

# TREATMENT BULLETIN

A comprehensive guide to health and well-being for people living with HIV/AIDS  
December 2011



CARDIOVASCULAR  
DISEASE & HIV:

## WHAT YOU NEED TO KNOW

Toronto People With AIDS Foundation

[www.pwatoronto.org](http://www.pwatoronto.org)



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Cardiovascular disease is one of the leading causes of death in Canada. It is an issue that doctors with HIV+ patients have been particularly concerned about as cardiovascular disease is found in higher rates in people living with HIV/AIDS.

This bulletin is intended to provide an overview of cardiovascular disease, including its causes, risk factors, and management, and how it relates to HIV infection. It will also provide you with some tools and strategies for preventing heart disease and keeping your heart as healthy as possible!

## **WHAT IS CARDIOVASCULAR DISEASE?**

Cardiovascular (CV) disease is a category of diseases that affect the heart and blood vessels. Types of CV disease include heart disease, stroke, and peripheral vascular disease.

Your heart is a muscle, and just like the rest of the muscles in your body, it has its own set of vessels that supply it with blood, known as the coronary arteries. In heart disease (or coronary artery disease, CAD), the coronary arteries become clogged over time through the formation of “plaques” that stick to the artery walls causing the amount of blood supply and oxygen to the heart to be reduced. Unlike other diseases, heart disease isn’t something you can feel developing. Symptoms usually develop when blood supply becomes significantly reduced, however some people do not experience symptoms even up until a heart attack. A heart attack happens when one or more of the arteries has a complete blockage and blood supply to a part of the heart is completely stopped resulting in some of the heart tissue dying as a result of a lack of oxygen.

### *Do you know the symptoms of a heart attack?*

- Chest pain that can feel like tightness, discomfort, crushing pain, pressure, squeezing, burning or fullness in the chest
- The pain can spread down one or both arms or up to the neck and jaw
- Shortness of breath, paleness, sweating, feeling weak
- Nausea, vomiting, or feeling of indigestion
- Feeling of anxiety or fear
- Women may experience pain that is more vague and diffuse rather than a tightness or crushing pain – symptoms should still be taken seriously!

Many people experiencing these symptoms can find it hard to believe that they are having a heart attack and may delay seeking help. If you are experiencing any of these or think there is any possibility that you are having a heart attack, call 911 and or get to an emergency room right away. It never hurts to be cautious but it can be deadly if you ignore the symptoms!

Cerebrovascular disease and peripheral vascular disease are similar to heart disease but they affect blood vessels elsewhere in the body. Cerebrovascular disease can lead to a stroke, which happens when the blood vessels in the brain become completely blocked and occasionally burst, causing bleeding into the brain. Signs and symptoms of a stroke include weakness, numbness, or tingling in your arms, leg, or face; trouble speaking; vision problems such as loss of vision or double vision; headache that may be more severe than usual; and dizziness. As with a heart attack, it is important to get to an emergency room as fast as possible when these symptoms occur.

In peripheral vascular disease, the vessels of the leg are usually affected. Most people notice the symptoms when they walk, often experiencing pain or discomfort in their calf muscles.

## RISK FACTORS

There are some factors that increase your risk for developing heart disease. Some of these are beyond your control, but many of them you can do something about. Risk factors that you can't change include your family history, age, and ethnic background.

- If any of your immediate family members has had a heart attack or has high blood pressure or high cholesterol, your risk for these diseases also increases.
- Men over the age of 45 and women over the age of 55 have a higher risk of heart disease.
- People of South Asian and African descent as well as Aboriginal populations are more at risk for developing heart disease.



Modifiable risk factors largely revolve around lifestyle choices. The following are risk factors that you can change, and doing so can have a tremendous positive impact on your health:



**Smoking** increases blood pressure and promotes plaque formation

**High cholesterol**, especially high levels of “bad” LDL cholesterol in your blood can block your arteries.

**High blood pressure** can increase plaque buildup in your arteries and weakens the heart.

**Diabetes** and poorly controlled blood sugar levels can contribute to the development of heart disease, high blood pressure and risk of stroke.

**Obesity**, especially abdominal obesity, increases your risk for many diseases, which increases the risk of heart disease, including diabetes and high blood pressure.

**Sedentary lifestyle** and lack of regular exercise is associated with greater risk of heart disease.

**Poor dietary habits** with diets high in saturated fat, trans fat, and sodium increase your risk for heart disease.

**Stress** can increase your blood pressure

## HIV, MEDICATIONS, AND HEART DISEASE

Higher rates of heart disease are seen in people who are HIV+ than in the general population for several reasons.

The first is that HIV infection activates the immune system, causing a persistent state of inflammation in the body. This inflammation is thought to trigger plaque formation in the arteries and leads to heart disease.



HIV medications also pose a risk for the development of heart disease. It is well known that some HIV medications increase the levels of cholesterol and triglycerides (a type of fat) in the blood. They can also increase blood sugar levels and cause diabetes, a known risk factor for heart disease. The protease inhibitor class of medication is the one that is most likely to cause this effect, but other classes of medications may also have the same side effect. Your doctor will put you on medications that will bring these levels back into a normal range in order to minimize

If you are concerned about the possible cardiovascular side effects of any medication you may be on, speak with your doctor, who may be able to suggest an alternate treatment regimen or provide you with additional support for maintaining a healthy cardiovascular system. It is not ideal to stop medication since untreated HIV infection is thought to pose more of a risk to the heart than the side effects of any medications you may take for your HIV.

## PREVENTION

Preventing heart disease largely involves changing your modifiable risk factors. While it's true that you may not be able to change the inflammatory effect of HIV on the body, or the effects of the medications you are taking, changing your modifiable risk factors can go a long way in helping you prevent heart disease and can have a significant impact.

The following are strategies for keeping your heart as healthy as possible:

***Quit smoking.*** There are many support systems in place to help you quit. While it may seem hard to quit, the benefits are unquestionable. Within 48 hours of quitting your chance of having a smoking-related heart attack starts to decrease; within one year the risk is cut in half, and within 15 years of quitting your risk is equivalent to someone who never smoked! Speak to your health care provider about what options are available to you to help you quit.

***Consume a diet rich in fruits and vegetables.*** Fruits and vegetables contain plenty of vitamins, minerals, fiber and many other substances that keep you, and your heart, healthy. Many fruits and vegetables are good sources of antioxidants, which help to combat the negative effects of chronic inflammation on your body.



***Make fish a regular part of your diet or consume fish oil.*** Fatty fish like salmon, as well as fish oil (as a supplement), contain EPA and DHA, two essential fats that have many positive effects on the cardiovascular system. In addition to having anti-inflammatory properties, it also can help to lower cholesterol and reduce blood pressure.

***Exercise.*** Exercising for 30 minutes a day lowers your cholesterol and blood pressure, increases circulation throughout your body, and significantly lowers your risk of heart disease. The benefits of exercise go beyond heart health – it also improves mood, reduces weight, helps to prevent numerous other diseases, and is a great way to relieve stress!

***Reduce saturated and trans fats.*** These “bad” fats are found in animal products, baked goods, fried foods. Read nutrition labels to determine how much the foods you are eating contain and try to stick to as little as possible. These fats will raise your cholesterol and have negative impacts on cardiovascular health.

***Lose weight.*** If you are overweight, losing weight will make a big difference. Besides helping to reduce your risk for heart disease, it also will increase your energy, decrease any wear and tear on your joints, improve your sleep, mobility, and breathing, among many other benefits!

***Find healthy coping mechanisms to deal with stress.*** There are some great coping mechanisms that you can use to help you deal with stress that will also improve your health. Exercise, meditation, social activities, cooking a healthy meal with foods that you really enjoy, treating yourself to a massage, or anything else that you enjoy doing can be turned into a stress-relieving activity!



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## MANAGEMENT

If you've been diagnosed with high cholesterol, high blood pressure, heart disease or have had a heart attack, there are many things you can do to manage your health.

Several of the risk factors for heart disease, such as high cholesterol and high blood sugar, are easily diagnosed through simple blood tests, or through simple physical exam techniques such as having your blood pressure taken. Your doctor may also choose to order tests that will allow them to visualize your heart and evaluate how much blood supply it receives, or even refer you to a specialist. In addition to the dietary changes that are mentioned above, your doctor may suggest that you take medication to control your risk factors. These may include medications that lower cholesterol, lower blood pressure, thin the blood to prevent clots, or increase blood flow to the heart.



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*The Toronto People With AIDS Foundation exists to promote the health and well-being of all people living with HIV/AIDS by providing accessible, direct, and practical support services.*

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