider to see if any STD tests might be recommended for you. Having an STD can make it easier to contract HIV.
- If you inject drugs, don't share needles, syringes, or "works." Only use syringes from a source you can trust, such as a pharmacy.

