

Epidemic Disease Information Sheet for HIV/AIDS

Prepared by: The Students Currently Enrolled in STS 4400: Epidemic Disease

AIDS (Acquired Immunodeficiency Syndrome) is a health condition that results from the deficiency in the body's immunity following HIV infection. HIV attacks the human body by breaking down its immune system that is meant to fight diseases. Over a period of time, the immune system weakens and the body loses its natural ability to fight diseases, at which time various diseases begin to take effect.

Infectious Organism and Mode of Transmission:

HIV is not easy to get. Both men and women can become infected and can give the virus to someone else. HIV is found in the blood, semen, and vaginal secretions of infected persons and can be spread in the following ways:

- Having sex—vaginal, anal, or oral, with an HIV-infected person (male or female)
- Sharing drug needles or injection equipment with an HIV-infected person to inject or “shoot” drugs
- Passing the virus from an HIV-infected woman to her baby during pregnancy or during birth. (An infected mother can also pass HIV to her baby through breastfeeding.)
- Receiving blood transfusions or blood products contaminated with the HIV virus

Disease Characteristics:

Many people do not develop any symptoms when they first become infected with HIV. Some people, however, get a flu-like illness within three to six weeks after exposure to the virus. This illness, called Acute HIV Syndrome, may include fever, headache, tiredness, nausea, diarrhea and enlarged lymph nodes (organs of the immune system that can be felt in the neck, armpits, and groin). These symptoms usually disappear

within a week to a month and are often mistaken for another viral infection.

About half of all people with HIV develop AIDS within 10 years if they are not treated.

The symptoms of AIDS may include:

- Recurring fever
- Dry cough
- Fatigue
- Diarrhea lasting more than one week
- Skin rashes
- Night sweats
- Loss of appetite
- Rapid / significant weight loss
- Swollen lymph glands
- White spots in the mouth or vaginal discharge (signs of yeast infection)
- Pneumonia
- Red, brown, pink, or purplish blotches on or under the skin or inside the mouth, nose, or eyelids
- Memory or movement problems

Many of the apparent symptoms of AIDS are really symptoms of *opportunistic infections*, many of them otherwise rare, that are able to take advantage of an individual's compromised immune system.

Prevention, Treatment, Cure:

Prevention of the spread of HIV is based on education of the public of how it can be transmitted. One approach to prevention is avoiding behaviors that pose a transmission risk (for example, abstaining from sexual activity and from the use of injected drugs). For those who are sexually active, the male latex condom is the single most efficient technology to reduce the sexual transmission of HIV and other sexually transmitted infections.

Testing is an important part of the prevention process. According to the CDC, most people develop detectable antibodies

within 2 to 8 weeks. Those testing negative should be tested again 3 months after exposure because of the rare occurrence of false negatives in earlier testing.

As of now there is no known cure for HIV/AIDS, but anti-retroviral drugs can be taken to slow down the effects of HIV on the body. These drugs help stop HIV from reproducing, or inhibit the virus from completing the steps necessary for replication. These drugs reduce the amount of HIV in the bloodstream. These are very strong drugs and once the drugs are taken, they must be taken regularly. If not, the virus may develop a resistance to the drug.

Historical Significance:

There are many competing theories about the origin and history of HIV/AIDS. The virus was probably transferred from simian to human populations in central Africa, spreading among humans from the 1950s to

the 1980s. The disease was first identified, and the virus isolated, in the early 1980s.

Over 20 million people worldwide have died of AIDS since the disease was identified.

Contemporary Occurrence:

According to UNAIDS, as of December 2004, 35.9-44.3 million people were living with HIV/AIDS. In 2004, there were 4.3-6.4 million newly infected people and 2.8-3.5 million AIDS deaths. 64% of people with HIV/AIDS live in Africa.

Contemporary Significance:

Even though easily preventable, the AIDS pandemic is a daunting foe. It is the number one killer of African-Americans 18-45. It has cut the life expectancy of some nations to the mid-30s. This pandemic severely undermines the world's fight against poverty, for if all the young adults are dead, who is left to control the means of production?

For More Information:

Centers for Disease Control: Division of HIV/AIDS Preventions Web site, "Fact Sheets," last revised 15 Aug 2005, available online at: <http://www.cdc.gov/hiv/pubs/facts.htm>, accessed 20 Sept 2005. One-stop-shop for reliable information on the HIV/AIDS pandemic.

YOUANDAIDS.org Web site, "Symptoms," no revision date, available online at: <http://www.youandaids.org/About%20HIVAIDS/Symptoms/index.asp>, accessed 20 Sept 2005. This site gives good descriptions of early symptoms of HIV infection, occurrences in the body during infection, and later symptoms of HIV/AIDS.

UNAIDS Web site, "AIDS Epidemic Update: 2004," December 2004, available online at http://www.unaids.org/wad2004/EPIupdate2004.html_en/epi04_00_en.htm, includes "Maps," http://www.unaids.org/wad2004/EPIupdate2004.html_en/Epi04_13_en.htm#P251_74231 accessed 26 Sept 2005. Excellent maps with HIV/AIDS numbers broken down by regions in 2004 (currently infected, newly infected, and deaths).

American Red Cross of Greater Chicago Web site, "Get Educated," no date, available online at http://www.chicagoredcross.org/geteducated/hivaids_facts.htm, accessed 26 Sept 2005.

Q&A of facts about HIV/AIDS including transmission, prevention, and symptoms.

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