The Stages of HIV Disease

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HIV Is a Continuum

Most of us are used to thinking of disease in very simple terms: if you feel sick, you are sick; if you feel healthy, you are healthy. However, because HIV may begin causing subtle changes in the immune system long before an infected person feels sick, most doctors have adopted the term "HIV disease" to cover the entire HIV spectrum, from initial infection to full-blown AIDS (which is also called "advanced HIV disease").

The HIV continuum described below is representative of the experience of many people with HIV. The time that it takes for each individual to go through these stages varies. For most people, however, the progression of HIV disease is fairly slow, taking several years from infection to the development of severe immune suppression.

Infection

Following exposure to the virus, HIV enters the bloodstream and begins to take up residence in the cells; this is when HIV infection occurs. People with HIV are considered to be infectious (able to transmit HIV to others) immediately after infection with the virus.

A person with HIV is infectious at all times. Also, a person does not need to have symptoms or look sick to have HIV. In fact, people may look perfectly healthy for many years despite the fact that they have HIV in their bodies. The only way to find out if you are infected is by taking an HIV test.

Primary Infection (or Acute Infection)

Primary HIV infection is the first stage of HIV disease, typically lasting only a week or two, when the virus first establishes itself in the body. Some researchers use the term acute HIV infection to describe the period of time between when a person is first infected with HIV and when antibodies (proteins made by the immune system in response to infection) against the virus are produced by the body (usually 6 to 12 weeks) and can be detected by an HIV test.

Up to 70% of people newly infected with HIV will experience some "flu-like" symptoms during this stage. These symptoms, which usually last no more than several days, might include fevers, chills, night sweats, and rashes. Afterward, the infected person returns to feeling and looking completely well. The remaining percentage of people either do not experience symptoms of acute infection or have symptoms so mild that they may not notice them.
Given the general character of these symptoms, they can easily have causes other than HIV, such as a flu infection. For example, if you had some risk for HIV infection a few days ago and are now experiencing flu-like symptoms, it is possible that HIV is responsible for the symptoms, but it is also possible that you have some other viral infection instead. If you believe you may have been exposed to HIV, you may want to consider calling an AIDS hotline to discuss whether you were in a situation that put you at risk for HIV infection and whether you should take an HIV test. Within California, you can call the California AIDS Hotline toll-free at 800/367-AIDS. Outside California, call your State’s AIDS Hotline or the CDC-Info line toll-free at 1-800-232-4636. To find the number for your state’s hotline go to www.aidshotline.org and click on Other Hotlines.

During acute HIV infection, the virus makes its way to the lymph nodes, a process which is believed to take three to five days. Then HIV actively replicates (makes copies of itself) and releases new virus particles into the bloodstream. This burst of rapid HIV replication usually lasts about two months. People at this stage often have a very high HIV "viral load" (amount of virus in the body). However, people with acute HIV infection usually will not test positive for HIV antibodies, since it takes the body approximately one to three months to produce antibodies against HIV.

Some individuals who fear they have recently been exposed to HIV may be curious about PCR and RNA viral load testing, which test directly for the virus itself rather than for antibodies and can therefore be used during the acute infection stage. Viral load testing is generally used by physicians to track the progression of HIV disease in the body -- thus helping HIV positive patients make choices about appropriate treatment strategies. Most people concerned about their HIV status do not need viral load testing. The antibody test is the cheapest, easiest, and overall most reliable way for individuals to learn their HIV status. That said, individuals who have been exposed to HIV recently and experience symptoms consistent with acute HIV infection can request a viral load test from their doctor. This test may help identify HIV infection during the "window period" before HIV antibodies have developed, though an antibody test will ultimately be needed to confirm the viral load test result.

Some doctors are treating newly infected people (those in the acute stage of HIV infection) with a combination of anti-HIV drugs. Scientists disagree about whether anti-HIV treatment is useful during primary HIV infection. While some researchers are optimistic about the impact of very early anti-HIV treatment, they are also concerned about drug side effects, long-term effects on the body, and the possibility of developing drug-resistant virus if people use powerful anti-HIV drugs before they become ill due to HIV disease. You should consult with your doctor to make the most informed choice about when to start taking anti-HIV medications.

**Seroconversion**

This term refers to the time when an HIV positive person's immune system responds to the infection by producing antibodies to the virus. Most people develop antibodies within three months after infection, and some can take up to six months.

If an antibody test is done before seroconversion is complete, it may give a "false negative" result because sufficient antibodies have not yet been developed by the body. A three-month window period between infection and production of antibodies is normal for most of the population. Very, very rarely (i.e., in only a few cases ever), a person may take six months to produce antibodies. To be certain of your HIV status, take an HIV antibody test three months or longer after you were exposed to the virus. For even greater certainty, get tested again six months after the exposure occurred.
The Asymptomatic Stage

After the acute stage of HIV infection, people infected with HIV continue to look and feel completely well for long periods, usually for many years. During this time, the only indication that you are infected with HIV is that you will test positive on standard (antibody) HIV tests and you may have swollen lymph glands.

This means that you look and feel healthy but can infect other people through unprotected sex or through needle sharing -- especially if you have not been tested and do not know that you are infected.

Even though an infected person may appear perfectly healthy, HIV is still very active and is continuing to weaken the immune system during this stage. In some individuals, the virus appears to slowly damage the immune system over a number of years. In most people, however, a faster decline of the immune system occurs at some point, and the virus rapidly replicates. This damage can be seen in blood tests before any actual symptoms are experienced.

HIV positive people should seek medical care and begin monitoring their immune systems as soon as possible after receiving a positive test result. Periodic immune monitoring tests, such as CD4 count and viral load tests, can give you and your doctor a better picture of your immune health and disease progression, and can help you make smart choices about treatment.

Seeking early care for HIV disease can give people better chances of survival and improved quality of life. People with HIV are encouraged to see a doctor regularly, even if they feel fine at the moment, because the virus could be already damaging the immune system. Early and regular care enables HIV positive individuals and their medical care providers to take control of their treatment before symptoms appear.

Early- and Medium-Stage HIV Symptomatic Disease

When the immune system is compromised by HIV infection, many people begin to experience some mild HIV disease symptoms, such as skin rashes, fatigue, night sweats, slight weight loss, mouth ulcers, and fungal skin and nail infections. Most, though not all, will experience mild symptoms such as these before developing more serious illnesses. Although one's prognosis varies greatly depending on a number of factors, it is generally believed that it takes five to seven years for the first mild symptoms to appear. These symptoms mark the early and medium stages of HIV symptomatic disease.

As the disease progresses, some individuals may become quite ill even if they have not yet been diagnosed with AIDS, the late stage of HIV disease. Typical problems include chronic oral or vaginal thrush (a fungal rash or spots), recurrent herpes blisters on the mouth (cold sores) or genitals, ongoing fevers, persistent diarrhea, and significant weight loss.

These symptoms are not necessarily specific to HIV or the development of AIDS. However, they should be of concern to people who have tested positive for HIV. Usually, symptoms occur when the virus has already caused considerable damage to the immune system. For that reason, people with HIV should not wait until symptoms appear to get medical treatment. Also, people with high risk for HIV infection should not wait to for symptoms to appear before getting tested.
Late-Stage HIV Disease (AIDS)

When immune system damage is more severe, HIV positive individuals may experience opportunistic infections (called "opportunistic" because they are caused by organisms which do not ordinarily induce illness in people with normal immune systems, but take the opportunity to flourish in people with compromised immune systems). Some of the most common opportunistic infections include Pneumocystis carinii pneumonia (PCP), Mycobacterium avium complex (MAC) disease, cytomegalovirus (CMV), toxoplasmosis, and candidiasis.

According to the Centers for Disease Control and Prevention (CDC), an AIDS diagnosis can be given to an HIV positive person who has a CD4 count of less 200/mm3 or a history of an "AIDS-defining illness" (such as one of the opportunistic infections mentioned above). For more information on what defines AIDS, including a complete list of AIDS-defining illnesses, see "Mortality Trends" from the Winter 2005 BETA.

It is important to note that this definition of AIDS may apply to HIV positive individuals who have never experienced symptoms of HIV disease.

Receiving an AIDS diagnosis does not necessarily mean that the diagnosed person will die soon; some people have lived for many years after their diagnosis. This is even more the case today with the availability of highly active antiretroviral therapy (HAART), which has helped extend the lives of thousands of people living with HIV and AIDS. In addition, many opportunistic infections can be prevented or treated successfully. This has substantially increased the longevity and quality of life of people living with HIV/AIDS.

Does everyone who has HIV eventually develop AIDS? We don't know for certain. Studies show that the majority of untreated people do eventually become ill from HIV. However, with regular medical care and other positive lifestyle factors, such as emotional support, many long-term survivors have been living with HIV/AIDS for upwards of two decades. As existing treatments are used earlier in the course of HIV disease and new treatments are developed, it has become possible to further postpone, and perhaps even prevent, illness.

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