

Keep tabs on your health

by Dr. Marianne Harris



Waiting at labs, having blood drawn and reviewing test results are a big part of living with HIV, so we've given the subject a few extra pages in this issue of *Relay*. The feature article starting on page 7 looks in depth at the lab tests you need to diagnose and monitor HIV. Here we introduce the different tests that are conducted routinely to monitor your overall health and see how your body's reacting to both the virus and the medications you're taking.

Once you're diagnosed with HIV, it's important to have a number of regular blood tests to check your general state of health and see if you have any other medical conditions that need attention. In particular, we like to check conditions that can be affected by the drugs used to treat HIV to minimize your risk of complications.

Complete Blood Count (CBC): This test provides information about red and white blood cells, different kinds of white blood cells, which fight off infection, and platelets (cell fragments that are used in clotting). Advanced HIV disease can cause abnormalities in blood cell counts. Also, some HIV medications can affect these counts, particularly AZT (Zidovudine, Retrovir®).

Liver tests: HIV disease, common co-infections such as hepatitis B and C, alcohol, and most HIV medications (as well as many non-HIV medications) can affect the liver. It's thus important to monitor your liver enzymes (for example AST, ALT, alkaline phosphatase) and liver function (for example bilirubin, albumin) through blood tests.

Kidney tests: Kidney function can be adversely affected by HIV and by liver diseases (e.g. hepatitis B or C). The risk of kidney problems increases with age (over 50), high blood pressure and diabetes. Treating HIV usually benefits the kidneys, but some drugs can impair kidney function so this needs to be monitored regularly with urine tests, a blood test for creatinine, and an estimate of kidney function called GFR (calculated based on your age, race, gender, creatinine level, and possibly your weight). (See also the Q&A on liver and kidney effects of HIV meds, p. 18)

Pancreatic amylase: The pancreas, an organ that produces insulin and digestive enzymes, can become inflamed. This condition is called pancreatitis. It's commonly caused by alcohol but also by some antiretroviral drugs such as stavudine (D4T,

Zerit™), didanosine (DDI, Videx™), and more rarely by some of the newer HIV drugs. For this reason we usually monitor blood levels of amylase, an enzyme produced by the pancreas, which will become elevated in the presence of pancreatitis.

Fasting sugar and lipids: Diabetes and cardiovascular disease (heart attacks and strokes) are increasingly recognized as risks of long-term antiretroviral therapy. As people age, their risk of developing these conditions increases as well. For this reason, before you start HIV treatment, your blood sugar (glucose) and lipids (total cholesterol, HDL cholesterol, LDL cholesterol, triglycerides) should be checked after you've been fasting (nothing to eat or drink except water) for 12 hours. If tests show you're at risk for diabetes or heart disease, these conditions should be brought under control, if possible, before you start HIV medication. Other issues that increase your risk for heart disease, such as being overweight, lack of exercise, smoking, and high blood pressure, should be addressed as well.



The absolute level of an abnormal test may be less important than how quickly it's changing, or how much it has changed from your own normal "baseline" level (before you started HIV treatment), as opposed to how it compares to the lab's "normal" ranges. For example, rapid increases in liver enzymes or amylase may signal inflammation in the liver or pancreas, respectively, which can be related to medications in combination with other conditions. With kidney function tests, rapid changes can also be important signs of acute kidney failure; however, more gradual changes from baseline levels may also be important signs of chronic loss of kidney function.

For a more in-depth description of some of the above blood tests (CBC, enzymes, blood sugar and lipids, urinalysis), you can visit the following website on "How to interpret your blood test results": <http://www.amarillomed.com/howto.htm> 