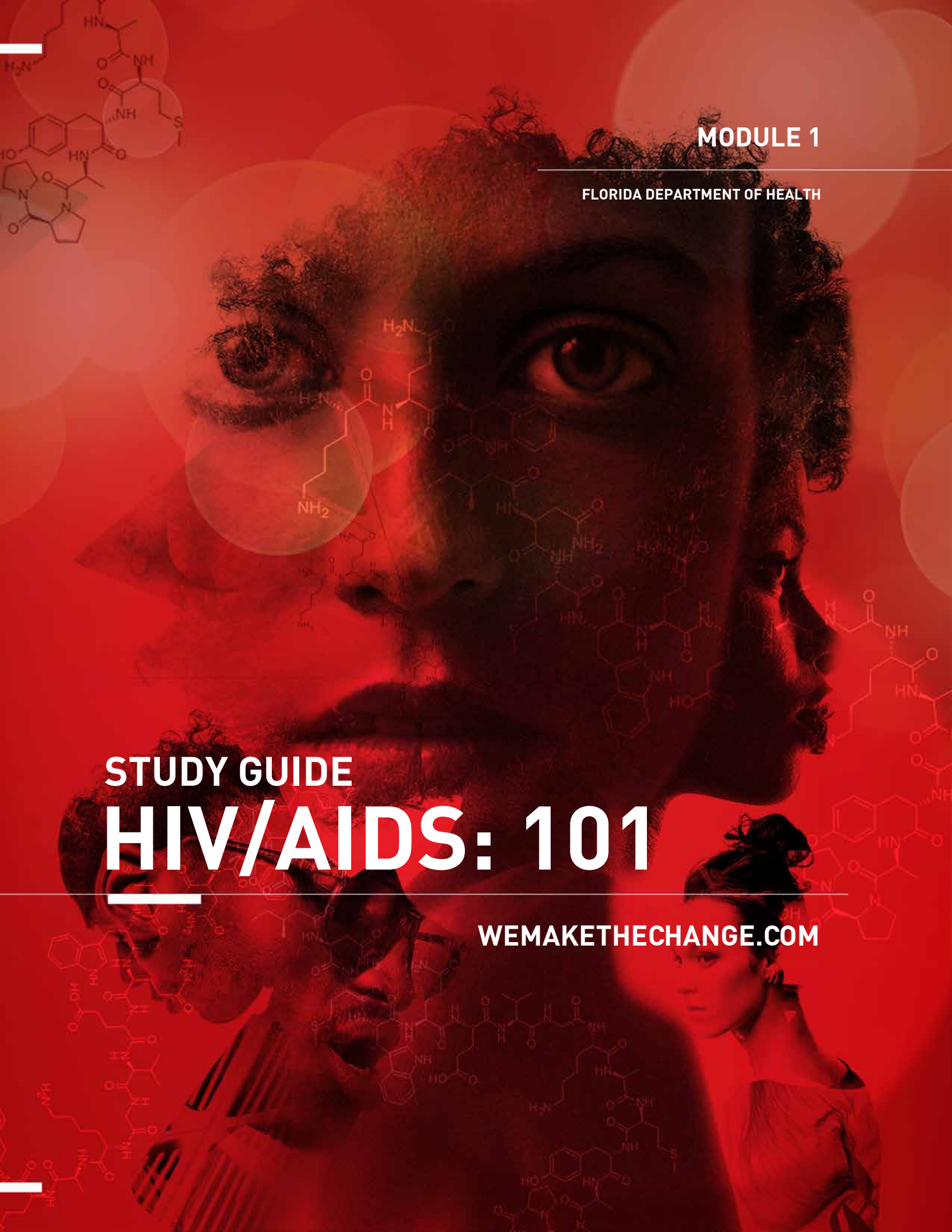


**MODULE 1**

FLORIDA DEPARTMENT OF HEALTH

**STUDY GUIDE**  
**HIV/AIDS: 101**

**WEMAKETHECHANGE.COM**



# HIV/AIDS 101 DVD CORE CONTENT SUMMARY

## WHAT IS HIV?

**HIV: Human Immunodeficiency Virus**

**H – Human** - virus can only infect human beings

**I – Immunodeficiency** – failure of the body's immune system to work properly

**V – Virus** - one of its characteristics is that it is incapable of reproducing by itself. It reproduces by taking over the machinery of the human cell

## WHAT IS AIDS?

**AIDS: Acquired Immune Deficiency Syndrome**

AIDS is the most serious stage of HIV infection. It results from the destruction of the infected person's immune system.

**A – Acquired:** passed from one person to another

**I – Immune:** the body's defense system against disease

**D – Deficiency:** lack of, shortage of, or breakdown

**S – Syndrome:** a combination of symptoms and diseases

## WHAT CAUSES AIDS?

AIDS is caused by the human immunodeficiency virus (HIV). That is, HIV is the virus that causes AIDS.

HIV attacks and weakens the body's immune system by destroying the body's T-helper white blood cells; white blood cells are those cells in your body that fight infections.

## HOW HIV LIVES IN THE BODY

Human Immunodeficiency Virus (HIV) enters the body through specific body fluids (blood, semen, vaginal secretions and breast milk) and gains access to the bloodstream. Once in the bloodstream, HIV targets the T-helper lymphocyte or T-cell, also known as CD4+ cells (T-cells are an essential part of the immune system; without them, the body cannot effectively fight most diseases and infection). HIV enters the T-cell (the host) through the outer coating, called CD4+ cells into which it can move and set up "virus factories."

## HOW HIV DESTROYS THE IMMUNE SYSTEM

Over time, CD4+ cells are methodically destroyed. A normal CD4+ cells count in a healthy adult is 800-01000 T-cells per cubic millimeter (microliter) of blood. Persons diagnosed with AIDS will have a CD4+ count of less than 200 per cubic millimeter, and some may have a CD4+ count of close to zero. At such low CD4+ cell counts, the immune system can no longer protect the body from infection.

## EARLY SYMPTOMS OF HIV INFECTION

Many people do not have any symptoms when they first become infected with HIV. Some may get flu like conditions within a month or two or sooner after exposure. These symptoms can include fever, headaches, tiredness and swollen glands in the neck, groin or under the armpits.

During a time between infection and diagnosis (up to ten years), HIV destroys your immune system. The virus is absorbed by your white blood cells. The blood cells break the virus into pieces.

Once HIV is in your T-cells or CD4 cells, it inserts HIV DNA into the cells' DNA. DNA is the building block that is used to make all living things. Your cells become an HIV factory infecting the rest of your body's healthy cells. Then your body is at risk for any virus or infections to grow and create life potentially threatening illnesses. Some of the unpleasant conditions resulting from AIDS are: fevers, vision loss, vomiting, pneumonia, weight loss, severe headaches, shortness of breath, and difficulty in swallowing, diarrhea, coma, white spots in the mouth and yeast infections in women.

## HOW IS HIV/AIDS TRANSMITTED?

HIV is transmitted from one person to another by body fluids, which carry enough HIV to cause infection. The primary activities, which bring most people in contact with HIV, are unprotected sexual contact, and by sharing or reuse of HIV contaminated needles and syringes used to inject illegal or legal drugs. In addition, an infected woman can pass HIV to her unborn baby during pregnancy or to her newborn during childbirth, or through breast-feeding. Before 1985, receiving blood transfusions or blood products infected many people. Today, HIV infections through receipt of blood products are exceedingly rare in the United States due to intensive screening and the use of sophisticated HIV testing.

## MODES OF TRANSMISSION

**Exchange of bodily fluids (blood, semen and vaginal secretions):** HIV can live only in certain fluids of the human body. These fluids are blood, semen, vaginal secretions and breast milk. Saliva, sweat, urine and tears do not spread the virus because they do not have enough white blood cells for the virus to grow and survive.

**Sexual contact (vaginal, oral and anal):** Unprotected sex or sex without a latex barrier such as a condom can let HIV enter the blood. Vaginal, anal and oral sex each can transmit HIV. In an infected man, the semen (male sexual fluid) has a high amount of HIV. Semen can pass from one person to another during unprotected vaginal, anal or oral sex. The virus can go through the lining of the vagina, anus or mouth into a person's bloodstream. In women, vaginal fluids and menstrual blood can pass the virus to another person.

**Sharing needles:** Sharing intravenous needles, such as drug needles and syringes, as well as using other pointed devices used for tattooing or body piercing needles, is another method of contracting HIV. People who use needles of any kind, legal or illegal, must use new needles or clean those that have already been used. Cleaning needles involves soaking them in bleach, then rinsing them in water several times before each use.

**Mother to infant transmission:** Pregnant women with HIV can pass the virus to their unborn or newborn babies during pregnancy, delivery or while breast feeding. An infected mother's blood and milk carry HIV. If a woman is pregnant or thinks she might be pregnant, she should be tested for HIV. An infected pregnant woman can greatly reduce the chance that her baby will be born infected by taking antiretroviral medications, after consultation with her doctor and with a doctor's prescription.

**Blood Transfusions:** Blood transfusions or blood products may also transmit HIV. This is not likely because blood products are screened to prevent transmission of blood borne pathogens.

## HOW HIV IS NOT TRANSMITTED

Saliva, sweat, urine, feces, tears or any blood sucking insect, like the mosquito, does not spread the HIV virus. HIV is also not spread through casual contact such as kissing, hugging or shaking hands with someone, or using dishes or utensils used by someone with HIV. Objects (e.g., toilet seats and doorknobs) and animals (e.g., dogs, cats) do not transmit HIV.

## HIV TESTING

The body produces antibodies to destroy a foreign invader – in this case, HIV. Antibody blood tests are done confidentially or anonymously (see below) at any Florida health department. There are also tests available that can detect the virus in a person's blood.

## WHO SHOULD BE TESTED

Anyone who thinks they might have put themselves at risk for HIV should consider being tested, including pregnant females and children of HIV-positive females. HIV antibody testing detects antibodies in the blood. The antibodies show that the virus is present in the body and that the immune system is trying to fight it.

## AVAILABILITY OF HIV TESTING

HIV testing is available to anyone who requests it at any county health department in Florida. In most situations, HIV antibody testing is available only after giving informed consent – that is, a person must give their permission before being tested. Testing is available in health departments, doctor's offices and other private and non-profit clinics and agencies. Health departments offer testing at a minimal charge, but no fee is charged for those who cannot afford it.

Any person interested in locating their nearest testing facility may do so by sending a text message to 477493. A message will then prompt the person to enter their zip code. The individual will then receive a text message with the addresses of testing facilities nearest to them. You may also locate the nearest testing facility by visiting our website at <http://srdappsdo35.doh.state.fl.us/ClinicSearch/ClinicSearch.aspx>.

## CONFIDENTIAL AND ANONYMOUS TESTING

HIV test results are kept private in two different ways: confidentially and anonymously. Confidential testing means that the person's name and test results are kept in their private medical file. Anonymous testing means each person is given an identifier when being tested, and the person can only be identified by that number. No name is recorded.

## HIV AND AIDS REPORTING

Positive HIV tests have been reportable in Florida since July of 1997. AIDS cases have been reportable since 1981. All AIDS and HIV cases reported to the Department of Health are kept completely confidential.

## HIV PREVENTION

Preventing the transmission of HIV is simple. It all comes down to increasing our knowledge of HIV, knowing our HIV status and the HIV status of our partner(s), always using protective measures when appropriate, and avoiding risky behaviors.

### **Sexual Behavior: Abstinence and Monogamy**

- Abstinence is the only sure way to prevent infection through sexual contact. If a person is not sexually active, these activities include oral, anal, or vaginal contact; there is virtually no chance of contracting HIV or any STD through sexual activity.
- Having sex with only one uninfected partner is a way to be sexually active and not risk infection with HIV. The words mutual monogamy means that both partners in a relationship are only having sex with each other.

(cont'd)



(cont'd)

### Condoms

- Condoms provide a barrier of protection for those who choose to have one or more sex partners. When used properly, condoms create a barrier that prevents the virus from spreading from an infected individual to someone else.
- Condoms are highly effective at preventing many types of STD including HIV when used consistently and correctly. Most often, human error causes condoms to fail.

### Drug Use Behavior

- If needles and syringes are not shared during drug use, no infection will occur.
- It is possible to disinfect needles and syringes with ordinary bleach before sharing. Bleach should be drawn into the needle and syringe three times and shaken each time. Then, water should be drawn into the syringe three times to rinse out the bleach. If needles and syringes are used, it is best to properly discard them after each use.

Get tested if you may have been in contact with HIV. If you are HIV positive, practice safe sex methods, get tested, get lots of rest, eat balanced meals, get exercise, take vitamins, get flu shots and learn more about HIV and AIDS.

### Universal Precautions

Standard universal precautions are infection control procedures. Health care workers, barbers, cosmetologist, emergency workers or any other professional who may come in contact with another person's body fluids should assume all patients/clients are infected with HIV. Precautions such as wearing latex gloves, sterilizing instruments and washing hands are essential for preventing HIV transmission.

## SPECIAL CONSIDERATIONS FOR PREGNANT WOMEN

HIV-positive women can transmit HIV to their babies during pregnancy, childbirth and breast feeding. However, if a woman follows all the orders given by her doctor she can almost always have a healthy baby that does not have HIV. That means that she must keep all her prenatal appointments and take the prescribed medication without missing any doses. The drug AZT will be given to her during labor, and the baby will also take it four times a day for the first six weeks of life. The baby should be fed formula and an HIV positive woman should not breastfeed. The baby has a 98% chance of being born free from HIV if the mother follows all the directions of her physician. It is crucial that a pregnant woman knows her HIV status so she does not miss the opportunity to protect her unborn baby. HIV testing takes place at the initial prenatal care visit and again at 28 to 32 weeks gestation. If the second test was missed, the woman receives a rapid HIV test at labor and delivery. There have been documented cases of pregnant women having an initial negative HIV test and then having an infected baby because they contracted HIV while pregnant. It is important that all pregnant women use safer sex practices to prevent becoming infected while they are pregnant.

## LIVING WITH HIV

HIV can be managed like a chronic illness. Getting informed and taking charge of one's health is a great first step. HIV-positive persons should work with doctors, health professionals and counselors to develop the best treatment for their individual needs. They also need to decide who to tell about their illness and treatment. Positive persons need to get regular medical and dental exams and blood tests to make sure this infection is under control. The goal is to keep a low viral load and a high T-cell count in the blood. They should avoid alcohol, recreational drug use, smoking and unprotected sexual activities. HIV-positive persons need to be proactive with both their treatment and life plans. They should take the time and learn about their options.

Patients who are not eligible for Medicaid, who do not have private insurance, or those who have insurance that does not cover their medication can enroll in the State of Florida AIDS Drug Assistance Program (ADAP). Medications can be ordered monthly and can be picked up regularly at the clinic you normally attend.

## TREATMENT

Several classes of antiretroviral drugs are available for people infected with HIV/AIDS. These drugs work at different stages of the viral reproductive cycle by preventing HIV from being successfully assembled and released from the infected T-cell. The goal of anti-HIV therapy is to suppress replication of HIV in order to limit damage to the body's immune system. Successful therapy results in increased CD4+ cell counts accompanied by decreased viral loads. Individuals may respond differently to the same drug combinations, and some may experience side effects that make it difficult to take the drugs as prescribed. Antiretroviral drugs are not a cure for HIV/AIDS, but they can prolong and improve the quality of life for an HIV-positive person.