

Like the majority of the American population I have lived in a cloud of ignorance about the HIV and AIDS crisis. I have never know anyone close to me that has been infected with either of the two viruses. So when the option to research something to do with sexuality arouse I felt this would definitely further my education about a lethal killer that is roaming this earth. Since I knew next to nothing about this topic I will start from the begging of the disease and discuss where it's at now.

The HIV and AIDS disease has been around for awhile although no one has been able to pin point it's origin. There are many theories floating around the medical world but the most predominant theory "is that the virus first attacked humans in Central Africa up to 100 years ago."(Kelly 524). It is said that the virus stayed mainly in this closed society until many years later. Many say the disease spread when international travel began to increase. The HIV and AIDS viruses were believed to arrive in the United States sometime during the nineteen seventies. It was a common disease between gay males and intravenous drug abusers. Now it is well known that the viruses have been transmitted through sexually, occasionally through blood and organ transplants.

The acronym HIV stands for Human Immunodeficiency Virus, where as the acronym AIDS stands for Acquired Immunodeficiency Syndrome. When someone has contracted the HIV virus in almost all cases it produces the AIDS virus. Apparently there has been a controversy that HIV really isn't the cause of the AIDS virus, but careful research has proved without a doubt that it is the cause. Socially the production of the viruses has caused a lot of hate, prejudice, racism and above all homophobia.

Many people only talk about the late stages of AIDS but HIV does not always produce the AIDS virus. If the HIV virus is caught in the early stages it is possible to get treatment and delay the effects of the AIDS virus. When an individual contracts HIV they can expect a fever, swollen glands, and sometimes a rash. As the bodies system tends toward these symptoms the HIV virus may still be undetectable. This first stage is called primary HIV disease then moves onto chronic asymptomatic disease. With this stage comes a decline in the immune cells and often swollen lymph nodes. As time moves on the depletion of immune cells increases leaving the body open to opportunistic infection. This is where normal sickness, disease, and other things in the environment are now able to attack the bodies system. This stage is called the chronic symptomatic disease. A very noticeable symptom is a thrush, which "is a yeast infection of the mouth..."(Kelly 532). Also at this stage there can be infections of the skin and also feelings of fatigue, weight loss, diarrhea, etc.

The actual period of the HIV virus really varies from person to person. Normally with in a year or two the serve stages of HIV set in. At this point in the victims life it is said they have progressed into the Acquired Immunodeficiency Syndrome(AIDS). This status is established when one or more of diseases have accumulated in the effected victims system. Many victims often have lesions appear on their skin or they begin to acquire a pneumocystic pneumonia. The final stage of the virus attacks the nervous system, "damaging the brain and the spinal cord."(Kelly 532). This can lead to a number of problems in the body: blindness, depression, loss of body control, loss of memory. This can often last for months before the victim finally passes away.

Once the HIV virus enters the body it infects the "T" cell the protectors of the immune system. Once they have attached to the T cell the HIV molecule sheds it's outer coating and then releases the Viral RNA material into the T cell. RNA and DNA are basically genetic blueprints for the body. When the Viral RNA enters the T cell it begins transforming into the more complex Viral DNA. This occurs because the virus brings along an enzyme with it that causes the change. Modern medicine uses the drug AZT to put the transformation on hold. After the Viral RNA changes to Viral DNA it then penetrates the nucleus of the T cell. It connects

with the cell DNA and awaits the opportunity to produce more Viral RNA. When the victim comes under stress or infection the cells break and become Viral proteins and begin making more Viral RNA. They are then re-coated so they can regain entry into other T cells, mass producing the virus throughout the immune system.

The HIV virus is of the retrovirus type, this is a class of viruses that reproduces with the aids of an enzyme that it carries with it. This allows the virus to transform the genetic RNA into DNA in the host cell. Basically when the virus attacks a cell it tells it's self, to transform from the RNA to the DNA form and then mass produce the Viral RNA. Unfortunately for modern chemists and biologists the HIV strand is so complex with so many genetic codes it is almost impossible to break down. The thing that makes the HIV virus so lethal is that it attacks directly into the primary defense cells of the immune system leaving it open for attack.

No one knows exactly how HIV destroys CD4 cells, they are white blood cells that play an integral part in the bodies immune system. One possibility is that they directly kill the cell either by causing them to clump together or by disintegrating them. A more recent theory is that HIV instills a genetic program inside the CD4 cell that causes the premature death of thousands of these cells. All cells in the body have a program to die, this helps keep renewing the body with fresh cells. That process is called apoptosis, and it's believed that HIV increases the rate of this process without the renewal. HIV is very good at cloaking it's self in the body. This way the virus can move through the body almost undetected killing cells along the way. It also makes it's way to the neuroglial cells in the brain and spine. This is the main problem defending against HIV, it's is so quick and sneaky that the body can't find it.

The HIV and AIDS viruses are technically more complex than what I explained. Now that I talked about what it does to the body I it's very important to understand how it is transmitted from person to person. It has been documented that the HIV virus is transmitted by the direct transfer of bodily fluids. Those fluids could be either blood or sexually transmitted fluid. Since the virus can stay undetected in a carriers body it is often transmitted to others without knowledge. Those infected with the HIV virus and have acquired AIDS are more likely to transmit the disease compared to those without AIDS. This does not mean that the virus will not be transmitted at all.

The virus normally enters the body through "internal linings of organs (such as the vagina, rectum, urethra within the penis, or mouth) or through openings in the skin, such as tiny cuts or open sores." (Kelly 534). It has also been proven that the virus can be transmitted from a mother to a baby via breast milk. It has also been shown that HIV can be found in urine, tears, saliva, and feces but no evidence of transmission through these fluids. There is hard evidence stating that HIV has been transmitted by the following; sexual intercourse, either anal or vaginal. Contact with vaginal fluid and semen, transplanted organs or blood from an infected person. The contact with infected blood, the sharing syringes by drug users, tattoo needles that are not sterilized, etc.

There is still no really strong evidence that HIV has been transmitted through oral sex. Although there has been documented cases in which it has been transmitted from a male's semen through oral sex. There is far less evidence of male's or female's contracting the virus through oral sex performed on a female. It has been said that the virus can not be transmitted trough kissing but experts can not rule out this possibility. Some have said that prolonged "French" kissing, open mouth with the switching of saliva, could possibly transmit the virus. There has been no evidence that casual contact has or ever will transmit the disease. This is were many social problems come into effect. Many be tend to isolate people that they know have contracted the virus because they are ignorant to how the disease is transmitted.

"About 5 percent of individuals infected with HIV have remained asymptomatic even without any antiviral treatment." (Kelly 535). It's not known what causes this very rare occurrence but many doctors are still researching why it happens. Can the body reject the HIV and AIDS virus, unfortunately until now the answer remains

no for most. The virus defeats the immune system leaving the vulnerable to other diseases. Those victims that already have a more defeated immune system and then contract HIV will be more likely to acquire AIDS at a much faster rate than normal. Although someone is infected with HIV this does not necessarily mean they are sentenced to die. Few people that have been diagnosed seemed to have rid themselves of the deadly virus. Most people tend to make a drastic change in their lifestyle. A change in eating habits, vitamins, exercises, and work habits. Some of these victims often live for many years after they are diagnosed.

Testing for the HIV and AIDS virus is a process that has become a regular occurrence in most people's lives. When the virus enters the body it reacts by producing antibodies. Unfortunately these antibody's can go undetected for sometime leaving people with the false hope that they are HIV negative. In most people it has been estimated that these antibody's appear with in six months or longer. This is why the medical profession suggests regular HIV testing on a six month interval.

There are two tests mainly used to detect the HIV and AIDS virus. The ELISA and the Western blot. ELISA stands for, Enzyme-Linked Immunosorbent Assay, it is an inexpensive test but often gives false positive diagnoses. When a positive result returns it's often followed by the Western blot. This is a much more expensive and lengthy test that has to be interpreted by trained professionals. The major problem with HIV testing is that it often develops very slowly in the human body, staying virtually undetected for a long time. This is why so many people can be not carrying the disease without even knowing it.

There are three possible outcome with the testing technology that is available now. First, positive conformation that HIV antibodies are present through out the body. Second, positive conformation that the HIV antibodies are not present through out the body. Third, the uncertain result that HIV antibodies are present in the body.