

HIV/AIDS

1. **Agent:** Human immunodeficiency virus (HIV), a retrovirus.

2. **Identification:** Acquired Immunodeficiency Syndrome (AIDS) is a term first used by epidemiologists concerned about the emergence in 1981 of a cluster of diseases associated with loss of cellular immunity in adults who had no obvious reason for presenting such immune deficiencies. AIDS was subsequently shown to be the late clinical stage of infection with the human immunodeficiency virus (HIV).

a. **Symptoms:**

HIV Infection : Within several weeks to several months after infection with HIV, may develop an acute self-limited mononucleosis-like illness, lasting for a week or two. Usually are then free of clinical signs or symptoms for months to years before other clinical manifestations develop. Later symptoms of HIV disease includes night sweats, fever, fatigue, involuntary weight loss, diarrhea, swollen lymph nodes, oral candidiasis and vaginal yeast infections.

Advanced Disease: As the immune system weakens opportunistic infections and cancers occur. This stage is referred to as Acquired Immunodeficiency Syndrome (AIDS).

b. **Differential Diagnosis:** Other causes of immunodeficiency disease.

c. **Diagnosis:**

For the case definitions of both HIV and AIDS see the following document entitled "[HIV and AIDS Surveillance Case Definition](#)".

Serological tests for antibodies to HIV and antigen tests are diagnostic for HIV infection. Most persons infected with

HIV develop detectable antibodies within 1-3 months after infection. HIV antibody tests must be confirmed by another method, either Western blot or immunofluorescence antibody test. Antigen tests include HIV p24 antigen test, viral culture and HIV nucleic acid detection.

The absolute T-helper cell (CD4+) count or percentage is used most often to evaluate the severity of HIV infection and to help clinicians make decisions about treatment.

3. **Incubation:** Variable. Although the time from infection to the development of detectable antibodies is generally 1-3 months, the time from HIV infection to diagnosis of AIDS has an observed range of less than 1 year to 15 years or longer. With no treatment about half will develop AIDS in 10 years. The time that it takes for individuals to go through the stages/spectrum of the disease depends on many factors, including a person's health status and health behaviors. Early detection and early treatment may delay the onset of AIDS. The incubation period in infants is shorter than in adults.

4. **Reservoir:** Humans.

5. **Source:** Body fluids such as blood, CSF, vaginal secretions or semen; HIV-infected tissues or organs; contaminated needles and syringes.

6. **Transmission:** HIV is both a sexually transmitted disease and a blood borne pathogen. Person-to-person transmission occurs from sexual contact; sharing needles and/or syringes; through other direct exposure to infected body fluids by needle sticks, open cuts or sores, or other breaks in the skin that would facilitate direct blood to blood exposure; transfusion or organ transplants. From an infected woman to her fetus (vertical or perinatal transmission), or through breastfeeding (neonatal transmission).

7. **Communicability:** Not known precisely; begins early after onset of HIV infection and likely extends throughout life.
8. **Specific Treatment:** Early diagnosis of infection and referral for medical evaluation are indicated. Expert sources for information on appropriate health screening, and drug schedules and doses include the AIDS Educational and Training National Resource Center (www.aids-ed.org) and National HIV/AIDS Clinicians' Consultation Center (www.ucsf.edu/hivcntr).

AIDS must be managed as a chronic disease; antiretroviral treatment is complex, involving a combination of drugs; resistance will rapidly appear if a single drug is used. The drugs are toxic and treatment must be lifelong. Adherence is critical for the success of the treatment. A successful treatment is not a cure, although it results in suppression of viral replication. Treatment decisions must be guided by the laboratory parameters of both plasma HIV RNA (viral load) and CD4+ absolute T-helper cell count, and by assessing the clinical condition of the patient.

9. **Immunity:** Unknown, but presumed to be general susceptibility; race, gender and pregnancy status do not appear to affect susceptibility to HIV infection or progression to AIDS.

REPORTING PROCEDURES

Both HIV and AIDS are to be reported within 1 week of identification of case or suspected case (Title 17, Section 2500, *California Code of Regulations* and *California Health and Safety Code*, Section 121022).

CONTROL OF CASE, CONTACTS & CARRIERS

Provider may make a referral to the Public Health Services' HIV/AIDS Program for case management of patients. This may include assistance with partner notification, benefits counseling, AIDS Drug Assistance Program, referrals to substance abuse treatment, HIV

Early Intervention treatment, or referral for AIDS medical care.

CASE:

Isolation: Isolation of the HIV-positive person is unnecessary, ineffective and unjustified. Universal precautions apply to all patients. Observe additional precautions appropriate for specific infections that occur in AIDS patients.

Concurrent disinfection: Of equipment contaminated with blood or body fluids and with excretions and secretions visibly contaminated with blood and body fluids by using bleach solution or germicides effective against *M. tuberculosis*.

CONTACTS:

Cases should be advised and counseled on notifying their sexual partners and needle-sharing partners. Health care provider or local county HIV/AIDS Program can assist patients in partner notification. Infants born to HIV infected mothers need to be followed medically and tested.

PREVENTION-EDUCATION

Cases:

1. Educate case on modes of transmission and how to prevent spreading HIV infection to others.
2. Refer for drug treatment if appropriate.
3. Good nutrition and healthy lifestyle should be addressed.

Prevention Education for non-infected patients:

1. Having unprotected sexual intercourse (anal, vaginal, or oral); multiple and especially concurrent and/or overlapping sexual partners increases the risk of HIV and other sexually transmitted diseases (STDs).
2. Having another STD can increase the risk of getting infected with HIV as the sores, blisters, rashes or other tissue

changes that result from infection with a STD provides easier entry for HIV into the body.

3. The only sure way to avoid infection through sex is to abstain or to engage in mutually monogamous sexual intercourse only with someone known to be uninfected. In other situations, latex condoms must be used correctly every time a person has vaginal, anal, or oral sex.
4. Sharing drug paraphernalia, such as needles, syringes, cookers and other injection equipment increases the risk of HIV infection.
5. The CDC now recommends routine HIV testing for all adults and adolescents, ages 16 to 64 years, in all health care settings. Routine HIV testing and counseling of patients is an important intervention for raising awareness of HIV, promoting safe

behaviors and diagnosing HIV infection early.

6. In California all pregnant women must be counseled about HIV early in the pregnancy, and offered testing for HIV as a routine part of standard prenatal care. If infected with HIV, taking AZT during later stages of pregnancy and delivery reduces the probability of transmission to the infant.
7. In health care settings care must be taken in handling, using and disposing of needles or other sharp instruments.

DIAGNOSTIC PROCEDURES

San Joaquin County Public Health Laboratory services are available. Refer to the Laboratory Services Manual in Section 2, Disease Reporting.