Monitoring Your Health

Monitoring viral load and CD4 count can show how well treatment is working.

May 17, 2021 By Liz Highleyman

With today's effective and well-tolerated antiretrovirals, people living with HIV don't require ongoing monitoring as often as they used to. But it's still important to get the recommended tests on a regular basis to keep tabs on your health and make sure your treatment is working.

Viral Load

Measuring the amount of virus in the blood is the mainstay of HIV monitoring. The goal of treatment is to keep viral load as low as possible for as long as possible. Viral load tests can indicate whether your treatment is failing and your immune system is at risk before your CD4 T-cell count drops.

Viral load tests measure the number of copies of HIV RNA, or viral genetic material, in a small amount of blood. They typically measure down to 50 or 20 copies. Below this level, the result will come back as "undetectable."

Federal HIV treatment guidelines recommend getting a viral load test when you seek HIV care, when you start treatment or change your regimen and again two to eight weeks later. Once viral load falls below 200, it should be monitored every three to six months.

Sometimes temporary increases known as "blips" can occur; these are usually nothing to worry about. But a trend of rising viral load over time is a bigger concern. This could indicate that HIV is resistant to drugs or that a person is struggling with adherence or having trouble getting prescription refills.

CD4 Count

There are two main types of T cells: CD4, or helper, cells coordinate the immune response, while CD8, or killer, cells attack virus-infected cells.

CD4 cells are the primary targets of HIV. Left untreated, the virus kills off these cells and the CD4 count declines. The normal CD4 range for HIV-negative people is 500 to 1,500. Once the level falls below 200, a person is susceptible to opportunistic illnesses and is considered to have AIDS. CD4 counts were previously used to determine when to start treatment, but now antiretroviral therapy is recommended for everyone diagnosed with HIV.

The CD4 percentage is the proportion of all T cells that are CD4 cells. The normal range for HIV-negative adults is 30% to 60%. People with HIV often have a lower percentage; below 14% indicates an AIDS diagnosis. The CD4/CD8 ratio gives a fuller picture of immune health. HIV-negative people usually have one to four CD4 cells for every CD8 cell. People with HIV may have fewer CD4 cells than CD8 cells, indicated by a ratio less than 1.0.

Federal guidelines recommend getting a CD4 count when you first seek care and when you start antiretrovirals, then every three to six months during the first two years on treatment. After two years with stable viral suppression, CD4 tests can be done once a year if your count is between 300 and 500 and are optional if it’s above 500.

Other Lab Tests

Other lab tests should be done periodically to monitor your overall health. A chem screen measures the amount of various chemicals in the blood. It may include glucose, cholesterol and electrolyte levels as well as biomarkers of liver function (such as bilirubin, ALT and AST) and kidney function (including creatinine and blood urea nitrogen).

A complete blood count (CBC) is an inventory of different types of blood cells. It includes a red blood cell count and hemoglobin level. Lymphocytes (T cells and antibody-producing B cells), neutrophils and monocytes are white blood cells. Platelets are cell fragments that enable the blood to clot.

Federal guidelines recommend getting a chem screen, CBC and urinalysis when you first seek HIV care and when you start or switch treatment. The chem screen should be repeated two to eight weeks later to check for drug toxicities. If everything looks good, these tests can usually be done every six or 12 months—ask your doctor which monitoring schedule is right for you.

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