

HIV/AIDS

Basic Education

(2 Training Hours)

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Basic HIV/AIDS

Beginnings

Less than 20 years ago, the words "Acquired Immune Deficiency Syndrome", (AIDS) and "Human Immunodeficiency Virus" (HIV) had not yet been uttered. Today these terms are commonly used. In the United States, the start of the epidemic was noted in 1981 with a group of gay men in San Francisco and a group of men in New York City that were demonstrating the same symptoms and dying from an unknown disease at an alarming rate. The research that followed discovered a yet unnamed disease. It was soon realized that individuals in other parts of the world were also experiencing similar symptoms. By 1984 it was discovered that Human Immunodeficiency Virus (HIV) is the causative agent of AIDS.

Over the years, our perception of AIDS has changed. The Centers for Disease Control and Prevention (CDC) defines AIDS as, "a specific group of diseases or conditions which are indicative of severe immunosuppression related to infection with the human immunodeficiency virus (HIV)." The CDC definition of an AIDS case has changed several times, with the most recent change occurring January 1, 1993. Treatments and therapies change constantly as new information is received about their effects on infected individuals.

What is HIV and AIDS?

In order to understand how HIV affects the body, one must understand how the immune system works. Very simply, lymphocytes are an important component of the immune system and can be divided into two distinct types: B-cells and T-cells. The bone marrow creates stem cells that later differentiate into B-cells. The B-cells generate antibodies in response to foreign antigens or "invaders" of the body.

The human immune system is composed of several lines of defense against outside invaders like bacteria, viruses, fungi and other parasites. These defenses include: the skin, the mucous membrane lining of the mouth and vagina, the hairs and cilia of the nose and respiratory system, antibodies and enzymes in tears, sweat and the acids in the stomach. These are the primary and secondary lines of defense in the human body. Within the body there is a further line of defense known as the immune system.

When a foreign invader, or antigen, gains entry into the bloodstream, the body reacts by producing antibodies specific for the destruction of that antigen. T-4 helper lymphocytes (white blood cells), also known as CD4+ cells, are an integral part of the immune system which directs the attack on the antigen. T-8 (also known as CD8+ cells) killer lymphocytes and B lymphocytes (both types of white blood cells) are directed by the T-4 cells in the elimination of the antigen. Without the T-4 (CD4+) helper cells, this process cannot take place. CD4+ cells are "called out" by the immune system and actually engulf and consume the "invaders". The normal CD4 cell counts ranges from 800-1,000 cells per cubic millimeter of blood. If the B-cells and the T-cells are not utilized, they generally die and they are replaced by newly created cells. By the time an individual begins to experience rare opportunistic diseases and infections as a result of the destructive process of HIV, their T-cell count is usually below 200 cells per cubic millimeter of blood. A person living with AIDS may have a T-cell count of close to zero cells per cubic millimeter of blood. At this point, their immune system may no longer protect them from opportunistic infections and conditions.

Thinking in the past was that HIV could hide in the lymph system or elsewhere for months or years and remain inactive. Now, it is evident that HIV goes to work immediately; however, the effects may not be

felt for months or years. It is not completely understood why HIV affects some individuals more quickly than others. Speculation is that some people who become infected have stronger immune systems, thereby making it more difficult for HIV to cause destruction. Also, once a person learns of their HIV infection, strict nutrition, exercise, sleep patterns and drug therapies can slow the effect of HIV.

The immune system does exactly what it is supposed to do when HIV enters into the bloodstream. The body produces antibodies specific to HIV so this foreign invader can be destroyed. These antibodies can destroy free floating virus in the bloodstream, but cannot destroy HIV once it enters the T-4 (CD₄⁺) or other target cells. HIV attacks, enters, hides inside and destroys the cells that normally would direct its destruction. HIV also attacks macrophages, which ingest bacteria and dead tissue, but its chief targets are T-4 cells.

Impact of HIV on the Immune System

The human immunodeficiency virus (HIV) was identified as the causative agent of AIDS in the mid-1980's. HIV is a retrovirus that invades CD₄ cell by attaching itself to a receptor site on the outside of the cell wall. Once inside of the CD₄ cell, it uses the reproductive capabilities of the host cell to create billions and billions of HIV every day. Eventually the host cell is destroyed and the newly created HIV is released to continue the cycle of invasion of CD₄ cells and HIV reproduction. Recent studies have demonstrated that lymphoid tissue (part of the immune system) serves as a viral reservoir, and in the early stages of the infection, active replication exists even though the amount of virus circulating in the blood remains low. Few symptoms are exhibited during this time, and a deterioration of the immune system is seen in a decrease in the CD₄ cell count. As the level of HIV increases and the amount of CD₄ cell count decreases, a number of symptoms and illnesses associated with an HIV infection are demonstrated.

Spectrum of the Disease: Scope of Infection from Onset to Death

The point from which a person becomes infected with HIV until they begin to experience life threatening opportunistic infections and conditions is an average of ten years. This is often referred to as the latency of incubation period.

As with any pathogen, the immune system responds when HIV is first introduced to the body. In an attempt to rid the body of the virus, the immune system is activated and HIV is forced into the lymph system where rapid growth occurs. A viral burst takes place and is manifested with acute (sudden onset), flu-like symptoms such as enlarged lymph nodes, fever, sore throat, fatigue, and gastrointestinal issues. The individual may also have other symptoms such as a rash, or generalized aches and pains. This phase of an HIV infection was formally known as Acute Retroviral Syndrome and is seen approximately three to twelve weeks after the initial infection. The infected individual is at their most infectious; that is to say, the level of HIV in the blood stream is at its highest level throughout the progression of the disease. Because the symptoms are mild to moderate in most people during this initial infection phase and resolve over time, they are often not recognized as an indicator of acute HIV infection. This response is the body's reaction to a foreign invader. Several months and, more commonly, years may pass before signs or symptoms of infection occur. This period is sometimes called asymptomatic HIV disease because few, if any, symptoms occur during this time.

Over time, the amount of virus circulating in the blood increases, and the CD₄ cell count drops.

Progression of the disease may be manifested by symptoms such as persistent generalized enlarged lymph

nodes or weight loss. If the CD4 cell count drops below 500 cells per cubic millimeter of blood, the infected person may experience symptoms such as increased fatigue, lethargy, fever, night sweats, skin rashes or lesions, oral yeast infections (thrush), and changes in blood counts (CBC). This phase of the HIV infection was referred to as ARC or Aids Related Complex and is now sometimes referred to as symptomatic HIV.

As time passes and as the CD4 cell count drop, the immune system is increasingly unable to defend the body and the individual becomes susceptible to a variety of illnesses. A diagnosis of AIDS is made when the CD4 cell count drops to 150 cells per cubic millimeter of blood and the individual experiences an AIDS- defining illness, such as pneumocystis carinii pneumonia.

Transmission

For infection to take place, two conditions must occur simultaneously: sufficient quantity of virus present and a port of entry in which to enter the body. Therefore, if the amount of HIV is low or there is no port of entry, the chain of infection will be broken and no infection will occur.

HIV and Body Fluids: Establishing Sufficient Quantity

HIV has been isolated in a variety of tissues and body fluids. Body fluids such as blood, semen, vaginal/cervical secretions, breast milk, cerebrospinal fluid, saliva, tears, and urine all carry HIV. The amount of virus present in each body fluid varies and therefore, the ability to transmit HIV also varies. The greater the concentration of the virus, the increased likelihood HIV will be transmitted. Blood carries the highest concentration of HIV, and contact with this body fluid presents the greatest risk of infection. Semen, vaginal and cervical secretions contain lower amounts of HIV, but it is still present in quantities large enough to transmit an HIV infection. Fluids such as saliva, tears and sweat do not have enough HIV virus present to be infectious.

The Ports of Entry: Three Major Routes

A port of entry must be present. If the virus has no way of entering the body, the person cannot be infected. The three major documented routes of infection are as follows:

1. Intimate sexual contact that includes exposure to blood, semen, or vaginal/cervical secretions that contain HIV.
2. Blood-to-blood contact with HIV infected blood or blood products via transfusion or by sharing drug equipment such as needles, syringes, filters, and cooking spoons.
3. From mother to infant during labor, delivery, and breast-feeding.

Sexual Transmission

Throughout the world, the majority of HIV infections are transmitted sexually. The majority of all reported cases in the United States are due to intimate sexual contact involving anal, vaginal or oral intercourse. Anal receptive places the individual at the highest risk for exposure. Women are eight times more likely than men to become infected with HIV through heterosexual intercourse. Oral intercourse, while not as risky as anal or vaginal intercourse, has been shown to be a mode of transmission for HIV. The HIV virus has been reported to have been transmitted orally to the receptive partner.

Blood borne Transmission

Blood-to-blood contact is the second most common mode of transmission. Blood-to-blood contact can occur in a variety of ways. The most common way is the sharing of injection drug equipment, such as needles, syringes, cooking spoons, and filters. The frequency and number of people that share the equipment increases the risk of transmission. However, although individuals may not use intravenous drugs, the use of drugs may lead to decrease inhibitions or create the need to trade sex for money or drugs. The use of crack, cocaine and other non-injectable drugs is considered a risk factor for HIV infection because of the association with high-risk sexual behaviors.

Other Blood-to-Blood Modes of Transmission

HIV can also be transmitted through contaminated blood or blood products. Donated blood is tested for antibodies, thereby significantly reducing the risk of transmission. The American Red Cross conducted a study of approximately half of the U.S. blood supply and reported that the risk of transmission was estimated to be 1 in 225,000.

Occupational Exposure is another way of contracting HIV through blood-to-blood contact, usually from needle sticks. Anyone who provides health related services to a person infected with HIV may be at risk of becoming infected through some accident. Health care workers who have experienced a significant exposure to HIV infected blood have been part of a CDC study that began in 1985. Most of these individuals experienced an accidental needle stick with HIV tainted blood. Almost all of the individuals never became infected, even though they were exposed. The chance of infection from a needle stick with HIV infected blood is about 1 in 350.

Other modes of transmission do exist however: blood and body fluid splatters and sprays on unprotected mucous membranes or non-intact skin and cuts from used razors to list a few.

Perinatal Transmission

HIV is transmitted from mother to infant approximately 25% of the time in the United States. The virus can be transmitted while the baby is still in the uterus, during birth, or while breast-feeding. Four factors have been consistently identified to impact the risk of perinatal transmission: 1) adherence to antiretroviral therapy for the pregnant woman and the infant (the key to the treatment regimen); 2) duration of ruptured membranes at the time of delivery; 3) the viral load of the mother; and 4) the baby's gestational age. Studies have shown that antiretroviral therapy given to the mother during pregnancy and labor then to the infant for the first six weeks of life decreases the rate of perinatal transmission to 7-8%. Because of side effects and logistics of taking the medications can be difficult, frequently the medication regimen is not followed and effectiveness of treatment is reduced. Breast milk has a high concentration of HIV in the first few days of its production after the infant's birth; therefore, this milk should be discarded.

Other Modes of Transmission

The above list of modes of transmission is not all inclusive. For instance, there are rare reports of HIV being transmitted by human bite.

Although injection drugs and sharing needles is certainly a behavior which puts an individual at risk for transmitting HIV, other drug and alcohol use (including the abuse of prescription drugs) may also affect judgment and put a person at risk of engaging in behaviors that can transmit HIV. Since the middle

1980's, crack cocaine has been a drug of choice for many drug users in communities across America. Although the act of smoking the drug does not put a person directly at risk, the behavior that accompanies the drug may. For example, young women in many communities who are poor and addicted to crack cocaine may support the cost of their addiction by having sex in exchange for the drug, or for money to buy the drug.

Opportunistic Infections and Conditions

When the T-cell count of an infected person falls to approximately 200 per microliter, opportunistic infections or conditions will usually occur. Opportunistic diseases emerge because the immune system is compromised or suppressed. A person with a healthy immune system and a normal T-cell count would probably not experience an opportunistic disease. However, there are a few diseases a person with a healthy immune system can get that may not be AIDS related. For example, tuberculosis, candidiasis ("thrush") and salmonellosis. If a person with a healthy immune system came in contact with a person who has an opportunistic disease, the individual would normally not become ill with that disease. Rather than being the direct cause of death, in most instances HIV sets the body up for opportunistic infections and conditions that attack and cause damage. Once the body can no longer defend itself because of a suppressed immune system, even a common cold or influenza can be difficult to eliminate. Over 25 opportunistic infections and conditions are associated with AIDS. An individual with an AIDS diagnosis may have two or more diseases simultaneously. Some of these opportunistic conditions are treated preventively (prophylactically) since the infection process of HIV is now better understood. Treated infections may recur at any time.

The agents that are responsible for opportunistic diseases and conditions are viruses, bacteria, fungi, protozoa, and cancers. The following is a list of the Centers for Disease Control and Prevention recognized opportunistic diseases and conditions that are associated with AIDS:

Candidiasis: This is a fungal infection commonly known as "thrush" in infants. Candidiasis appears as white, sometimes painful patches on the tongue and other oral mucous membranes, in the trachea, the esophagus or the lungs. Several medications are available for treatment.

Invasive Cervical Carcinoma: A type of potentially fatal cancer of the cervix. Treatment may consist of surgery, radiotherapy or chemotherapy.

Coccidioidomycosis: This fungal infection is found most often in HIV infected individuals who live in the Southwest United States. In people with healthy immune systems, this is a self-limiting infection. Usually starting in the lungs, coccidioidomycosis can spread to other parts of the body.

Cryptococcosis: A fungal infection that usually involves the lungs. However, it may spread to other parts of the body, including the central nervous system.

Cryptosporidiosis: A protozoal infection of the inner lining of the intestines. For someone who is immune compromised, the diarrhea it causes can be life-threatening.

Cytomegalovirus (CMV): This is viral infection ranges from benign to severe depending on age and immune status. It can cause brain damage, colitis, pneumonia and blindness. Several antiviral medications are available to treat CMV retinitis.

HIV Encephalopathy: This may be any disease of the brain directly related to HIV infection. This condition is also referred to as AIDS Dementia Complex and affects the central nervous system. Symptoms include poor concentration, forgetfulness, slowness, balance and behavioral problems.

Chronic Herpes Simplex: This disease is caused by a virus and is identified by mucocutaneous sore which are transmitted through sexual or other intimate contact. Symptoms last longer and can recur more often in an individual with a compromised immune system.

Histoplasmosis: A fungal infection which may be pulmonary (in the lungs) or disseminated (occur throughout the body). Symptoms are similar to those of tuberculosis.

Chronic Intestinal Isosporiasis: This protozoal infection causes diarrhea and inadequate gastrointestinal absorption.

Kaposi's sarcoma: This rare cancer was first recognized in elderly men of Mediterranean heritage in the late 1800's and it may attack people with AIDS when their immune system is compromised. Purplish-gray lesions usually occur on the extremities, although they may be found on the skin and on internal organs.

Non-Hodgkin's Lymphoma: This refers to a group of similar solid type tumors which includes diffuse histiocytic lymphomas and Burkitt's or non-Burkitt's lymphomas.

Primary Lymphoma of the Brain: A type of cancer found in the central nervous system and was very rare before the beginning of the AIDS epidemic. Prognosis for recovery is poor.

Mycobacterium Avium Complex: This is a common bacterial contaminant in the southeast part of the United States. It is not transmitted person to person, but causes chronic fever, anemia and wasting (unusual and uncontrolled weight loss) in individuals who have a compromised immune system.

Tuberculosis: Mycobacterium Tuberculosis is a bacterial infection which is spread by airborne droplets through coughing or sneezing by an infected person. It usually infects the lungs but may be disseminated throughout the body.

Pneumocystis Carinii Pneumonia (PCP): A protozoal infection of the lungs and the most common of the opportunistic diseases associated with AIDS.

Recurrent Pneumonia: this is any type of pneumonia (inflammation of the lungs) that occurs more than once over a short period.

Progressive Multifocal Leukoencephalopathy (PML): A viral infection that affects the central nervous system.

Salmonellosis: This bacterial infection affects the gastrointestinal system and is caused by ingesting contaminated raw foods. For a person with a compromised immune system, resolution of symptoms is very slow.

Toxoplasmosis: T protozoal infection that can attack the brain and central nervous system. It is usually caused by exposure to cat feces but can also be caused by ingesting some types of raw meat. This disease is generally only a problem for women who are infected during pregnancy and for individuals with compromised immune system.

Wasting Syndrome: This syndrome is characterized by a significant loss of weight (defined by CDC as more than 10% of baseline body weight) in the absence of any other underlying intestinal cause, and directly associated with HIV infection.

Prevention

Humans tend to believe that specific, disturbing events they observe happening to others will never happen to them. For example, teens often believe they will never have cancer because it usually takes several decades of inhaling tobacco until the consequences are manifested; senior adults don't believe sexually transmitted diseases can happen to them because that "stuff" is for punks and prostitutes. It is easier to deliver a prevention message than to get individuals to change their behavior. **Preventing the transmission of HIV/AIDS is simple. All someone has to do is avoid high risk behaviors, increase knowledge of HIV and know their HIV status and the HIV status of their partner.**

Abstinence and Monogamy

Abstinence from sexual activity is the only sure way to not become infected sexually. If a person is not sexually active (through oral, anal, or vaginal contact), there is virtually no chance of contracting HIV or any STD.

Being mutually faithful to one uninfected partner is a way to be sexually active and not risk infection with any disease. The words "mutual monogamy" implies that both partners in a relationship are only having sex with each other.

Latex Condoms

Condoms provide a barrier of protection for those who choose to have one or more sex partners. When used properly, condoms create a latex barrier that will prevent the virus spreading from an infected individual to someone else.

Latex condoms are approximately 90% effective at preventing pregnancy and the passage of almost all sexually transmitted diseases. This figure would be about 98% to 99% if everyone who used condoms used them correctly. Most often, human error causes condoms to fail.

Polyurethane Condoms

Although plastic, or polyurethane, condoms are reported to be stronger and more sensitive than latex condoms, the guidelines for using condoms properly should be followed. Polyurethane condoms are a recent addition to the HIV prevention market and, as such, their reliability in preventing diseases is mostly unknown. Advantages polyurethane condoms have over latex are oil, water or silicon based lubricants may be used, they serve as an alternative for individuals allergic to latex and polyurethane may be more pleasant for individuals who find latex condoms undesirable, due to their lack of sensitivity. Disadvantages of using polyurethane condoms are the increased cost and loss of pliability.

Other Barrier Methods of Prevention

For oral sexual contact, barrier methods of prevention must be employed to avoid HIV and STD transmission. A latex dental dam or latex condom may be used for this purpose. Although no studies have been published on its reliability ordinary household plastic wrap may be used for barrier protection when other conventional barriers are not available.

Injection Drug Use

Prevention measures in the injecting drug use (IDU) community take on a hierarchy of effectiveness. The ideal situation would be to remove the behavior from the drug user, get them into a substance abuse program and off the drug. This prevention measure is not always possible because there are more drug addicted individuals than existing abuse programs can serve.

The second best measure of prevention is not sharing needles and syringes (works). If an injection drug user chooses not to change their behavior and give up drugs, they should not share needles. By not sharing needles, the risk of HIV transmission through blood-to-blood contact is reduced.

If an IDU continues sharing needles, they should clean their needles and syringes. Ordinary household bleach drawn into the needle and syringe can inactivate HIV. The bleach must be drawn into the syringe, shaken and squirted out. This process must be completed three times. Then, water must be drawn in and shaken to thoroughly rinse out the bleach. This process should also be completed three times as injecting bleach into the veins can cause great harm.

The least effective means of IDU prevention is to rinse the needle and syringe in any available liquid such as water, soda or any drinkable liquid. Some measure of prevention is better than no measure of prevention.

Most states and local governments have laws that prohibit the use, sale and exchange of drug paraphernalia. This is also the case with Florida.

The 1998 Clinton Administration endorsed the use of needle exchange programs as a part of a comprehensive HIV prevention program, but concluded that the programs should be designed and funded by local communities. The Florida Department of Health supports the use of needle exchange programs as a proven effective measure to prevent the spread of HIV.

Infection Control

All health care workers are required to undergo training in basic infection control measures and universal precautions. Universal precautions mean all health care workers should assume any patient could be infected with HIV and Hepatitis B and take appropriate precautions. If universal precautions are followed at all time, infections are not likely to be transmitted in the health care setting.

A Few Statistics

For several years, Florida has reported approximately ten percent of all the AIDS cases in the US, but has only six percent of the US population. Of the cumulative number of reported cases of AIDS in the US, Florida is third behind New York and California. Texas and New Jersey round out the top five. In Florida in 1997, AIDS was the second leading cause of death of males and females 25-34 years of age. The four most southeastern counties (Dade, Broward, Palm Beach and Monroe) report nearly sixty percent of Florida's AIDS cases.

The Florida AIDS Law: Legal Rights and "The Right to Know"

In 1988, the Florida Omnibus AIDS Act was passed. The Florida Department of Health (formerly the Department of Health and Rehabilitative Services) was given rule-making authority, and rules were signed by the Governor in 1989. Most of Florida's AIDS law is outlined in Florida Statutes 381, and most of the accompanying rules can be found in Chapter 64-D-2 of the Florida Administrative Code.

The following is a list of highlights regarding the Florida AIDS Law. This synopsis does not cover everything in the rules and law, and many of these laws and rules have exceptions.

Confidentiality- If a person chooses to have a test for HIV or HIV antibodies, related medical records are confidential. Only the person or their authorized representative may have access to that testing information.

Counseling- Pre-test counseling requirements were changed in 1998, and post-test counseling procedures can now be determined by medical providers. The Department of Health will continue the policy of pre- and post- counseling when an HIV test is requested at a DOH county health department or registered site.

Non-complying Carriers- HIV/AIDS infected individuals may not have sex or share drug needles with a prospective partner without first informing them of their HIV status.

Discrimination- HIV infected individuals, people diagnosed with AIDS, health care workers, and individuals perceived to be infected are protected from discriminations.

Blood Banks- all blood, human tissues and organs that are donated must be tested for HIV. It is illegal for an HIV infected individual to donate blood or blood products.

Education- Individuals who are licensed by the Florida Department of Business and Professional Regulations, the Agency for Health Care Administration or the Department of Health are required by their specific boards to have AIDS education. Employees of licensed facilities such as hospitals and nursing homes are also required by law to receive training in AIDS education. State employees, students in schools and universities, are required by law to receive information, annually, regarding HIV/AIDS transmission and prevention.

Informed Consent- If a person chooses to have a confidential HIV test, they must give their written consent. Consent may be verbal when testing is done at a Department of Health anonymous clinic. A

minor twelve years of age or older, who attends an STD or family planning clinic can give their own consent of an HIV test.

Reporting- All individuals diagnosed with HIV or AIDS by a physician must be reported to the local DOH county health department.

Test Sites- All Department of Health registered sites, private physicians.

Hospitals- a hospital cannot require an HIV test as a condition for admission.

Prostitutes- a convicted prostitute or a person who is convicted for soliciting a prostitute may be required to undergo an HIV test.

“Need-to-Know” Limitations- The fact that a health care provider or facility is authorized to know a patient’s HIV test results does not mean that all their employees and agents have the right to know this information. The Omnibus AIDS Act limits access to superconfidential HIV test results to those employees and agents who either provide care to the test subject such as doctors, nurses, social workers; conduct administrative tasks supportive of the patient’s care such as secretaries, billing clerks, administrators; or handle body fluids or tissues of a test subject; AND have a “need-to-know” the patient’s HIV test status. (NOTE: the need to know is eliminated with the use of Universal Precautions.) If the employee or agent in order to perform properly his or her normal tasks (providing care, performing business operations, or participating in approved educational or research programs) would have access to the patient’s medical background, a need-to-know exists and knowledge of the patient’s HIV test status is permitted.

Caring for HIV infected Adults

An increasing number of Long Term Care (LTC) and adult living (ALF) facilities are now admitting HIV infected persons, and all staff must be familiar with the challenge of caring for these individuals. Patients with AIDS are treated according to their symptoms and every effort must be made to make them comfortable and to provide compassionate care.

Nutrition is one of the biggest day to day challenges in HIV and AIDS. Debilitated by recurring infections, vomiting, and diarrhea, they need extra calories and protein. However, nausea, vomiting, difficulty swallowing, pain, extreme fatigue, shortness of breath, or depression may leave residents with little appetite or energy for eating. The starving body breaks down muscle tissue for energy and emaciation (severe malnutrition) occurs.

The following basic nursing measures should be used when providing nutritional care for an HIV infected adult:

- Offer frequent, small meals, rather than 2 or 3 large ones. Avoid offering them at times when the resident is too tired to eat.
- Avoid greasy, fatty, and spicy foods. The smell of cooking meats and other proteins may be nauseating.
- Avoid high fiber foods because they can make diarrhea worse. Instead, offer bland, low-fiber foods, such as milk shakes and other milk products.

- Avoid uncooked fruits and vegetables. They can contain bacteria that can be dangerous for a person whose immunity is impaired.
- Offer dietary supplements, such as Ensure, Boost, or Sustacal.
- Provide frequent oral care (use gloves), since many residents with AIDS have oral lesions. Popsicles may also ease the discomfort while providing additional fluids. If the lips become dry and chapped, apply lip balm or petroleum jelly.
- Offer fluids frequently, or keep them within easy access.

Pay special attention to skin care. Individuals with AIDS are particularly prone to skin breakdown. Use these guidelines for providing skin care:

- Keep skin clean and dry. Use topical moisturizers or skin barriers after each incontinent episode.
- Assist the resident to reposition at least every 2 hours to avoid pressure ulcers.
- Provide or encourage loose fitting clothing for residents with extensive lesions.
- Report any rashes or changes in skin condition promptly to your supervisor.

Provide emotional support while providing resident care. Recognize that the diagnosis of AIDS is devastating to the affected adult, as well as to family and friends. Emotional and non-judgmental support must be an important aspect of care by all who are involved with the care for the person with HIV infection. The resident and their family members are grieving their loss and they have emotions to deal with and situations to resolve. Your personal feelings about the resident's lifestyle and how the disease was contracted should never be conveyed to the resident or other staff members. Discussion regarding the HIV status or any type of gossip or conjecture regarding the disease or how it was contracted must be avoided and discouraged. Your discretion, mature and professional manner may mean the difference in a resident's dignity and self-worth during a time when there is precious little left.

Conclusion

Since there is no cure for AIDS, nor a vaccine to prevent HIV infection at this time, and since older adults are also at risk for HIV infection, you must always be alert when performing care procedures. Health care workers that work with HIV infected and other immune compromised persons should always use appropriate methods such as Universal Precautions and Standard Precautions to prevent the spread of infection.

Health care workers have many contacts with persons who may have infectious diseases. Thus, it is important to be informed about HIV infection, methods of prevention, and effective ways to care for residents with HIV infections. Learn all that you can about this devastating disease and be prepared to give your residents the best care possible while safeguarding your own health at the same time. Remember, with HIV/AIDS, there you only get one chance to protect yourself and your resident.

HIV / AIDS Post Test

Student Name: _____ Date: _____

Instructions: Read each of the questions carefully, and circle T or F as your answer.

1. The immune system does not get affected by the aging process of the body. TRUE or FALSE
 2. The normal CD4 cell count is 400-800 cells per cubic millimeter of blood. TRUE or FALSE
 3. HIV/AIDS can be spread/contracted by hugging a sweaty infected person. TRUE or FALSE
 4. A person can have HIV and not have any symptoms. TRUE or FALSE
 5. The ports of entry are: intimate sexual contact, blood to blood contact, and from mother to infants.
TRUE or FALSE
 6. Opportunistic infections occur when the CD4 cell count drops below 600 cells per cubic ml of blood.
TRUE or FALSE
 7. Universal precautions are utilized to protect the health care providers from occupational exposure.
TRUE or FALSE
 8. Safe sex incorporates the use of latex condoms. TRUE or FALSE
 9. The Florida Omnibus AIDS Act "Right to Know" states that all healthcare providers have the right to know the status of every patient or resident that they serve. TRUE or FALSE
 10. Nutrition is one of the biggest challenges in HIV and AIDS. TRUE or FALSE
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FILL OUT YOUR INFORMATION BELOW AND SEND YOUR COMPLETED ANSWER SHEET TO THE ADDRESS BELOW.

INCLUDE YOUR CHECK OR MONEY ORDER FOR \$ 10.00 (PER TEST)

NAME: _____
ADDRESS: _____
PHONE: _____
EMAIL: _____
FACILITY NAME: _____

MAIL TO:

**Life Tech Instructional
1423 Wisconsin Ave.
Palm Harbor, FL 34683**