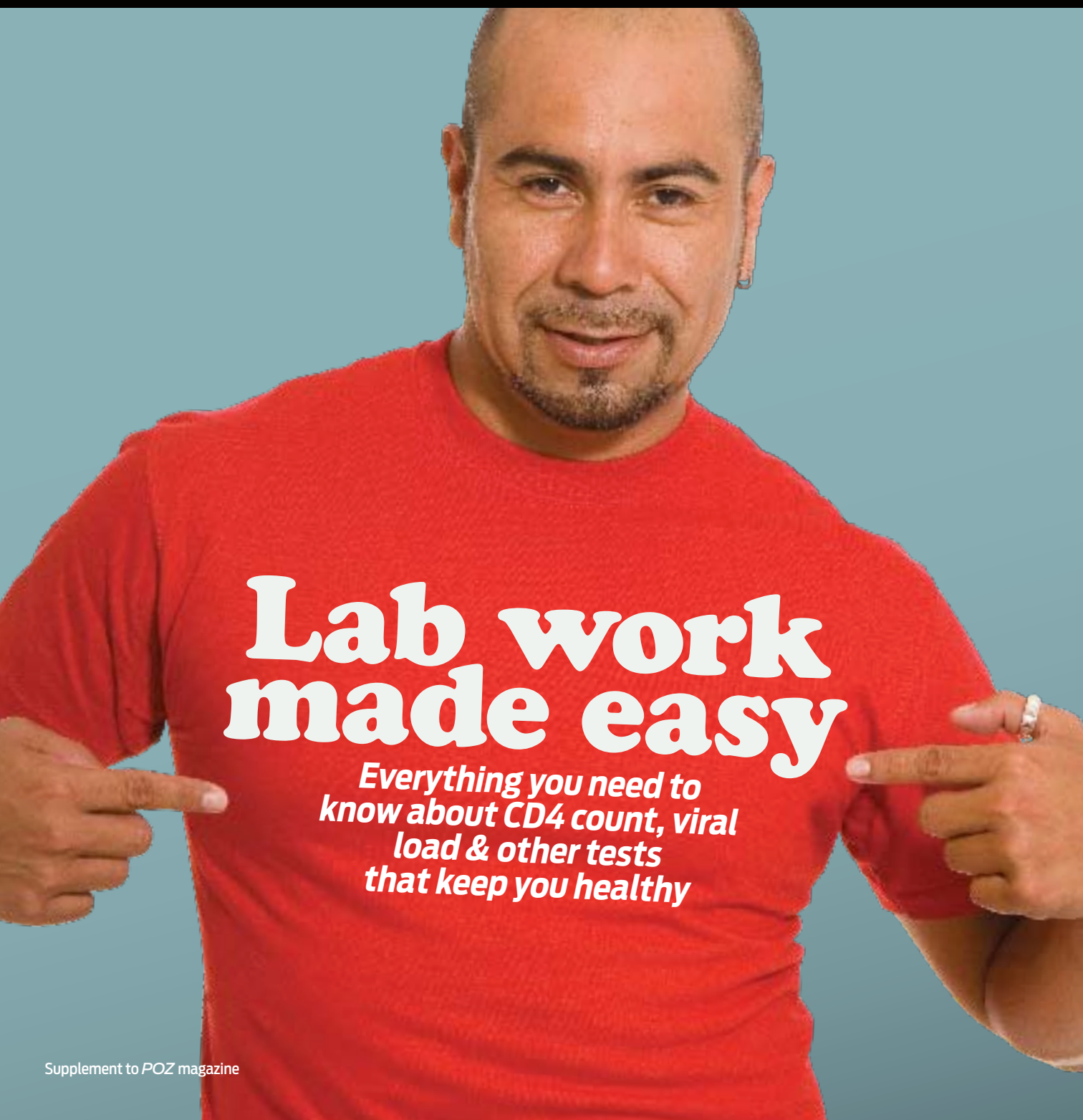
POZ FOCUS

SANA Y POSITIVA Healthy & Positive: A Two-Part Series



Lab work made easy

Everything you need to know about CD4 count, viral load & other tests that keep you healthy

Supplement to *POZ* magazine

Blood Matters

4 the number of times per year you should have lab work done if you're on HIV medication (two times per year if you're not)

Many of us can't stand the sight of blood or needles. But if you're living with HIV, blood tests are an important tool for keeping you healthy. Here we make it easy to understand the important parts of your lab tests—what they do, what they mean and what you and your doctor can do to keep you healthy.

El doctor dice

Dr. Antonio Urbina of St. Vincent's Comprehensive HIV Center in New York City helps you understand your lab work

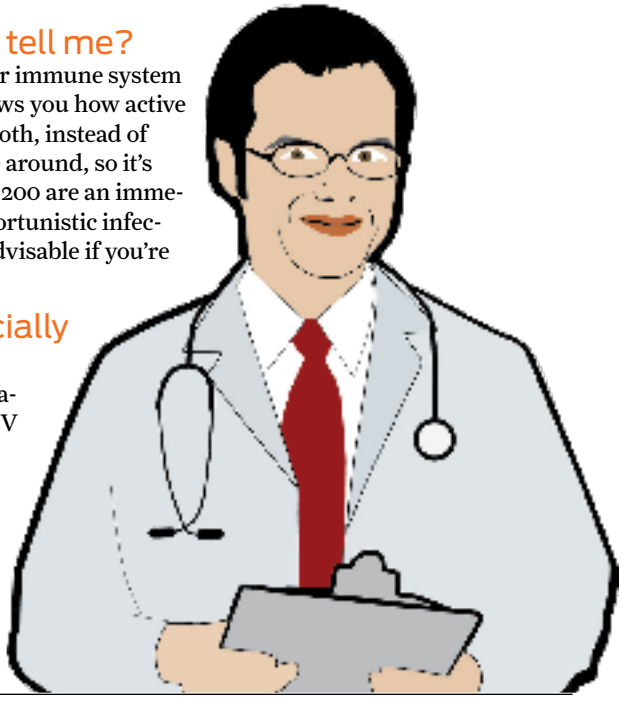
Interview by Derek Thaczuk

POZ: What do my CD4 count and viral load tell me?

Dr. Urbina: Your CD4 count is a good snapshot of how well your immune system is working and how much damage HIV has done. Viral load shows you how active HIV is in your body. It's important to get a series of readings of both, instead of making decisions based on any single result. Results can bounce around, so it's best to get several and see how they compare. CD4 counts below 200 are an immediate cause for concern because you're much more at risk of opportunistic infections. Anti-HIV treatment is needed with counts that low, and advisable if you're approaching them.

POZ: What other tests are important, especially for HIV-positive Latinos?

Dr. Urbina: Latinos on the whole are prone to diabetes and metabolic problems—trouble with your body chemistry. If you are HIV positive and Latino, your glucose (sugar) levels and your lipids (fats) are two key things to watch. The lipid panel measures the "good" or HDL cholesterol, the "bad" or LDL cholesterol and the "ugly"—another type of fat called triglycerides. If your glucose, triglyceride, "bad" cholesterol levels or your blood pressure are inching upward, that combined with your HIV puts you at risk for heart disease and other health problems.



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POZ: What other health concerns should HIV-positive Latinos watch for?

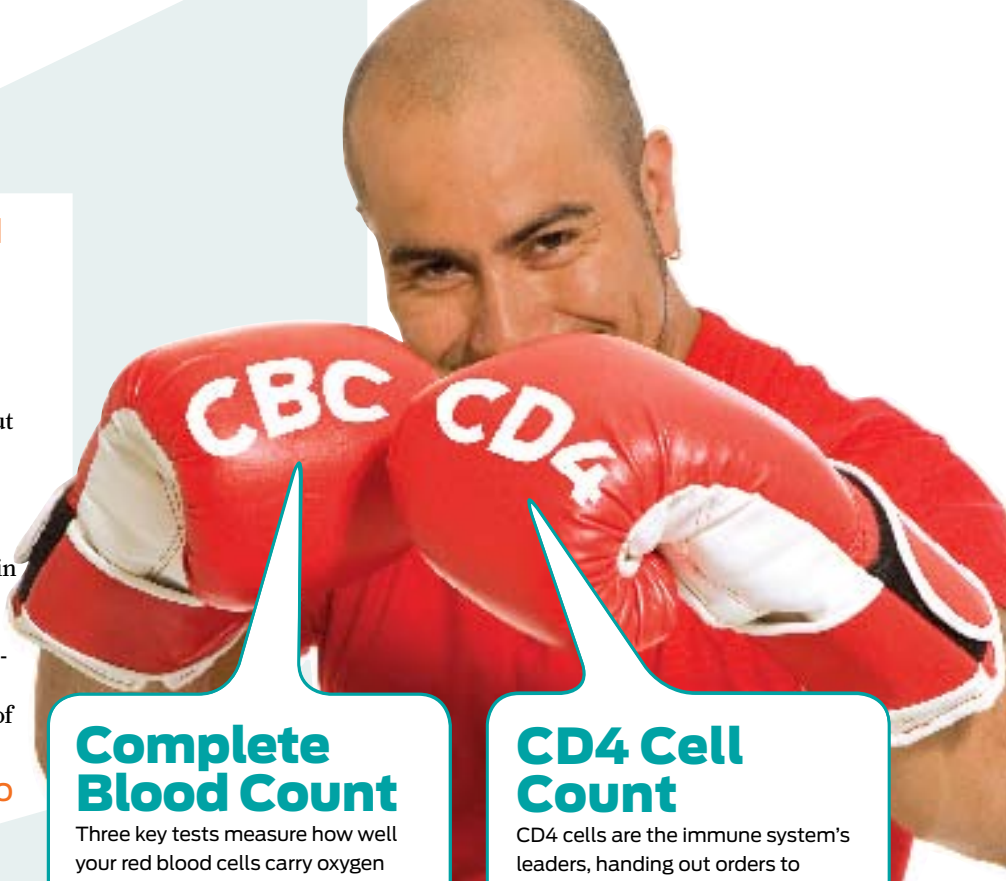
Dr. Urbina: Diabetes is a condition in which your body isn't able to process sugar (glucose) properly. The sugar is a fuel for your body, but if your body can't control glucose levels, they can trigger a kind of domino effect. Excess sugar levels can affect your kidneys' ability to hold on to protein. Losing protein, in turn, increases your risk of kidney disease and can cause your cholesterol levels to go up, which then creates a risk of heart disease. So high glucose levels can set off a cascade of other health risks.

POZ: What can you do to lower the risk for heart disease and diabetes?

Dr. Urbina: There's a bit of genetic predisposition, but the main factor is probably diet. A diet that's built around rice and tortillas contains a lot of sugar, which may need some adjusting if your lab work indicates a risk. The three best things you can do are: exercise, eat healthfully and keep your weight in a healthy range. Of course, those suggestions can also be the most difficult! It may be easier to take a pill to lower your cholesterol—and we will do that when it's needed—but those "lifestyle" changes are really the best prevention. If your diet is an issue, it's best if you can find a culturally trained nutritionist who can make the best recommendations for you.

POZ: How can you make sure your lab work is picking up these risks?

Dr. Urbina: High blood pressure and metabolic problems are more likely to go undiagnosed and undertreated in Latinos and other people of color. You should be getting your weight and blood pressure checked at each visit, and sugar and cholesterol measured twice a year. If any levels are abnormal, that signals a need for more intensive monitoring.



Complete Blood Count

Three key tests measure how well your red blood cells carry oxygen throughout the body, including:

Red Blood Cell Count (RBC)—measures the number of red blood cells (or erythrocytes) in your blood

Hematocrit (HCT)—measures the percentage of your blood volume filled by red cells (bigger cells, which can carry more oxygen, take up more room)

Hemoglobin (HGB)—measures the most important part of your red cells—the crucial oxygen-carrying hemoglobin molecule

Other measures include:

Platelets—measures the number of platelets (thrombocytes) needed for blood clotting. Blood may not clot properly if platelet counts are low.

White Blood Cell Count (WBC)—measures the total number of infection-fighting white cells or leukocytes

Test Tip: Low RBC, HCT or HGB values are a sign of anemia, which could mean less oxygen in your blood and less energy for you. Note: Women are more prone to anemia than men. Treatments vary, so talk with your doctor about what you can do to stay healthy.

CD4 Cell Count

CD4 cells are the immune system's leaders, handing out orders to nearly every other cell. For people with HIV, CD4 counts are the No. 1 sign of immune strength.

CD4 counts above 350: Most people with HIV are not at higher risk of illness and likely needn't start HIV treatment.

CD4s between 200 and 350: It's time to think seriously about treatment. Consult with your doctor and weigh your options.

CD4s below 200: Very serious infections are much more likely at this level. If you haven't already, talk to your doctor about starting HIV treatment and get preventive treatment against opportunistic infections.

Test Tip: Most experts suggest CD4 measurements every three to six months—more often if they're lower or changing quickly. Low CD4 counts are a sign of HIV in need of treatment. HIV may cause other numbers (e.g. neutrophil counts) to fall as well, which may call for treatment. Talk to your doctor about your options.

(COVER SUBJECT: LUIS MARES) ANDREW MCLEOD; (DOCTOR) WILLIAM PLUMMER

Want to learn more? Check out poz.com for more information.

HIV Viral Load

What it measures: How much HIV is in your blood. This information helps you and your doctor make decisions about HIV treatment and determine whether the medications are working. Fewer than 50 copies of HIV per mL—about a teaspoon of blood—reads as "undetectable"; results range from undetectable up to millions of copies per mL.

When it's used: Usually at the same time as CD4 counts—typically every few months—to monitor your HIV infection and see if any change in treatment is needed. A sudden change in viral load may call for an immediate repeat test.

How it helps: An undetectable result doesn't mean the virus is gone for good, but it signals successful treatment and a low likelihood of worsening disease. If you are on HAART (Highly Active Antiretroviral Treatment—a potent combo of HIV-fighting drugs), an undetectable viral load is considered the best possible result. If you've just started treatment, this might take several months—another test in two or three months will tell for sure.

Test Tip: Even if the viral load is considered undetectable, it may occasionally bounce up to small but measurable values. These may not be cause for alarm. But persistent, detectable viral load while you're on HAART is cause for concern: It's a signal that your treatment isn't controlling the virus. You and your doc need to talk about a switch.

Note: *If you are not on HAART, it's not so clear how your viral load result affects your care. Recent science has questioned whether people with higher viral loads progress (get sick) faster. Ask your doc to break down the info about your viral load so that you know how it affects your health.*

TWO NEWCOMERS:

These experimental newer tests zero in on two specific drugs—abacavir and maraviroc—and whether you should take them.

Hypersensitivity

What it measures: Whether you have a gene that marks you as allergic to Ziagen (abacavir)—a potentially serious side effect in 5 percent of positive people using the drug

When it's used: If you're considering Ziagen

What it shows: Whether you should steer clear of abacavir in any of its forms, including Ziagen, Trizivir, and Epzicom

Tropism

What it measures: Whether you have the so-called CCR5-tropic virus. Selzentry (maraviroc) and other CCR5 inhibitors work against only this strain of HIV.

When it's used: If you're considering Selzentry (maraviroc)

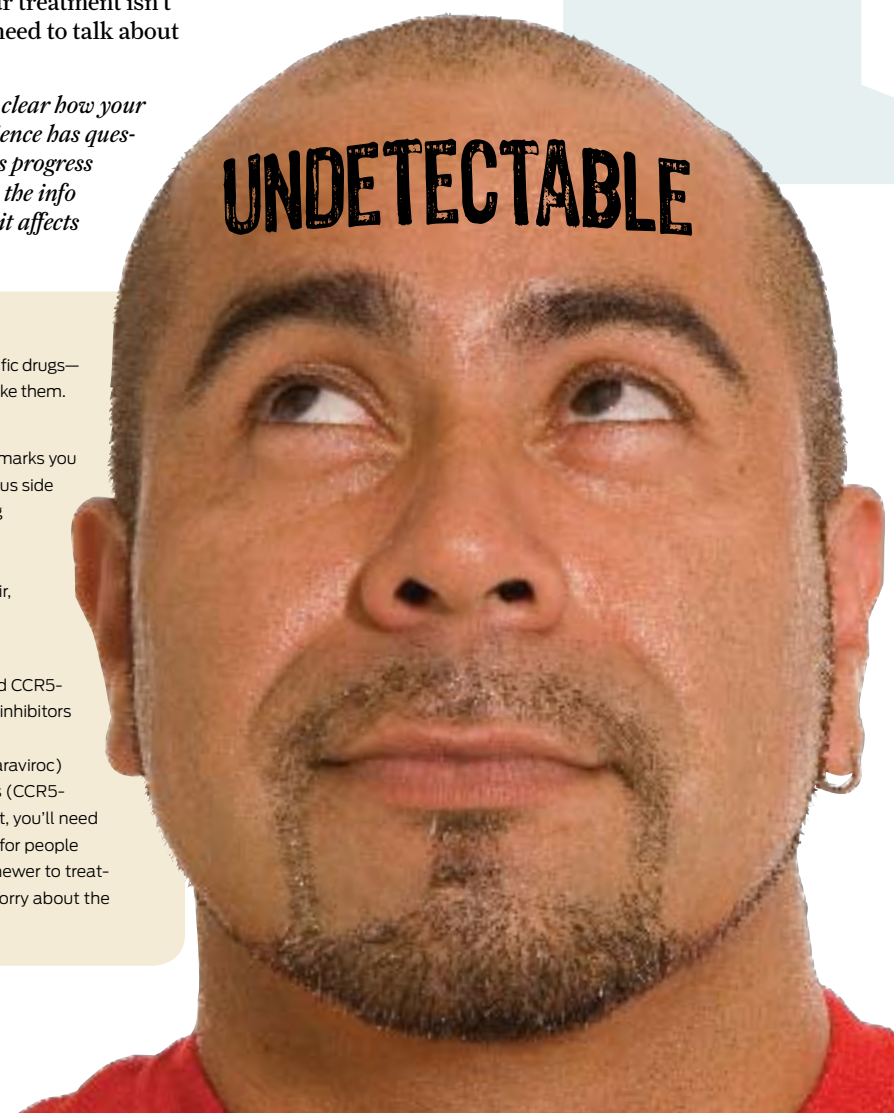
What it shows: If you have the "right kind" of virus (CCR5-tropic), this new drug may work for you. If you don't, you'll need to consider other options. So far, maraviroc is only for people resistant to most other HIV medications. If you're newer to treatment and have other options, you won't need to worry about the tropism test.

Drug Resistance Testing

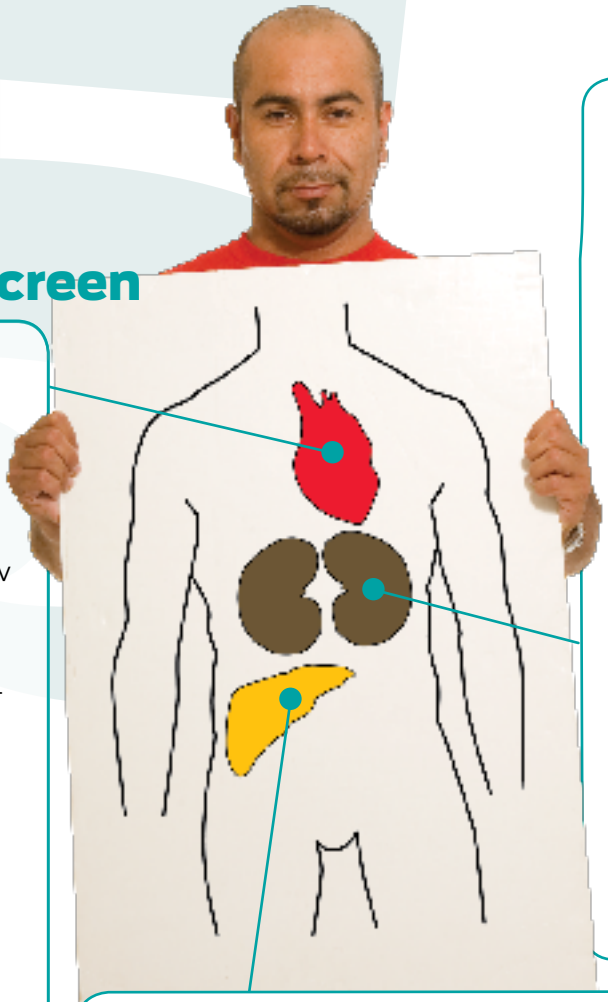
What it measures: HIV can mutate to become resistant to drugs. Resistance testing helps identify the meds that still work against HIV when others fail—or the meds you might not benefit from *before* you start treatment.

When it's used: Before treatment is started (to see if you were possibly infected with drug-resistant HIV), when viral load increases while on treatment and when choosing meds to use during pregnancy. *Genotyping* and *phenotyping* tests are both available. Those with complex treatment histories might benefit from both tests.

Test Tip: The test can miss drug-resistant virus if the amount of HIV in your bloodstream is small (a viral load below 1,000). For best results, have blood drawn for the test before stopping or switching your treatment. If you haven't started treatment, testing is best if only a few years have passed since the time of infection.



The Chem Screen



Heart

Important measurements to watch include:

Lipids (that's blood fats to you and me). Our bodies need lipids to live—but too much, and our risk for stroke and heart disease goes up. HIV and some HIV meds, as well as poor diet and not enough exercise, are causes.

Triglycerides: The most common fats in our diets.

LDL cholesterol: The "bad" cholesterol that clogs the arteries. (LDL stands for low-density lipoprotein.)

HDL cholesterol: Unlike the last two, you want higher levels of this "good" cholesterol (or high-density lipoprotein), which keeps your heart and arteries healthy.

Test Tip: If your LDL or triglycerides are too high, you need to go on a lower-fat diet, get more exercise and (possibly) take fat-lowering drugs like atorvastatin (Lipitor). You may also need to switch your HIV meds.

Kidneys

Keep an eye on the following:

Creatinine clearance or glomular filtration rate: These measure your kidneys' ability to remove creatinine, a muscle waste product, from your blood. Lab tests showing slower removal could mean kidney disease.

Protein analysis: Damaged kidneys can flush too much protein out of the body. A color-coded dipstick test can be used to check for too much protein (proteinuria) in your urine.

Blood pressure: High blood pressure can cause kidney damage—and can also be a sign of it. Keeping yours below 120 over 80 is recommended.

Glucose: Blood sugar levels done on an empty stomach (nothing but water for eight hours before) can check for diabetes, a major kidney disease risk factor.

Liver

Your body depends on this football-sized organ to clear toxins (that includes meds) out of the blood. The measures to watch include:

Liver enzymes: High measurements of ALT, AST, bilirubin and others are signs of a liver working overtime. Hepatitis infections may be a factor and Hep C and B are common among people with HIV, so get tested. Many meds can stress the liver. Mildly abnormal enzyme levels may be OK, but constant and very high levels may be saying that a switch is needed (especially for folks with HIV and hepatitis, whose livers are already under stress). If blood work shows liver stress, lay off the alcohol—it takes a toll.

Our Cover Guy

Name: Luis Mares, 40
Hometown: Astoria, New York
Profession: Trained as a physician in his native Lima, Peru, now works as an HIV program administrator

His story: Luis tested positive in 2003 after the grief over a lover's death from AIDS-related causes sent him into a spiral of crystal meth and unprotected sex. His CD4 counts, starting in the low 300s, declined to 198 by early 2004. "I knew I'd have to start meds. I didn't want to get the side effects, like lipo [the loss of limb and facial fat or accumulation of belly fat] that I'd seen in so many people."

Before treatment: Luis distanced himself from the party crowd and took up a simple, healthy routine of "sleeping, working, church and the gym." He got by with help from friends, a therapist and a few months with his addiction recovery group.

Health risks: Diabetes in his family called for extra attention to the blood-sugar levels that HIV treatment can sometimes nudge upwards. His glucose (and cholesterol) have stayed normal.

After treatment: Luis became undetectable and the side effects that had scared him never materialized. A Hepatitis B diagnosis prompted a switch to HIV drugs that fight HIV and Hep B as well as extra attention to his liver-related lab work.

Words of wisdom: Luis now helps other people with HIV realize what he's learned himself: "HIV is not the end of the world. Not anymore." —DT

(LUIS MARES) ANDREW MCLEOD; (ORGANS) WILLIAM PLUMMER