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	<p style="text-align: center;"><b><u>LESSON PLAN : SA 8</u></b> <b><u>CAUSES / PREVENTION OF HIV / AIDS</u></b> <b><u>AND ROLE OF YOUTH</u></b></p> <p>Period - One</p> <p>Type - Lecture</p> <p>Code - SA 8</p> <p>Term - I (SD/SW)</p> <p><b><u>Training Aids</u></b></p> <p>1. Computer, Projector, Charts, Pointer, Black Board &amp; Chalk.</p> <p><b><u>Time Plan</u></b></p> <table><tr><td>2. (a)</td><td>Introduction</td><td>-</td><td>03 Min</td></tr><tr><td>(b)</td><td>Causes of HIV / AIDS</td><td>-</td><td>10 Min</td></tr><tr><td>(c)</td><td>Prevention of HIV / AIDS</td><td>-</td><td>15 Min</td></tr><tr><td>(d)</td><td>Role of Youth</td><td>-</td><td>10 Min</td></tr><tr><td>(e)</td><td>Conclusion</td><td>-</td><td>02 Min</td></tr></table> <p><b><u>INTRODUCTION</u></b></p> <p>3. Few diseases have been feared as much as HIV/AIDS has been ever since human beings began efforts to prevent and control major diseases. Although a large number of health problems continue to defy human efforts to control them, none of them presents a challenge greater than the prevention and control of HIV/AIDS.</p> <p>4. Globally, an estimated 38.6 million people are living with HIV, of which an estimated 4.1 million were new infections. In Asia, an estimated 8.2 million people are living with HIV including 1.2 million new infections last year. In India, an estimated 5.2 million people are living with the virus, most of whom are poor and marginalized. The patterns of HIV infection in India reflect underlying patterns of social and economic inequality, such as distribution of wealth, power, gender relations, women’s status, poverty, lack of sustainable livelihoods, civil unrest and disorder, etc.</p>	2. (a)	Introduction	-	03 Min	(b)	Causes of HIV / AIDS	-	10 Min	(c)	Prevention of HIV / AIDS	-	15 Min	(d)	Role of Youth	-	10 Min	(e)	Conclusion	-	02 Min
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## **AIM**

5. To acquaint the cadets about the Causes and Prevention of HIV / AIDS and the Role of Youth.

## **PREVIEW**

6. The lecture will be conducted in following parts:-

- (a) Part I - Causes of HIV / AIDS.
- (b) Part II - Prevention of HIV / AIDS.
- (c) Part III - Role of Youth.

(a)

## **PART I : CAUSES AND PREVENTION OF HIV / AIDS**

7. What is HIV / AIDS.

(a) Although HIV and AIDS are often used synonymously, they are different. HIV (Human Immuno-deficiency Virus) is a virus that gradually destroys the body's immune system. AIDS (Acquired Immuno Deficiency Syndrome) is a condition wherein various diseases affect the body because of the body's weak natural defense mechanism - the immunity. AIDS stand for Acquired (not inborn, but passed from mother to baby), Immune (relating to the body's immune system, which provides protection from disease causing bacteria/viruses/ fungi); Deficiency (lack of response by the immune system to bacteria / viruses / fungi / cancer cells); Syndrome (a number of signs and symptoms indicating a particular disease or condition).

(b) Therefore, AIDS is an acquired condition in which a person may have various diseases that cause similar symptoms, all of which are due to the body's diminished ability to fight diseases. Anyone who has HIV infection will develop AIDS over a period of time.

8. How Does HIV Affect the Body. A special variety of white blood cells called T lymphocytes secrete chemicals that are necessary for destroying the disease causing germs or agents. HIV destroys T lymphocytes (also called T-cells), and thereby reduces the body's ability to fight diseases. T-cells contain a protein called CD4 on their surface. HIV first attaches itself to CD4 and then fuses with the T-cells to multiply. Fusion with T-cells destroys the T cell and several copies of HIV are produced.

9. How Does HIV/AIDS Spread. HIV is present in all body fluids of an infected person and is more in number, in the blood, semen and vaginal fluids. HIV infection normally spreads when there is contact with these body fluids through four main routes:-

(a) Sexual Transmission. The most common route of spread of HIV infection is through

unprotected sex between two people, where at least one has HIV infection. Unprotected sex means having sex without condom. Although the risk of HIV being transmitted during one sexual act depends upon several factors, it is important to remember that even one episode of unprotected sex with an infected partner can transmit HIV. Increased number of unprotected sex increases the risk of infection. Some issues related to sexual transmission of HIV are as under:-

(i) **Increased Risk for Women.** Women are at greater risk of developing HIV infection through unprotected sex. This means that the risk of transmission of HIV from man to woman is higher than that from woman to man. There are five main reasons why women are at greater risk:-

(aa) The semen from the infected male sexual partner remains in the woman's vagina for a longer time, thereby increasing the duration of contact between infected semen and delicate lining of the vagina.

(ab) The surface area of the vagina is larger than the surface of tip of the penis in men, which provides greater opportunity for the virus to enter the body.

(ac) Many women with sexually transmitted infections (STIs) do not have any symptoms and therefore do not seek treatment. Presence of STIs increases the risk of HIV transmission.

(ad) The gender imbalance makes it difficult for women to exercise their sexual rights. This means that they have less control over, when and with whom, they have sex.

(ae) Women are less likely to take treatment, especially for STIs, which increase the risk of HIV transmission.

(ii) **Sexually Transmitted Infections.** Presence of STIs increases the risk of HIV transmission. People who have ulcers in the genital organs or abnormal discharge either from the penis or the vagina are at higher risk of HIV transmission. Early treatment of STIs reduces the risk of HIV infection.

(iii) **Anal Sex.** Although anal sex is more common among men, who have sex with men (MSM), some heterosexual partners also practice it. Anal sex has higher risk of HIV transmission as compared to vagina sex. This is mainly because the delicate inner lining of the anus gets easily damaged during anal sex. This damage helps the HIV to enter the body easily.

(iv) **Menstruation.** The menstrual blood of a woman with HIV infection will contain the virus. Thus, sexual intercourse during menstruation with an infected woman increases the risk of the male partner getting HIV infection.

(b) Blood Transfusions. As per the guidelines of the National AIDS Control Organization (NACO), it is mandatory to test blood for HIV before transfusion. The risk of transmission of HIV through tested blood is therefore very remote. The only possibilities of infection through blood are, if the blood was not tested for HIV or the HIV infection was in the window period. Window period is the term used for the duration between the entry of HIV in the body and the detection of its antibodies through blood tests. Window period is normally up to three months. This means that during this time, even if a person is HIV infected he/she will test negative. He/she can however transmit infection to others. Blood donation has no risk of getting HIV infection because the needle and other equipment used for collecting your blood are safe.

(c) Sharing Needles and Syringes for Intravenous Drug Use.

(i) When people inject drugs intravenously, they may draw small amounts of blood into the needle. If another person uses this needle immediately, the blood containing HIV will be injected into the second person. Thus, he/she can also be infected with HIV.

(ii) Despite several concerns about the poor sterilisation practices by some doctors, especially in rural areas, HIV infection through injections given at a health centre is not a common mode of transmission in India. This is mainly because most of these doctors, even if they are not qualified, boil them for a short time. HIV is destroyed by even short duration heat and drying. Shorter boiling time for sterilizing needles may not destroy other disease causing germs such as Hepatitis B virus. It is also important to remember that injections that are given in the muscles, under the skin or in the skin layers carry little risk of transmitting the HIV.

(iii) For several years now, rumours are periodically spread about people with HIV infection, intentionally pricking other people with infected needles in public places such as movie theatres, markets, bus-stops etc. with an intention of transmitting the infection to them. These rumours are baseless because of three main reasons:-

(aa) There should be adequate amounts of blood containing the virus on the needle before it can cause infection. A needle that has been merely pricked in the body of a person with HIV is not likely to have the number of HIV necessary to cause infection.

(ab) Even if the infected person were to use needle that has been used intravenously, the virus may not be alive if the blood on the needle has dried up.

(ac) When an infected needle is pricked into the muscles, the risk of transmitting the infection is very low.

- (d) Mother to Child Transmission. Mother to child transmission of HIV can occur in three ways:-
- (i) During pregnancy, when the HIV crosses the placenta.
  - (ii) During delivery.
  - (iii) During Breastfeeding. Although HIV is present in breast milk, it does not mean that the baby will always be infected with it. Also, in a country such as India, the alternative to breast-feeding is bottle-feeding, which is not only expensive but also carries a higher risk of diarrhoea, poor nutrition and as a result death. Since the benefits of breast-feeding are much more than the risk of getting HIV infection, it is recommend that women with HIV infection breast-feed their babies.
- (e) Other Methods.
- (i) Skin Piercing. There are several cultural practices in India that involve skin piercing such as, piercing ears or nose for ornamental reasons, tattooing, etc. Although skin piercing is not currently one of the major routes of transmission of HIV infection in India, it is desirable to use sterilized equipment for prevention of infections such as Hepatitis B.
  - (ii) Oral Route. Many people believe that kissing, sharing utensils etc. with people who have HIV can transmit the infection. This is not true. HIV has not been shown to be transmitted through saliva. If the virus is ingested in the stomach, the acids in it are likely to inactivate or destroy the virus. The risk through oral route may be there only if there are cuts or wounds in the mouth or bleeding gums.

10. How is HIV Diagnosed. HIV is normally diagnosed through blood tests that detect antibodies to HIV. It is recommended that the tests are done only at the Voluntary Counselling and Testing Centres (VCTCs) set up by National AIDS Control Organisation (NACO). Counselling is done before and after the test in order to ensure that the person being tested is aware of all the issues related to HIV transmission, prevention, treatment, care and support. In case of a negative test result, the test is repeated after three months to rule out the possibility of the first test being carried out in the window period. Confidentiality is strictly maintained while testing for HIV. This means that no one other than the person being tested is informed about the test results.

(b)

## **PART II : PREVENTION OF HIV/AIDS**

11. Symptoms of HIV.

- (a) Most people infected with HIV are not likely to have any symptoms for about three to ten years. Few develop symptoms earlier while few others may not develop any symptoms for

more than ten years. Even if a person does not have symptoms, he/she can transmit the infection to others. This is why it is recommended that anyone who has sex with a partner who is not in mutually faithful relationship should use condoms for every sex.

(b) A normal person has about 500 to 1500 CD4 cells per millilitre of blood. When the CD4 count decreases below 200, people with HIV can present with opportunistic infections, which are infections, that affect the body because of poor immunity. Opportunistic infections are caused by bacteria, virus, fungus and parasites. They may also get some types of cancer.

(c) When HIV progresses to AIDS, the infected person would have had unexplained weight loss of more than ten percent, unexplained diarrhoea or fever for more than one month, fungal infections, tuberculosis or severe bacterial infections.

12. Tuberculosis. Since tuberculosis is already one of the major health problems in India, people with HIV infection are at higher risk of getting it. Very often, tuberculosis is the first indication that a person has HIV infection. Although tuberculosis largely affects the lungs, it can affect other organs of the body also. People with AIDS are more likely to get infection in other organs of the body. One of the major concerns related with tuberculosis and AIDS is resistance of the tuberculosis bacteria to several medicines that were earlier effective for its treatment. Common symptoms of tuberculosis include cough, fever, increased sweating at nights, loss of weight and excessive fatigue.

### 13. **HIV Prevention.**

(a) HIV/AIDS can be prevented in four main ways:-

(i) Being in a mutually faithful sexual relationship. If this is not possible, then correct and consistent use of condoms for every sexual act, irrespective of the type of sex is essential.

(ii) Checking all the blood and blood products for HIV infection before transfusion.

(iii) Avoiding drug abuse, especially sharing needles and syringes for injecting drugs.(iv)

Reducing the risk of mother-to-child transmission by following recommended guidelines for preventing parent to child transmission of HIV infection.

(b) Condom Use. Condoms have two main advantages-they prevent infections such as sexually transmitted infections (STIs) and HIV, and also prevent pregnancy. Many people use condoms only for commercial sex. It is important to remember that anyone who is not in a mutually faithful sexual relationship should use condoms for every sex. There are some myths about the use of condoms which are not true. These are:-

- (i) Some people argue that condoms do not offer complete protection. This is not true. It is only the inconsistent and incorrect use of condoms, which may lead to contracting STD or HIV.
  - (ii) Some people complain that condoms, especially those that are distributed free by the government, are probably not of good quality and therefore break during sexual act. These complaints are not valid, as several strict quality control methods are adopted during condom manufacturing.
  - (iii) A belief that condoms reduce sexual pleasure, is one of the major barriers to condom use. This is also not true. There may be a difference in the sensation in the initial stages of using condoms but most people adapt to them very soon.
- (c) Preventing Parent to Child Transmission. NACO has set up 'Prevention of Parent to Child Transmission (PPTCT) centres in all districts of the six states where HIV infection is high and in several other hospitals in other states. In these centres, pregnant women are counselled and tested for HIV. If they are positive, they are given medicines for HIV at the time of delivery and caesarean section is done to surgically deliver the baby. This reduces the risk of infection for the newborn from about 45% to less than 2%.

14. Ethical Issues Related to HIV Infection. Ethical issues related to HIV infection are mainly for ensuring that a person with HIV infection leads a life of dignity. HIV testing should not be done without informed consent of the person to be tested. This means that the person to be tested should have understood what test results would mean and its likely impact on his/her life. People with HIV infection have as much right to get education, employment and medical treatment from any source as everyone else.

(c) **PART III : ROLE OF THE YOUTH IN PREVENTING HIV / AIDS**

15. HIV is more common in the most productive age group of 15-45 years, and therefore causes major impacts on the economic status of the affected individual, family, community, and the nation at large. The young adults can play a very important role in preventing the HIV at community level, and also minimise its impact at all levels by taking following actions :-

- (a) Youth can assume responsibility in preventing HIV infections by avoiding behavior that might lead to HIV infections.
- (b) Youth may also share the right to refuse sex and assume responsibility for ensuring safe sex.

(c) People living with HIV/AIDS have the same right to education, employment, health, travel, marriage, recreation, privacy, social security, scientific benefits etc. Hence, all should share responsibilities for avoiding HIV infection / re-infection.

(d) The youth by creating a proper and positive peer pressure, can delay the age at first sex, avoid sex before marriage, practicing safer sex, and preventing alcohol and drug abuse. The stereotypical image of a “macho” male needs to be changed to depict responsible behaviours.

(e) The young can also play an important role in addressing gender imbalance, which is one of the important factors for underdevelopment and HIV transmission.

(f) Youth should also educate general public by spreading the information that HIV can not be transmitted by the following actions:-

(i) Shaking Hands.

(ii) Sharing of Clothes.

(iii) Sharing of Food and Utensils.

(iv) Sharing of Toilets.

(v) Insect Bites.

(vi) Hugging or Kissing.

(vii) Working in the same office or travelling in the same vehicle.

(viii) Playing or swimming with the infected person.

(ix) Coughing, sneezing or in routine patient-care activities (bed - making, feeding etc).

### **CONCLUSION**

16. HIV can be transmitted from person to person only if the body fluids like blood, semen and vaginal fluids come in contact with body fluids of an HIV infected or AIDS patient. Young people, with or without HIV/AIDS, have an important role to play in actively countering discrimination against young people living with HIV/ AIDS. We require to provide a platform for people living with HIV/AIDS, so that we work together according to their interests. We also need to mobilize support of local authorities and community leaders to listen to people living with HIV/AIDS and to combat actively against their discrimination and exclusion. Setting up training programmes, to improve the integration of the young people suffering from HIV/AIDS into society, is the need of the hour.



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