Getting to the Heart of the Matter

HIV raises the risk of heart disease. What can you do to lower that risk?

October 1, 2015 By Benjamin Ryan

People with HIV are at a greater risk for heart disease than the general population, even when they are taking antiretrovirals (ARVs) and have a fully suppressed virus. There are numerous overlapping factors that likely contribute to the increased risk of outcomes such as a heart attack or stroke among HIV-positive people, and these factors aren't all directly related to HIV.

All this may seem like cause for anxiety. But there are many things people with HIV can to do lower their risk of heart disease. And there is even evidence to suggest that excellent health care services, the kind that successfully treat the virus and address an individual's overall health, may be able to help wipe out this excess risk of cardiovascular disease (CVD).

What are your actual chances of heart disease?

When looking at the risk of any health problem, it's important to consider the difference between the what are called "absolute risk" and "relative risk." Absolute risk looks at the rate of that health problem in a group of people. Finding the relative risk means comparing the difference in rates of that health problem between two groups of people.

A 2007 study examined heart attack risk among 3,850 HIV-positive people as well as 1 million HIV-negative individuals receiving care in a Boston health care system. About 1.1 percent of the HIV population suffered a heart attack each year, compared with 0.7 percent of the HIV-negative group. Those are the respective absolute risks of a heart attack in each of the two groups. As for the relative risk: After controlling for age, sex, race, high blood pressure, diabetes and high cholesterol, the researchers found that the HIV group had a 75 percent increased risk of a heart attack when compared with those who did not have the virus. (Another way to put this is to say that there was a 1.75-fold increased risk among the HIV-positive group.) A limitation of the study is it did not have complete data about smoking, and higher smoking rates among the HIV population may have accounted for some of the difference in heart attack rates.

A study published in 2013, which included 82,500 individuals, a third of whom had HIV, who received care from the U.S. Department of Veterans Affairs, found that, after controlling for various factors, having HIV raised the risk of a heart attack by 48 percent (or 1.48-fold). Those veterans who were taking ARVs and had a fully suppressed virus had a 39 percent increased risk

of a heart attack when compared with the HIV-negative vets. So this study adds to previous research findings suggesting that HIV treatment alone shaves off some of the increased risk of heart attack that people with HIV experience.

How to Lower CVD Risk

Seek proper healthcare. Getting health insurance and seeing a physician are fundamentally important for anyone living with HIV. (Check out POZ's guide to obtaining health coverage through Obamacare. We will soon update the guide, since the open enrollmentperiod for 2016 coverage begins November 1 and ends January 31, 2016.)

Treating the virus itself is vital for your overall health, wellbeing and longevity. When it comes to heart disease prevention in particular, clinicians can also help you develop a plan to try to keep you as healthy as possible.

Some exciting news came out of Kaiser Permanente California in January. Looking at nearly 25,000 people with HIV and 258,000 HIV-negative individuals who received care from the sprawling health care system between 1996 and 2011, researchers found that the apparently excellent care Kaiser provided its HIV-positive patients led to incredible heart health benefits. In the late 1990s, those who had HIV had an 80 percent increased risk of a heart attack compared with those who did not have HIV. By the 2010 to 2011 window, this difference had vanished: The heart attack risk was the same in the two groups.

Looking at the reasons why Kaiser's HIV-positive population is doing so well in the heart disease department, Daniel B. Klein, MD, chief of the division of infectious diseases and HIV services at Kaiser's San Leandro Medical Center, says treating the virus itself is key.

"The vast majority of our HIV patients are on effective antiretroviral therapy with excellent results," he says. "Well over 95 percent have undetectable HIV viral loads and the average CD4 count is now over 500." He adds that those seeking care for HIV from Kaiser tend to start treatment early in the course of their infection, which may account for some of the drop in their heart disease risk.

"The success we've seen at Kaiser in reducing cardiovascular risk among people with HIV comes from the same efforts as in people without HIV," adds C. Bradley Hare, MD, the director of HIV care and prevention at Kaiser Permanente Medical Center in San Francisco, stating that this means "a focus on quitting smoking and keeping blood pressure and diabetes in check."

Janet Lo, MD, an assistant professor of medicine at Harvard Medical School who researches heart disease in people with HIV, says that it's important to have a discussion with your primary care provider about heart disease, especially as you get older. There are different so-called risk calculators that physicians can use to try to predict your overall risk. Unfortunately, according to Lo, research suggests that both of the two most commonly used calculators may under-predict the risk for CVD among HIV-positive individuals.

“So we would have to take [the calculators] with a slight grain of salt,” she says. “At least they can give us some sort of ballpark area to kind of know what the estimated risk might be.”

Get on HIV treatment. As mentioned, ARVs can lower your risk of heart disease. Until recently, the HIV research community wasn’t certain if starting ARVs soon after diagnosis (specifically, with CD4s greater than 500) would mean a net benefit to the health of people with HIV. This spring, the long-awaited results from the global START trial provided gold-standard proof that going on ARVs as soon as possible is indeed better for overall health than delaying treatment.

The START researchers intend to release information in early 2016 from a substudy looking more closely at HIV treatment’s effects on heart disease.

Kick the nicotine habit. One reason CVD rates are higher among people with HIV is that a staggering 60 to 80 percent of the American HIV population smokes. A 2012 Danish study of almost 3,000 HIV-positive and 10,600 HIV-negative individuals found that, between 1995 and 2010, more than 60 percent of the deaths among people with HIV were related to smoking.

Make other lifestyle changes. It’s no secret that maintaining a healthy weight, eating a balanced diet and getting regular exercise are good for your overall health and wellbeing. Keeping your body-mass index below 25 (the cutoff for being overweight) and certainly 30 (obese) may be beneficial for preventing heart disease. (Note, however, that the BMI calculator is a rather crude tool. It may misjudge someone with high muscle mass and low body fat as overweight, and those with high body fat and low muscle mass as underweight.)

Lo stresses the importance of regular cardiovascular exercise for promoting heart health.

“Even just walking can be good exercise,” she says.

The Harvard researcher encourages a heart-healthy died, such as the Mediterranean diet, citing recent research findings of cardiovascular benefits to a diet that favors olive oil and is rich in nuts, fish, beans, fresh veggies and fruits, and whole grains.

A healthy diet and weight as well as regular exercise also help prevent diabetes and high blood pressure, both of which are a risk factor for heart disease. That said, treating diabetes if you do have the condition is highly important to reducing the risk of a heart attack or stroke. And if your lifestyle efforts don’t keep your blood pressure under control, medications can help.

High cholesterol is another contributor to heart disease. If a low-cholesterol diet does not keep cholesterol levels under control, you can turn to the class of drugs known as statins.
Lo says that individuals with coronary artery disease should be on a statin, and that those who meet the guidelines for statin treatment “should have an individualized discussion with their doctor to discuss the potential risks and benefits of a statin for them.”

Recently, small studies have suggested that statins may help reduce some of the excess risk of

heart disease among the HIV population. According to Steven Grinspoon, MD, codirector of the Nutrition Obesity Research Center at Harvard, who worked with Janet Lo and others on one such study, People with HIV tend to have harmful excess immune activity in arteries, with excess immune activation as a possible contributing factor. This can lead to a chain reaction that raises the risk of an artery rupturing. Successful HIV treatment lowers this effect, but not entirely. Grinspoon's research suggests that statins may help reduce this excess immune activation and thus the overall risk of heart disease.

Grinspoon is the lead investigator on a massive double-blind, randomized-controlled trial called REPRIEVE that he and his colleagues hope will provide top-notch scientific evidence about statins' benefits among people with HIV. The $40 million global study, which is primarily funded by the National Institutes of Health, is set to recruit 6,500 men and women with HIV between 40 and 75 years of age who do not have CVD symptoms. These participants, who will be randomized to receive a statin or a placebo, will have low to moderate "traditional" risk factors for heart disease. The idea is to recruit individuals whose personal doctors have said they wouldn't otherwise put them on a statin.

"These are patients whose doctors very, very often don't know what to do," Grinspoon says. "They don't know whether to prescribe a statin or not," because their patients have low-to-moderate "traditional" risk factors. In other words, these physicians don't have enough guidance from the available research on how best to prevent heart disease among their HIV-positive patients, specifically regarding statin use when their patients wouldn't need one if they were HIV-negative.

Results from the REPRIEVE trial are not expected for another five years. However, an independent safety monitoring board will review the study's data every six months. And if a clear benefit of statin use emerges, that board may recommend ending the placebo group early and offering statins to all the participants.

If you are interested in participating in the REPRIEVE trial, click here for more information.
