

A Brief Note on HIV Testing

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Description

Human Immunodeficiency Virus (HIV) tests are used to observe the existence of the human immunodeficiency virus in serum, saliva, or urine. Analogous tests may determine HIV antibodies, antigens, or RNA.

Tests used for the diagnosis of HIV infection in an individual need a huge extent of both sensitivity and specificity in which sensitivity shows a positive result in the presence of HIV whereas specificity shows negative results in the absence of HIV respectively. In the United States, this is attained by using an algorithm incorporating two tests for HIV antibodies. If antibodies are detected by a commencing test based on the ELISA method, then a subsequent test utilizing the Western blot procedure detects the size of the antigens in the test kit binding to the antibodies. The combination of these two methods is extremely authentic.

The diagnostic tests have limitations, and intermittently their use may produce false or doubtful results.

False-positive: The test erroneously confirms that HIV is present in a non-infected person.

False-negative: The test erroneously confirms that HIV is absent in an infected person.

Nonspecific functions, hypergammaglobulinemia, or the presence of antibodies managed to other transmissible agents that may be antigenically similar to HIV can produce false-positive results. Autoimmune diseases, such as systemic lupus erythematosus, have also hardly produced false-positive results. Most false-negative consequences are due to the window period.

There are three types of tests available:

A Nucleic Acid Test (NAT) considers the authentic virus in the blood and involves taking out blood from a vein. The test can either tell whether an individual has HIV or tell how much virus is available in the blood (known as an HIV viral load test). While a NAT can determine HIV than before other types of tests, this test is extremely pricey and not commonly utilized for screening individuals except if they thereafter had a high hazardous of exposure or a probable exposure and have early symptoms of HIV infection.

An antigen/antibody test considers for both HIV antibodies and antigens. Antibodies are provoked by the immune system when exposed to viruses like HIV. Antigens are foreign

substances that give rise to your immune system to stimulate. If an individual has HIV, an antigen called p24 is produced even before antibodies evolve. Antigen/antibody tests are suggested for testing done in labs and are now common in the United States. This lab test includes taking out blood from a vein. There is also a quick antigen/antibody test available that is done by a finger pricking method.

HIV antibody tests only consider antibodies to HIV in your blood or oral fluid. In general, antibody tests that use blood from a vein can detect HIV promptly after infection than tests done with blood from a finger prick or with oral fluid. Most rapid tests and the only currently accepted HIV self-test are antibody tests.

Consult the health care provider regarding what type of HIV test is suitable for the individual.

Laboratory tests (NAT and antigen/antibody) need blood to be taken out from the vein into a tube and then that blood is sent to a laboratory for testing. The results may take several days to be obtainable.

With a speedy antibody screening test, usually done with blood from a finger prick or with oral fluid, results are ready in 30 minutes or less.

The rapid antigen/antibody test is done by finger pricking and takes 30 minutes or less.

The oral fluid antibody self-test gives results within 20 minutes.

If an individual has been diagnosed with HIV, it's necessary to take advice from a specialist trained in diagnosing and treating HIV to aid the person in:

- Determining whether the person requires any further testing.
- Determining which HIV antiretroviral therapy (ART) will be suitable for the person.
- Examining the progress and work with the person to treat health.

If the person experiences a diagnosis of HIV/AIDS, numerous tests can help the physician to determine the stage of the disease and the best treatment, including:

- CD4 T cell count: CD4 T cells are white blood cells that are specifically targeted and destroyed by HIV. Even if an individual has no symptoms, HIV infection progresses to AIDS when your CD4 T cell count dips lesser than 200.

- **Viral load (HIV RNA):** This test measures how much amount of virus in your blood. After starting HIV treatment, the goal is to have an obscured viral load. It significantly reduces your chances of opportunistic contamination and other HIV-related complexities.
- **Drug resistance:** Some strains of HIV are resistant to medicaments. This test helps the doctor determine if the individual's particular form of the virus has resistance and guides treatment decisions.