



Focus on AIDS

Introduction

Welcome to the Focus on AIDS session of the *Living in Balance* program. This session focuses on HIV/AIDS, the most dangerous sexually transmitted disease and one of the greatest health concerns throughout the world.

What is in this session?

This session has two major parts: (1) Understanding HIV and AIDS and (2) HIV/AIDS Risk Reduction and Treatment. Appendixes provide further information about the progression of the disease from HIV to AIDS, telephone numbers where you can get further information, and a glossary of key terms.

- ✓ After participating in part 1, you will be able to
 - Understand the extent and danger of the HIV/AIDS problem in the United States
 - Understand how HIV testing works and why it is important
 - Understand how HIV is spread and how it can't be spread
 - Judge your own risk for getting HIV



**SESSION 16 HAS
TWO MAJOR PARTS:**

1. Understanding HIV and AIDS
2. HIV/AIDS Risk Reduction and Treatment

- ✓ After participating in part 2, you will be able to
 - Understand ways to lower your risk of getting HIV/AIDS
 - Understand the basics of how HIV affects the body
 - Understand how HIV is treated

What will be asked of you?

You will be asked to look at your own behavior, both past and present, and think about the risks you may run or may have run for getting HIV. You will need to confront any fears you have about getting tested for HIV. An important part of sobriety is attending to your physical health, and one way you can do this is to learn about diseases such as HIV/AIDS that pose a serious threat to people's health today.



Part 1: Understanding HIV and AIDS

What is HIV and AIDS? HIV is short for *human immunodeficiency virus*; it causes *acquired immune deficiency syndrome* (AIDS). HIV is transmitted through bodily fluids such as blood, semen, and vaginal fluids. It is the most serious and deadly sexually transmitted disease today.

Being infected with HIV does *not* always mean AIDS will develop. It does mean, though, that a person will be infected with the virus for the rest of his or her life. People with HIV can infect others, too, if they do things that transmit the virus.

No one can tell by looking at someone whether he or she has HIV infection. Someone can look healthy and still be infected.

The only way to know if HIV is present is by taking an HIV *antibody* test. (An *antibody* is a protein produced by the immune system as a response to a foreign agent in the body.) Two tests are used to learn if a person is infected with HIV. Each one examines blood samples for the presence of HIV antibodies. A more recent test has been developed that uses saliva rather than blood, but it is more expensive and not as common.



LEARNER OBJECTIVES FOR PART 1:

You will

- Understand the extent and danger of the HIV/AIDS problem in the United States
- Understand how HIV testing works and why it is important
- Understand how HIV is spread and how it can't be spread
- Judge your own risk for getting HIV

1. The ELISA (enzyme-linked immunosorbent assay) test is the most common antibody blood test. A positive result means the person may be infected with HIV.
2. If the ELISA test is positive, another test, called the Western blot, is performed to double-check the results. If the Western blot is positive, the person is considered to be infected with HIV, or *HIV-positive*.

Negative results may mean the person is not infected, or that not enough time has gone by since HIV entered the body for it to produce HIV antibodies, which are what the tests look for. The period between the initial infection and the production of antibodies is usually six to twelve weeks. An infected person can still transmit HIV during this time.

HIV is short for *human immunodeficiency virus*; it causes *acquired immune deficiency syndrome (AIDS)*.

Statistics on HIV and AIDS

- Nearly one million Americans are living with HIV/AIDS. At least a third of them are estimated as having AIDS.
- For men, about 25 percent of new AIDS cases occur through injection drug use.
- Young people (under the age of twenty-five) make up at least half of all new HIV infections, and most of them are infected through heterosexual sex.
- The percentage of AIDS cases among women has risen dramatically since 1986. Nearly half of all adults living with HIV/AIDS worldwide are women.
- African Americans and Hispanics represented half of all AIDS cases reported among males and 75 percent among females in 2001. AIDS is the leading cause of death for African American men ages twenty-five to forty-four.

Source: National Institute of Allergy and Infectious Disease *Fact Sheets*, 2002.



Alcohol and other drug use can also hurt people's immune systems, making infection more likely.

Once someone has HIV, he or she may become unable to fight off other infections. As a result, infections that a healthy person could easily beat become difficult or impossible to fight off.

Without treatment, most people with HIV infection will develop AIDS within ten years. With treatment, the HIV infection can usually be slowed, and the onset of AIDS can be delayed. At this time, there is no cure or vaccine for HIV or AIDS.

Who Is at Risk for Getting HIV/AIDS?

Certain people have a higher risk of getting HIV than others because of certain behaviors.

Intravenous drug abuse is a primary source of transmitting HIV infection. Other high-risk behaviors often associated with addiction—such as having unprotected sex, sex for money or drugs, and sex with multiple partners—increase the chances of becoming infected for alcohol and other drug users.

Alcohol and other drug use can also hurt people's immune systems, making infection more likely when they come in contact with the virus. Research shows that HIV may spread more quickly in the bodies of people who use alcohol and other drugs.



EXERCISE 1

Select yes or no for the following questions:

1. Have you shared needles or syringes to inject drugs or steroids?
 Yes No
2. If you are male, have you had sex with other males?
 Yes No
3. Have you had sex with someone whom you know or suspect was infected with HIV?
 Yes No
4. Have you had a sexually transmitted disease?
 Yes No

5. Have you had sex with someone who would answer yes to any of the above questions?
- Yes No

Answering yes to any of these questions means that you have an increased risk of having HIV and that you should speak with a health care professional.

How Is HIV Spread?

HIV may be transmitted through

- Unprotected sex (vaginal, anal, or oral) with an infected person
- Using a needle or sharing works (such as a spoon or a cotton ball) that have been used by an infected person
- Giving birth, as women with HIV infection can pass the virus to their babies during pregnancy or childbirth, and, in some cases, when breast-feeding
- Receiving blood transfusions from infected donors (note that currently all blood donors are checked for HIV)

Because there are still questions about how the virus is transmitted, no sexual behavior is described as “safe” or “completely safe.” However, “safer” behaviors are much less likely to spread HIV.



EXERCISE 2

Please check true or false for the following statements:

1. You can get AIDS from any type of unprotected sex.
 True False
2. Women can give AIDS to their children while giving birth.
 True False
3. You can only get AIDS from sharing needles, not from sharing a cotton ball or a spoon.
 True False

Ways in Which You *Cannot* Get HIV

HIV is not transmitted by

- Drinking from the same glass or eating from the same dishes as a person with AIDS (HIV does not survive well outside of the body and should be killed by normal washing of dishes and utensils)
- Eating food handled, prepared, or served by somebody with HIV infection
- Using public toilets, drinking fountains, or public transportation, since HIV is not transmitted through water, air, or food, or by touching objects handled by someone who has HIV/AIDS (it is wise, however, to avoid sharing instruments such as toothbrushes and razors, which may come into contact with blood through nicks or cuts)
- Touching, hugging, or kissing a person with HIV infection
- Swimming in swimming pools, since the virus associated with AIDS is killed by the chlorine in the pool
- Being bitten by insects or animals



EXERCISE 3

Please check true or false for the following statements:

1. You can get AIDS by coming in contact with the blood of someone who has it.
 True False
2. AIDS is spread by mosquito bites.
 True False
3. You can't get AIDS from a toilet seat.
 True False

Partner Notification

When someone has an STD, it is important that his or her sexual partners are notified that they may have an STD, too. The goal is simply to provide treatment to people who are very likely to have an STD. It is very important because people often do not have any noticeable symptoms of STDs even though they are infected and can infect others.

People who have STDs, including HIV, have a responsibility to help their sexual partners get tested and treated. Partner notification is the process of identifying and notifying sexual partners. Physicians can use different approaches to getting sexual partners treated, and different states have different laws about how to do this.

- **Patient referral.** In this case, the physician asks patients to bring or send in partners, but the provider does not ask for information about partners. Commonly, patients receive contact cards or referral slips to give their sexual partners.
- **Physician referral.** Through sensitive questioning, physicians obtain names and addresses of sexual partners and try to contact them by telephone, mail, or visiting.
- **Patient and physician referral.** In this case, physicians ask for names and addresses of partners but give patients time—often one week—to refer them. If the patients' partners do not appear for treatment, providers attempt to contact them.



When someone has an STD, it is important that his or her sexual partners are notified that they may have an STD, too.


**LEARNER OBJECTIVES
FOR PART 2:**

You will

- Understand ways to lower your risk of getting HIV/AIDS
- Understand the basics of how HIV affects the body
- Understand how HIV is treated

AIDS, like other sexually transmitted diseases, is related to high-risk behavior.



Part 2: HIV/AIDS Risk Reduction and Treatment

A few years ago, certain groups were considered high-risk groups. Today, it is recognized that AIDS, like other sexually transmitted diseases, is related to high-risk *behavior* more than certain groups. These behaviors include sharing needles, anal sex, and sexual encounters with multiple partners.

Treatments for AIDS, in the form of new drugs, have also improved in recent years. However, there is still no cure for the disease.

How to Lower the Risk of Getting AIDS

1. **Do not share needles or syringes.** The only way to completely clean needles and syringes is by sterilizing them. Rinsing with regular household bleach for at least thirty seconds, followed by two flushes of clean water, will disinfect the needles, but this is not the same as sterilization. It will decrease the chance of being infected, but it does not kill the virus.
2. **Do not share cookers, cotton, or rinse water.** Even when people do not share needles, or even when they clean them well before sharing, there is a risk that HIV can be transmitted through contaminated materials used for injecting drugs, such as a cooker, cotton, or rinse water.
3. **Practice safer sex.** Use condoms properly from start to finish. Although condoms will not protect you 100 percent of the time against pregnancy and STDs, such as HIV, they can reduce your risk of becoming infected if used properly. Use latex condoms, not animal-skin condoms. (See box on pages 10–11 for more information on condom use.)
4. **Don't have sex with multiple partners or with people who have had multiple partners.**
5. **Don't have sex with people who you know have AIDS or who you think may have AIDS.**

People with HIV and people who are IV drug users should not donate blood, plasma, body organs, or tissues, as the virus may become transmitted to someone else. The risk of getting AIDS depends on what you do, not who you are. There is no cure for AIDS at this time, but it is preventable.



EXERCISE 4

Please answer the following questions:

1. What are some additional reasons why drug use might increase the risk for AIDS or other STDs?

2. When you were using alcohol and other drugs, did you take regular precautions against getting HIV? Knowing what you do now, do you think those precautions were enough?

The risk of getting AIDS depends on what you do, not who you are.

Using Condoms

Male Condoms

1. Use FDA-approved latex condoms, since condoms made of animal membranes (sometimes called “natural”) are more likely to allow HIV to pass through.
2. Use only water-soluble lubricants such as K-Y jelly. Do not use oil-based lubricants or saliva. Oil-based lubricants, such as cooking oil or petroleum jelly, can damage the condom. Avoid condoms with nonoxynol-9, as it can irritate the skin and increase the chance of HIV infection.
3. Never use outdated condoms. Always check the expiration date on the package.
4. Always store condoms in a cool, dry place. Heat can damage a condom.
5. Never use a condom more than once.
6. The correct way to use a condom is to remove it from the package and roll it down over the erect penis, leaving a space at the tip to catch the semen. Don’t unroll the condom before putting it on.
7. Use a condom from start to finish. Don’t wait until you’re ready to ejaculate to put on the condom. If the penis goes soft while still inside a partner, the protection can be lost, and a new condom should be used.
8. When removing a condom, make sure you don’t spill any of the semen. Also make sure you don’t allow any semen to come in contact with cuts or sores.
9. Dispose of used condoms by flushing them down a toilet or putting them in the trash.
10. Be sure you do not tear the condom with fingernails or other sharp objects.

Using Condoms

Female Condoms

1. Read ALL instructions prior to use.
2. All female condoms have an expiration date. Always check the date prior to use.
3. Store condoms in a cool, dry area.
4. The female condom can be inserted up to eight hours before use. However, most women insert the condom just before having sex.
5. Use the condom only once. Use a new condom with each sexual act.
6. The female condom can be used like a dental dam during oral sex.
7. DO NOT use a male condom and a female condom at the same time.
8. Be sure you do not tear the condom with fingernails or other sharp objects.
9. Use enough lubricant.
10. Dispose of the condom by placing it in the trash.



A person infected with HIV may show no symptoms for many years.

Effects of HIV

The body is protected by its immune system. When HIV enters the body through blood, semen, or vaginal secretions, it seeks out and destroys specific parts of the immune system. These elements are called white blood cells or lymphocytes (T cells). The function of these cells is to protect the body from various germs, such as viruses, bacteria, and parasites. When the body detects any of these infections, it sends white blood cells to attack the infection, trying to keep the body healthy.

When someone has HIV/AIDS, the immune system begins to break down, as HIV infects T cells. The virus grows in these cells, the white blood cells don't work as well, and finally the body's immune system is destroyed.

A person infected with HIV may show no symptoms for many years. Usually, however, a newly infected individual may present with a number of symptoms that can include (but are not limited to) the following:

- Fatigue
- Rash
- Headache/dizziness
- Severe night sweats
- Swollen glands in the neck, armpit, and/or groin
- Rapid weight loss



EXERCISE 5

Please check true or false for the following statements:

1. HIV attacks red blood cells.
 True False

2. Having HIV makes it more likely that a person will get other diseases, because his or her immune system is weak.
 True False

How Is HIV/AIDS Treated?

Although there is no known cure for HIV or AIDS, a number of drugs are now available to help treat it. While medications are rapidly changing, a couple of different types of drugs are commonly used. These are protease inhibitors (which interfere with the protease enzyme HIV uses so it can infect new cells) and reverse transcriptase inhibitors (which affect another enzyme that HIV needs to make copies of itself). These medications are usually prescribed in different combinations in what is sometimes referred to as a combined drug “cocktail.”

So far, sixteen different drugs have been approved for treating HIV infection (see below). These are called antiretroviral drugs because they attack retroviruses like HIV.

Protease Inhibitors	Reverse Transcriptase Inhibitors
Ritonavir	Abacavir
Saquinavir	ddC
Indinavir	ddI
Amprenavir	d4T
Nelfinavir	3TC
Lopinavir	ZDV
	Tenofovir
	Delavirdine
	Nevirapine
	Efavirenz

So far, sixteen different drugs have been approved for treating HIV infection.



**EXERCISE 6****AIDS Awareness Test**

Please check true or false for the following statements:

1. AIDS is a disease that harms the body's natural ability to fight infection.
 True False
2. Scientists believe that AIDS is caused by the human immunodeficiency virus.
 True False
3. AIDS can be transmitted through body fluids.
 True False
4. The incubation period for AIDS can be anywhere from a few weeks to many years.
 True False
5. Homosexual men, intravenous drug users, and heterosexuals with several sexual partners have a greater risk of getting HIV/AIDS.
 True False
6. There are tests for HIV/AIDS.
 True False
7. AIDS cannot be transmitted through social contact, hugging, shaking hands, sneezing, or living in the same house with an AIDS patient.
 True False
8. A person with no symptoms can transmit the AIDS virus through sexual contact or intravenous drug use.
 True False
9. AIDS can be transmitted by sharing needles and other "works."
 True False



Session 16 Summary

In this session you have learned how HIV/AIDS affects the body and the common treatments for it. You have looked at your own behaviors that may have increased your chances of getting HIV, and you have learned how you can decrease your chances of getting the disease by changing your behavior. This information will help you keep healthy in sobriety, and it will help you deal with problems that may stem from your addiction.

Progression of the Disease from HIV to AIDS

There are four major stages in the progression from HIV to AIDS:

1. The window period
2. The seroconversion/acute stage
3. The asymptomatic stage
4. The symptomatic stage

The *window period* ranges from the point when the body is exposed to HIV until the point when the body begins to create antibodies. The window period can last anywhere from six weeks to one or more years. AIDS tests such as the ELISA test look for antibodies, so if you are tested while you are in this window period, the test can come back falsely negative.

The *seroconversion stage* begins when the body first begins to produce antibodies to HIV. Generally speaking, seroconversion takes place three to eight weeks after the initial infection. When most people seroconvert, they experience flulike symptoms such as continuing headaches, fever, sore throat, and swollen lymph nodes. These symptoms will usually go away in two to four weeks. During this period, the amount of virus in your body is very high and is mostly found in the lymphoid tissues.

After the initial flulike symptoms go away, the body enters the *asymptomatic stage*. Infected people can go anywhere from six months to ten or more years without experiencing any symptoms; however, the average is about ten years. Some people, referred to as long-term survivors, have stayed in this stage for over fifteen years. Current drugs can increase the length and quality of life much longer. At this stage, HIV is destroying “helper T cells” (T4 cells), but the body is healthy enough to continue making new ones.

The *symptomatic stage* is marked by a major loss of T4 cells and symptoms including fever, weight loss, fatigue, loss of appetite, night sweats, headaches, and especially swollen lymph nodes. This is the final stage before the progression to AIDS.

AIDS is the final stage of HIV infection. The Centers for Disease Control and Prevention says that HIV becomes AIDS when the person is (1) infected with HIV and has a T4 cell count of less than 200, or (2) infected with HIV and one of twenty-six different infections. Many drugs used for AIDS treatment have very harmful side effects that can be life threatening.



Sources for More Information

Centers for Disease Control National AIDS Hot Line

English service 800-342-AIDS

Spanish service 800-344-7432

TDD service for deaf 800-243-7889

AIDS Clinical Trials Information Services

800-874-2572

National Institute on Drug Abuse Hotline

English service 800-662-HELP

Spanish service 800-66-AYUDA

National Clearinghouse for Alcohol and Drug Information

800-728-6686 (SAY-NO-TO)

American Red Cross

National Headquarters

202-737-8300

CDC National AIDS Clearinghouse

800-458-5231

American Social Health STD Hotline

800-227-8922



Session 16 Glossary

AIDS: Acquired immune deficiency syndrome.

Antibody: A protein that is produced when certain cells encounter an *antigen*. Antibodies can bind to and, in turn, destroy certain antigens. An HIV test actually tests for the existence of antibodies.

Antigen: A substance that is recognized as foreign by the immune system. Antigens are either a whole or a part of an organism or virus.

B cells: Lymphocytes that produce antibodies.

Cellular immunity: A collection of cell types that provide protection against certain types of antigens.

Dendritic cells: White blood cells that are found in the spleen and other lymphoid organs. These cells have “tentacles” that they use to present antigens to T4 cells.

ELISA: A test that detects the presence of antibodies to HIV.

Etiological agent: The organism that causes a disease.

HIV: Human immunodeficiency virus.

Immune response: The reaction of the immune system to a foreign particle.

Incidence: The number of cases recorded in a specific time frame.

Leukocytes: White blood cells.

Lymph nodes: Parts of the body that help prevent the spread of infection.

Lymphocytes: These are a specific type of *leukocytes*. They are a very important part of the immune system because they identify and “remember” which cells to attack. The two main types of lymphocytes are T cells and B cells.

Lymphokines: Chemical messengers produced by T and B cells.

Opportunistic infection: A normally benign infection or virus that becomes dangerous in people with a damaged immune system.

Pathogenic: Harmful and disease causing.

Phagocytes: These are another type of white blood cell. They help the body by consuming infections or other foreign particles.

STD: Sexually transmitted disease.

Suppressor T cell: A subset of T cells that is responsible for turning off the immune response.

Syndrome: A set of symptoms that occur together.

T helper cells: Also referred to as T4 cells. These are the essential conductors of the immune system, and they turn on antibody production.

Virus: Any of a large group of organisms that can infect plants, animals, and/or bacteria. They are characterized by a total dependence on living cells for reproduction.

Western blot: A blood test that is used to detect the presence of specific *antigens*. The Western blot is used to confirm the results of an ELISA test, because it is much more specific.