

A LOAD OFF YOUR CHEST: IDENTIFYING HEART ATTACK AND STROKE RISK

Cardiovascular disease is the single greatest health problem in Canada and the rest of the developed world. Combined, heart attack and stroke account for the deaths of over one million North Americans every year. Statistics Canada suggests 33% of Canadian men and 35% of women will eventually die of some form of cardiovascular disease.

Can death from cardiovascular disease be prevented? In many cases, yes. High-risk individuals can improve their chances of survival significantly, provided they are aware of their condition.

Medically, we know "plaque" within the central channel of the blood vessels decreases the body's ability to transport nutrient-rich blood.

We now know of an effective, non-invasive way to identify the presence of plaque in blood vessels: a multislice spiral CT. Because a direct relationship exists between the amount of calcium detected in the heart and the amount of plaque in blood vessels, a spiral CT calcium analysis is a reliable method of screening patients for plaque.

Once identified, an at-risk patient can be treated for problems such as high blood pressure, cholesterol pathology and borderline diabetes. The test may also motivate patients to end high-risk behaviours like smoking and physical inactivity.

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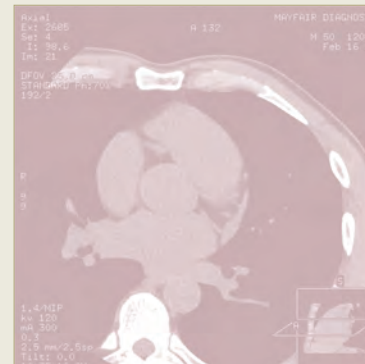
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WHEN PLAQUE ATTACKS

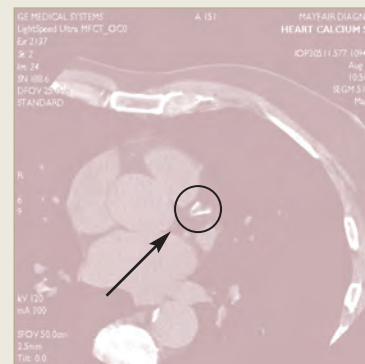
Plaque results from atherosclerosis, a disease process where cholesterol, calcium, white blood cells, and other substances build up within the inner lining of an artery. As people age, plaque can narrow arteries or block them, reducing blood flow to the heart, brain or other vital organs. A sudden surge in blood pressure can cause a plaque deposit to rupture, often with fatal results.

If a clot cuts off blood flow to the heart, a heart attack may occur. If flow to the brain is stemmed, a stroke may evolve.

Starting at age 45 for men and 55 for women, individuals should consider having a multislice spiral CT to determine their plaque levels. Screening may be especially important for those with increased risk factors, such as a family history of coronary artery disease or risky behaviour like smoking or inactivity.



CT image of a healthy heart.



CT image of a heart with obvious coronary artery calcification. This level of calcification in an otherwise young, healthy patient is indicative of significant disease and further investigation is warranted.



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SEVEN HABITS OF HIGHLY SUCCESSFUL MANAGERS OF HEART DISEASE RISK

Adopting habits that foster good heart health is important if you hope to live a long and healthy life – especially if you have a family history of coronary heart disease (CHD). The following lifestyle practices can help your ticker keep on tickin’:

- 1. Manage Your Weight:** Watch the number of calories you consume – especially calories from trans fat and saturated fats. A high BMI (Body Mass Index) is a key risk factor in CHD.
- 2. Increase Your Physical Activity:** Regular, moderate activity (30 or more minutes daily) reduces the risk of heart disease by as much as 50%.
- 3. Eat Less Fat:** To lower your risk of CHD, the single most important nutritional principle you can follow is to lower the fat in your diet. No more than 30% of the calories you consume should come from fat, and no more than 10% should come from saturated fat.
- 4. Manage Your Blood Pressure:** Decrease your risk of hypertension – a major risk factor for CHD – by maintaining a healthy body weight, avoiding cigarettes, limiting alcohol intake and remaining physically active.
- 5. Butt Out:** Only one year after a person quits smoking, his CHD risk is half of what it was when he was still puffing. After 15 years, the risk is the same as if that person had never smoked.
- 6. Pay Attention to Cholesterol:** Low-density Lipoprotein (LDL) Cholesterol is associated with increased risk of heart disease; conversely, elevated levels of High-density Lipoproteins (HDL) decrease the risk of heart disease. LDL comes from fatty foods, while regular aerobic exercise can raise your levels of HDL.
- 7. Take an Aspirin a Day:** For most people over the age of 40, a daily dose of the 100+-year-old drug reduces the risk of heart attack. Before you begin, be sure to consult your physician, who will recommend a dosage based on your health and your family history.

LAUGHTER REALLY IS THE BEST MEDICINE

Heart disease is no laughing matter, but a recent study reveals that a giggle a day can keep the doctor away. University of Maryland researchers divided patients into two groups. One watched an emotionally wrenching war movie, while the other watched a comedy. The findings: stress causes blood vessel linings to constrict, whereas laughter causes them to open up. In other words, laughing allows blood to flow more freely through the body, improving overall health and well being. The researchers suggest that a few hearty laughs are as good for you as jogging up to half an hour.

For details, click here to visit the Canadian Heart & Stroke Foundation Web site at www.heartandstroke.ca

MULTISLICE SPIRAL CT

Multislice Spiral CT: a report on the American Heart Association Web site heralds this "reliable, non-invasive way to detect blockages in the coronary arteries." [View the article.](#)



THE CT HEALTH ASSESSMENT SCAN IN ACTION: HEART SCAN (CORONARY CALCIUM SCORING)

A 55 year-old man with a six-month history of atypical chest pain came to Mayfair Diagnostics for a CT Health Assessment Scan, which includes a coronary artery calcium score.

Before coming to Mayfair, the patient had undergone heart tracing (EKG), blood work and an ultrasound of the heart – all of which returned negative results. He attempted an exercise stress test but was unable to achieve a maximal heart rate or replicate his symptoms. Yet his chest pains continued to worsen, so he opted for a CT Health Assessment Scan.

According to Mayfair’s CT Heart Scan, the patient’s coronary artery calcium score was 1224. For his age group, the normal score is less than 10. These results indicated extensive coronary artery disease and pointed to angina as the cause of his chest pains.

The CT Health Assessment dramatically altered this patient’s medical management. Following the comprehensive exam and Heart Scan, he underwent an intravenous dye study of the blood vessels of his heart (coronary angiogram), which revealed significant narrowing of his coronary arteries. He then received urgent coronary artery bypass grafting.

Following recovery from surgery, the patient adopted diet and lifestyle changes to help prolong his new lease on life.