Educational Objectives

LEARNING GOAL:

TO FAMILIARIZE LAW ENFORCEMENT PERSONNEL WITH THE ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS) AS A HEALTH RISK AND THE RECOMMENDED MEASURES FOR PREVENTION AND SELF PROTECTION.

PERFORMANCE OBJECTIVES:

At the completion of this module, the participant will be able to:

List ways the AIDS virus can infect the human body.

Identify who is at risk for contracting the virus.

Differentiate between a blood borne disease and a casually transmitted disease in relationship to the AIDS virus.

Identify the proper technique for cleaning contaminated surfaces.

Recognize the fact that AIDS can be contracted by heterosexual means and that the disease is not confined to the homosexual and intravenous drug communities.
Introduction

Recently there has been great concern by law enforcement personnel about possible exposure to AIDS. The Acquired Immune Deficiency Syndrome is indeed a serious and nearly always fatal condition. However, with an understanding of the virus and how it is transmitted from person to person, it becomes clear that most people are at low risk for contracting this disease. In 1978 the first documented cases of AIDS were reported in the United States. Not until 1981 did this virus become classified as a new disease. No disease or physical condition in recent history has received as much publicity or attention as AIDS. It would be difficult to find anyone who has not at least heard of this disease. The purpose of this module is to: (1) provide the officer with facts about AIDS, (2) to answer many of the questions commonly asked in relationship to these facts, and (3) to clarify many of the assumptions made concerning the disease.

<table>
<thead>
<tr>
<th>QUESTION #1</th>
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<tbody>
<tr>
<td>THE ACRONYM AIDS ACTUALLY MEANS</td>
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<tr>
<td>A_________ I_________ D_________ S_________</td>
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What is AIDS?

AIDS is a disease that is caused by a virus which attacks the T-lymphocyte cells in the body's immune system. The virus uses T-cells to multiply and attacks other cells which subsequently causes the T-cells to die. As the T-cells die and the AIDS virus multiplies, the immune system of the infected individual progressively deteriorates and the body becomes unable to fight infection.

<table>
<thead>
<tr>
<th>QUESTION #2</th>
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<tbody>
<tr>
<td>THE AIDS VIRUS DAMAGES THE ____________________ SYSTEM</td>
</tr>
<tr>
<td>OF THE INFECTED PERSON.</td>
</tr>
</tbody>
</table>
Eventually, a person with AIDS will become infected with any number of various diseases or viruses which would generally not result in the death of a person with a normal immune system. The damaged system will not have the capability to repel an invading virus no matter how harmless it would normally be. This reduced capability to repel normally harmless infections, leads to a gradual deterioration of the person's health and can result in death. Remember, persons with AIDS do not die from the virus itself; they die from a variety of other infections which attack an inadequate immune system.

QUESTION #3
AN AIDS PATIENT DIES FROM THE VIRUS ITSELF.
TRUE ____ FALSE ____

AIDS is caused by a virus known as the Human Immune Deficiency Virus (HIV). Most persons infected with HIV remain healthy while others develop illnesses ranging from minor to extremely serious. Up to 30 percent (possibly higher) of these persons will develop AIDS. Other people will develop AIDS Related Complex (ARC) which is generally less serious, but for some people can be fatal. An accurate definition for ARC has not yet been agreed upon by the medical community. Opportunistic infections and tumors are not present in the ARC classification. If they do occur, the person is removed from the ARC category and classified as having AIDS.

QUESTION #4
AIDS IS CAUSED BY A VIRUS KNOWN AS __________________________
__________________ DEFICIENCY __________________________.

Who is at risk?

Studies have revealed that the highest risk group for contracting this disease are homosexual and bisexual males. These two groups compose 73% of all AIDS patients. Intravenous drug users fall victim in 17% of all documented cases. This group contracts the disease by sharing contaminated needles. Unidentified persons who died prior to being interviewed, women, and children account for 3% of AIDS patients. Women contract AIDS from sexual relations with bisexual men, intravenous drug using men, blood transfusions, or contaminated intravenous drug usage. Children become infected by mothers passing
PWA (Persons with AIDS) BREAKDOWN

- 73% Homosexual and Bisexual Men
- 17% IV Drug Users
- 3% Women and Children or unidentified persons who died prior to being interviewed
- 3% Hemophiliacs, Transfusion Recipients
- 4% Heterosexual contacts of persons with AIDS or at risk for AIDS
on the virus via the placenta during birth and sometimes through blood transfusions. Hemophiliacs, transfusion recipients and sexual contacts of persons at risk for AIDS compose the remaining 7%.

**QUESTION #5**

___________ AND _______________ MALES COMPOSE 73% OF ALL AIDS PATIENTS.

**What about donating blood?**

Blood donation in this Country is, and always has been safe. The needles used are new and sterile and are disposed of after use. Also, the current blood supply in the Country has been, and will continue to be, screened for HIV.

**QUESTION #6**

IN THE UNITED STATES, IT IS _______________ TO DONATE BLOOD.

**Is it possible to get AIDS by casual contact?**

No, AIDS is a blood borne, sexually transmitted virus that is not spread by casual contact. If a person were to spit, sneeze or somehow get tears on your clothing or exposed body parts, the disease would not be transmitted.

**QUESTION #7**

IF A PERSON WITH AIDS WERE TO SPIT ON YOU, WOULD YOU BE LIKELY TO CONTRACT THE DISEASE? YES ____ NO ____
How great is the risk of contracting AIDS during the performance of my normal duties?

At least five fact finding studies have been conducted dealing with people who have had direct exposure to the virus while rendering some kind of assistance to AIDS patients. Direct exposure to the virus is described as: Needle stick injuries, mucous membrane exposure, or contact with open cuts or lesions from a person with AIDS or a person who has tested positive for the AIDS antibody (HIV). A total of 1,700 individuals have been monitored by receiving ongoing, periodic exams and HIV antibody tests. None of these individuals has developed AIDS or a positive HIV antibody test.

**QUESTION #8**

**GIVEN THE INFORMATION ABOVE, WOULD YOU BE LIKELY TO CONTRACT AIDS BY PERFORMING CPR?**

YES ____  NO ____

**QUESTION #9**

**WHILE GIVING FIRST AID TO A CUTTING VICTIM, YOU ARE INFORMED THAT HE/SHE HAS AIDS. YOUR RISK FOR CONTRACTING THE DISEASE WOULD BE CONSIDERED _________.**

What are the recommended cleansing procedures following exposure?

Unlike the hepatitis B virus which has been known to live up to six weeks outside of the body, the AIDS virus dies quickly when exposed to the environment. Research show that HIV can survive up to one week under ideal laboratory conditions. However, the virus rarely survives more than two hours outside of the body. Common household cleaning agents are adequate for killing the virus. Surfaces that are exposed to the AIDS virus can be readily disinfected with a 1:9 solution of household bleach to water. As an added precaution, it is suggested that you use disposable vinyl gloves while cleansing a possibly infected area.
QUESTION #10

THE AIDS VIRUS CAN BE READILY DESTROYED WITH A ______: ______ SOLUTION OF HOUSEHOLD BLEACH TO WATER.

Law enforcement personnel during the course of their normal duties are at low risk to this disease since it has been proved time and time again that casual contact does not transmit the virus. If by chance you should come in contact with a known or suspected AIDS infected body fluid, a routine precaution would be to thoroughly wash any exposed area with soap and water for at least 30 seconds. It is recommended that you wash the affected area as soon as possible following contact.

QUESTION #11

LAW ENFORCEMENT OFFICERS SHOULD THOROUGHLY _________
WITH _________ AND _________ ANY EXPOSED AREA
SUSPECTED OF BEING CONTAMINATED.

How large is the AIDS problem in Maryland?

Since official record keeping began in 1981, the breakdown by year of AIDS cases in Maryland is as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
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<tbody>
<tr>
<td>1981-1982</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>1983</td>
<td>32</td>
<td>28</td>
</tr>
<tr>
<td>1984</td>
<td>79</td>
<td>68</td>
</tr>
<tr>
<td>1985</td>
<td>165</td>
<td>114</td>
</tr>
<tr>
<td>1986</td>
<td>167</td>
<td>52</td>
</tr>
<tr>
<td>1987 Jan and Feb</td>
<td>27</td>
<td>1</td>
</tr>
</tbody>
</table>
Is heterosexual transmission of AIDS a growing problem?

As of this date, data and studies are inconclusive. Since AIDS was originally recognized predominantly in homosexual males, numerous studies concluded that HIV could only be transmitted by specific sexual activities, such as anal intercourse. Since then, however, evidence has been obtained to illustrate the transmissibility of HIV through routine heterosexual activity. It has been proven that high concentrations of HIV are found in blood and semen. Should an infected male have sexual relations with a female, it is possible to infect that female. The use of condoms undoubtedly reduces the probability of HIV transmission from the male to the female. The contraction of AIDS by a female from a male is generally accepted, however, the reverse transmission is subject to controversy. At first, several medical investigators considered it "unlikely" that HIV could be transmitted from females to males. Studies now reveal that women can and do infect men. The actual methods of female-to-male transmission are unknown. HIV can be isolated from blood, saliva and vaginal/cervical secretions. Studies have also revealed that AIDS has been spread during oral sexual acts. Exchange of secretions via genital-genital, oral-genital, oral-anal or oral-orai contact may all play a role in this type of transmission. The likelihood of sexual exposure to HIV relates directly to three factors: (1) Sexual contact with high-risk individuals, (2) Number of contacts, and (3) Number of contacts with different partners. Thus, an individual's risk of sexual exposure to HIV can be generally determined mathematically: The greater the number of sexual contacts, the greater the risk of exposure.

**QUESTION #12**

HIGH CONCENTRATIONS OF HIV ARE FOUND IN _________ AND _________.

**QUESTION #13**

THE USE OF _____________ UNDOUBTEDLY REDUCES THE PROBABILITY OF HIV TRANSMISSION.
Is there a cure or vaccine available?

No, however, in January of 1987, scientists in Cambridge, Massachusetts identified a fragment of viral protein that may be a key ingredient in developing a vaccine. Called gp120, it stimulates production of antibodies and binds directly to the immune system T-4 receptor. "We are excited by the results to date and have begun the process of testing the experimental vaccine in chimpanzees," comments National Cancer Institutes Robert Gallo, M.D. "We're hopeful that the results of these tests will give us a better idea whether or not this protein fragment has the potential of producing an immune response capable of protecting against the AIDS virus in humans."

Summary

Everyone of every sex and race must now be concerned about AIDS. However, many people are unnecessarily fearful for their safety. Research has shown that AIDS is contracted by (1) intimate sexual contact with an infected person, (2) contaminated blood which is directly introduced to the bloodstream, and (3) by shared intravenous needles. Family members, friends and co-workers of AIDS patients have not contracted the disease through their usual, everyday contact. There is absolutely no evidence to indicate that the virus is spread by casual contact. Routine handwashing, the use of disposable vinyl gloves and the use of a 1:9 solution of bleach to water to disinfect soiled materials are suggested safeguards for routine police activities.
Answers to Review Questions

1. Acquired Immune Deficiency Syndrome
2. Immune
3. False
4. Human Immune ( ) Virus
5. Homosexual and Bisexual
6. Safe
7. No
8. No
9. Low
10. 1:9
11. Wash, Soap and Water
12. Blood, Semen
13. Condoms

References

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