

# Preventing Cardiovascular Disease

## A GUIDE FOR PATIENTS

Effective Date: March 15, 2008

### What is cardiovascular disease?

Cardiovascular disease (CVD) is a common term used for a number of medical conditions that affect the heart and/or blood vessels. Examples include atherosclerosis (arterial disease or hardening of the arteries), coronary heart disease, heart failure and arrhythmia (irregular heart beat). Diabetes, hypertension, stroke and kidney disease are related disorders that also affect the circulatory system.

Cardiovascular disease is the leading cause of death in BC, accounting for one in three deaths each year. Studies have shown that vascular injury, progressing to cardiovascular disease in adulthood, begins in adolescence. Emphasizing the early prevention of atherosclerosis and vascular damage by modifying risk factors such as smoking, excess body weight, low levels of physical activity and poor eating habits is of utmost importance.

### How do I know if I am at risk of developing cardiovascular disease?

**Smoking:** Smoking is a key risk factor for heart attack and stroke. People who currently smoke have a significantly higher risk of developing cardiovascular disease than non-smokers.

**Elevated blood pressure:** Elevated blood pressure (hypertension) can lead to a number of potentially life-threatening conditions if it is not controlled or treated. Talk to your doctor about your blood pressure and ask to have it checked regularly. For information on hypertension and how frequently you should have your blood pressure measured, see the BC guideline and patient guide for hypertension ([www.BCGuidelines.ca](http://www.BCGuidelines.ca)).

**Diabetes (type I and type II):** People with diabetes are at an increased risk of developing cardiovascular disease. Prevention of diabetes through a healthful diet and increased physical activity (to maintain a healthy body weight), and effective management of diabetes through a healthy lifestyle and medications where appropriate, are critical in reducing cardiovascular disease risk. For further information on the prevention and management of type I and type II diabetes, see the BC diabetes guideline and patient guide at [www.BCGuidelines.ca](http://www.BCGuidelines.ca).

**Lipid (cholesterol) testing:** Elevated triglycerides and LDL cholesterol are associated with an increased risk of cardiovascular disease. Lipid tests may be needed to test for elevated triglycerides and cholesterol in men over age 40 and women over age 50. If you have other risk factors, such as smoking, hypertension, diabetes, kidney disease or abdominal obesity, you should have your lipids tested by age 40. A family history of early coronary artery disease (onset before age 55) or a family history of severe hyperlipidemia (high cholesterol) also indicates that tests should be done earlier.

**Framingham risk assessment:** Your doctor may assess your risk (likelihood) of coronary heart disease using a tool called the Framingham risk assessment chart. This is based on a number of known risk factors such as age, gender, smoking status, blood pressure and cholesterol or lipid concentrations.

The good news is that heart disease and stroke are often caused by things that you can change, such as quitting smoking if you are a smoker, incorporating more physical activity into your day, losing weight if you are overweight and eating a healthful diet.

A few small changes in your daily routine, such as walking two flights of stairs per day instead of taking the elevator or using milk in your coffee instead of cream, can help improve your health and sense of well-being.

- ✓ **Smoking cessation:** Quitting smoking is the most effective way to reduce the risk of heart disease, stroke, kidney disease, lung cancer and chronic lung disease (COPD). For assistance to quit, call QuitNow Services at 1 877 455-2233 (toll-free in BC, 24/7/365), or obtain self-help materials from their Web site at [www.quitnow.ca](http://www.quitnow.ca). Ask your doctor for the personal smoking cessation aid, called “Quit smoking: It’s time to act” associated with the cardiovascular disease prevention guideline.
- ✓ **Physical Activity:** Exercise is one of the best things you can do for your health and heart. Build physical activity into your daily routine by walking wherever and whenever you can, stretching and moving around frequently, taking the stairs instead of the elevator and participating in activities that you enjoy. Work towards incorporating at least 30-60 minutes of moderate activity 4-7 days per week (moderate activity includes: walking 3 km [2 miles] in 30 minutes once per day, or 1.5 km [1 mile] in 15 minutes two times per day, jogging, cycling or swimming).
- ✓ **Overweight/Obesity:** A body-mass index of greater than 27, or a waist circumference greater than 90 cm/102 cm (35”/40”) for men (Asian/Caucasian) and 80 cm/88 cm (32”/35”) for women (Asian/Caucasian), is associated with an increased risk of cardiovascular disease. To accurately measure your waist, place the tape measure between your hip bone and rib cage (near the belly button). Losing weight through a combination of a healthful diet and increased physical activity will lower your risk of a heart attack and stroke, as well as lower your risk of developing hypertension, kidney disease and type II diabetes.
- ✓ **Diet:** Eating foods that are low in saturated fat, trans-fat and cholesterol (< 300 mg/day), and high in fibre is an effective way to reduce your risk of developing cardiovascular disease. Recent studies also show a major benefit from consuming vegetables, fruits, fish (at least 2 servings per week) and low-fat dairy products, as well as limiting salt intake to less than 1 tsp (5 ml) per day. Be aware of the “hidden” salt content of processed foods, such as lunchmeat, canned soups and pasta. Consult Canada’s Food guide for dietary advice. If you have CVD or another condition that increases your risk of CVD (such as diabetes, dyslipidemia, hypertension or obesity), ask your doctor for a referral to a dietitian to obtain personalized dietary advice to help reduce your risk.

Additional lifestyle management information, specifically on healthy eating, physical activity and smoking cessation, may be found at [www.actnowbc.ca](http://www.actnowbc.ca). ActNowBC recommends 0/5/30 as follows:

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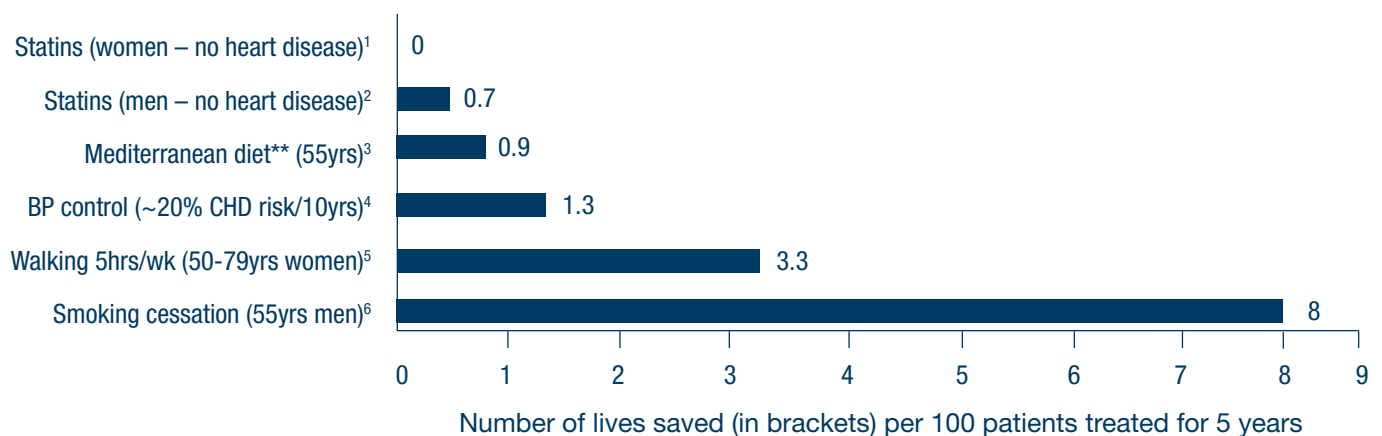
<b>0</b>	<b>Smoking: Complete avoidance of tobacco smoke</b>
<b>5</b>	<b>Servings of fruits and vegetables per day (minimum)</b>
<b>30</b>	<b>Minutes of moderate-intensity activity per day (minimum)</b>

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- ✓ **Blood pressure (BP) control:** To lower your blood pressure, follow the above recommendations for smoking cessation, physical activity, overweight/obesity and diet. If lifestyle changes are insufficient in lowering your blood pressure, consult your physician about taking blood pressure lowering medications. For more information on blood pressure control, consult the guideline *Hypertension – Detection, Diagnosis and Management* found at [www.BCGuidelines.ca](http://www.BCGuidelines.ca).

- ✓ **Diabetes management:** Lifestyle changes related to diet and exercise can help control your blood glucose level. For some patients, medications may also be required for effective blood glucose control. For more information on the management of type II diabetes, consult the guideline Diabetes Care found at [www.BCGuidelines.ca](http://www.BCGuidelines.ca).
- ✓ **Aspirin therapy:** For people who are at high risk of cardiovascular disease (greater than 20% over 10 years), and who are younger than 70 years old, low-dose (e.g. 81 mg) aspirin therapy is recommended.
- ✓ **Lipid management:** Lipid levels may be controlled by lifestyle management. Most people who do not have heart disease will not need lipid-lowering medications, even if lipid levels remain elevated. Lipid-lowering drugs may be indicated for higher risk patients.

**Figure 1. Mortality benefits of lifestyle modification (smoking cessation, walking, Mediterranean diet) compared to prescription medication management (BP control, statins) for patients without heart disease.\***



\* The benefit of treatment (number of lives saved) may vary depending on the level of risk (i.e., low, moderate, high). Generally, high-risk patients benefit more from the treatment methods listed above than lower-risk patients.

\*\* Key elements of the Mediterranean diet are more whole-grain bread, more fruits and green vegetables, more fish, less red meat, no butter or cream, and oils/spreads restricted to olive oil. Moderate alcohol consumption (wine) is usually permitted.

## References

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## Resources

**The Guidelines and Protocols** Web site ([www.BCGuidelines.ca](http://www.BCGuidelines.ca)) has more detailed information about the management of diseases such as hypertension and diabetes.

**The BC HealthGuide Online** (Web site: [www.bchealthguide.org](http://www.bchealthguide.org)) provides detailed information on how to reduce your risk of developing cardiovascular disease. For example, search for information on smoking cessation, prevention of coronary artery disease, hypertension, chronic kidney disease, diabetes, and lifestyle changes such as the therapeutic lifestyle changes diet, Mediterranean diet, DASH diet, physical activity and heart health.

**The Heart and Stroke Foundation of BC and Yukon** (Web site: [www.heartandstroke.ca](http://www.heartandstroke.ca)) offers excellent materials for the control of modifiable lifestyle factors that contribute to hypertension, heart disease, stroke and kidney disease. This includes many useful tools and resources for healthy living, and personalized management plans to develop goals. The Foundation can also be helpful in directing you to community resources for healthy living. Telephone: 1 888 473-4636 (Toll free) (BC/Yukon division office)

**Dial-A-Dietitian** (Web site: [www.dialadietitian.org](http://www.dialadietitian.org)) provides accessible, quality information to the public and health information providers throughout British Columbia about nutrition. Registered dietitians provide nutrition consultation by phone. Telephone: 1 800 667-3438 (Toll free) or 604 732-9191 (Greater Vancouver)

**American Heart Association** (Web site: [www.americanheart.org](http://www.americanheart.org))

**Mayo Clinic** (Web site: [www.mayoclinic.com](http://www.mayoclinic.com))

**Healthy Heart Society of BC** (Web site: [www.heartbc.ca](http://www.heartbc.ca))

**St. Paul's Healthy Heart Program** (Web site: <http://www.healthyheart.org/>)