HIV AND AIDS for CNA's & HHA's

INTRODUCTION

The human immunodeficiency virus (HIV) is a virus that is transmitted through sexual contact or contact with infected blood. Infection with HIV is one of the biggest public health issues in the world today. HIV was first diagnosed in New York City and San Francisco in 1981. However, there is evidence that HIV had actually been infecting people for many, many years before it was recognized, and many years before the epidemic started.

There are now over 33 million people worldwide infected with HIV. A large number of them will develop the acquired immune deficiency syndrome (AIDS). AIDS is the name for the group of illnesses that are caused by HIV. Modern medications have now allowed many people infected with HIV to avoid developing AIDS. However, there are still a percentage of people infected with HIV who will develop AIDS, and access to these drugs is impossible for people living in poor countries. There is no cure for HIV infection, almost everyone who develops AIDS will die, and there is still no vaccine available that can prevent the spread of HIV.

Learning Break: Many people use the terms HIV and AIDS interchangeably, but it is important to remember that they are two different things. HIV is the virus that causes AIDS. AIDS is the disease – or group of diseases – that causes AIDS. A person can be infected with HIV but not have AIDS.

OBJECTIVES

When the student has finished this module, he/she will be able to:

1. Identify a definition of HIV.
2. Identify a definition of AIDS.
3. Identify the basic defense mechanism the body uses against infections.
4. Identify why this defense mechanism fails to control HIV.
5. Identify the basic way that HIV causes harm.
6. Identify two most common ways that HIV is transmitted.
7. Identify three ways HIV is not transmitted.
8. Identify one important fact about testing for HIV.
9. Identify two basic precautions used when caring for patients with HIV or HIV/AIDS.
10. Identify the proper course of action after contact with HIV-infected fluids/secretions.

BACKGROUND: HOW HIV WORKS AND WHAT IT DOES

HIV is a virus. Viruses are microscopic organisms that are very common: if you have ever had a cold or the flu, you have been infected with a virus. Many viruses are harmless. Also, the body has the ability to stop many viruses from multiplying and
causing harm. HIV, however, is different. HIV can keep multiplying and in many cases, it eventually causes the very serious disease of AIDS. This is how it happens.

We are constantly exposed to bacteria, viruses, and other infectious agents. Yet our bodies do a remarkably good job of stopping these microorganisms before they can cause illnesses. The immune system is the defense mechanism we have developed to keep us healthy even if we have been infected with harmful bacteria and viruses. It is a group of specialized cells and proteins that fights and contains potentially dangerous microorganisms in two ways:

- The immune system, in several different ways, destroys the bacteria, viruses, etc. before they can cause illnesses.
- The immune system forms antibodies. Antibodies are compounds that the body manufactures in response to an infection by a particular microorganism. Antibodies attach to that particular bacteria and/or virus and incapacitate it.

Unfortunately, the immune system does not often work when it tries to control an infection with HIV. First, HIV is a virus that multiplies very rapidly. Many times, the immune system simply cannot destroy the virus as quickly as the virus can spread. Also, the virus can actually “hide” inside cells; if that occurs, the body does not sense the presence of HIV until the infection has had a chance to spread. Second, and more importantly, HIV is a virus that mutates, and mutates quite fast. The body can form antibodies against the virus in its original form. But these antibodies only recognize and seek out that particular form of the virus. When the HIV senses a threat from these antibodies, it mutates, changes shape, and the new form of the virus cannot be destroyed by the circulating antibodies.

Learning Break: A useful way to think about antibodies, HIV, and mutations is a lock and key. The HIV is the lock and the antibody is the key that fits that lock and no other. When the HIV mutates, the key (the antibody) doesn’t fit the lock (the virus) and the virus cannot be controlled and destroyed. Mutation is the biggest reason why the immune system cannot control HIV.

Once the infection with HIV has begun, the viruses cause harm by destroying a certain type of white blood cell, the CD4 cell. White blood cells in general, and the CD4 cells in particular, are a vital part of the immune system. Without CD4 cells, our ability to fight infection is severely compromised. When the level of CD4 cells gets very low, the person with an HIV infection will develop AIDS.

AIDS itself is actually not one specific disease. HIV, in a sense, does not cause damage to major organs and tissues by itself. But because it so seriously damages the immune system, the infected person is very susceptible to diseases and cancers that normally would not occur.

AIDS then is defined as an infection with HIV that has destroyed the immune system to the point that certain specific infections or diseases occur.
Most of these infections are rare in people without an HIV infection. Certain cancers, lung infections, and injury to the brain are the most common.

It generally takes 8 to 10 years after an infection for someone with HIV to develop AIDS. Unfortunately, when the disease has started, it kills almost everyone within two years unless they are treated.

**SIGNS AND SYMPTOMS OF THE PATIENT WITH HIV/AIDS**

In the early stages, the person who has HIV/AIDS will not have any signs or symptoms. Later, as the disease progresses, fever, weakness, weight loss, fatigue, and nausea may be seen. In those situations, it is easy for someone to decide that these may all be due to the flu, or some other simple illness. Eventually, the patient with HIV/AIDS will develop one of the opportunistic infections or cancers for which there is no cure and the patient will die.

**HIV TRANSMISSION**

HIV and AIDS are very frightening, and rightly so. However, this fear, along with a lack of information, has caused some people to become irrationally afraid of becoming infected with HIV. There has been a lot of research about HIV transmission, and experts in the field are confident that they know exactly how HIV is transmitted and how it is not transmitted.

HIV is transmitted in these ways:

- Unprotected sex. Some sexual activity is much riskier than others, but any form of very intimate sexual activity that is unprotected can result in transmission of HIV.
- A blood transfusion with HIV infected blood: this is now very rare. The risk of being infected with HIV from a blood transfusion is about 1 in 2,135,000.
- Contact with HIV infected blood. This means that the HIV infected blood must be introduced into the bloodstream. This most commonly occurs when IV drug users share needles. Rarely, this happens when a healthcare worker gets stuck with a needle. It can also happen if a healthcare worker has HIV infected blood splashed into the eyes, nose, or mouth, or HIV infected blood is splashed onto an open cut.
- Through breastfeeding.
- During childbirth.
- During pregnancy to the unborn child.

**Learning Break:** As a healthcare worker, you should seek medical advice if you are exposed to HIV infected blood and you are not wearing barrier protection such as latex gloves or a face mask, or the blood contacts exposed skin.

**Learning Break:** Latex condoms do a very good job at preventing the transmission of HIV during sexual activity, but they are not foolproof. The only way to completely prevent HIV transmission during sexual activity is to make sure the individuals involved do not have an HIV infection.
HIV is *not* transmitted by:

- Mosquito bites.
- Contact with the saliva, tears, or urine from someone with an HIV infection.
- Touching/hugging someone with an HIV infection.
- Using public restrooms, public telephones, public drinking fountains, public health clubs/gymnasiums, or public swimming pools.
- Sharing food with someone with an HIV infection, or sharing eating utensils that have been used by someone with an HIV infection.
- Being in the same room with someone with an HIV infection – HIV is not transmitted through the air.

**Learning Break:** The two most common ways HIV is transmitted is through unprotected sexual activity and contact with HIV infected blood.

**HIV TESTING**

The only way to be sure that someone is infected with HIV is to perform a blood test. A small amount of blood is taken from a vein and examined. If there are anti-HIV antibodies, the test is considered positive and the person has an HIV infection.

**Learning Break:** Infection with HIV cannot always be detected right away. It can take up to 6 months after exposure and infection to detect HIV in a blood test.

**HIV/AIDS: KEEPING YOURSELF AND OTHERS SAFE**

You may be uncomfortable or afraid of having close physical contact with someone who has HIV or HIV/AIDS. Those feelings, at first, are certainly natural; HIV and AIDS can be deadly. But it is important to remember that HIV *cannot* be transmitted through casual contact. Sexual activity and blood transmission are the primary ways the virus is passed from person to person. As a CNA you might possibly be in contact with blood that is infected with HIV, but that would be unusual. There is no reason to be frightened for your health and safety when you are caring for a patient with an HIV infection or AIDS. Remember: *If you use simple precautions and common sense, you will not become infected with HIV.* Also, as a health care professional, it is your duty to care for all patients, and when it comes to people with HIV infection, there is no exception.

**Learning Break:** Under the Americans With Disabilities Act of 1990, people with an HIV infection cannot be refused health care. When you are a CNA, you are a health care professional, and you cannot refuse to care for someone who has an HIV infection or who has AIDS.

The precautions you must take when you are caring are really no different from the precautions you would use when caring for any patient.
• Consider all body fluids as possibly contaminated. HIV cannot be transmitted by contact with urine, stool or other body fluids/secretions from someone who has HIV. However, patients with HIV/AIDS may have infections that can be transmitted by body fluids other than semen or blood.

• Always wash your hands before caring for the patient (to protect the patient) and always wear disposable latex gloves when delivering personal care or when handling any body fluids or secretions. Wearing gloves protects you, protects the patient, and prevents the spread of any infectious agent that could be in body fluids.

• Always wash your hands after caring for the patient.

• There is no need to wear a mask when caring for the patient with HIV or HIV/AIDS unless that patient has a disease that is spread by inhalation.

Learning Break: It is important to observe these precautions to protect yourself and to protect the patient. Remember, the patient with an HIV infection or HIV/AIDS cannot fight infections as well as a healthy individual.

Learning Break: This was stated before, but it is important to remember. If you are exposed to HIV infected blood and you are not wearing barrier protection such as latex gloves or a face mask, or the blood contacts exposed skin, seek medical advice.

What do you do if you suspect or are worried that someone you are caring for has an HIV infection or has AIDS? Can you simply ask that person? That is a complicated question, it can’t be easily answered, and whether or not you can ask depends on the situation. In certain circumstances, asking someone about his/her HIV status could be considered an invasion of privacy. If you have doubts, it is best to simply use basic precautions – which you should do anyway – and ask your immediate supervisor what to do when you get a chance. That will keep you safe, avoid problems, and spare the patient’s privacy.

BASIC CARE OF THE PATIENT WITH HIV/AIDS

People with HIV/AIDS can develop one – or several – of many different infections or cancers, so it is difficult to provide a list of signs and symptoms that you may see. But the basic care of a patient with HIV/AIDS is not difficult. Here are the areas of care you will need to focus on.

• Infection control: HIV transmission can occur if you are careless or do not follow proper infection control procedures. Make sure you wear disposable latex gloves if and when you may have contact with the patient’s blood. Because people with HIV/AIDS may have another infection that can be spread through body fluids like sputum or stool, always wear disposable latex gloves when handling any body fluids/secretions. Wash your hands before and after caring for the patient. This protects you, protects the patient, and protects other people. If you have to handle any sharp object such as a needle that has punctured the skin or has been in contact with blood from someone who is infected with HIV, you must be very
careful. The facility where you work should have policies in place for the handling and disposing of contaminated needles, sharp objects, etc. These policies are usually discussed during orientation

- Infection control for the patient: If you currently have a communicable disease – even if it is a simple case of the flu – check with your immediate supervisor before caring for a patient with HIV/AIDS. These patients cannot fight off infection the way a healthy person can. You can also help the patient with HIV or HIV/AIDS to learn to live safely and sensibly. Become knowledgeable about the ways HIV can and cannot be spread so you can answer questions and educate your patients.

- Nutrition: Good nutrition is one way to keep the immune system healthy. Encourage your patient to eat well, and explain the reason to him or her. Let your supervisor know if the patient cannot or will not eat.

- Medications: People with HIV must take a large number of tablets/capsules each day to prevent HIV from causing AIDS. Taking large amounts of medications can be difficult. Also, many of these drugs have serious side effects. Although the success rate of the latest drug therapy for treating/preventing AIDS is very good, it can be easy for these patients to become discouraged. They may reason that they have a fatal illness and the complicated therapy and nasty reactions are not worth the possible benefit. However, these drugs have made a big difference, and you can certainly help your patients by reminding them of this, encouraging them to talk about their feelings, and encouraging them to try and follow the treatment plan.

- Emotional and psychological support: Having an HIV infection or AIDS can be emotionally and psychologically devastating. The amount of emotional and psychological assistance you give to these patients will depend on their needs, their resources, and your comfort level. But regardless of how much support you can provide, you must remember not to be judgmental about these patients. Every sick patient, regardless of what type of illness he/she has, deserves a basic level of courtesy and compassion.