Acquired immunodeficiency syndrome (AIDS) is a condition that prevents the body's immune system from effectively fighting disease. Persons with AIDS are more susceptible to opportunistic illnesses, such as severe infectious diseases and certain cancers, that can be fatal. Less severe AIDS-related illnesses include fever, swollen glands, tiredness, weight loss, and diarrhea.
AIDS is caused by human immunodeficiency virus (HIV), initially identified in 1984. It has been found in blood, semen, saliva, tears, urine, vaginal secretions, mucous membranes, cerebrospinal fluid, breast milk, and amniotic fluid.

HIV-infected individuals usually develop HIV antibodies within 6-12 weeks following infection. Beginning about 12 weeks after infection, HIV is detectable by blood test: enzyme-linked immunosorbent assay (ELISA or EIA). A positive EIA means that the individual has been infected and can transmit the virus. The HIV-infected individual will not necessarily develop AIDS or AIDS-related illnesses.

There are three principle mechanisms of HIV transmission:

* heterosexual and homosexual activity;
* direct contact with infectious blood or blood products, including needle sharing and blood transfusion; and
* transmission from infected mothers to their infants, in utero, at birth, or through breast-feeding.

INCIDENCE OF AIDS IN THE UNITED STATES

The first cases of AIDS were reported in the U.S. in 1981. Today, approximately one million persons may be HIV-infected (CDC, February 1990). As of March 1990, 125,000 individuals were known to have AIDS, 2,000 of them children under age 13 years (CDC, April 1990). Through 1989, 339 males and 82 females ages 13-19 were diagnosed as having AIDS (Office, 1989).

WHY ADOLESCENTS ARE AT RISK FOR HIV INFECTION

Although less than 1 percent of persons known to have AIDS are teenagers, this segment of the population presents characteristics that increase the risk of becoming HIV infected:

1. PERCEIVED INVULNERABILITY

Adolescents characteristically believe that they are impervious to disease, accidents, and death (Hochhauser, 1988). Ninety-one percent of 16-19 year olds surveyed by telephone did not think they would get AIDS (Strunin & Hingson, 1987). 73 percent of adolescents in another study were not worried about becoming HIV-infected (Price et al., 1985). Even when 79 percent of San Francisco teenagers reported being afraid of getting AIDS, more than half believed they were not the kind of person who gets AIDS...
2. DEVELOPING PERSONAL IDENTITY

Sexual orientation becomes clarified during adolescence. One study found 1-2 percent of 16-19 year old boys had had homosexual relationships (Hingson et al., 1990); 0.5 percent reported bisexual relationships (Strunin & Hingson, 1987). These boys could serve as agents of transmission to subsequent female or male partners.

3. UNPROTECTED SEXUAL INTERCOURSE

Adolescents are already at high risk for sexually transmitted diseases (STD). Recent data suggest that 70 percent of teenagers are sexually active by age 20, over half have had sexual intercourse by age 17, and fewer than half use condoms (Guidelines, 1988).

It is not surprising that slightly under half of all patients treated for STD are under age 25 years (Yarber, 1987). The Centers for Disease Control (CDC) reports that 15-19 year olds have the highest rate of gonorrhea of any age group and that the number of reported cases of STD, an indicator of unprotected sexual intercourse, is increasing among 15-19 year olds.

4. DRUG EXPERIMENTATION

An individual's first experience with drugs typically occurs during the first three years of high school (Thorne & DiBlassie, 1985). Over half of adolescents have experimented with psychoactive drugs by high school graduation (Guidelines, 1988). Most drug use among 12-17 year olds involves alcohol, although a small proportion--0.1 percent in a recent study (Hingson et al., 1990)--uses heroin and other injectable drugs. Experimentation with noninjectable drugs may impair judgment and lead to behaviors that increase the risk of HIV infection.

HIGH-RISK ADOLESCENTS

Particularly vulnerable to becoming HIV-infected are certain subgroups within the adolescent population. These include: regular intravenous drug users; those from homes in which family members are substance abusers; those in detention and residential facilities; dropouts; the homeless; migrant children; adolescents who have had STD; hemophiliacs; and those who adopt high-risk behaviors, such as unprotected sexual intercourse and drug and alcohol use. In testimony before Congress, Dr. Karen Hein called these subgroups "bridges" between HIV-infected adults and large groups of uninfected adolescents (AIDS and Teenagers, 1988). The extent of HIV infection within the high-risk population, excluding hemophiliacs, is largely unknown. Twenty-four states have one or more HIV education programs addressing youths at highest risk of infection (CCSSO, 1989).
EDUCATIONAL INTERVENTIONS FOR ADOLESCENTS

As of May 1989, 28 states and the District of Columbia required HIV/AIDS education, although most states did not stipulate content, and virtually all states permitted parents to exempt their children from instruction (CCSSO, 1989). Only 7 states provided funding for HIV/AIDS education.

Content of HIV/AIDS education should include: (a) the nature of HIV/AIDS; (b) how HIV can be transmitted; (c) who is at risk; and (d) behaviors that minimize the risk of HIV infection (Yarber, 1987).

The following sequence of instruction has been recommended:

a. early elementary school--basic information on HIV to reduce unnecessary fears of infection;

b. late elementary/middle school--more specific information on how HIV can and cannot be transmitted; and

c. junior high/high school--modification of behaviors that increase risk of HIV transmission.

The challenge of preventing HIV infection among adolescents is the same challenge faced by educators trying to prevent STD and develop healthy life-style behaviors in this population. Some data suggest that AIDS education, while improving positive attitudes toward HIV-infected people, has not altered adolescents' attitudes toward adopting preventive behaviors (Huszti et al., 1989).

Attempts at promoting behavior change through the media may also have mixed results. When a population does not perceive the consequence of its actions as a likely event, the population is unlikely to alter its behaviors to avoid the consequence (Job, 1988). In the case of AIDS, adolescents seem unable to regard illness and death as likely consequences of unprotected sexual intercourse or drug use and therefore may be unresponsive to traditional health messages. In addition, messages aimed at "gay men" may go unheard by adolescent boys who have occasional homosexual experiences. Messages aimed at "addicts" may be neglected by adolescents who occasionally experiment with drugs.

Based upon research in STD prevention, Haffner (1989) recommends that both adolescents and parents be involved in HIV/AIDS education program design; that programs address the invulnerability issue; and that programs be behaviorally based,
rather than simply offer information. Successful programs would help adolescents develop and practice skills for communication, refusal, and assertiveness, as well as show them how to obtain information and resources.

REFERENCES

References identified with an EJ or ED number have been abstracted and are in the ERIC database. Journal articles (EJ) should be available at most research libraries; documents (ED) are available in ERIC microfiche collections at more than 700 locations. Documents can also be ordered through the ERIC Document Reproduction Service; (800) 227-3472. For more information contact the ERIC Clearinghouse on Teacher Education, One Dupont Circle, NW, Suite 610, Washington, DC 20036; (202) 293-2450.


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