Change of Heart

Could your anti-HIV meds put you at risk for a heart attack? Lark lands talks to one PWA who's been through it all, and tells you how to take preventive steps.

September 1, 2000 By Lark Lands, PhD

I wouldn't normally think of sautéing vegetables as a life-threatening event," says Manhattan HIVer Jack Waters, "but when I started feeling dizzy, weak and short of breath just standing at my stove, it got scary." No, this wasn't a case of Evil Zucchini Illness. It was myocardial infarction (MI), a heart attack, the cause of which was likely his antiretroviral medications—ritonavir (Norvir), d4T (Zerit) and 3TC (Epivir)—perhaps combined with the cardiac effects of long-term HIV disease itself. Waters was one of the first HIVers to experience what some researchers fear is a growing problem.

Keith Henry, MD, director of HIV/AIDS Programs at Regions Hospital in St. Paul, Minnesota, was the first researcher to report angina (chest pain and pressure that can be an early warning of heart disease) and coronary artery disease (CAD), the clogging or thickening of blood vessels that can lead to a heart attack, in a few of his patients on HAART (Highly Active Antiretroviral Therapy). He now says, "People with HIV on HAART should be considered at increased risk of heart disease. Period."

The early reports that Henry published may have saved Waters' life. "If I hadn't been reading about the cardiac connection to HAART, I might have just gone and laid down and not said anything," he says. "I could have died in my sleep." But his partner, Peter Cramer, insisted on calling an ambulance. Initially, Waters didn't want to climb in, but emergency technicians told him that he was having all the symptoms of a heart attack. As the ambulance sped him to the hospital, he began to feel his heart beating irregularly and a sensation that he wasn't getting enough oxygen.

After an angiogram (an X-ray taken after dye is injected) found serious blockage in two of his coronary arteries, doctors stented the most important one (the left anterior descending, or LAD). In this procedure, wire mesh is inserted into the artery via a tube introduced in the groin and then expanded with a balloon, the goal being to keep the artery open long term. Waters was sent home a day later with prescriptions for beta blockers (standard cardiac medications that help maintain a regular heartbeat) and aspirin (which helps prevent the clots that can cause heart attacks and strokes).

A week later, Waters' cardio problems returned, and another angiogram found that while the LAD

was holding up fine, the posterior lateral (a secondary vessel off of the LAD) was blocked. A balloon angioplasty (in which a small balloon is inserted through a blood vessel in the groin and expanded once it reaches the blockage) fixed that and, fortunately, Waters' symptoms vanished.

But that's not the end of the story. While on a European vacation soon afterward, he again experienced chest pains, especially when sudden exercise was combined with stress as in a mad dash to catch a train. He tried deep breathing and visualization but eventually ended up in the American Hospital in Paris, where he was told that he had been experiencing multiple small MIs. Doctors discovered that his LAD stent had failed and restented it (re-expanding the mesh with a balloon).

Since advanced heart disease requires such invasive procedures, it's best to prevent them up-front. "We should be more aggressive at evaluating coronary artery disease," Henry says, "and educate the HIV doctors who may not be up to speed. We should address elevated blood lipids and other risk factors, and come up with a plan that balances this concern with the HIV management needs of our patients."

Keep your blood fat score because any of the following may mean you're at risk for an MI: elevated serum total cholesterol and, in particular, elevated low-density lipoprotein (LDL) cholesterol; low levels (less than 35 mg/dl) of high-density lipoprotein (HDL) cholesterol; unhealthy HDL/total cholesterol ratio or elevated triglycerides. The significance of these numbers will depend on whether you have another heart disease risk factor, as the risk is additive: age (over 45 for men; over 55 for women), premature menopause (without estrogen replacement therapy), personal or family history of CAD, hypertension (high blood pressure), diabetes, current cigarette smoking, obesity and physical inactivity. But take note: Some cardiologists know so little about HIV that until you show up with the actual symptoms of a heart attack or stroke (see sidebar at right), they may discount the possibility that you could be at risk.

The problem is that no studies yet show the risk from HAART. "I think that protease inhibitors are a major factor in the cholesterol and triglyceride abnormalities, and high lipid levels are linked to heart disease," Henry says. "People haven't been paying enough attention because of the thrill of having low viral loads and improving CD4s." If this doesn't change, he says, unlucky HIVers may be substituting death from cardiac disease for death from AIDS.

Henry encourages the long view. "We need to be smarter about using drugs so you get the best HIV effect possible with the least long-term side effects, including heart problems," he says. Instead of needlessly treating HIV early on, only to deal with cardiac disease down the line, he says, "You use the drugs if someone's CD4s are low enough to risk serious illness, but you don't use them if you don't have to. Living long and prospering is not the same as having viral load low from day one at any cost."

Henry recommends looking for what he calls lipid-friendly combinations. Although no studies prove what's best, he uses less standard-dosage ritonavir and more amprenavir (Ziagen) combined with

a low dose of ritonavir or saquinavir (Fortovase); less Sustiva (efavirenz) and more nevirapine (Viramune) or delavirdine (Rescriptor); and less d4T and ddI (Videx) and more abacavir (Ziagen) and AZT (Retrovir).

But until less-toxic drugs arrive, if elevated blood fats point to trouble, address your other risk factors to reduce overall risk of heart attack. Richard Elion, MD, a Washington, DC, doctor with a large HIV practice, recommends the following:

- Improve your diet. Reduce fat, use mostly mono-unsaturated fats like olive oil, and try to eliminate the artery-damaging partially hydrogenated fats found in most margarines, vegetable shortenings, commercial baked goods and snack foods. (Study your labels.) Increase dietary sources of soluble fiber—fruits, vegetables and whole grains—which block cholesterol absorption.
- Quit smoking. Duh.
- If you're overweight, diet.
- Exercise. Just do it.
- Reduce stress in your life by any means necessary.
- If your fasting cholesterol (measured after not eating for 12 hours) is above 250, your cholesterol/HDL ratio is not normal or your triglycerides are elevated, use lipid-lowering agents. The statin drugs (Lipitor, Pravachol or Mevachor) help prevent the conversion of fats into cholesterol (because it interacts less with protease inhibitors, Pravachol may be best). The fibrate drugs (such as Lopid) bind cholesterol to prevent its absorption, while also lowering triglycerides; side effects can include bloating, gas, gastrointestinal upset and liver toxicity. B vitamin niacin is Elion's preference. With fewer side effects, niacin can lower overall cholesterol, LDL cholesterol and triglycerides. To avoid flushing, redness, warmth or painful stinging and itching, Elion recommends a sustained-release, no-flush form called Niaspan, 500 mg taken twice a day. For elevated triglycerides, the amino acid L-carnitine (Carnitor) in doses of 3,000 to 6,000 mg daily may help.
- Take nutrients that help prevent arterial damage. Magnesium, deficient in a large percentage of people with HIV, can help in doses of 500 to 1000 mg daily. Also important are antioxidants and

B vitamins found in high-potency multivitamins.

Despite all his cardiac treatments, Waters' symptoms returned once he was back in New York City, so he finally took a vacation from HAART. Such a break is unlikely to open up already clogged arteries, but will stop any med-related worsening of the problem. At the end of two months, Waters' viral load had reached a quarter-million and his CD4s had dropped from 480 to 250, so he restarted the d4T with 3TC but substituted Sustiva for the ritonavir. With this drug switch, along with maintenance of his low-fat diet, regular yoga and dance classes, and continued use of cardiac medications, he has avoided any further recurrences of heart symptoms. And although tests have shown that the blood supply to his heart still isn't normal, Waters has decided to delay the most extreme of heart repair approaches, a coronary bypass graft, due to the risks and pain of such surgery.

But he's an optimist. "I'm going to put off coronary bypass grafts for as long as possible," he says. "Maybe HIV drugs will get better and quit causing cardiac harm, or maybe by the time I need the surgery, advances in cardiac medicine will have made bypasses obsolete."

Jack Waters
Age: "Older than Ricky Martin"
Tested positive: 1992
Regimen: d4T, 3TC, Sustiva
XTRA FX: Heart attack

Jack Waters knew the pains he was having were not neuropathy. "This felt circulatory, like the blood wasn't getting into my limbs. I couldn't get enough air in my lungs." It turned out that the New York City dancer, filmmaker and performance artist was having a heart attack—the first of several he had last winter.

Waters didn't want an ambulance to come to take him to the hospital, but now he says, "Thank God they didn't believe me when I said I was feeling fine." He underwent surgery for a blocked artery, a procedure that had to be redone a few months later while on vacation.

"I suspected the heart problems were the result of the medications, but I wanted to wait until I could get home to my doctor to make any changes." Under doc's supervision, Waters went on another holiday: three months sans meds. He returned last March.

These days Waters takes regular trips to the cardiologist, and he is currently not having any cardiac symptoms.

Waters says his heart-attack episode "was not terribly dramatic, but it could have been. There's a feeling you get when one of your vital organs breaks down—like a red alert going off in your body.

It’s very animal, I think. Either you pay attention to it or you don’t.”

-Rebecca Minnich

TICKER TROUBLES

Heart Attack Warning Signs

- Uncomfortable pressure, fullness, squeezing or pain in the center of the chest lasting more than a few minutes.
- Pain spreading to the shoulders, neck or arms.
- Chest discomfort with light headedness, fainting, sweating, nausea or shortness of breath.

You may have only one of these symptoms but could still be having a heart attack.

BRAIN BREAK

Stroke warning signs

- Sudden weakness or numbness of the face, arm or leg on one side of the body.
- Sudden dimness or loss of vision, particularly in one eye.
- Loss of speech or trouble talking or understanding speech.
- Sudden, severe headaches with no apparent cause.

Unexplained dizziness, unsteadiness or sudden falls, especially along with any of the previous symptoms, are also stroke signs.
