



A REVIEW ON “CURRENT SITUATION OF HIV / AIDS, TREATMENT CHOICES, AND MAJOR CHALLENGES WITH COMPLIANCE TO ANTIVIRAL TREATMENT”

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ABSTRACT

The disclosure of the Human immunodeficiency infection (HIV) because the causative body of procured of immunodeficiency disorder (Helps) and therefore the failure of present day pharmaceutical to get a remedy for it's put HIV together of the foremost feared pathogens of 21st century. HIV predominance is expanding round the world since individuals on antiretroviral treatment live longer, in spite of the very fact that unused contaminations diminished from 3.3 million in 2002, to 2.3 million in 2012. Worldwide AIDS-related passing's topped at 2.3 million in 2005, and diminished to 1.6 million by 2012. An assessed 9.7 million individuals in low-income and middle-income nations had begun antiretroviral treatment by 2012. Unused bits of data into the components of inactive contamination and therefore the significance of supplies of contamination might within the end of the day cause a remedy. A part of safe enactment within the pathogenesis of non-AIDS clinical occasions (major causes of dismalness and mortality in individuals on antiretroviral treatment) is receiving increased acknowledgment. Breakthroughs within the avoidance of HIV imperative to open wellbeing incorporate male therapeutic circumcision, antiretrovirals to avoid mother-to-child transmission, antiretroviral treatment in individuals with HIV to anticipate transmission, and anti-retroviral for pre-exposure prophylaxis. Inquire about into other avoidance mediations, eminently immunizations and vaginal microbicides, is beforehand.

KEYWORDS: HIV, Anti-Retroviral, Immunity, AIDS, Pathogenesis.

INTRODUCTION

Procured immunodeficiency disorder (Helps) might be a restorative condition caused by the human immunodeficiency infection (HIV). HIV contamination could also be an exceptionally current danger and may effortlessly be named as a revile upon the humanity. The logical community to start with noticed and recognized the nearness of Helps as a real illness taking after an increment within the frequency of exceptionally uncommon astute diseases and cancers among something else solid gay person men,^[1] It closely takes after a simian infection that taints macaques in imprisonment. Simian infections that actually contaminate African primates are suspected to succeed in people through different cross-species transmissions happening about within the spread of HIV-1 and HIV-2^[2] An evaluated 38.6 (33.4–46.0) million individuals accept HIV-1 round the world, whereas almost 25 million have kicked the bucket already. In 2005 alone, there have been 4.1 million unused HIV-1 diseases and 2.8 million Helps

deaths. HIV could also be a infection that targets and changes the resistant framework, expanding the hazard and effect of other contaminations and infections. Without treatment, the contamination might advance to a progressed infection arrange called Helps.

In any case, advanced progresses in treatment cruel that individuals living with HIV in nations with great get to healthcare exceptionally once during a while create Helps once they're accepting treatment. The life hope of an individual who carries the HIV infection is presently drawing closer that of a person who tests negative for the infection, as long as they follow to a mixture of medicines called antiretroviral treatment (Craftsmanship) on a continuous basis. A Kaiser Permanente believe in 2016 recommended that between 1996 and 2016, the crevice in life anticipation between individuals who are HIV positive and HIV negative closed from 44 a long time to 12 an extended time.

The World Wellbeing Organization (WHO) too exhorts that an individual living with HIV can continue a tall quality of life with treatment, which 20.9 million individuals round the world were getting Craftsmanship as of mid-2017. During this article, we clarify HIV and Helps, their side effects, causes, and medications.

WHAT IS HIV?

Human immunodeficiency infection (HIV) could be an infection that assaults safe cells called CD4 cells, which are a kind of T cell. These are white blood cells that move round the body, identifying flaws and inconsistencies in cells also as well as diseases. When HIV targets and penetrates these cells, it decreases the body's capacity to combat other diseases. This increments the hazard and effect of deft diseases and cancers. In any case, an individual can carry HIV without encountering side effects for an extended time.

HIV might be an extended lasting disease. Be that because it may, getting treatment and overseeing the illness successfully can avoid HIV from coming to a significant level and diminish the prospect of a individual passing on the infection.

WHAT IS AIDS?

Helps is that the foremost progressed organize of HIV disease. Once HIV disease creates into Helps, contaminations and cancer posture a more prominent risk. Without treatment, HIV contamination is probably going to make into Helps because the safe framework steadily wears down. In any case, propels in Craftsmanship cruel than an ever-decreasing number of people advance to the present stage. By the near of 2015, around 1,122,900 individuals were HIV-positive. To match, figures from 2016 appear that restorative experts analyzed Helps in an evaluated 18,160 individuals.

Causes

Individuals transmit HIV in substantial liquids, including: blood semen vaginal secretions anal fluids breast milk with the Joined together States, the foremost causes of this exchange of liquids are: anal or vaginal intercut with an individual who has HIV whereas not employing a condom or PrEP, a preventive HIV medicine for people at tall hazard of infection sharing gear for injectable illegal drugs, hormones, and steroids with a individual who has HIV A woman living with HIV who is pregnant or has as lately born might exchange the infection to her child amid pregnancy, childbirth, or breastfeeding. The prospect of HIV transmitting through blood transfusions is greatly moo in nations that have compelling screening methods in put for blood gifts.

Imperceptible = untransmittable

To transmit HIV, these liquids must contain sufficient of the infection. within the event that a individual has 'undetectable' HIV, they will not transmit HIV to another individual, indeed in the event that after a exchange of

fluids. Undetectable HIV is when the sum of HIV within the body is so moo that a blood test cannot distinguish it. People could also be ready to attain imperceptible levels of HIV by closely taking after the prescribed course of treatment. Confirming and regularly checking imperceptible status employing a biopsy is significant, as this doesn't cruel that the individual not has HIV. Imperceptible HIV depends on the individual following to their treatment, also because the adequacy of the treatment itself.

Progression to AIDS

The risk of HIV getting to AIDS varies widely between individuals and depends on many factors, including:

- The age of the individual
- The body's ability to defend against HIV
- Access to high-quality, sanitary healthcare
- The presence of other infections
- The individual's genetic inheritance resistance to certain strains of HIV
- Drug-resistant strains of HIV

Symptoms

For the foremost portion, contaminations by other microbes, infections, organisms, or parasites cause the more extreme indications of HIV. These conditions tend to advance assist in individuals who accept HIV than in people with sound resistant frameworks. A accurately working resistant framework would make sure the body against the more progressed impacts of diseases, and HIV disturbs this handle.

Early symptoms of HIV Infection

A few individuals with HIV don't appear indications until months or indeed an extended time after contracting the virus. However, around 80 percent of people may create a group of flu-like indications referred to as intense retroviral disorder around 2–6 weeks after the infection enters the body. The first side effects of HIV disease may incorporate:

- Fever
- Chills
- Joint pain
- Muscle aches
- Sore Throat
- Sweats. particularly at the dark
- Enlarged glands
- A red rash
- Tiredness
- Weakness
- Unintentional weight loss
- Thrush

These side effects might moreover result from the resistant framework battling off numerous kinds of viruses. However, individuals who involvement a couple of those indications and know of any reason they could be at hazard of contracting HIV over the ultimate 6 weeks ought to take a test.

Asymptomatic HIV

These indications might moreover result from the resistant framework battling off numerous kinds of viruses. However, individuals who involvement a couple of those indications and know of any reason they could be at chance of contracting HIV over the ultimate 6 weeks need to take a test.

Late-Stage HIV Infection

Without medication, HIV weakens the power to fight infection. The person becomes susceptible to serious illnesses. This stage is understood as AIDS or stage 3 HIV.

Symptoms of late-stage HIV infection may include:

- Blurred vision
- Diarrhea, which is typically persistent or chronic
- Dry cough
- A fever of over 100 °F (37 °C) lasting for weeks
- Night sweats
- Permanent tiredness
- Shortness of breath, or dyspnea
- Swollen glands lasting for weeks
- Unintentional weight loss
- White spots on the tongue or mouth

Amid late-stage HIV disease, the hazard of making a life-threatening sickness increments significantly. A individual with late-stage HIV can control, anticipate and treat genuine conditions by taking other drugs nearby HIV treatment.

Opportunistic Infection

HIV treatment is lately regularly successful sufficient to stay numerous contaminations cornered. In decreasing the movement of the resistant framework, late-stage HIV decreases the capacity of the body to combat a run of diseases, infections, and cancers. Contaminations that caused negligible or no wellbeing issues a while recently the advancement of Helps might posture a real wellbeing chance once the condition has debilitated the resistant system. Doctors allude to those as deft diseases (OIs). Once any of those diseases happen, a specialist will analyze Helps

These include

- **Candidiasis of the bronchi, trachea, esophagus, and lungs:** As a mycosis that normally occurs within the skin and nails, this frequently causes serious problems within the esophagus and lower tract for people with AIDS.
- **Invasive cervical cancer:** This sort of cancer begins within the cervix and spreads to other areas within the body. Regular checks with a cancer care team can help prevent the cancer or limit the spread.
- **Coccidioidomycosis:** People sometimes refer to the self-limited version of this disease in healthy individuals as coccidioidomycosis. Inhalation of the fungus *Coccidioides immitis* causes this infection.

- **Cryptococcosis:** *Cryptococcus neoformans* may be a fungus which will infect any apart of the body, but most frequently enters the lungs to trigger pneumonia or the brain to cause swelling.
- **Cryptosporidiosis:** The protozoan parasite *Cryptosporidium* causes this infection that result in severe abdominal cramps and watery diarrhea.
- **Cytomegalovirus disease (CMV):** CMV can cause a variety of diseases within the body, including pneumonia, gastroenteritis, and encephalitis, a brain infection. However, CMV retinitis is of particular concern in people with late-stage HIV, and it can infect the retina at the rear of the attention, permanently removing sight. CMV retinitis may be a medical emergency.
- **HIV-related encephalopathy:** An acute or chronic HIV infection can trigger this encephalopathy. While doctors don't fully understand the cause, they consider it to be linked to post-infection inflammation within the brain.
- **Herpes simplex (HSV):** This virus, usually sexually transmitted or passed on in childbirth, is extremely common and infrequently causes health issues or causes self-limiting recurrences in people with healthy immune systems. However, it can reactivate in people with HIV, causing painful cold sores round the mouth and ulcers on the genitals and anus that don't resolve. The sores, instead of a herpes diagnosis, are an indicator of AIDS. HSV also can infect the breathing tube, lungs, or esophagus of individuals with AIDS.
- **Histoplasmosis:** The fungus *Histoplasma capsulatum* causes extremely severe, pneumonia-like symptoms in people with advanced HIV. This condition can become progressive disseminated histoplasmosis and may impact on organs outside of the systemarespiratorium.
- **Chronic intestinal isosporiasis:** The parasite *Isospora belli* can infect the body through contaminated food and water, causing diarrhea, fever, vomiting, weight loss, headaches, and abdominal pain.
- **Kaposi's sarcoma (KS):** *Kaposi's sarcoma herpesvirus* (KSHV), also referred to *human herpesvirus 8* (HHV-8), causes a cancer that result in the expansion of abnormal blood vessels anywhere within the body. If KS reaches organs, like the intestines or lymph nodes, it are often extremely dangerous. KS appears as solid purple or pink spots on the surface of the skin. They could be flat or raised.
- **Lymphoma:** People ask to cancer of the lymph nodes and lymphoid tissues as lymphoma, and lots of different types might occur. However, Hodgkin and non-Hodgkin lymphoma have strong links to HIV infection.
- **Tuberculosis (TB):** The bacteria *tubercle bacillus* causes this disease and may transfer in droplets if an individual with a lively sort of the

bacteria sneezes, coughs, or speaks. TB causes a severe lung infection also as weight loss, fever, and tiredness, and can also infect the brain, lymph nodes, bones, or kidneys.

- **Mycobacteria, including *Mycobacterium avium* and *Mycobacterium kansasii*:** These bacteria occur naturally within the environment and pose few problems for people with fully-functioning immune systems. However, they will spread throughout the body and cause life-threatening health issues for people with HIV, especially in its later stages.
- ***Pneumocystis jirovecii* pneumonia (PJP):** A fungus called *Pneumocystis jirovecii* causes breathlessness, dry cough, and high fever in people with suppressed immune systems, including those with HIV.
- **Recurrent pneumonia:** Many various infections can cause pneumonia, but a bacterium called *Streptococcus pneumoniae* is one among its most dangerous causes in people with HIV. Vaccines are available for this bacterium, and each one that has HIV should receive vaccination for *Streptococcus pneumoniae*.
- **Progressive multifocal encephalopathy (PML):** The John Cunningham (JC) virus occurs during a vast number of individuals, usually lying dormant within the kidneys. However, in people with compromised immune systems, either thanks to HIV or medications, like those for multiple sclerosis (MS), the JC virus attacks the brain, resulting in a dangerous condition called progressive multifocal leukoencephalopathy (PML). PML are often life-threatening, causing paralysis and cognitive difficulties.
- **Recurrent *Salmonella* septicemia:** This sort of bacteria often enters the body in contaminated food and water, circulates the whole body, and overpowers the system, causing nausea, diarrhea, and vomiting.
- **Toxoplasmosis (toxoplasmosis):** *Toxoplasma gondii* may be a parasite that inhabits warm-blooded animals, including cats and rodents, and leaves the body in their feces. Humans contract the diseases by inhaling contaminated dust or eating contaminated food, but it also can occur in commercial meats. *T. gondii* causes severe infection within the lungs, retina, heart, liver, pancreas, brain, testes, and colon. Take care to wear protective gloves while changing cat litter and thoroughly wash the hands afterward.
- **Wasting syndrome:** This happens when an individual involuntarily loses 10 percent of their muscle mass through diarrhea, weakness, or fever. Part of the load loss can also contain fat loss.

Prevention

Preventing OIs is vital to extending anticipating with late-stage HIV. Aside from managing HIV viral load with medications, an individual who lives with the disease must take precautions, including the subsequent steps:

- Wear condoms to prevent other STIs.

- Receive vaccinations for potential OIs. Discuss these with your primary care physician.
- Understand the germs in your surrounding environment that could lead to an OI. A pet cat, for instance, might be a source of toxoplasmosis. Limit exposure and take precautions, like as wearing protective gloves while changing litter
- Avoid foods that are at risk of contamination, such as undercooked eggs, unpasteurized dairy and fruit juice, or raw seed sprouts.
- Do not drink water straight from a lake or river or tap water in certain foreign countries. Drink bottled water or use water filters.
- Ask your doctor about work, home, and vacation activities to limit exposure to potential OIs.
- Antibiotic, antifungal, or antiparasitic drugs can help treat an OI.

HIV and AIDS myths and facts

Many misconceptions circulate about HIV that are harmful and stigmatizing for people with the virus.

The following cannot transmit the virus:

- Shaking hands
- Hugging
- Kissing
- Sneezing
- Touching unbroken skin
- Using the same toilet
- Sharing towels
- Sharing cutlery
- Mouth-to-mouth resuscitation or other forms of "casual contact"
- The saliva, tears, feces, and urine of a person with HIV



HIV and AIDS: Transmission myths and fact

Diagnosis

The Centers for Disease Control and Prevention (CDC) estimates that about 1 in every 7 HIV-positive Americans is unaware of their HIV status.

Becoming conscious of HIV status is significant for commencing treatment and preventing the event of more severe immune difficulties and subsequent infections.

HIV blood tests and results

A doctor can test for HIV employing a specific biopsy. A positive result means they need detected HIV antibody within the bloodstream. The blood is re-tested before a positive result's given.

After potential exposure to the virus, early testing and diagnosis is crucial and greatly improves the probabilities of successful treatment. Home testing kits are also available.

HIV might take 3 - 6 months to point out up in testing, and re-testing could also be necessary for a definitive diagnosis. People at danger of infection within the last 6 months can have an instantaneous test. The test provider will normally recommend another test within a couple of weeks.



Treatment

Adhering to antiretroviral treatment can reduce HIV to an undetectable viral load.

No cure is currently available for HIV or AIDS. However, treatments can stop the progression of the condition and permit most of the people living with HIV the chance to measure an extended and comparatively healthy life.

Starting ART early within the progression of the virus is crucial. This improves quality of life, extends anticipation, and reduces the danger of transmission, consistent with the WHO's guidelines from June 2013.

More effective and better-tolerated treatments have evolved which will improve general health and quality of life by taking as little together pill per day.

A person living with HIV can reduce their viral load to such a degree that it's not detectable during a biopsy. After assessing a number of large studies, the CDC concluded that individuals who have no detectable viral load "have effectively no risk of sexually transmitting the virus to an HIV-negative partner."

Medical professionals ask to this as undetectable = untransmittable (U=U).

Emergency HIV pills, or post-exposure prophylaxis

If a private believes they need been exposed to the virus within the last 3 days, anti-HIV medications, called post-exposure prophylaxis (PEP), could also be ready to stop infection. Take PEP as soon as possible after potential contact with the virus.

PEP may be a treatment lasting a complete of 28 days, and physicians will still monitor for HIV after the completion of the treatment.

Antiretroviral drugs

The treatment of HIV involves antiretroviral medications that fight the HIV infection and slows down the spread of the virus within the body. People living with HIV generally take a mixture of medications called highly active antiretroviral therapy (HAART) or combination antiretroviral therapy (cART).

There are a variety of subgroups of antiretrovirals, such as:

Protease inhibitors

Protease is an enzyme that HIV must replicate. These medications bind to the enzyme and inhibit its action, preventing HIV from making copies of itself. These include:

- Atazanavir/cobicistat (Evotaz)
- Lopinavir/ritonavir (Kaletra)
- Darunavir/cobicistat (Prezcobix)

Integrase inhibitors

HIV needs integrase, another enzyme, to infect T cells. This drug blocks integrase. These are often the primary line of treatment thanks to their effectiveness and limited side effects for several people.

Integrase inhibitors include:

- Elvitegravir (Vitekta)
- Dolutegravir (Tivicay)
- Raltegravir (Isentress)

Nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs)

These drugs, also mentioned to as "nukes," interfere with HIV because it tries to duplicate.

This class of drugs includes:

- Abacavir (Ziagen)
- Lamivudine/zidovudine (Combivir)
- Emtricitabine (Emtriva)
- Tenofovir disproxil (Viread)

Non-nucleoside reverse transcriptase inhibitors (NNRTIs)

NNRTIs add an identical thanks to NRTIs, making it harder for HIV to duplicate.

Chemokine co-receptor antagonists

These drugs block HIV from entering cells. However, doctors in the U.S. do not often prescribe these because other drugs are simpler.

Entry inhibitors

Entry inhibitors prevent HIV from entering T cells. Without access to these cells, HIV cannot replicate. As with chemokine co-receptor antagonists, they're not common within the us.

People will often use a mixture of those drugs to suppress HIV. A medical team will adapt the precise mixture of drug to every individual. HIV treatment is typically permanent, lifelong, and supported routine dosage. A person living with HIV must take pills on a daily schedule. Each class of ARVs has different side effects, but possible common side effects include:

- Nausea
- Fatigue
- Diarrhea
- Headache
- Skin rashes

Complementary or alternative medicine

Although many of us who have HIV try complementary, alternative, or herbal options, like as herbal remedies, no evidence confirms them to be effective.

According to some limited studies, mineral or vitamin supplements may provide some benefits in overall health. It is important to debate these options with a healthcare provider because some of these options, even vitamin supplements, may interact with ARVs.

Prevention

To prevent contracting HIV, healthcare professionals advise precautions associated with the subsequent.

Sex employing a condom or PrEP: Having sex without a condom or other preventive measures, like as PrEP, can drastically increase the danger of transmitting HIV and other sexually transmitted infections (STIs).

Use condoms or PrEP during every sexual act with an individual outside of a trusted relationship during which neither partner has HIV.

Drug injection and needle sharing: Intravenous drug use may be a key factor for HIV transmission in developed countries. Sharing needles and other drug equipment can expose users to HIV and other viruses, like hepatitis C.

Certain social strategies, like needle-exchange programs, can help to scale back the infections as a result's of substance abuse. Recovering from a substance use disorder can improve health a top quality of life for

several reasons, but it can dramatically reduce potential exposure to HIV.

People employing a needle to require medications should use a clean, unused, unshared needle.

Body fluid exposure: A individual can limit their potential exposure to HIV by taking precautions to scale back the danger of exposure to contaminated blood.

Healthcare workers should use gloves, masks, protective eyewear, shields, and gowns in situations where exposure to bodily fluids may be a possibility.

Frequently and thoroughly washing the skin immediately after coming into contact with blood or other bodily fluids can reduce the danger of infection. Healthcare works should follow a group of procedures referred to as universal precautions to stop transmission.

Pregnancy: Certain antiretrovirals might harm an unborn fetus during pregnancy.

However, an efficient, well-managed treatment plan can prevent mother-to-fetus HIV transmission. Delivery through caesarean section may be necessary.

Women who are pregnant but have HIV may additionally expire the virus through their breast milk. However, regularly taking the right regimen of medicines greatly reduces the danger of transmitting the virus.

Discuss all options with a healthcare provider.

Education: Teaching people about known risk factors is significant to equip them with the tools to avoid exposure to HIV.

Living with HIV

A person with HIV can live a full and active life, as long as they adhere to treatment.

Due to the added risk of other infections and disease, people living with HIV must make lifestyle adjustments to accommodate their reduced immunity.



Adherence: Taking HIV medication as prescribed is completely essential to effective treatment. Missing even a few doses might jeopardize the treatment. Program a daily, methodical routine to suit the treatment plan around any existing lifestyle and schedule. Treatment plans will be different between people. People sometimes refer to "adherence" as "compliance". HIV medications can cause particularly severe side effects that always deter people from adherence.

If side effects are getting too severe, speak to your medical team instead of simply stopping medication. They can switch the regimen to a better-tolerated drug.

General health: Taking steps to avoid illness and other infections is vital. People living with HIV should seek to enhance overall health through regular exercise, a balanced, nutritious diet, and therefore the cessation of any drugs, including tobacco.

Additional precautions: People living with AIDS should take extra precautions to stop any exposure to infection, especially around animals. Avoid coming into contact with animal feces and pet litter.

Doctors also recommend the meticulous and regular washing of hands. Antiretrovirals reduce the need for these precautions.

Regular contact with doctors: HIV may be a lifelong condition, so regular contact with a healthcare team is vital for updating treatment in line with advancing age and other conditions. The healthcare team will regular review and adjust treatment accordingly.

Psychological effects: Common misconceptions about AIDS and HIV are reducing as understanding of the disease increases.

However, stigma around the condition continues in many parts of the planet. People living with HIV may feel excluded, persecuted, and isolated.

An HIV diagnosis are often very distressing, and feelings of hysteria or depression are common. If you are feeling anxious or have symptoms of depression, seek medical help immediately.

Takeaway

HIV may be a misunderstood and potentially dangerous disease that reduces the effectiveness of the system in combatting other infections.

Advances in modern medicine person living with HIV can have a near-normal anticipation and active lifestyle. A person receiving antiretroviral therapy must adhere strictly to their regime the foremost effective results.

HIV transmits in bodily fluids, like as semen or vaginal secretions during sex, or blood. In the US, HIV most

often transmits through sexual activity without a condom or PrEP and sharing needles when injecting drugs. However, if an individual features a viral load that HIV tests cannot detect, they can't transmit the virus to a different person.

If HIV advances, for instance in situations where an individual isn't conscious of their HIV status or doesn't receive treatment, it can reach a late stage known as AIDS.

AIDS can open the door to a variety of infections referred to as opportunistic infections that pose a severe risk to health. Some are extreme or prolonged presentations of infections that might normally resolve quickly during a person with healthy immune function.

Others might occur thanks to microbes that occur naturally within the environment and wouldn't normally cause infection in the least.

A person living with AIDS can revert the condition to HIV through adhering to treatment.

If you think recent exposure to the virus, click here to seek out your nearest testing facility.

What Is the Difference Between HIV and AIDS?

You do not have AIDS as soon as you acquire HIV. You can accept HIV (be HIV+) for several years with no signs of disease, or only mild-to-moderate symptoms. People living with HIV and taking HIV drugs as prescribed have a really low risk of getting to AIDS. But without treatment, HIV will eventually wear down the immune system in most people to the point where they have few CD4 cells and develop opportunistic infections.

The definition of AIDS was established before there was effective treatment for HIV. It indicated that an individual was at higher risk for illness or death. In countries where HIV treatment is quickly available, AIDS is not any longer as relevant because it once was. This is because with access to effective HIV treatment, people can stay healthier even at low CD4 counts. Also, someone could have received an AIDS diagnosis years ago, but their system has recovered since then. They may still have that diagnosis, but no longer have a low CD4 count.

The US Centers for Disease Control and Prevention (CDC) identifies someone as having AIDS if she or he's living with HIV and has one or both of those conditions:

- At least one AIDS-defining condition (see our list of AIDS-Defining Conditions)
- A CD4 cell count of 200 cells or less (a normal CD4 count is about 500 to 1,500)

People with AIDS can rebuild their system with the assistance of HIV drugs and live an extended, healthy life. Even if your CD4 cell count goes back above 200 or

an OI is successfully treated, you may still have a diagnosis of AIDS. This doesn't necessarily mean you're sick, or will get sick within the future. It is just the way the general public health system counts the amount of individual who have had advanced HIV disease.

How Do I Know If I Have HIV?

Most people cannot tell that they need been exposed to, or have acquired, HIV. Initial, or acute, symptoms of HIV infection may show up within two to four weeks of exposure to HIV, and may include:

- Fever
- Swollen glands
- Sore throat
- Night sweats
- Muscle aches
- Headache
- Extreme tiredness
- Rash

Some people do not notice the symptoms because they are mild, or they think they have a cold or the flu. After these "flu-like" symptoms disappear, people living with HIV can go years without showing any symptoms. The only way to know for sure if you are living with HIV is to take an HIV test.

If you've got a number of the initial or acute symptoms of HIV, it's important that you simply be tested for HIV antigen (not just HIV antibody). Antigens are pieces of the HIV virus, or viral particles. If an HIV antigen is in your blood, there are tests that can identify HIV infection as soon as two weeks after you have been exposed to the virus.

Antibodies are proteins that your body makes to mark HIV for destruction by your system. The body takes one to three months and occasionally up to six months to develop these antibodies. This three- to six-month period between getting HIV and therefore the production of antibodies is named the "window period." Therefore, tests that detect antibodies are only reliable one to 3 months after you have been exposed to HIV.

Do I Need to Get Tested for HIV?

The CDC estimates that about 15 percent of people living with HIV in the US do not know they live with HIV. Many of those people look and feel healthy and don't think they're in danger. But the truth is that anyone of any age, gender, race, ethnicity, sexual orientation, social group, or economic class can acquire HIV. Humans may discriminate on the basis of these factors, but the virus does not. For more on how HIV is spread, see our fact sheet on HIV transmission.

To see if you need to get tested for HIV, answer the following questions:

- Have you ever had penis into vagina or penis into anus ("butt") sex, or oral sex without a condom or other latex barrier (e.g., dental dam)? Note: oral sex

is a low risk activity. Vaginal and anal sex are much higher risk.

- Do you not know your partner's HIV status or is your partner living with HIV?
- Are you pregnant or considering becoming pregnant?
- Have you ever had a sexually transmitted infection or disease (STI or STD)?
- Do you have hepatitis C (HCV)?
- Have you ever shared needles, syringes, or other equipment to inject drugs (including steroids or hormones)?

If you answered yes to any of those questions, you ought to definitely get an HIV test. In the US, everyone between 13-64 years old should be screened for HIV at least once.

Why Should I Get Tested?

If you're worried because you think that you'll be exposed to HIV, get tested. Then, if you learn you are HIV-negative, you can stop worrying. You can also consider taking pre-exposure prophylaxis (PrEP) or post-exposure prophylaxis (PEP). PrEP means taking an HIV drug before being exposed to HIV, to stop yourself from getting it. PEP means taking HIV drugs for a few months immediately after possible exposure to HIV, to stop HIV acquisition.

If you test HIV+, there are effective medications to help you stay healthy. These medications are also part of HIV prevention. When an individual living with HIV is taking HIV drugs and their viral load (amount of HIV in their blood) has reached undetectable levels (not enough HIV in their bloodstream for a test to measure), that person cannot sexually transmit HIV to a partner who is HIV-negative.

But you cannot get the health care and treatment you need if you do not know your HIV status (whether you are living with HIV or are HIV-negative). If you don't know your status, you could also pass HIV to others without knowing it.

For women who decide to become pregnant, testing is particularly important. If a lady lives with HIV, medical aid and certain HIV drugs taken during pregnancy can lower the prospect of passing HIV to her baby. For more information, see our fact sheet on Pregnancy and HIV.

In the US, you can go to the National HIV, STD and Hepatitis Testing website or the HIV.gov website to find a testing location near you. You can also call the CDC's information line at 800-232-4636 or call your state's HIV/AIDS hotline (numbers listed here). To find services across the planet, visit aidsmap's e-atlas. For more on getting tested for HIV — types of tests, how they work, and where to get them — see our fact sheet on HIV Testing.

How Is HIV Spread?**HIV is spread primarily through contact with the subsequent body fluids:**

- Blood (including menstrual blood)
- Semen ("cum") and other male sexual fluids ("pre-cum")
- Vaginal fluids
- Breast milk

For people living with HIV, taking HIV drugs and reducing their viral load makes these fluids far less likely to transmit HIV to others. This is called HIV treatment as prevention. If a person living with HIV takes HIV drugs and maintains an undetectable viral load (too low to be measured with standard tests), their semen or vaginal fluids will not pass HIV on to their sexual partner. The most common ways HIV is spread from person-to-person is through unprotected sex (no condoms, other barriers, or treatment-as-prevention methods used), sharing needles used for injecting drugs, and mother-to-child (during pregnancy, birth, or breast-feeding).

HIV isn't spread through contact with these body fluids:

- Sweat
- Tears
- Saliva (spit)
- Feces (poop)
- Urine (pee)

In other words, you can't get HIV by touching or hugging someone who lives with HIV, kissing someone living with HIV, or by employing a toilet also employed by someone living with HIV.

Is There a Vaccine or Cure for HIV?

There is neither a vaccine nor a cure for HIV. The best thanks to prevent HIV is to use prevention methods whenever, including safer sex (choosing low- or no-risk activities, using condoms, taking HIV drugs if you're living with HIV, or PrEP if you're HIV-negative), and using sterile needles (for drugs, hormones or tattoos). For more information, see our fact sheet on HIV Vaccines.

Additional Information**As you learn more about HIV, you'll find these articles helpful**

- HIV Testing
- Did You Just Test HIV+?
- Considerations Before Starting HIV Treatment
- HIV Transmission
- Safer Sex
- Undetectable Equals Untransmittable: Building Hope and Ending HIV Stigma
- Pregnancy and HIV
- Women and HIV

CONCLUSION

Later propels in HIV medicines have significantly changed the nature and movement of HIV/AIDS. It can

be securely considered as a "chronic" illness, given the contaminated patients get appropriate Craftsmanship. Shockingly, current measurements of the around the world HIV burden tells another story: one with a unflinching rate of HIV-related passing. More individuals kick the bucket of complications and the movement of HIV to Help than ought to be when Craftsmanship is utilized legitimately. The major jump a doctor faces with Craftsmanship is the frequency of unfavorable side impacts of the treatment, which induce patients to suspend the treatment. Destitution, need of mindfulness, and the social disgrace related with the disease complicate an as of now complicated circumstance. Fitting changes in treatment regimens and drugs can offer assistance patients overcome such unfavorable impacts and potential complications characteristic to the illness. Also, it is exceedingly fitting to supply patients and their quick family individuals with suitable counseling for treatment compliance and mental back.

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