

# A Guide to Help You Live and Thrive with Cardiovascular Disease

Cardiovascular Prevention & Rehabilitation Program  
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## Cardiovascular Prevention & Rehabilitation Program

Dr. Paul Oh, Medical Director  
Nicole Sandison, Advanced Practice Leader  
Valerie Skeffington, Program Manager  
Crystal Aultman, Project Manager, Health e-University  
Gabriela Melo Ghisi, Scientific Associate

### Authors

Kerseri Scane, R. Kin, MSc, BPHE  
Nicole Sandison, R. Kin, MSc, HBSc HK  
Sylvia Maksymiu, BPHE  
Fatim Ajwani, RD, BSc  
Regan Leader, MSW, RSW  
Jaan Reitav, Ph. D., C. Psych, CBSM  
Maria Ricupero, R.D., CDE, MHSc  
Dr. Rajni Nijhawan, MD  
Diane Nixon, RN

### Contributions

Kelly Angevaare, R. Kin, MSc  
Crystal Aultman, R.Kin, MSc., OCT  
Margaret Brum, R.D., CDE, BA Sc  
Tracey Colella, IA, ACNP, PhD  
Daryl Dooks, BSc  
Evelyn Foster, R. Kin, BPHE  
Joan Kitchen, R. Kin, BSc Kin  
Samantha Kobylnik, MSW, RSW  
Renee Konidis, R. Kin, BA  
Phyllis Mancini, MA  
Gabriela Melo Ghisi, MSc., PhD  
Dr. Paul Oh, MD, MSc, FRCPC, FACP

Veronica Rouse, MAN, R.D., CDE  
Dr. Michael Sarin, MD, MEd, FRCPC, CDE  
Farrah Schwartz, MA Promotion de la santé  
Ellen Silaj, BSc PT  
Valerie Skeffington, R. Kin, BPHE

### Plain Language (2016)

Crystal Aultman, R.Kin, MSc., OCT  
Tina Papadacos, MA(Ed)

### Graphics

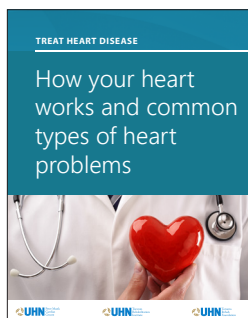
Kristin Foster  
Adam Latuns

### Patients and Families

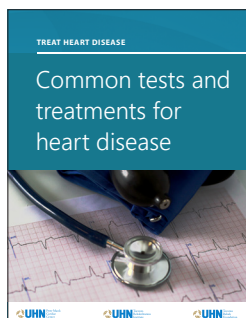
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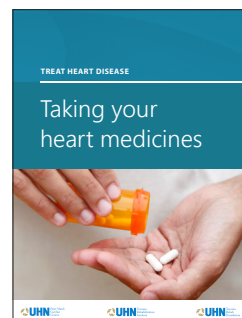
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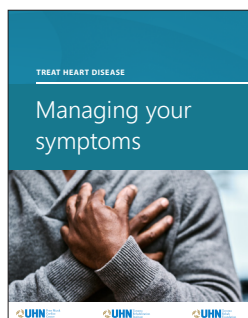
**How your heart works and common types of heart problems**



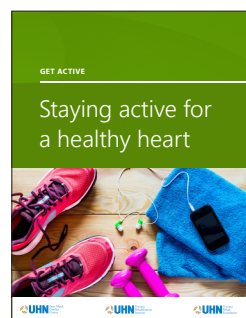
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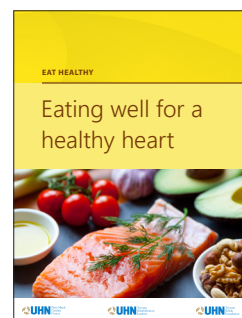
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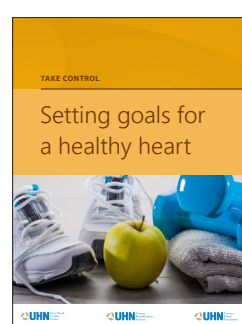
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TREAT HEART DISEASE

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# How your heart works and common types of heart problems







# How Your Heart Works and Common Types of Heart Problems

For people living with heart disease and their caregivers

Read this booklet to know:

- Different parts of your heart
- How your heart works
- Common heart problems
- Common causes of heart problems

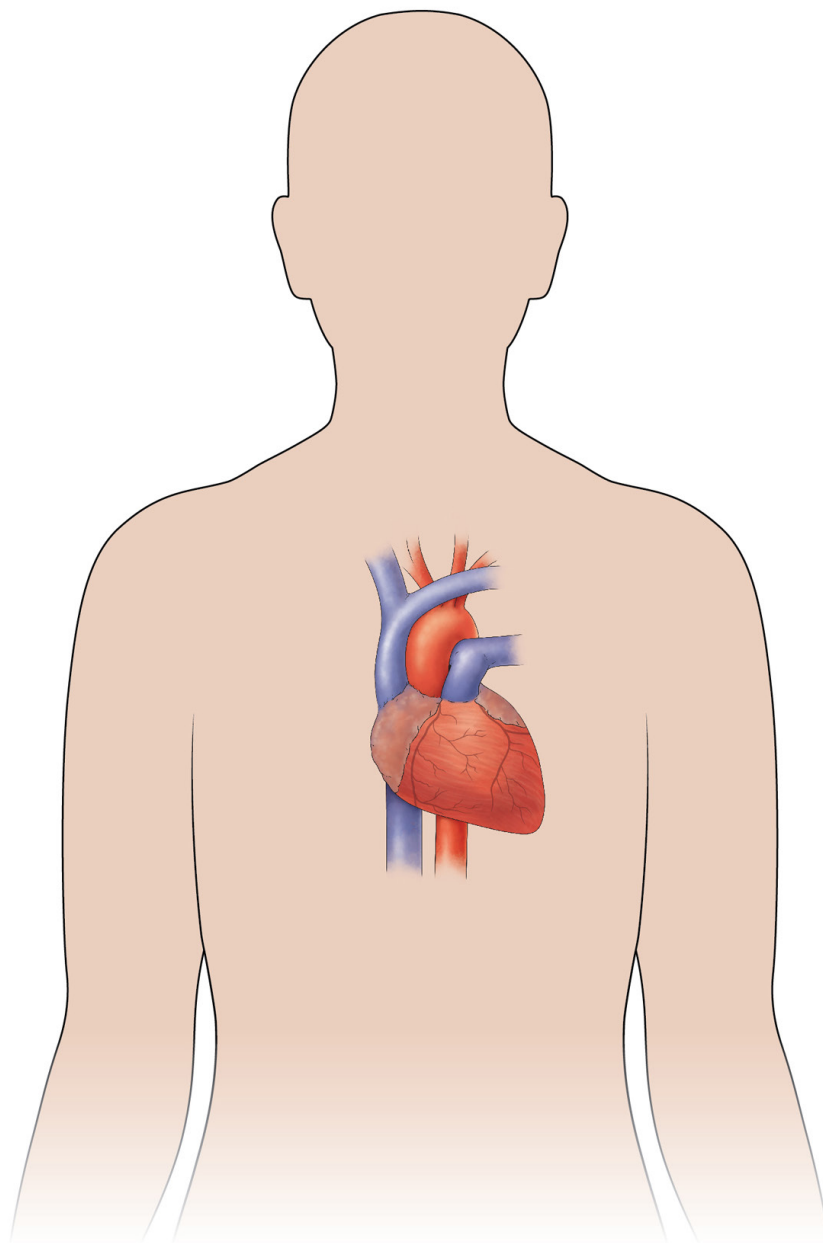


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# About Your Heart



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### How your heart works

Your heart is a muscle that is about the size of your fist. It is slightly to the left of the centre of your chest. Each time your heart beats, it supplies your body with blood and oxygen.

Your heart has:

- A pumping system
- An electrical system
- A blood supply

### How does my heart pump?

The pumping system of your heart is made up of 4 chambers and 4 valves.

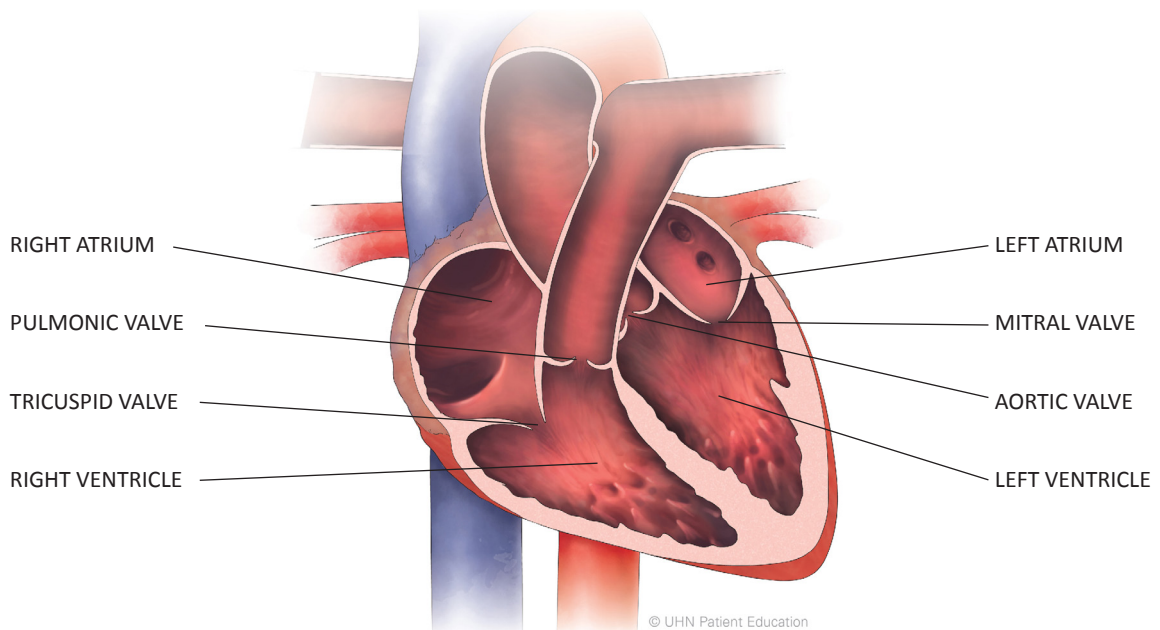
The 4 chambers:

- Two chambers on the right side of your heart (right atrium and right ventricle)
- Two chambers on the left side of your heart (left atrium and left ventricle)
- The chambers fill with blood when your heart is resting and pump blood out to the rest of your body when your heart contracts (squeezes)

The 4 valves:

- Tricuspid, pulmonary, mitral and aortic valves
- Open and close when your heart beats
- Keep the blood flowing through your heart in one way

Blood is pumped through these chambers and valves. The left ventricle is the main pump and sends oxygen rich blood to your brain and body.



Each time your heart contracts (squeezes), it pumps blood into your arteries. The flow of blood passing through your arteries is what you feel when you take your pulse.

### **What makes my heart beat?**

Your heartbeat is controlled by electrical signals. These signals make your heart contract (squeeze) and pump blood out of your heart to the rest of your body. The passage of the electrical signal through your heart can be recorded on an electrocardiogram (ECG). This is called your heart rhythm.



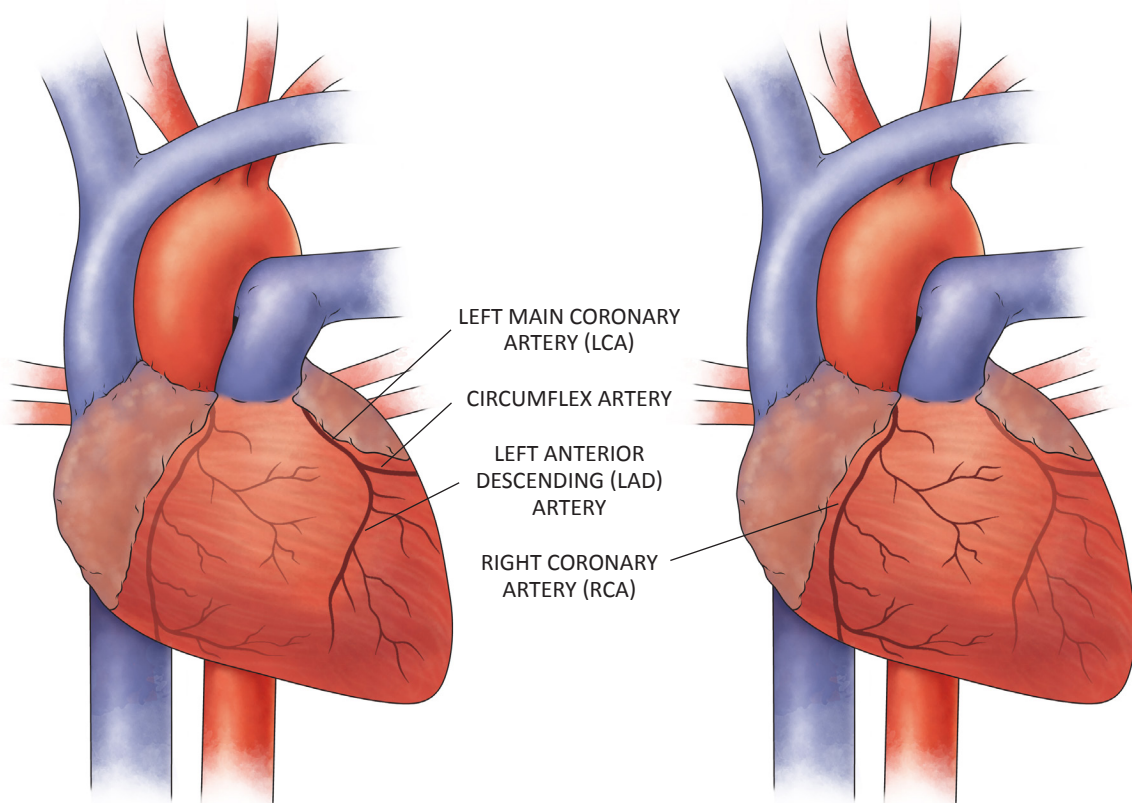
*A normal electrocardiogram (ECG)*

## How does blood flow to my heart?

Since your heart is a muscle, it requires its own blood supply so that it is able to contract (squeeze). Oxygen rich blood is brought to your heart through your coronary arteries.

There are 4 main arteries:

- Right coronary artery (RCA)
- Left main coronary artery (LCA) which splits into two (2) branches:
  - Left anterior descending (LAD) artery
  - Circumflex artery





# About Heart Disease

## Types of heart problems

Heart disease refers to many types of heart problems. These problems can affect the way your heart beats and how blood moves into and out of your heart.

Examples of heart disease include:

- Coronary artery disease
- Heart failure
- Valve disorders
- Arrhythmias (problems with the rhythm of your heart)

## Coronary artery disease

### What is coronary artery disease?

Coronary artery disease is the most common type of heart disease. Coronary artery disease is caused when plaque (a waxy substance made of fat, cholesterol, and calcium) collects over time in your coronary arteries (the blood vessels that bring blood and oxygen to your heart). As plaque collects, it can narrow your coronary arteries and prevent blood and oxygen from getting to your heart. Plaque can start to collect as early as childhood.

## Heart failure

### What is heart failure?

Heart failure is a type of heart disease that occurs when your heart muscle is damaged.

When your heart muscle is damaged:

- Your heart cannot pump enough blood and oxygen to the rest of your body
- Your body does not get the blood and oxygen it needs to work well
- Your heart cannot fully relax to let blood return from the rest of your body to your heart
- Fluid collects in your lungs and other parts of your body such as your feet, ankles and legs

### Valve disorders

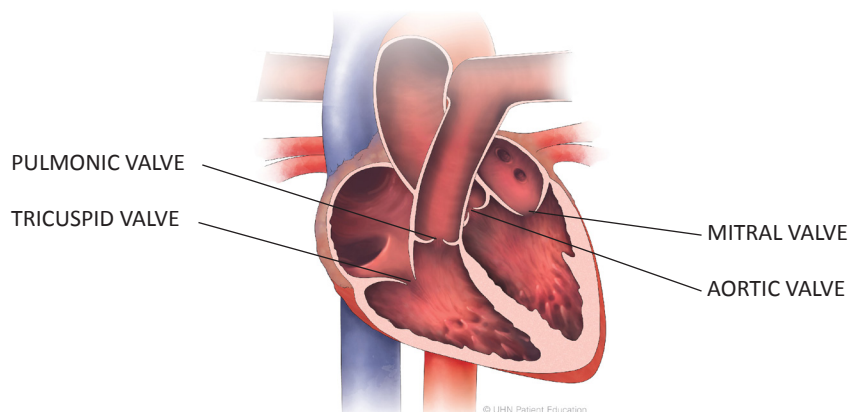
#### What is a valve disorder?

There are 4 valves in your heart: tricuspid, pulmonary, mitral and aortic. Working valves are like doors that ensure that blood flows only one way through the chambers of your heart.

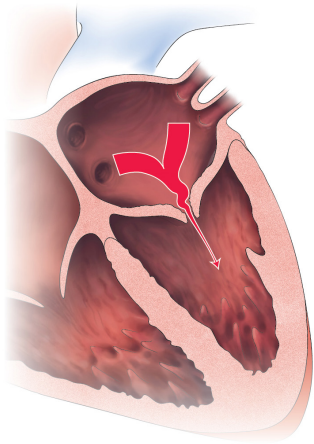
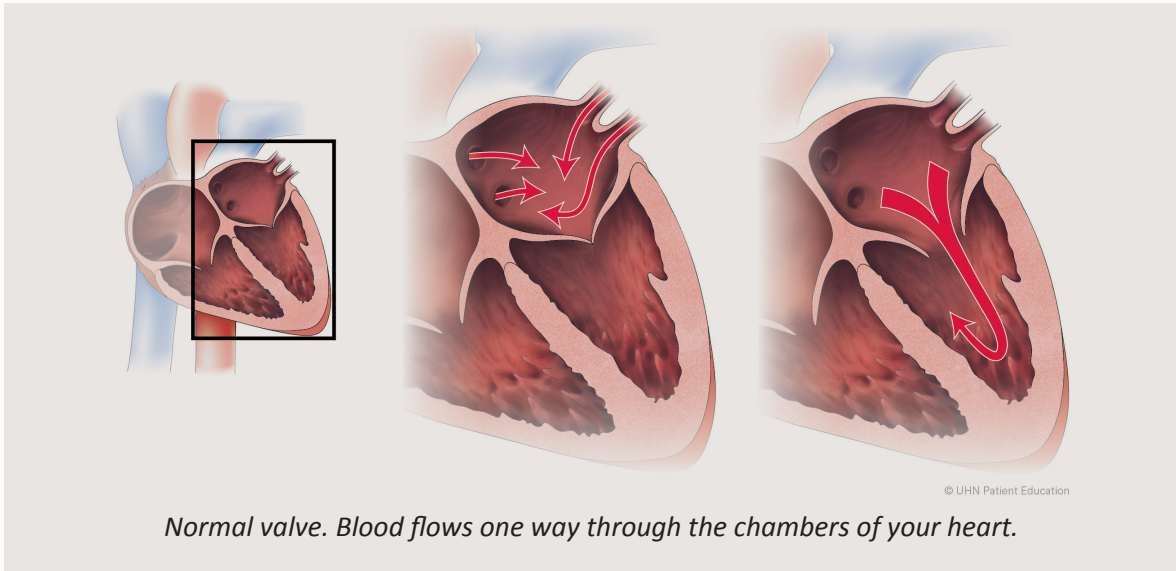
If you have a valve disorder:

- Your heart may have to work harder
- Your valves may not be able to control the flow of blood through your heart

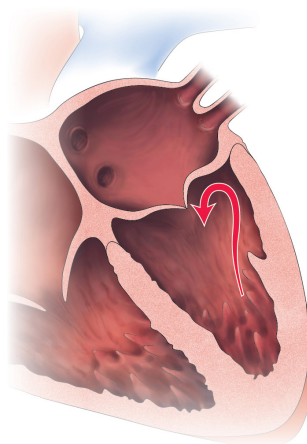
There are 3 types of valve disorders.



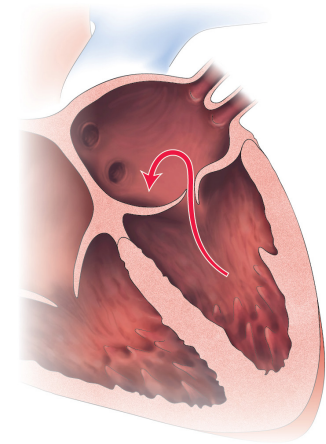
## What are the different types of valve problems?



**Stenosis or Narrowing.** The valve cannot open in the right way. If your valve has narrowed, your heart has to work harder to pump blood.



**Prolapse (falls out of place).** If your valve is prolapsed, the flaps of the valve do not close smoothly.



**Regurgitation.** If you have regurgitation, your valve does not seal when it closes which causes leaking.

### Arrhythmias

#### What is an arrhythmia?

A normal heartbeat is steady - one beat after the other. When you take your pulse, you are counting your heart rate and feeling the heart rhythm. Earlier in this chapter you learned about electrical signals that cause the heart to beat. If there is a problem with how the electrical signal starts or moves through your heart, your heart may beat too slowly, too fast or too early.

#### What are the different types of arrhythmias?

There are 3 types of arrhythmias:

- Slow heartbeat
- Fast heartbeat
- Early heartbeat

### Common causes of coronary artery disease

#### What are the common causes of coronary artery disease?

Problems that you can manage that cause coronary artery disease:

- Not exercising enough
- Eating an unhealthy diet
- Smoking
- High blood pressure
- High cholesterol
- High blood sugar
- Poor sleep
- Depression, stress, anxiety
- Big waist size

If you manage the problems that are within your control (your modifiable risk factors), you will reduce your risk.

Things you cannot change that cause coronary artery disease:

- Age
- Sex
- Family history
- Ethnicity
- Genetics

If you have 3 or more of the problems (risk factors) below and they are not controlled, you have metabolic syndrome:

- High blood pressure
- Low HDL (good cholesterol)
- High triglycerides (a type of fat in your blood)
- High fasting blood sugar
- Large waist size

Metabolic syndrome increases your risk of getting both heart disease and diabetes.

### **Is there new research about the causes of heart disease?**

Many research studies have been done to learn if there are other risk factors for heart disease. These are facts and habits that seem to lead to a disease but more research is needed to confirm if they do.

### **C-reactive Protein (CRP)**

C-reactive protein (CRP) is an inflammatory marker found in your blood. If you have CRP in your blood, it means that something harmful happened in

your body (such as damage to your arteries) and now your body is trying to fix the problem.

### **Infection**

Viruses and other things that cause infection can damage your arteries. When your arteries are damaged, plaque can start to collect on the wall of your arteries. Unknown infections can also lead to heart failure.

### **Gum Disease**

Gum disease can happen because of lifestyle habits. These same lifestyle habits can lead to heart disease.

### **Homocysteine**

Homocysteine is a substance found in your blood.

When your homocysteine levels are high, 3 problems may occur:

- Plaque can collect in your arteries
- More clots may form in your blood
- Your arteries may become stiff and hard

All 3 of these problems make it hard for blood to flow through your arteries.

### **Calcium content of coronary arteries**

Your coronary arteries bring blood and oxygen to your heart. If you have a substance called calcium in your coronary arteries this means that you have plaque in your arteries. High levels of calcium in your coronary arteries may mean you are more likely to have a heart attack.

### **Ethnic background**

People with ethnic backgrounds listed below get heart disease more often:

- South East Asians
- Chinese

- African Americans
- Aboriginal communities

### **Lp(a) Lipoprotein**

Lp(a) lipoprotein is substance found in your blood that is like LDL (bad) cholesterol. If you have a high level of Lp(a) lipoprotein, you may be more likely to get early heart disease. Lp(a) lipoprotein can also cause blood clots to form.

### **Early menopause**

Women who go into early menopause are twice as likely to have a heart attack or stroke.

## **Know your risk factors**

The first step to manage your modifiable risk factors is to know which risk factors you have. Once you know your risk factors, your doctor and Cardiac Rehab team can help you make lifestyle changes to control them. Use the risk factor profile tool to know your risks.

### **How to use your risk factor profile tool:**

1. Complete your Risk Factor Profile tool with your Cardiac Rehab team and your doctor.
2. Notice what risk factors you have.
3. Ask your family doctor and Cardiac Rehab team how they can help you control your risk factors.
4. Bring a copy of your Risk Factor Profile tool to your appointments with your doctor.
5. If you use the Risk Factor Profile tool over time, you will see how your efforts to make changes are helping to reduce your risk. Update your Risk Factor Profile every 3 to 6 months.

## About Heart Disease

Modifiable Risk Factor	Desirable Level			My Level	My Level	My Level
				Date:	Date:	Date:
Physical Inactivity	Daily active living					
	Aerobic Exercise	Moderate to Vigorous intensity, 30-60 minutes 5 times/week				
	Resistance Training Exercise	Moderate intensity, 10-15 reps, 2-3 times/week				
Nutrition	Fat: less than 30% of daily calories (<7% Cal from saturated fat; < 1% Cal from trans fat)	Sodium: less than 2000 mg/day	Fibre: 25 to 50 grams/day			
Stress	Coping well with: <ul style="list-style-type: none"> <li>• Depression</li> <li>• Sleep apnea</li> <li>• Psychosocial stress</li> <li>• Disturbed sleep</li> <li>• Chronic stress</li> <li>• Stressful life events</li> <li>• Lost sense of control</li> </ul>					
Smoking	Avoid smoking and exposure to second hand smoke.					



## About Heart Disease

Modifiable Risk Factor	Desirable Level		My Level	My Level	My Level
			Date:	Date:	Date:
<b>Blood Pressure</b>	Less than 140/90 mmHg				
	Living with Diabetes: less than 130/80 mmHg				
<b>Cholesterol and Triglycerides</b>	LDL	Less than 2.0 mmol/L or 50% or more reduction			
	Cholesterol/HDL Ratio	Less than 4.0			
	HDL	Greater than 1.0 mmol/L			
	Triglycerides	Less than 1.7 mmol/L			
<b>Blood Glucose</b>	Fasting Blood Glucose	Living with diabetes: 4 to 7 mmol/L			
	A1c	Living with diabetes: Less than 7% for most			
<b>Waist Size</b>	General Guideline	Men <102 cm (40") Women < 88 cm (35")			
	European, Sub-Saharan African, Eastern Mediterranean and Middle Eastern	Men <94 cm (38") Women < 80 cm (32")			
	South Asian, Chinese, Japanese, South & Central American	Men <90 cm (36") Women < 80 cm (32")			

**TIP SHEET**  
**Physical Inactivity (not exercising or moving enough during the day)**

**Healthy target**

<b>Daily</b>	Sit less and move more during the day
<b>Aerobic Exercise</b>	Medium to strong effort, 30-60 minutes, 5 times per week
<b>Resistance Training</b>	Medium effort to strong effort, 10-15 reps, 2-3 times per week

**What does 'physical inactivity' refer to?**

- Level of activity is how much exercise you do
- You are inactive if you do not get at least 30 minutes of moderate intensity (medium effort) exercise on most, if not all days of the week
- Being active throughout your day and exercising are different
- Being active can be unplanned. For example, walking to the bus stop, gardening, dancing, brisk walking, cycling, etc.
- Exercise is planned, structured, scheduled and is done toward a goal. For example, walking 3 miles in 51 minutes on a measured route or treadmill, 5 times per week
- You can reduce your risk of heart disease by carefully planning an exercise routine and being active throughout your day

**Why is being inactive a risk factor?**

- Being inactive can add to high blood pressure, high cholesterol, diabetes, and obesity. Being inactive can cause plaque to form in your blood vessels, which can decrease blood flow. All of these problems can lead to heart disease

- Being inactive on its own is as much of a risk for heart disease as smoking, high blood pressure and high cholesterol
- Sitting too much is related to many serious health problems including heart disease, diabetes and certain cancers
- Being active throughout your day and doing planned exercise can help manage these health problems and improve the health of your blood vessels

### **What actions can you take?**

- Include both aerobic exercise and resistance training exercise (weights or resistance exercise bands) in your exercise program
- Both types of exercise training can help: decrease body fat, increase lean muscle mass, improve blood glucose (sugar) levels and improve your fitness level
- Make a plan for both types of exercise training by using the F.I.T.T. principle (see the next section for more details)
- Increase your activity levels slowly. Use the Rating of Perceived Exertion (RPE) Scale
- Create an action plan that will keep you active
- Ensure being active is part of your daily routine
- Don't sit for too long at a time. Work towards standing up (for 2 to 3 minutes) after 45 minutes of sitting
- Speak with your Cardiac Rehab team to help develop a safe plan for exercise

### The F.I.T.T. principle

<b>Aerobic Exercise</b>	<b>Resistance Training Exercise</b>
<ul style="list-style-type: none"><li>• Frequency: 5 times per week</li><li>• Intensity: Moderate *</li><li>• Time: 30 – 60 minutes. Done either all at once (continuous) or broken up into smaller bouts (10 minutes at a time) of exercise</li><li>• Type: activity using large muscle groups like walking, cycling (biking), swimming</li></ul> <p>*Speak to your Cardiac Rehab team for specific instructions for how much effort you should make.</p>	<ul style="list-style-type: none"><li>• Frequency: 2-3 times per week (not 2 days in a row - need a rest day in between)</li><li>• Intensity: start with 1 set of 10-15 repetitions *</li><li>• Time: will vary between 20-45 minutes</li><li>• Type: 8-10 exercises that target all major muscle groups, using free weights (dumbbells), exercise bands or machines</li></ul> <p>*Speak to your Cardiac Rehab team for specific instructions for the amount of weight to lift.</p>

### TIP SHEET Nutrition

#### Healthy target

<b>Total Fat Intake</b>	Less than 30% of total calories per day, (less than 7% of calories from saturated fat and less than 1% of calories from trans fat)
<b>Fibre Intake</b>	25 to 50 grams each day
<b>Sodium Intake</b>	Less than 2000 mg each day
<b>Added Sugar</b>	Women: up to 5 teaspoons each day Men: up to 9 teaspoons each day

#### What is a "heart healthy" diet?

A heart healthy diet is one that includes the following:

- Plenty of vegetables and fruits
- Healthy fats instead of saturated and trans fats
- Whole grains and cereals, beans and lentils
- Fatty fish (like salmon) at least twice a week
- A handful of unsalted nuts and seeds most days
- Lower fat dairy products

#### What does "a fat intake of less than 30% of total calories" mean?

Below are examples only and are not intended to recommend total calories to eat and drink each day.

If you are a man and you eat and drink 1800 calories each day:

Total fat for the day = 60 grams with up to 14 grams (approximately 3 teaspoons) from saturated fat (fat from animal products)

If you are a woman and you eat and drink 1500 calories each day:

Total fat for the day = 50 grams with up to 11 grams (approximately 2.5 teaspoons) from saturated fat (fat from animal products)

### **Why is not eating well a risk factor?**

Not eating well can lead to:

- Weight gain
- High blood pressure
- High cholesterol

### **What actions can you take to eat well?**

- Try to make one or two changes to start. Begin slowly and then over time make other changes
- Never skip meals. Include at least 3 meals a day. Start with breakfast
- Eat regularly during the day. Try to eat every 4 to 5 hours. This can help to prevent hunger from building
- Include more plant-based foods. Have a fruit and/or vegetable, every time you eat a meal or snack. Cook with legumes or beans more often
- Choose whole grains and cereals such as whole wheat pasta, whole grain bread and high fibre cereal
- Have fish instead of red meat more often
- Limit foods high in sugar such as juice, regular pop, cookies, pies and other baked good items
- Speak to a registered dietitian for further guidance
- Speak to your Cardiac Rehab team to help develop your action plan

### TIP SHEET Stress

#### Healthy target

<b>Cope well with all seven heart stress factors</b>	<ul style="list-style-type: none"><li>• Depression</li><li>• Sleep apnea</li><li>• Psychosocial stress</li><li>• Disturbed sleep</li><li>• Chronic stress</li><li>• Stressful life events</li><li>• Lost sense of control</li></ul>
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#### What is stress?

Stress is your body's response to change. Stressors are the unwanted factors that bring about change. How you deal with and react to stress will determine how stress will affect your body.

#### What kinds of change (stressors) can lead to stress?

Changes in health, relationships, work, family, friendships, lifestyle, or your finances can lead to stress. Loss is often involved in these changes. High levels of stress or chronic stress can lead to anxiety and depression. Ongoing anxiety and depression are major stressors. Medical research has highlighted seven factors that each add to your overall stress level. The seven stress risks are:

1. Depression
2. Sleep apnea
3. Psychosocial distress

4. Disturbed sleep
5. Loss of the sense of control
6. Chronic stress at work or at home
7. Many stressful life events in the past year

### **Why is stress a risk factor?**

Most stress is not an instant problem. Stress that lasts for months at a time (called chronic stress) is a health concern. Each time you are stressed your body releases stress hormones (like cortisol) and over time this can negatively affect your health. Also, repeated peaks of your stressors will increase your overall stress level, and may increase your risk of a heart attack.

### **How do you know if your stress level is high?**

You may already know that some of these heart stressors are high. To find out more, make an appointment with a psychologist or social worker and they can help.

### **What actions can you take to control your stress?**

- Exercise 5 times each week, including aerobic exercise (walking, cycling (biking), swimming) and resistance training exercise (dumbbells or exercise bands). Regular exercise turns off the negative stress response and decreases the harmful effects of stress
- Pay attention to your eating habits. Stress can lead to poor food choices and habits
- Learn relaxation techniques. Techniques include: deep breathing, progressive muscle relaxation, visualization, and meditation. You can learn more about these at [www.helpguide.org](http://www.helpguide.org)



## About Heart Disease

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- Take notice of the stressors that occur repeatedly. Learn strategies to handle these differently
- Connect with others. Talk about what concerns you as well as what makes you happy
- Make small changes in how you respond to common stressors in your life
- Distract yourself. Listen to music, read, watch TV, enjoy your hobbies and try to have a sense of humour

Speak to your Cardiac Rehab team to help develop your action plan.

### TIP SHEET Smoking

#### Healthy target

- 0 cigarettes each day
- Do not be exposed to second hand smoke
- 0 chewing tobacco each day

#### What is smoking and second hand smoke?

Smoking tobacco (cigarette, cigar or pipe) or chewing tobacco increases your risk of getting heart disease. If you already have heart disease, continuing to smoke or be exposed to second hand smoke will worsen your medical condition.

Second hand smoke can come from two places:

- 1) Smoke that comes from the tip of a burning cigarette, cigar or pipe
- 2) When a smoker exhales

Both can increase the risk of getting heart disease or making your heart disease worse.

#### Why is smoking and second hand smoke a risk factor?

Carbon monoxide and many of the other harmful chemicals in cigarette smoke cause health problems, including damage to your arteries. This damage can cause plaque to build up in your arteries, which blocks blood flow. Smoking increases your risk of blood clots and reduces the amount of oxygen in your blood. Smoking may also increase your blood pressure and make your heart work harder. Nicotine is a highly addictive substance that leads a smoker to continue to seek these harmful exposures.

Second hand smoke contains the same chemicals and causes the same health effects listed above. There is no safe distance from a burning cigarette.

### **What actions can you take to control your smoking, your cravings or your exposure to second-hand smoke?**

#### **Smoking**

- Start to **think** about quitting. Consider the costs of smoking compared to the benefits
- **Prepare** to quit. Understand why you smoke and make a commitment to quit
- **Quit.** Set a quit date and identify your triggers to smoke
- Stay smoke free. Prepare for any relapses
- Ask for help from your doctor or other healthcare professional for more information, for counselling and aids

#### **Cravings**

There are three types of cravings:

- 1) Nicotine withdrawal symptoms include: feeling cranky, depressed, anxious, headaches, wanting to eat more (increased appetite)
- 2) Habits – smoking can occur at the same time as another habit such as smoking and driving, drinking alcohol or coffee, after a meal, when stressed
- 3) Memories - reminders of how nice it is to relax with a cigarette

Cravings and urges will come and go, but will go away in time.

## About Heart Disease

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- Remind yourself it will pass
- Do something else like exercise when you have a craving
- Take deep breaths
- Avoid doing things that you did while smoking

### **Second hand smoke**

- Make your home and car smoke free
- Avoid places where smoking is permitted

Talk to family members who smoke and develop a plan together that respects both of your environments.

### TIP SHEET Blood Pressure

#### Healthy target

Less than 140/90 mmHg	If you have diabetes: less than 130/80 mmHg
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#### What is blood pressure?

Blood pressure is a measure of the force of your heart pumping blood out against the walls of your arteries. Blood pressure is expressed as two numbers, such as 120/80, and is measured in millimetres of mercury (mmHg).

The top number (systolic blood pressure) is the force of blood when your heart contracts (squeezes) and the bottom number (diastolic blood pressure) is the force of blood when your heart relaxes. Both numbers are important.

#### Why is high blood pressure a risk factor?

High blood pressure often has no warning signs or symptoms. For this reason, high blood pressure has been called 'a silent killer.' Over time, high blood pressure can damage the walls of the arteries in your body. This damage can cause plaque to build up in your arteries, blocking blood flow to your heart. Untreated high blood pressure can also lead to kidney disease, stroke, and impaired heart functioning (heart failure). Other factors can increase blood pressure, including a high salt diet, excess body fat and stress.

### **What actions can you take to control your blood pressure?**

- Know your blood pressure level. Keep records of your measurements during visits with your doctor
- Take your blood pressure medicine as prescribed by your doctor even if you feel well
- Exercise 5 times each week, including aerobic training (walking, cycling (biking), swimming) and resistance training 2 times each week (dumbbells or exercise bands). Over time, regular exercise can lower your blood pressure
- Maintain a healthy weight
- Increase intake of foods that are high in potassium, calcium and magnesium such as: fruits, vegetables, nuts/seeds, whole grains, beans and lentils, and lower fat milk products
- Reduce the amount of sodium in your diet to less than 2000mg each day.
- If you drink alcohol, limit the amount you drink.
  - Men: limit alcohol to 14 drinks each week at most and no more than 2 drinks on any day
  - Women: limit alcohol to 9 drinks each week at most and no more than 2 drinks on any dayOne Standard Drink equals 17.2 mL of ethanol or:
  - 355 ml (12 oz) of 5% beer
  - 44 ml (1.5 oz) of 80 proof (40%) spirits (such as vodka, rum, whisky, and gin)
  - 148 ml (5oz) of 12% wine
- If you do not already drink alcohol, don't start
- If you are stressed, learn relaxation techniques such as deep breathing, progressive muscle relaxation, visualization, and meditation
- Speak to your Cardiac Rehab team to help develop your action plan

**Blood Pressure Diary**

<b>Date</b>	<b>Time of Day</b>	<b>Blood Pressure</b>	<b>Comments</b>
June 8 <sup>th</sup>	11:45 am	138/80	Stressful day at work

**TIP SHEET**  
**Cholesterol and Triglyceride Levels**

**Healthy target**

<b>Total Cholesterol</b>	Less than 4.5 mmol/L
<b>HDL (good) Cholesterol</b>	Greater than 1.0 mmol/L
<b>LDL (bad) Cholesterol</b>	Less than 2.0 mmol/L or a 50% reduction
<b>Triglycerides</b>	Less than 1.7 mmol/L
<b>Total Cholesterol to HDL Cholesterol Ratio</b>	Less than 4.0

**What is cholesterol?**

Cholesterol is a lipid (fat) found in your blood, which your body needs. Your body gets cholesterol from two sources: 1) Your liver and 2) Animal food products you eat.

Types of cholesterol: Cholesterol is carried in the blood by lipoproteins:

- Low density lipoproteins (LDL): the ‘bad cholesterol’
- High density lipoproteins (HDL): the ‘good cholesterol’

**What are triglycerides?**

Triglycerides are a form of fat carried in the blood that contributes to the fat that is stored in your body’s tissue. High fat foods, sugar and alcohol contribute to high levels of triglycerides.



### **Why are cholesterol and triglycerides a risk factor?**

Too much LDL (bad) cholesterol causes plaque to build up in your coronary arteries (arteries that bring blood and oxygen to the heart muscle). These blockages make it difficult for blood to pass through your coronary arteries, which can lead to a heart attack.

Low levels of HDL (good) cholesterol also increase the risk for heart disease. HDL (good) cholesterol helps remove cholesterol from your coronary arteries and slow down the buildup of plaque.

High levels of triglycerides increase your risk of obesity, diabetes and heart disease.

### **What actions can you take to control your cholesterol levels?**

- Know your cholesterol levels. Work with your doctor to decide how often you should be having blood tests and keep a record of your levels
- Take your cholesterol medicine as prescribed by your doctor. The ‘statin’ class of heart medicines helps to bring your blood cholesterol levels into a healthy range. Statins also work to remove plaque from your coronary arteries. This can contribute to regression of heart disease
- Exercise 5 times per week including aerobic exercise (walking, cycling (biking), swimming) and resistance training exercise (dumbbells or exercise bands)
- Increase your intake of soluble fibre. Have foods such as oats, ground flax seeds, beans, and lentils
- Eat vegetables and fruit with every meal
- Choose lower fat dairy products or alternatives
- Remove all visible fat from meats before cooking. Remove skin from poultry

- Avoid deep fried foods
- Include plant sterols (found in small amounts in fruits, vegetables, grains, nuts and seeds. Also added to foods such as margarine, juice, cereals)

### **What actions can you take to control your triglyceride levels?**

- Eat less added sugars, sweets and refined, processed carbohydrates
- Drink less alcohol
- Add fish to your meals more often. Aim to eat fatty fish that are high in Omega- 3s, 2 to 3 times a week
- Reduce how much saturated and trans fats you eat

Contact a registered dietitian for further guidance. Speak to your Cardiac Rehab team to help develop your action plan.

**TIP SHEET**  
**Blood Glucose (Sugar)**

**Healthy target**

<b>Fasting Blood Glucose</b>	Living with diabetes: 4 to 7 mmol/L
<b>Hemoglobin A1c</b>	Less than 7% for most

**What is fasting blood glucose (blood sugar)?**

- Fasting blood sugar is a measure of blood sugar after you have not eaten for at least 8 hours. Fasting blood sugar is often measured first thing in the morning, after an overnight sleep
- Fasting blood sugar can help you to know if you have diabetes or if you are at risk for diabetes
- Hemoglobin A1c (HbA1c) is a measure of blood sugar over the past 2 to 3 months

**Why is an abnormal blood glucose (blood sugar) a risk factor?**

- High levels of blood sugar can increase your risk of getting diabetes and heart disease.
- The pancreas (organ in your body) releases the hormone insulin. Insulin lowers blood sugar. It acts like a key that unlocks the cells in your muscles. This allows blood sugar to enter the muscle and be used for energy. Over time, excess body fat can cause ‘insulin resistance.’ Insulin resistance is when your body can no longer use insulin in this way. This means that high levels of blood sugar stay in your blood stream.

If you have a hemoglobin A1c between 6 and 6.4 percent (%) you have 'pre-diabetes.' Lifestyle changes including regular exercise and eating healthy can delay or prevent diabetes by improving blood sugar levels.

If you are living with heart disease, ask your doctor to check your blood sugar levels as part of your normal blood work. Talk with your doctor about often this test should occur.

If you have diabetes, talk with your Cardiac Rehab team about managing your blood sugar levels.

### **What actions can you take to control your blood glucose (sugar) levels?**

- Know your fasting blood sugar level and hemoglobin A1c level. Talk to your health care team to know how often these tests should be done
- If you have type 2 diabetes your target level for most people is below 7%
- Avoid foods high in sugar content such as juice, sweets and simple sugars
- Exercise 5 times each week. Include both aerobic training (walking, cycling (biking), swimming) and resistance training (using dumbbells or exercise bands). Exercise helps insulin get the sugar into your muscles to be used for energy
- Be active every day
- Contact a registered dietitian for further help
- Speak to your Cardiac Rehab team to help design your action plan

### TIP SHEET Waist Size

Healthy target for waist size

- Men less than 102 cm (40 inches)
- Women less than 88 cm (35 inches)

European, Sub-Saharan African, Eastern Mediterranean and Middle Eastern

- Men less than 94 cm (38 inches)
- Women less than 80 cm (32 inches)

South Asian, Chinese, Japanese, South & Central American

- Men less than 90 cm (36 inches)
- Women less than 80 cm (32 inches)

### **How to measure your waist size**

From Heart and Stroke Foundation:

<http://www.heartandstroke.ca/get-healthy/healthy-weight/healthy-weight-and-waist>

- Clear your stomach area of any clothing, belts or accessories. Stand upright, face a mirror with your feet shoulder-width apart and your stomach relaxed. Wrap the measuring tape around your waist
- Use the borders of your hands and index fingers – not your fingertips – to find the uppermost edge of your hipbones by pressing upwards and inwards along your hipbones

**Tip:**

There is a part of your hipbone that is easy to feel at the front of your body. Many people mistake this part as the top of their hipbones. Follow this spot up and back toward the sides of your body to find the top of your hipbones.

Using the mirror, align the bottom edge of the measuring tape with the top of the hipbones on both sides of your body

**Tip:**

Once located, it may help to mark the top of your hipbones with a pen or felt-tip marker in order to aid you in correctly placing the tape.

- Make sure the tape is parallel to the floor and is not twisted
- Relax and take two normal breaths. After the second breath out, tighten the tape around your waist. The tape should fit comfortably snug around the waist without depressing the skin

**Tip:**

Remember to keep your stomach relaxed at this point.

- While still breathing normally, take the measurement on the tape. This is your waist circumference measurement
- This method for measuring your waist circumference is best to determine your risk for heart disease and its progression

### **Why is your waist measurement a risk factor?**

- Carrying extra fat around the middle of the body changes how the body uses fat and sugar
- More fat that sits around your waist and close to the organs can lead to developing heart disease and other obesity related diseases which include Type 2 diabetes, hypertension and high cholesterol. However, positive lifestyle changes can improve your body composition, which can improve blood sugar levels, lower blood pressure and cholesterol

### **What actions can you take to control your waist size?**

- Exercise 5 times each week, including aerobic training (walking, cycling (biking), swimming) and resistance training (dumbbells, exercise bands). The combination of both exercise training methods allows for the greatest changes in body composition
- Eat a healthy diet that is low in fat, low in salt, and high in fruits and vegetables, and fibre. Meet with a dietitian for further guidance
- Changes in body composition take time and patience. Commitment to both a healthy way of eating and an effective exercise program is essential





# Where to Learn More

**Cardiac College**

[www.cardiaccollege.ca](http://www.cardiaccollege.ca)



TREAT HEART DISEASE

# Common tests and treatments for heart disease





# Common Tests and Treatments for Heart Disease

For people living with heart disease and their caregivers

Read this booklet to know:

- Common heart tests
- What to expect during the tests
- Common treatment options
- What to expect during treatment



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# Common Medical Tests for Heart Disease

## Electrocardiogram (ECG)

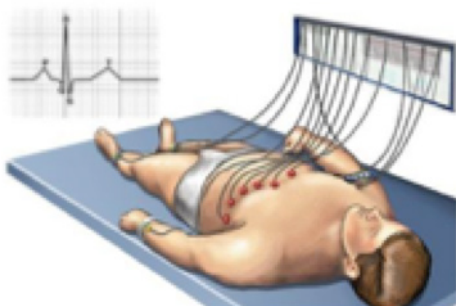
### What is an electrocardiogram for?

An electrocardiogram (ECG) measures the electrical activity in your heart.

By looking at the pattern of electrical activity in your heart, your doctor can:

- Know if your heart rhythm is normal (or not normal)
- See if your heart is damaged from a lack of oxygen or a heart attack

### What happens during an electrocardiogram?



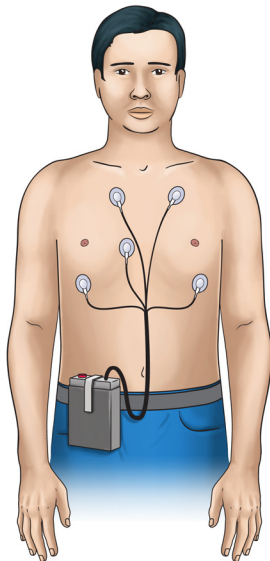
For this test, you will be asked to lie on an exam bed. A healthcare worker places sticky patches (electrodes) on your chest, legs and arms. These patches are attached to wires that connect to a machine.

## Holter monitor

### What is a holter monitor for?

A holter monitor tracks your heart rate and rhythm over several hours. Your doctor may send you for this test if your heart is beating too slow, too fast or too early.

### What happens while I am wearing a holter monitor?



For this test, a healthcare worker will place sticky patches (electrodes) on your skin. These patches are attached to wires that connect to a small machine. This is the same test as described in the section on electrocardiogram (ECG), only you wear this device for 24 hours. The holter monitor test is painless and you can move around as you would on a normal day.

### Exercise stress test

#### What is an exercise stress test for?

An exercise stress test can be used to diagnose coronary artery disease. It can also be used to see how much exercise you can do safely.

#### What happens during an exercise stress test?

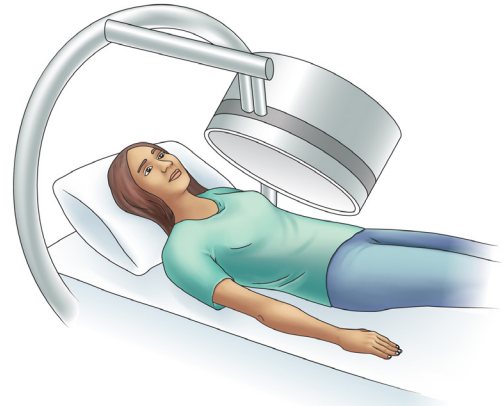
You may complete this test if you have been told you may have coronary artery disease. During an exercise stress test, you will walk on a treadmill or cycle on a stationary bike. Your heart rate and rhythm will be tracked by an electrocardiogram (ECG) while you exercise.



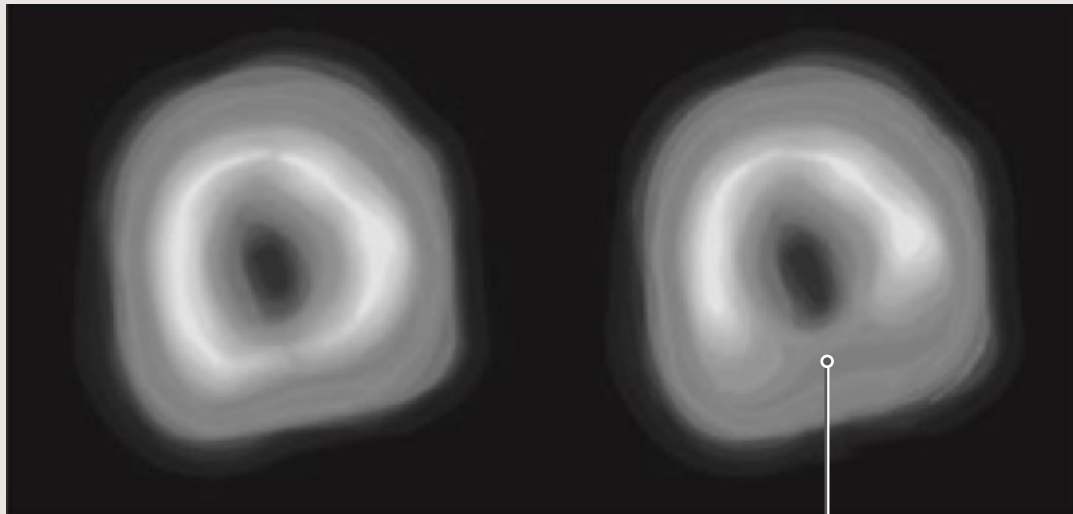
## Nuclear stress test

### What is a nuclear stress test for?

A nuclear stress test shows if you are getting enough blood and oxygen to your heart muscle and if/where your heart was damaged from a heart attack.



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AREA WITH LESS BLOOD FLOW

Picture of a heart before exercise. The white line shows the blood that has travelled to the heart. This picture shows that enough blood and oxygen travelled to all parts of the heart.

Picture of a heart after exercise. There is no white line here. This picture shows that there is less blood and oxygen at this part of the heart.

### **What happens during a nuclear stress test?**

For this test, a healthcare worker will add a small amount of a radioactive substance to your blood. The substance travels in your blood to your heart. A special camera that can see the substance will show how much blood is getting to your heart.

You may have to do this test before and after you complete an exercise (or drug) stress test.

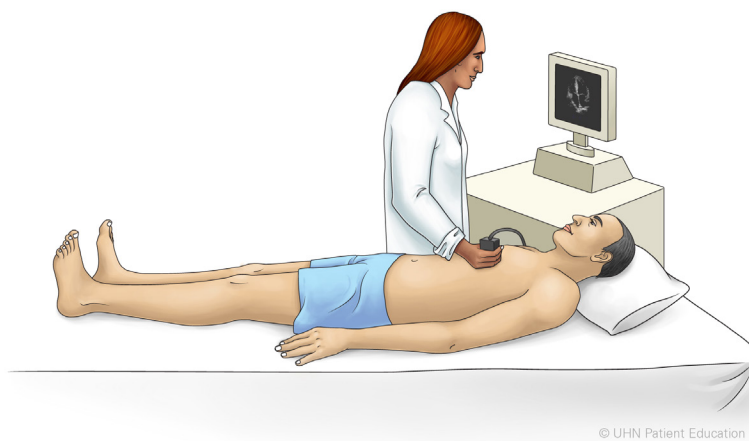
### **Echocardiogram (echo)**

#### **What is an echocardiogram for?**

An echocardiogram uses sound waves (ultrasound) to create a picture of your heart. Your doctor will be able to see the shape of your heart, how your heart pumps and empties, and how the walls, chambers and valves move.

#### **What happens during an echocardiogram?**

For this test, you will be asked to lie on an exam bed. A healthcare provider moves a wand (transducer) over your chest.



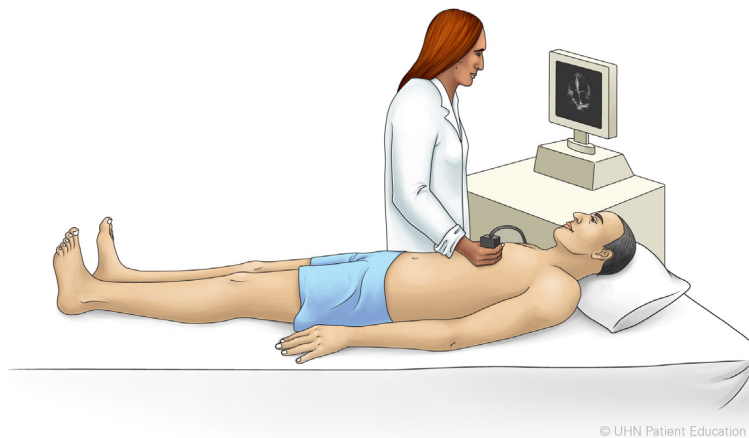
### Stress echocardiogram (stress echo)

#### What is a stress echocardiogram for?

A stress echocardiogram will show if any parts of your heart do not get enough blood and oxygen while you exercise.

#### What happens during a stress echo test?

For this test, you will complete an echocardiogram (as described above). This test is completed at rest and again after exercise. An echocardiogram uses sound waves (ultrasound) to create a picture of your heart. Your doctor will be able to see the shape of your heart, how your heart pumps and empties and how the walls, chambers and valves move. Your doctor will be able to see if any areas of your heart have poor blood flow.



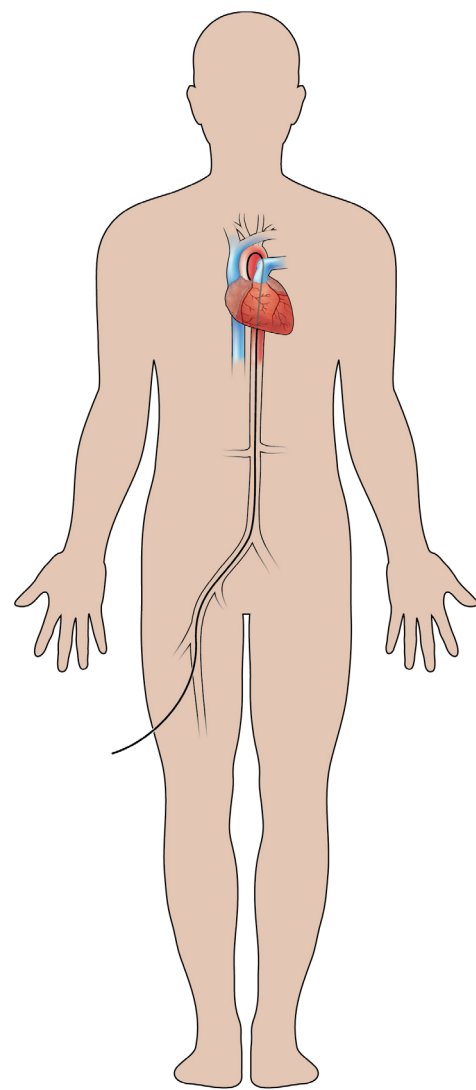
### Angiogram (angio or cath)

#### What is an angiogram for?

An angiogram will show how much your coronary arteries are narrowed or blocked by plaque.

#### What happens during an angiogram?

For this test, a doctor will insert a thin tube (called a catheter) into a blood vessel in your groin (femoral artery) or wrist (radial artery). The tube is pushed up to the coronary arteries in your heart. Next, a doctor will add a special dye into the tube and watch the dye move into your coronary arteries.



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# Common Treatments for Heart Disease

## TREATMENTS FOR CORONARY ARTERY DISEASE

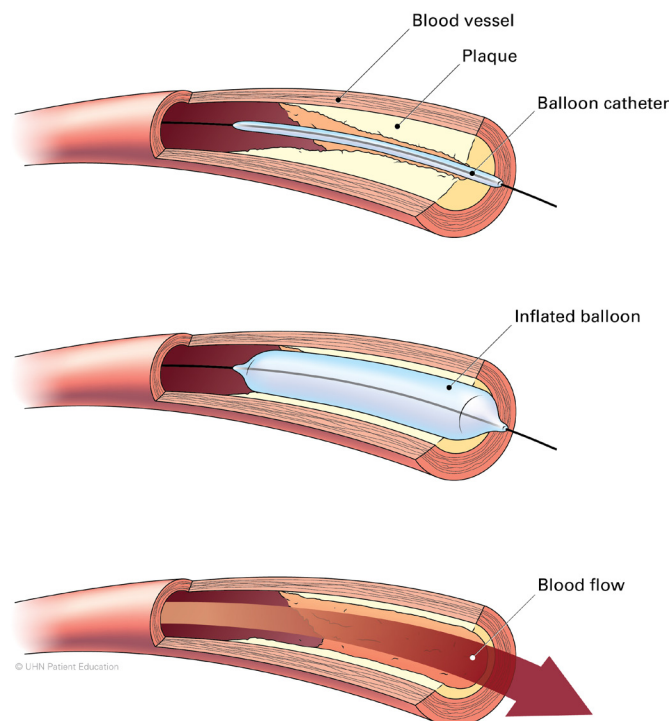
### Angioplasty

#### What is an angioplasty?

Angioplasty (also known as percutaneous coronary intervention) is a treatment used to widen your artery that is narrowed or blocked by plaque.

#### How does it work?

For this treatment, a doctor inserts a thin tube (called a catheter) into the narrowed or blocked coronary artery. The doctor inflates a small balloon, found at the end of the catheter. As the balloon gets bigger, it presses the plaque into the wall of your artery and opens the artery so blood can flow easily.



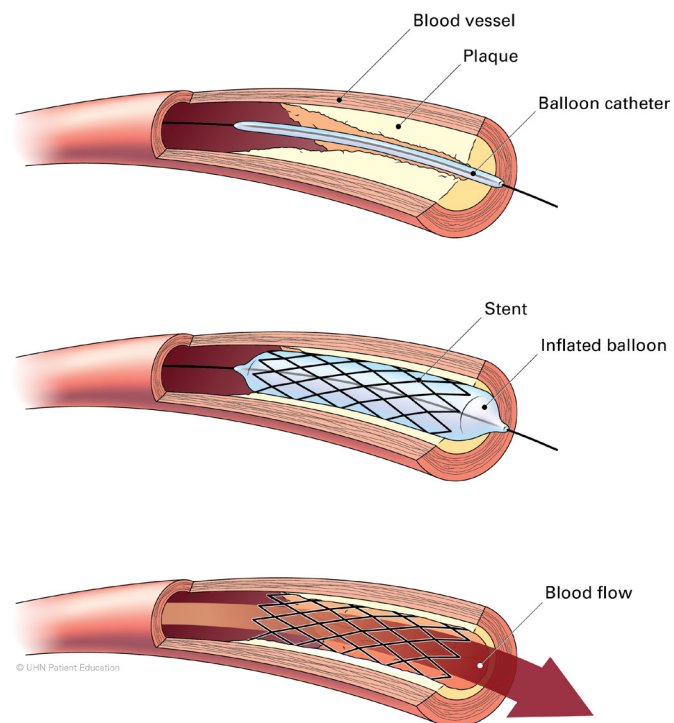
### Angioplasty with stent

#### What is an angioplasty with stent?

An angioplasty with stent follows the same steps as described in the section on angioplasty (percutaneous coronary intervention), but includes a stent.

#### How does it work?

A stent is a mesh tube that is placed in a narrowed artery to hold it open. In this treatment option, the balloon presses the stent against the wall of your artery. The catheter with the balloon is taken out of your artery and the stent remains to hold your artery open so blood can flow easily.





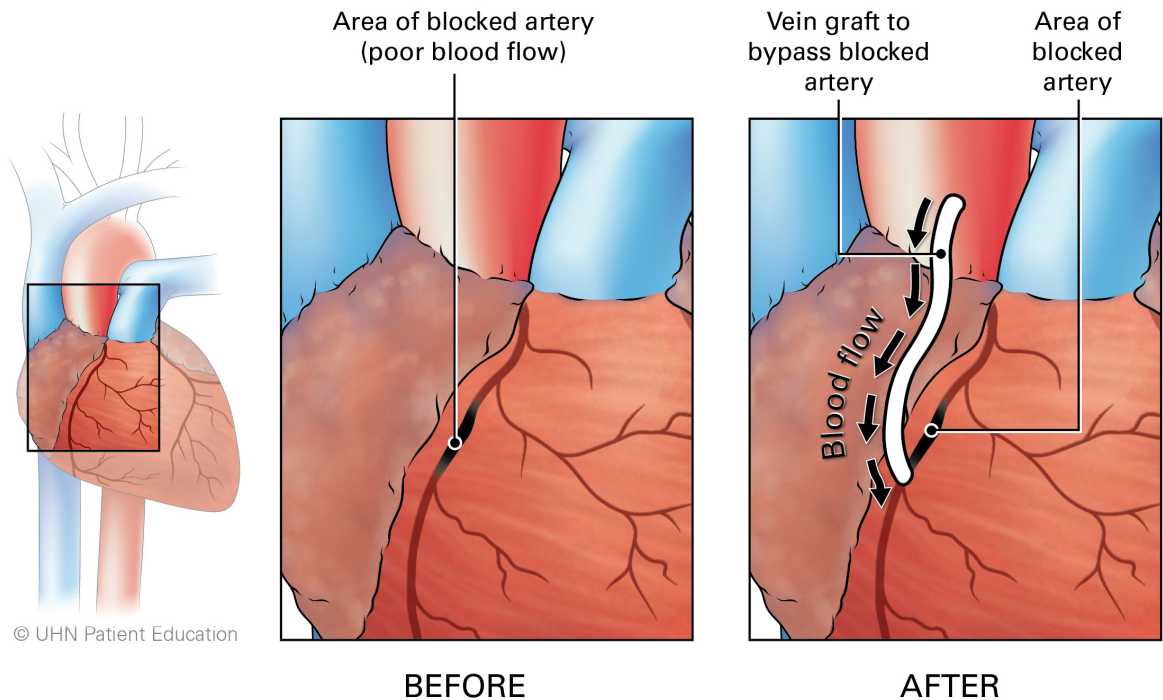
## Coronary artery bypass graft surgery

### What is a coronary artery bypass graft surgery (CABG)?

Coronary artery bypass graft surgery is a treatment that allows more blood and oxygen to get to your heart.

### What happens during a CABG?

In this treatment, a surgeon takes a section of a healthy blood vessel from your leg, arm or chest and connects (grafts) it to your blocked coronary artery. The healthy blood vessel allows blood to take a new path (bypass) around the blockage.



### Heart medicines

#### **What are some common coronary artery disease medicines?**

Many people who have coronary artery disease are prescribed cardiac medicines.

Common cardiac medicines include:

- Anti-platelets, aspirin
- Beta blockers
- Cholesterol lowering agents
- ACE inhibitors
- Nitrates

Read the booklet titled, Taking Your Heart Medicines for more information.

### Exercise

#### **How will exercise help me?**

Doing regular exercise will decrease the chance that your coronary artery disease will get worse. Do aerobic exercise and resistance training as prescribed by your Cardiac Rehab team.

Read the booklet titled, Staying Active for a Healthy Heart for more information.

### TREATMENTS FOR HEART FAILURE

#### **What are some common treatments for heart failure?**

Treatments for heart failure include:

- Medicine
- Surgery
- Healthy lifestyle (lower sodium and water intake, regular exercise)

Talk to your doctor to understand:

- Your medicines
- How much fluid you can drink
- When you should call your doctor or get medical help right away
- What type of surgery is available to you

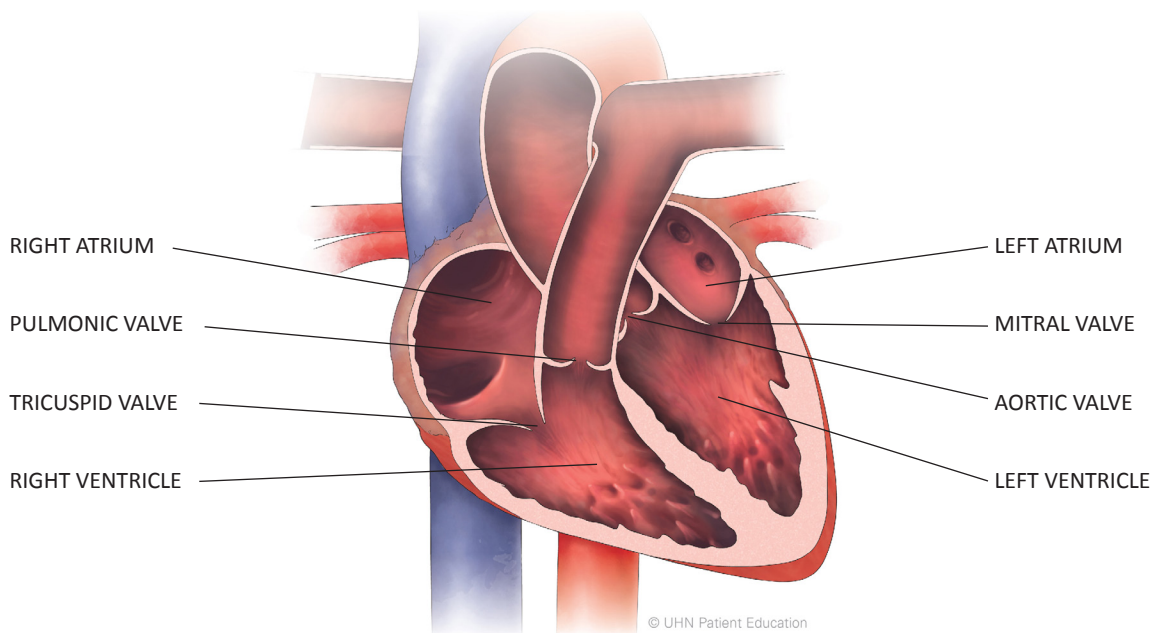
Talk to your Cardiac Rehab team to understand:

- How to exercise safely
- How to lower the amount of salt (sodium) in your diet

## TREATMENTS FOR HEART VALVE PROBLEMS

### What are common treatments for heart valve problems?

If your valve problem is severe, you may require surgery to repair or replace your valve.



# Where to Learn More

**Cardiac College**

[www.cardiaccollege.ca](http://www.cardiaccollege.ca)



TREAT HEART DISEASE

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# Taking your heart medicines







# Taking Your Heart Medicines

For people living with heart disease and their caregivers

Read this booklet to know:

- How different heart medicines work
- Common medicine names
- Common side effects



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# Introduction to Heart Medicines

## What do heart medicines do?

Your heart medicines are important for your health. When you take your medicines as prescribed by your doctor, they help reduce the chance that you will have another heart event. You may need to take some of your heart medicines for the rest of your life.

Your heart medicines help:

- Prevent blood clots forming
- Lower your blood pressure
- Lower the amount of work your heart has to do
- Improve blood flow to your heart
- Relieve angina symptoms
- Lower your LDL (bad) cholesterol
- Raise your HDL (good) cholesterol
- Lower your triglycerides (a type of fat in your blood)

Your doctor and pharmacist will work with you to ensure your medicines are working for you. They will check your medicines over time to ensure they still work for you.



# Types of Heart Medicines

This section will provide information about your medicines. You will need the name of your heart medicine(s) for this section. There are many types of heart medicines. Each type is unique and works in its own way within your body.

The University Health Network Cardiovascular Prevention & Rehabilitation Program does not promote one type of medicine over another. Brand names of heart medicines are listed to provide you with examples. The information listed is for education purposes only.

Talk to your doctor and pharmacist to find the right medicine(s) for you.

## Anticoagulants ('blood thinners')

### What is an anticoagulant?

This medicine helps prevent harmful clots forming in the blood vessels.

Common names:

- Warfarin (Coumadin®)
- Heparin (in hospital)
- Dabigatran (Pradaxa®)
- Rivaroxaban (Xarelto®)
- Endoxaban (Lixiana®)
- Apixaban (Eliquis®)

### How does this medicine help manage my heart disease?

It is often prescribed to lower the risk of stroke in patients with artificial heart valves or atrial fibrillation.

### **What are some common side effects of this medicine?**

Some common side effects are:

- Nosebleeds
- Easy bruising or bleeding (gums)
- Small risk of major bleeding (stomach or brain)

### **What should I know about taking this medicine?**

If this medicine (such as Warfarin/Coumadin) is new, your doctor will send you for weekly or monthly blood tests (INR test) to ensure you are taking the correct doses. Foods rich in vitamin K may interfere with these drugs, including green leafy vegetables. Avoid sudden changes in the amount you eat each day.

You do not need to get blood tests (INR test) if you take: Dabigatran (Pradaxa<sup>®</sup>), Rivaroxaban (Xarelto<sup>®</sup>), Endoxaban (Lixiana<sup>®</sup>) or Apixaban (Eliquis<sup>®</sup>).

## **Antiplatelet agents ('blood thinners')**

### **What is an antiplatelet agent?**

This medicine prevents the blood platelets (cells) from sticking together and forming clots.

Some common names are:

- Acetylsalicylic acid, ASA (Aspirin)
- Clopidogrel (Plavix<sup>®</sup>)
- Ticagrelor (Brilinta<sup>®</sup>)
- Prasugrel (Effient<sup>®</sup>)



### **How does this medicine help manage my heart disease?**

This medicine is used to reduce the risk of dangerous blood clots forming in the body that may cause a heart attack or stroke. May be prescribed for patients who are at risk of having a heart attack.

### **What are some common side effects of this medicine?**

Some common side effects are:

- Easy bruising, nausea (upset stomach)
- Vertigo, ringing in ears (tinnitus), light-headedness
- Abdominal pain, bleeding ulcers (black tarry stool)
- Impaired kidney or liver function
- Shortness of breath with Ticagrelor (Brilinta®)

## **Angiotensin converting enzyme (ACE) inhibitors**

### **What is an ACE inhibitor?**

This medicine expands (opens up) blood vessels to lower blood pressure and improve the amount of blood the heart pumps.

Some common names are:

- Ramipril (Altace®)
- Enalapril (Vasotec®)
- Quinapril (Accupril®)
- Fosinopril (Monopril®)
- Trandolapril (Mavik®)
- Perindopril (Coversyl®, Aceon®)
- Lisinopril (Prinivil®, Zestril®)

### **How does this medicine help manage my heart disease?**

This medicine may prevent further damage to the heart muscle after a heart attack. It is prescribed for patients with high blood pressure or heart failure.

### **What are some common side effects of this medicine?**

Some common side effects for this medicine are:

- Dry cough (very common)
- Rapid swelling of the lips or face
- Low blood pressure
- Dizziness
- Nausea
- Headache

## **Angiotensin 2 receptor blockers (ARB)**

### **What is an angiotensin 2 receptor blocker?**

This medicine keeps blood vessels relaxed, which increases the supply of blood and oxygen to the heart muscle and prevents blood pressure from rising.

Some common names are:

- Losartan (Cozaar®)
- Telmisartan (Micardis®)
- Irbesartan (Avapro®)
- Candesartan (Atacand®)
- Valsartan (Diovan®)

### **How does this medicine help manage my heart disease?**

Prescribed for patients with signs and symptoms of high blood pressure and heart failure. Prescribed when ACE inhibitors are not tolerated.

### **What are some common side effects of this medicine?**

Some common side effects are:

- Nausea
- Headaches
- Low blood pressure (dizziness)

## **Beta blockers**

### **What is a beta blocker?**

This medicine lowers blood pressure and makes the heart beat more slowly and with less force.

Some common names are:

- Atenolol (Tenormin<sup>®</sup>)
- Bisoprolol (Monacor<sup>®</sup>)
- Metoprolol (Lopressor<sup>®</sup>, Betaloc<sup>®</sup>, Toprol XL<sup>®</sup>)
- Carvedilol (Coreg<sup>®</sup>)
- Acebutolol (Monitan<sup>®</sup>, Sectral<sup>®</sup>)
- Timolol (Blocadren<sup>®</sup>)
- Nadolol (Corgard<sup>®</sup>)

### **How does this medicine help manage my heart disease?**

This medicine lowers blood pressure and heart rate. It will help reduce the chance of another heart attack or having angina (chest pain). It is prescribed for patients with abnormally fast heart rates (tachycardia) and irregular rhythms.

### **What are some common side effects of this medicine?**

Some common side effects are:

- Slow heart rate
- Low blood pressure
- Dizziness, headaches
- Worsening of asthma symptoms
- Masks signs of hypoglycemia (low blood sugar)
- Depression
- Sleep disturbance (nightmares)
- Sexual dysfunction (impotence)
- Lack of energy, fatigue

## **Calcium channel blockers**

### **What is a calcium channel blocker?**

This medicine relaxes (opens up) blood vessels to improve blood flow to the heart.

Some common names are:

- Amlodipine (Norvasc<sup>®</sup>, Lotrel<sup>®</sup>)
- Diltiazem (Cardizem<sup>®</sup>, Tiazac<sup>®®</sup>)

- Felodipine (Plendil®)
- Nifedipine (Adalat®, Procardia®)

### **How does this medicine help manage my heart disease?**

This medicine helps:

- Control high blood pressure
- Control irregular heartbeats
- Reduce angina (chest pain)

### **What are some common side effects of this medicine?**

Some common side effects are:

- Facial flushing
- Edema (ankle swelling)
- Headache, nausea, dizziness

## **Diuretics (water pills)**

### **What is a diuretic?**

This medicine helps the body to get rid of extra fluid.

Some common names are:

- Spironolactone (Aldactone®)
- Furosemide (Lasix®)
- Hydrochlorothiazide (HCTZ)
- Chlorothiazide (Diuril®)
- Indapamide (Lozol®, Lozide®)

### **How does this medicine help manage my heart disease?**

This medicine lowers the amount of work the heart has to do. This medicine helps to manage high blood pressure and heart failure. This medicine helps reduce extra fluid buildup in the lungs, lower legs and ankles.

### **What are some common side effects of this medicine?**

Some common side effects are:

- Low blood pressure
- Electrolyte imbalance (low potassium, low magnesium, low sodium)

### **What should I know about taking this medicine?**

Take this pill in the morning. It will cause many trips to the bathroom during the day, but will help to avoid disruption to your sleep at night. You may experience ringing in your ears if you take a high dose of this medicine.

## **Nitrates**

### **What is a nitrate?**

This medicine relaxes (opens up) blood vessels to improve blood flow (and oxygen) to the heart.

Some common names are:

- Nitroglycerin sublingual or (Nitrostat®)
- Nitro patch (Nitrodur®, Transderm-Nitro®)
- Nitroglycerin sublingual\* spray or (Nitrolingual pump spray)
- Nitropaste (Nitrol®)
- Hydralazine (Apresoline®)
- Isosorbide dinitrate (Isordil®)

This medicine is available in pills, spray, patches.

\*sublingual means under the tongue

### **How does this medicine help manage my heart disease?**

This medicine helps relieve angina symptoms (chest pain).

### **What are some common side effects of this medicine?**

Some common side effects are:

- Fainting or dizziness when sitting up or standing up too quickly
- Low blood pressure
- Headaches
- Flushing

## **CHOLESTEROL LOWERING MEDICINES**

### **Statins**

#### **What is a statin medicine?**

This medicine prevents the liver from producing too much cholesterol.

Some common names are:

- Rosuvastatin (Crestor®)
- Pravastatin (Pravachol®, Pravigard®)
- Simvastatin (Zocor®)
- Atorvastatin (Lipitor®)
- Lovastatin (Mevacor®)

### **How does this medicine help manage my heart disease?**

This medicine is prescribed for patients with high cholesterol at risk of heart disease, stroke or diabetes.

It helps:

- Lower LDL (bad) cholesterol
- Raise HDL (good) cholesterol
- Lower triglyceride (TG) levels

### **What are some common side effects of this medicine?**

Some common side effects are:

- Muscle pain
- Muscle weakness
- Abnormal liver function
- Allergic reaction (skin rashes)
- Heartburn
- Dizziness

### **What should I know about taking this medicine?**

Increased muscle pain and weakness can be a sign of a serious side effect and should be reported to your physician immediately.



### PCSK9 inhibitors

#### **What is a PCSK9 medicine?**

This medicine works inside the intestine and lowers the body's supply of cholesterol.

Some common names are:

- Evolocumab (Repatha®)
- Alirocumab (Praluent®)

#### **How does this medicine help manage my heart disease?**

Prescribed for patients with high cholesterol or those at risk for heart disease, stroke or diabetes.

#### **What are some common side effects of this medicine?**

Some common side effects are:

- Redness, itching, swelling or pain/tenderness at injection site
- Symptoms of the common cold and flu or flu-like symptoms

#### **What should I know about taking this medicine?**

This medicine is injected into the body (self-injection) 1 to 2 times each month.

### Fibrates

#### **What is a fibrate?**

This medicine blocks the production of certain types of cholesterol. It also increases production of HDL (good) cholesterol.

Some common names are:

- Fenofibrate (Lipidil®)
- Bezafibrate (Bezalip®)
- Gemfibrozil (Lopid®)

#### **How does this medicine help manage my heart disease?**

Prescribed for patients with high LDL (bad) cholesterol and triglycerides and low HDL (good) cholesterol.

#### **What are some common side effects of this medicine?**

Some common side effects are:

- Stomach pain
- Gas
- Heartburn

# Combined Medicines

Some people may be prescribed combination drugs containing two different cardiac medicines.

Some examples of the commonly prescribed medicines are:

## **Adalat XLPlus®**

Which contains:

- Nifedipine (calcium channel blocker)
- Acetylsalicylic Acid, ASA or Aspirin (anti-platelet)

## **Coversyl Plus®**

Which contains:

- Perindopril (angiotensin converting enzyme inhibitor)
- Indapamide (diuretic)

## **Caduet®**

Which contains:

- Amlodipine (calcium channel blocker)
- Lipitor (cholesterol lowering)

## **Hyzaar®**

Which contains:

- Cozaar (angiotensin 2 receptor blocker)
- Hydrochlorothiazide (water pill)

### **Atacand HCT®**

Which contains:

- Atacand (angiotensin 2 receptor antagonist)
- Hydrochlorothiazide (water pill)

### **Entresto™**

Which contains:

- Sacubitril (enzyme inhibitor)
- Valsartan (angiotensin 2 receptor blocker)

# Track Your Heart Medicines

It is important to keep track of your heart medicines. Fill out the chart below and take it with you to all of your medical appointments. Your pharmacist can help you fill out this tool.

<b>Class of medicine</b>	<b>Name of your medicine</b>	<b>How much you take (dosage)</b>	<b>When you take it (when, how often)</b>
<b>Blood thinners: anti-coagulants or anti-platelets</b>			
<b>ACE inhibitors</b>			
<b>Angiotensin 2 receptor blockers</b>			
<b>Beta blockers</b>			
<b>Calcium channel blockers</b>			
<b>Diuretic (water pill)</b>			
<b>Nitrates</b>			
<b>Cholesterol (statins)</b>			
<b>Other medicines</b>			



# Where to Learn More

## **MedsCheck program**

If you live in Ontario, your local pharmacist can help you with this.

[www.health.gov.on.ca/en/public/programs/drugs/medscheck/](http://www.health.gov.on.ca/en/public/programs/drugs/medscheck/)

## **Contact INFOline:**

1-866-255-6701

1-866-255-6701

TTY 1-800-387-5599

## **Cardiac College**

[www.cardiaccollege.ca](http://www.cardiaccollege.ca)

## **The Heart and Stroke Foundation**

[www.heartandstroke.ca](http://www.heartandstroke.ca)

Home —> Heart —> Treatments —> Medications





TREAT HEART DISEASE

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# Managing your symptoms





# Managing Your Symptoms

For people living with heart disease and their caregivers

Read this booklet to know:

- Different types of heart disease symptoms
- How to manage the symptoms



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# Managing Your Symptoms

## Why is it important to manage my symptoms?

It is important to manage your symptoms of heart disease to keep your heart safe while you do your daily activities, exercise and do recreational activities (such as golf).

## What are the most common symptoms of heart disease?

The most common symptoms of heart disease are:

- Pain or discomfort in your chest, throat, jaw, arms or upper back
- Shortness of breath
- Feeling very tired (fatigue)
- Upset stomach (nausea)

## What are the signs of a heart attack?

### Learn the Signs of a Heart Attack

- P** RESSURE
- A** NXIETY
- I** NABILITY to breathe
- N** AUSEA or vomiting

### Angina

#### What is angina?

Angina is a warning sign that your heart is under stress. When there is not enough blood and oxygen getting to your heart, you may feel pain or discomfort in one or more areas listed below.

You may feel pain (discomfort) in your:

- Chest
- Jaw
- Arms
- Upper back
- Throat

You may also feel short of breath, feel very tired (fatigue) or have nausea (upset stomach).

#### What are the different types of angina?

There are 3 types of angina:

- Stable
- Unstable
- Silent

#### Stable angina

Stable angina may occur when you exercise too hard, when you feel stressed or after a heavy meal. You can predict when stable angina will occur.



## Managing Your Symptoms

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Most often, your symptoms last for 5 minutes or less and are relieved by rest or nitroglycerin (a medicine that helps with angina).

If you have angina, pay attention to your body and how it responds to day to day activities (for example exercise).

To be safe, answer the questions below and record your answers. You will need to be able to describe how angina affects you to notice if it changes.

- Where on your body do you feel angina?
- When do you feel angina?
- What are you doing when you feel angina?
- How long does your angina last?
- What takes your angina away?
- How often do you feel angina?

When you describe how angina affects you, it is also important to rate how much pain or discomfort you feel when you have angina.

Knowing how much pain or discomfort you feel will help:

1. Your doctor know how to manage your angina
2. You know if your angina is getting better or worse

The Borg Rating of Perceived Pain Scale can help you describe your pain or discomfort. The scale goes from 0 to 10 and some of the numbers have verbal ratings as well.

<b>Rating of Perceived Pain Scale (RPP)</b>	
0	<b>Nothing at all</b>
0.3	
0.5	<b>Extremely weak (just noticeable)</b>
1	<b>Very weak</b>
1.5	
2	<b>Weak</b>
2.5	
3	<b>Moderate</b>
4	
5	<b>Strong</b>
6	
7	<b>Very strong</b>
8	
9	
10	<b>Extremely strong</b>

Know what is 'normal' for you. Talk to your doctor and Cardiac Rehab team if your usual pattern of angina changes (for example, symptoms last longer, symptoms are more intense or occur more often).

### **Unstable Angina**

Unstable angina may occur at any time even when you are resting or sleeping. Unlike stable angina, you cannot predict when unstable angina will occur. Your symptoms can last for up to 30 minutes.

Call 911 if you have unstable angina. An ambulance can take you to the Emergency Department. Do not drive yourself or have anyone other than an ambulance drive you to the Emergency Department. An ambulance is equipped with life-saving tools and medicine.

### **Silent Angina (or Silent Ischemia)**

Silent angina (also known as silent ischemia) is when your heart does not get enough blood and oxygen, but you do not feel any symptoms. You will not know if you are having silent angina. A simple test called an electrocardiogram (ECG) will show if your heart is getting enough blood and oxygen.

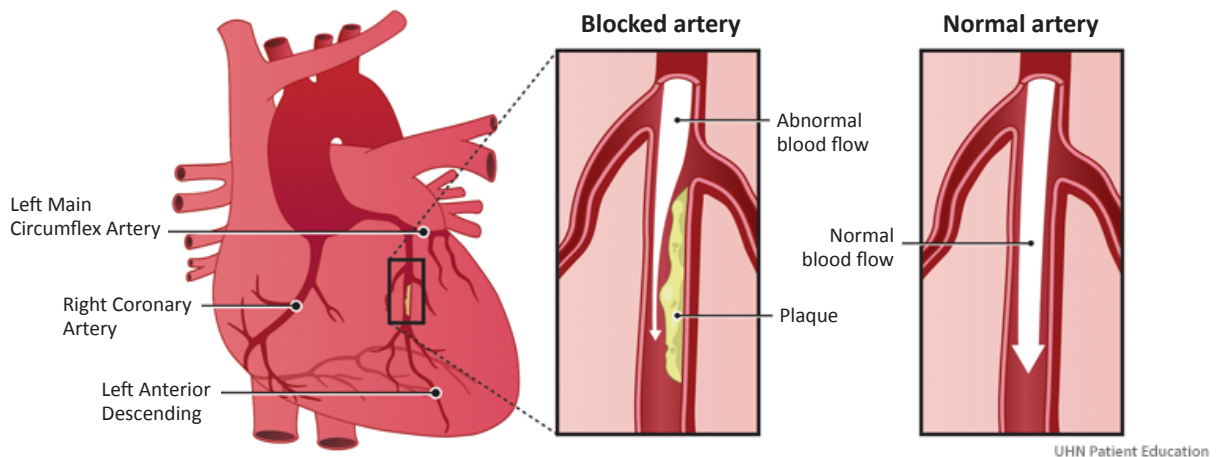
Silent angina is more likely to occur if:

- You do not warm up before you exercise or cool down after exercise
- You have diabetes

Your doctor and Cardiac Rehab team will tell you if you have silent angina. They will give you an exercise program that will keep you below the level of effort where your heart may be under stress.

### What causes angina?

Angina occurs when part of one of your coronary arteries (the arteries that bring blood and oxygen to your heart) is blocked. Your coronary arteries can get blocked when plaque collects over time. Plaque is a waxy substance made of fat, cholesterol and calcium.



### Managing angina

#### How do I prevent angina?

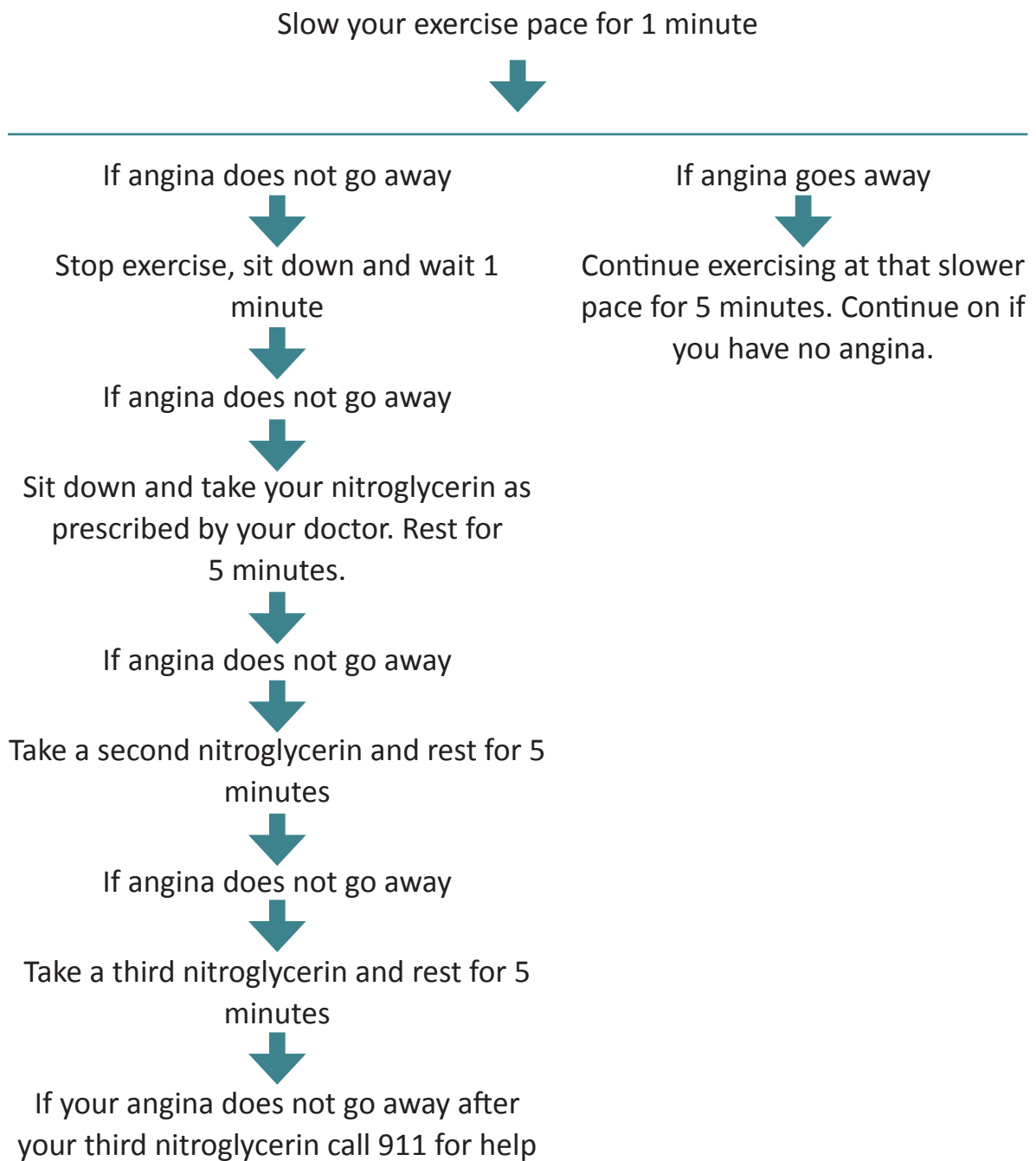
There are many things you can do to help prevent angina during exercise:

- Take your cardiac medicines as prescribed by your doctor
- Warm up for 5-10 minutes before you exercise
- Cool down for 5-10 minutes after you exercise
- Follow your exercise program as prescribed by your Cardiac Rehab team

If you get angina during exercise, follow the steps on the next page to make sure you keep your heart safe.

## How do I manage my angina?

Follow these steps if you feel angina during exercise:



### Safety Alert!

- If angina goes away after taking 1 spray of your Nitroglycerin, talk to your doctor and Cardiac Rehab team to see if it is safe for you to return to your exercise the same day.
- Even if your angina goes away after taking 2 sprays of your Nitroglycerin, do not return to exercise the same day.
- Call your doctor if these symptoms are new or different for you.

### When should I get medical help?

See your doctor if you:

- Experience a change in your symptoms
- Have new symptoms
- Feel angina more often, more intensely, for a longer time or at a lower level of physical activity

If you experience angina that does not go away after you have followed all of the steps to treat angina with nitroglycerin, call 911.

If angina goes away after taking 1 spray of your nitroglycerin, talk to your doctor and Cardiac Rehab team to see if it is safe for you to return to your exercise the same day.

Even if your angina goes away after taking 2 sprays of your nitroglycerin, do not return to exercise the same day.

Call your doctor if these symptoms are new or different for you. Reduce your level of physical activity until your doctor says it is safe for you to exercise again.

### Irregular heartbeats

#### What is an irregular heartbeat?

A normal heartbeat is steady - one beat after the other and evenly spaced apart. When you take your pulse, you are counting your heart rate and feeling the heart rhythm.

An irregular heartbeat (also known as an arrhythmia) is when your heart beats too quickly or too slowly for you, or when your heart beats too early.

If your heart:

- Is beating too quickly for you, your pulse count will be higher
- Is beating too slowly for you, your pulse count will be lower
- Beats too early, you may feel a pause in your pulse count

#### What are the different types of irregular heartbeats?

##### Fast Heartbeat

When the electrical signal in your heart is too fast and your heart beats more than 100 times per minute this is known as tachycardia.

There are several examples of this:

- Atrial flutter, atrial fibrillation, supraventricular tachycardia (SVT)
- Ventricular tachycardia (VT), ventricular fibrillation (V-fib)

##### Slow Heartbeat

When the electrical signal in your heart is slowed and your heart beats less than 60 times per minute this is known as bradycardia.

### **Early Heartbeat**

Most people, even people without heart disease, get early heartbeats at some time. Early heartbeats happen when something bothers your heart cells and causes them to send out a signal too early. This can cause your heart to beat early.

### **What causes a fast heartbeat?**

Fast heartbeats may be caused by:

- Not enough oxygen getting to your heart
- Caffeine (coffee, tea, chocolate)
- Too much alcohol or binge drinking
- Smoking
- Stress

### **What causes a slow heartbeat?**

Slow heartbeats may be caused by a heart block (a delayed or blocked electrical signal).

### **What causes an early heartbeat?**

Early heartbeats may be caused by:

- Not enough oxygen getting to your heart
- Caffeine (coffee, tea, chocolate)
- Too much alcohol or binge drinking
- Smoking
- Stress

- Fatigue (being tired) and illness
- Hot, humid, cold and windy weather
- Not doing a proper warm up
- Not doing a proper cool down
- Doing more than your exercise prescription

### Managing irregular heartbeats

#### How do I manage my irregular heartbeat?

If you feel unwell and have symptoms (such as angina, feeling dizzy, shortness of breath, passing out) contact your doctor for further advice. Some of the common treatments for irregular heartbeats below. Your doctor will discuss the best treatment options for you.

#### Medicine

Your doctor may prescribe you medicine to manage your irregular heartbeat.

Common medicines prescribed for irregular heartbeats include:

- Beta-blockers
- Calcium channel blockers

#### Cardioversion

Cardioversion is a treatment where controlled electrical pulses (shocks) are sent through your body to your heart. These electrical pulses trigger the heart to return to its normal rhythm.



### Surgery

There are 4 types of surgery that may be used to treat irregular heartbeats:

- Ablation. This procedure can be used to destroy the cells that send out electrical signals to make your heart beat too quickly.
- Maze Procedure. This procedure stops bad electrical signals from moving through your heart (such as atrial fibrillation).
- Pacemaker. This procedure attaches a small device to your heart to track and correct your heart rhythm.
- Implantable Cardiac Defibrillator (ICD). This procedure attaches a small device to your heart to track and correct a life-threatening rhythm. This device uses an electrical pulse (a shock) to correct a life-threatening rhythm.

### How do I record my irregular heartbeat in my exercise diary?

How to record your irregular heartbeat:

1. Count the number of beats you feel during the 10 second count. Write down this number.
2. Count the number of pauses you feel. Add this number to the first number.

For example, if you felt 12 beats over 10 seconds and felt 1 pause, record it as 12 + 1 on your exercise diary.

### When should I get medical help?

Most people with or without heart disease may have irregular heartbeats at some time. Occasional early heartbeats are not a problem.

If you feel unwell and have symptoms (such as angina, shortness of breath, or dizziness) when you have the irregular heartbeats, call your doctor and Cardiac Rehab team for further advice.

### **Managing hypoglycemia (low blood sugar) if you have diabetes**

The following information is important for people living with diabetes that are prescribed insulin or a medicine from the Secretagogue class of diabetes medicine.

#### **What is hypoglycemia?**

Hypoglycemia is also known as low blood sugar. Low blood sugar can be dangerous. It means there is not enough sugar in your blood.

Low blood sugar happens when your blood sugar drops below 4 mmol/L. You may have low blood sugar symptoms at different levels. For example, you may have low blood sugar symptoms at 6 mmol/L.

If your blood sugar gets too low you can become disoriented, confused, and you may even lose consciousness (go into a coma). This is called severe hypoglycemia. Severe hypoglycemia happens when your blood sugar is so low you can't treat it yourself with fast acting carbohydrates or glucagon (a medicine sometimes prescribed by doctors for people who are prone to very low blood sugar).

Teach your family members and friends how to help you when you can no longer treat your low blood sugar by yourself. They need to know this is a medical emergency and you need help right away.

### **What are the signs and symptoms of low blood sugar?**

People have different signs and symptoms of low blood sugar. You may have one or more of the symptoms below. Common signs and symptoms are:

- Trembling or shaking
- Hard time thinking
- Headache
- Dizzy
- Feeling tired (drowsy)
- Changes to your vision
- Anxiety (nervous and fearful)
- Tingling in your face or hands
- Nausea (upset stomach)
- Sweating
- Hunger
- Faster heart beat than usual (palpitations)
- Difficulty speaking
- Disoriented (confused)
- Seizures or loss of consciousness (with severe hypoglycemia)

Some people have low blood sugar levels and do not have any of the signs or symptoms listed. In this case, it is crucial that you check your blood sugar often to see if your blood sugar is low (especially before driving a car, motorcycle or boat). Check your blood sugar often to be sure. This will help you know when your blood sugar is low.

### **What causes hypoglycemia?**

You are at risk for low blood sugar if you:

- Are taking insulin
- Are taking a medicine from the Secretagogue class of medicines like:
  - Diamicron (Gliclazide)
  - Amaryl (Glimepiride)
  - Glyburide (Diabeta)
  - Repaglinide (Gluconorm)
- Start a new exercise program and are prescribed insulin or a medicine from the Secretagogue class of medicines
- Have had episodes of low blood sugar in the past
- Have an A1c of less than 6 percent (%)
- Do not get any of the signs or symptoms of low blood sugar

### **How do I treat hypoglycemia?**

There are two ways to know you have low blood sugar:

1. You have any signs or symptoms of low blood sugar
2. Your glucometer reading is less than 4.0 mmol/L

If you have low blood sugar:

1. Act quickly. Do not wait
2. Stop what you are doing and sit down. Test your blood sugar with your glucometer if you have not already done so
3. Eat or drink 15 grams of fast acting carbohydrate. Fast acting carbohydrates raise your blood sugar quickly

Examples of fast acting carbohydrates are:

- 15 grams of sugar tablets
  - $\frac{3}{4}$  cup (175 ml) of juice or
  - $\frac{3}{4}$  cup (175 ml) regular pop (soft drink)
  - 3 teaspoons or 3 packets of sugar dissolved in water
  - 6 LifeSavers
  - 1 tablespoon (15 ml) of honey
4. Wait 15 minutes
  5. Test your blood sugar again
    - a. If your blood sugar is still below 4 mmol/L take another 15 grams of fast acting carbohydrate
    - b. Wait another 15 minutes and check your blood sugar again
    - c. Repeat this step until your blood sugar is higher than 4 mmol/L
  6. When your blood sugar is above 4 mmol/L, eat your usual meal
    - Follow your regular meal schedule
    - Have a snack if your meal is more than 1 hour away. This snack should have a slower acting carbohydrate and protein like a slice of wholegrain bread with reduced fat cheese. Slower acting carbohydrates raise your blood sugar slowly over a period of time. This will prevent another episode of low blood sugar

### **How is severe hypoglycemia treated?**

If you had a severe episode of hypoglycemia in the past, your doctor may tell you to treat any future episodes with greater amounts of fast acting carbohydrate or glucagon (a medicine prescribed by your doctor).

If your blood sugar goes too low you will likely need help. It is important that you let your family and friends know how to help you when you can no longer help yourself (for example, you become disoriented, have a seizure

or lose consciousness). This is a medical emergency. Wear jewelry that lets people know you have diabetes. A medical alert bracelet is one type of this jewelry.

### **How do you learn from a low blood sugar episode?**

Reflect on your low blood sugar episode to help prevent another episode. Use the reflection chart below to answer questions about your low blood sugar episode.

Take this chart to your doctor, pharmacist or diabetes educator. They can help you make changes to prevent low blood sugar. This can include changes to your medicines, food or exercise.

	<b>Morning</b>	<b>Afternoon</b>	<b>Evening</b>
When did I take my diabetes medicine today?			
Am I taking a new medicine? Or is this a different amount of the same medicine?			
How long did I exercise today? What time did I exercise?			
What did I eat and drink today? What time did I eat?			

### How to prevent hypoglycemia

There are many ways to prevent hypoglycemia (low blood sugar). Talk to your doctor, pharmacist or diabetes educator to learn:

- The best amount of diabetes medicine for you
- How to time your diabetes medicine with your food
- When your diabetes medicine is working the hardest to lower your blood sugar
- How often to check your blood sugar
- How much exercise lowers your blood sugar. Use the exercise blood sugar diary below.
- If you take insulin or a medicine from the Secretagogue class of medicines, check your blood sugar before you exercise. If your blood sugar is less than 5.5 mmol/L, have a snack that contains protein and a slow acting carbohydrate (such as a slice of whole grain bread with peanut butter). Slow acting carbohydrate slowly raises your blood sugar to prevent an episode of low blood sugar
- How to know the signs and symptoms of low blood sugar. Carry a fast acting carbohydrate with you at all times just in case you need it. Fast acting carbohydrates raise your blood sugar quickly

### Exercise blood sugar (glucose) diary

Date	Time	Blood Sugar (glucose) Before Exercise	Blood Sugar (glucose) After Exercise	Comments
04/25	10:00 am	9.8	7.2	

#### **If exercise is new for you**

- Monitor your blood sugar levels before and after exercise for 6 or more exercise sessions

**If you have been exercising consistently over the past couple of months you may consider monitoring your blood sugar levels before and after exercise if:**

- You are experiencing difficulty managing your blood sugar OR
- You are trying a new exercise prescription



# Where to Learn More

**Cardiac College**

[www.cardiaccollege.ca](http://www.cardiaccollege.ca)

**The Heart and Stroke Foundation**

[www.heartandstroke.ca](http://www.heartandstroke.ca)

**The Mayo Clinic**

<https://www.mayoclinic.org/diseases-conditions/heart-arrhythmia/symptoms-causes/syc-20350668>



GET ACTIVE

# Staying active for a healthy heart





# Staying Active for a Healthy Heart

For people living with heart disease and their caregivers

Read this booklet to know:

- How sitting less and moving more keeps your heart healthy
- How prescribed exercise keeps your heart healthy
- Safe exercises you can do
- How much exercise you need
- How to prevent injury and keep your heart safe while you exercise



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# How Moving More Helps Prevent Disease

## **How often do I sit and how can I change it?**

Most adults spend about 10 hours a day sitting down. 10 hours takes up most of the hours you are awake.

Sitting for long periods of time is not good for your health. Your body slowly changes the longer you sit. When you don't use your muscles, they get weak. Sitting increases your risk of getting diseases like heart disease, certain cancers and diabetes. If you sit a lot, there are simple things you can do to change how long you sit for.

## **How can I sit less?**

The first step to change your sitting habits is exercise. Exercise improves your health and lowers your risk of heart disease, cancer and diabetes. But exercise is not enough. If you exercise but still sit often, you are still at risk for disease. You need to break up your sitting time.

Replace sitting with standing or movement. Some examples are:

- Switch to standing when you:
  - Work at your desk (or in meetings)
  - Take public transit
  - Talk (or text) on the telephone
  - Watch television
  - Use a computer
  - Read the newspaper
  - Fold clothes
  - Meet with friends and family

## How Moving More Helps Prevent Disease

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- Park farther from work and walk the rest of the way
- Use the stairs more rather than elevators and escalators
- Drink more water (unless your doctor has told you to limit your fluid intake) while you work so you take regular bathroom breaks
- Set an alarm on your computer or phone to remind you to get up and stand or move around every 45 minutes

Break up your sitting time slowly. Set small goals such as sitting less during your morning routine. Over time, it will be easy to sit less and move more.

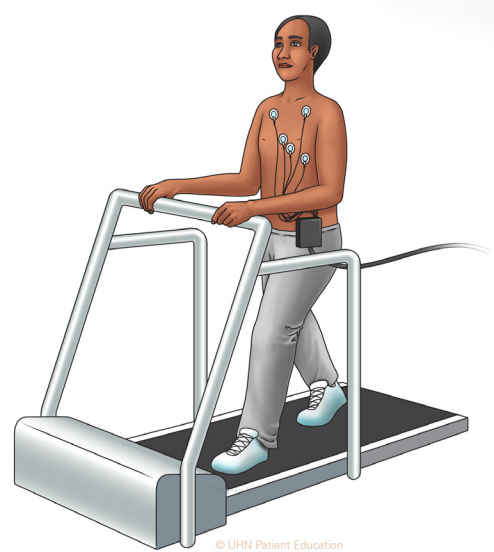
### **Take Action**

If you are sitting, get up every 45 minutes and move around!

# How to Start an Exercise Program

## Talk to your cardiac rehab team

Before you start an exercise program, talk to your Cardiac Rehab team (or doctor) about how to make exercise both safe and effective for you. Since you have heart disease, you will need to do an exercise stress test before you can start your exercise program. During an exercise stress test, you will walk on a treadmill or cycle on a stationary bike. Your heart rate and rhythm will be tracked by an electrocardiogram (ECG) while you exercise.



## What can I expect in the Cardiac Rehab exercise program?

Your Cardiac Rehab team prescribes your aerobic exercise prescription like the way your doctor prescribes your medicine. Like medicine, exercise needs to be defined, unique to you and may need to be changed over time.

Your Cardiac Rehab team will give you a written copy of your exercise prescription. You will receive a new copy of your exercise prescription each time it is changed. It is important to fill out your exercise diaries so that your Cardiac Rehab team can see how much exercise you are able to do at home. They can then progress your exercise safely.

Since your exercise prescription is tailored for you, if you have questions or concerns about the level of the exercise, discuss it with your Cardiac Rehab

team. It is not safe to increase the level of your exercise (pace and distance) without speaking to your Cardiac Rehab team.

### **How does my Cardiac Rehab team design my exercise program?**

Your aerobic exercise program was tailored for you by your Cardiac Rehab team.

To make your aerobic exercise program, your Cardiac Rehab team looked at your:

#### 1. Medical history

- What happened to your heart
- Other health concerns you have (this may include problems with your muscles or joints)

#### 2. Exercise stress test results

- Your level of fitness
- Your heart rate and blood pressure during exercise
- How your heart beats on the electrocardiogram (ECG)
- If you had any symptoms (for example chest pain) or discomfort (for example knee pain) during exercise

#### 3. Preferred way to exercise

- What kind of aerobic exercise you prefer
- What exercise equipment you have access to

The exercise prescription that you receive will help you make the most gains in your health while keeping your heart safe.

# Aerobic Exercise



## What it is

### What is aerobic exercise?

Aerobic Exercise is any type of prolonged activity that:

- Involves the large muscle groups
- Lasts for at least 10 minutes

Some examples of aerobic exercise include:

- Walking
- Jogging
- Cycling
- Swimming
- Rowing
- Using an elliptical machine

Places you can do your exercise include:

### **Outdoors**

Exercise outdoors when the weather is appropriate. It is important to make sure that you have measured your walking route. See your options on how to measure your route below.

### **Indoor/Outdoor Track**

- A walking track can help you measure your distance for walking/running
- You will need to know how many laps around the track is equal to a mile or kilometre

### **Fitness/Gym/Recreation Facility**

Your local recreation centre or local gym will have all the exercise equipment you need for your program (such as treadmills, stationary cycles, elliptical machines, weight machines).

- You may consider getting an annual or part-time membership to meet your needs. Your Cardiac Rehab team can provide you with instructions on how to use these alternatives safely and provide you with appropriate exercise prescription guidelines for use with these machines
- Try to look for a Heart Wise Exercise facility. Fitness facilities that have this symbol:
  - Encourage regular aerobic activity
  - Incorporate a warm-up and cool-down with all their exercise
  - Allow you to exercise at a safe level and have different options for your exercise

### **Mall**

Mall walking is a great free alternative. Some malls offer organized walking groups and others open early so you can walk. Call your local mall to see what is available.

### **Home exercise equipment**

If you already have, or are thinking about buying a piece of home exercise equipment, speak to your Cardiac Rehab team. They can provide you with an exercise prescription to use on exercise equipment to substitute or replace your outdoor walking program.

### **How it helps your heart**

#### **What are the benefits of aerobic exercise?**

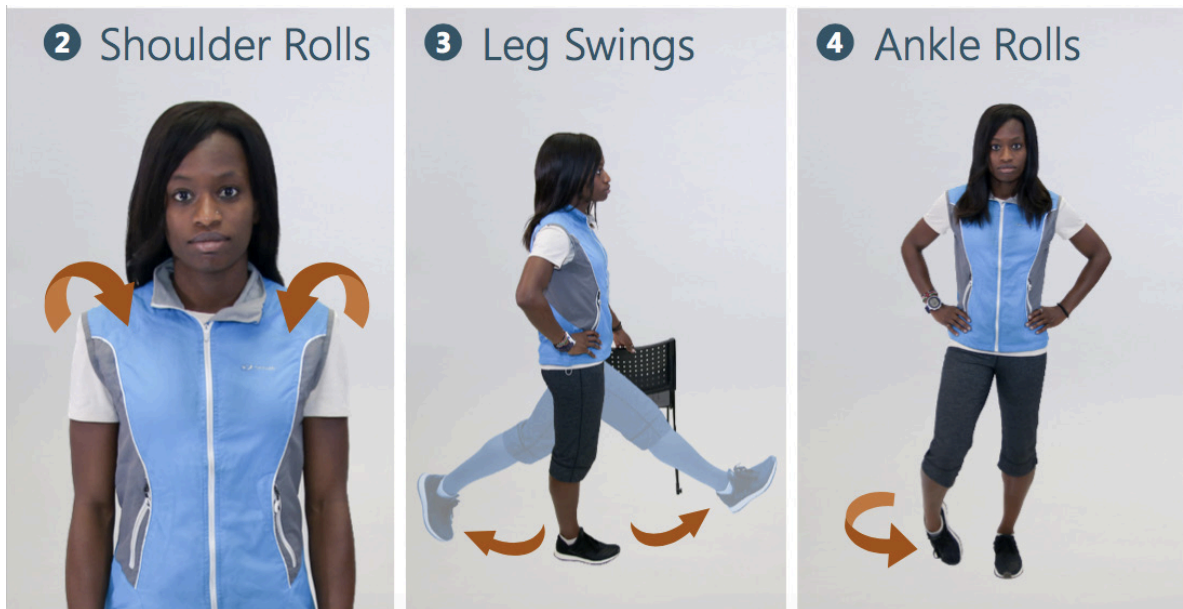
There are many benefits of doing an exercise program (such as walking a prescribed amount of time at a specific intensity, 5 days each week):

- Improves your fitness level
- Lowers blood pressure
- Lowers the effects of stress on your body
- Lowers cravings to smoke when you try to quit
- Improves HDL (good) cholesterol
- Lowers blood sugar (if you have diabetes or prediabetes). Sugar is used by your muscles when you exercise
- Improves muscle strength
- Lowers body fat
- Leads to stronger bones and better joint health
- Improves how you feel about yourself
- Raises your energy level
- Improves the quality of your life
- Helps you live longer

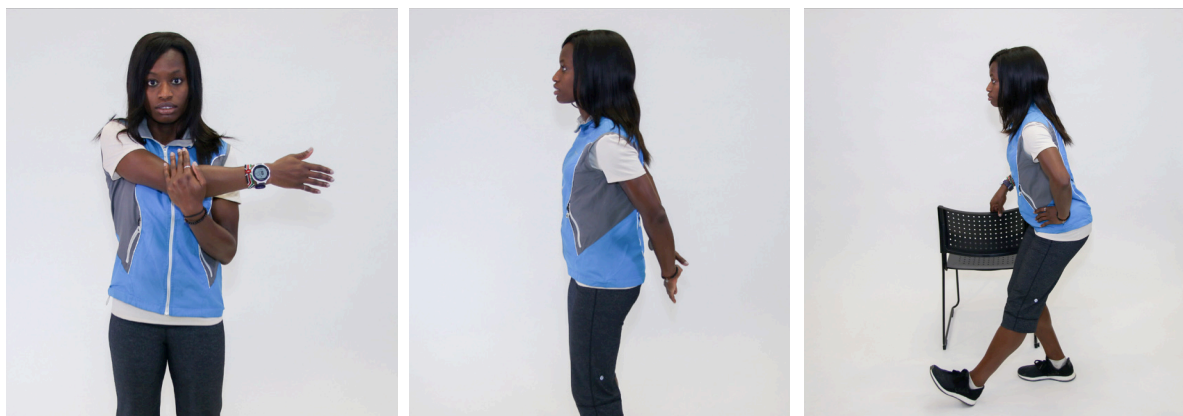
### How to exercise safely

#### What stretches should I do?

Stretch your muscles before you warm-up. Dynamic (moving) stretches may help improve your flexibility.



Stretch your muscles after you cool-down. Static (not moving) stretches may help improve your flexibility.





### **What is my warm-up and cool-down?**

You must warm up your body before exercise and cool down your body after. Warm-up means starting slowly. The purpose of your warm-up is to get your blood flowing to your muscles and prepare your body for exercise. Warm-up also allows your heart rate and blood pressure to rise slowly. This is important so that your exercise intensity feels more comfortable.

Match your warm-up to your exercise. If you are going to walk for exercise, your warm-up is walking. Take the first 5 to 10 minutes of your walk at a slow and casual pace. If you are cycling, your warm-up is cycling. Take the first 5 to 10 minutes of cycling at a slow pace.

It is also important to cool down. The cool-down is at the end of your exercise. Finish your exercise with 5 to 10 minutes of similar, slow activity. Your cool-down helps lower your heart rate and blood pressure to resting levels. The cool-down prevents you from feeling dizzy or light headed.

### **How often and how long do I exercise for?**

The goal is to do aerobic exercise:

- 5 days a week. To get started, your Cardiac Rehab team may ask you to try to exercise 3 days a week. Slowly increase the number of days you exercise each week to 5 days a week. It may take you 3 weeks to build up to this routine of exercising 5 days a week.
- 30 to 60 minutes on each of the 5 days. Your Cardiac Rehab team may ask you to start with 10 to 30 minutes of exercise. You can break up this time with rest breaks or into 10 minute bouts of exercise throughout your day. Slowly increase the time you spend exercising to 30 to 60 minutes.

Do **not** exercise more than 5 times per week.

Exercising more increases your risk of:

- Muscle or joint injuries
- Feeling tired or unwell
- Having more irregular heart rhythms (arrhythmias)

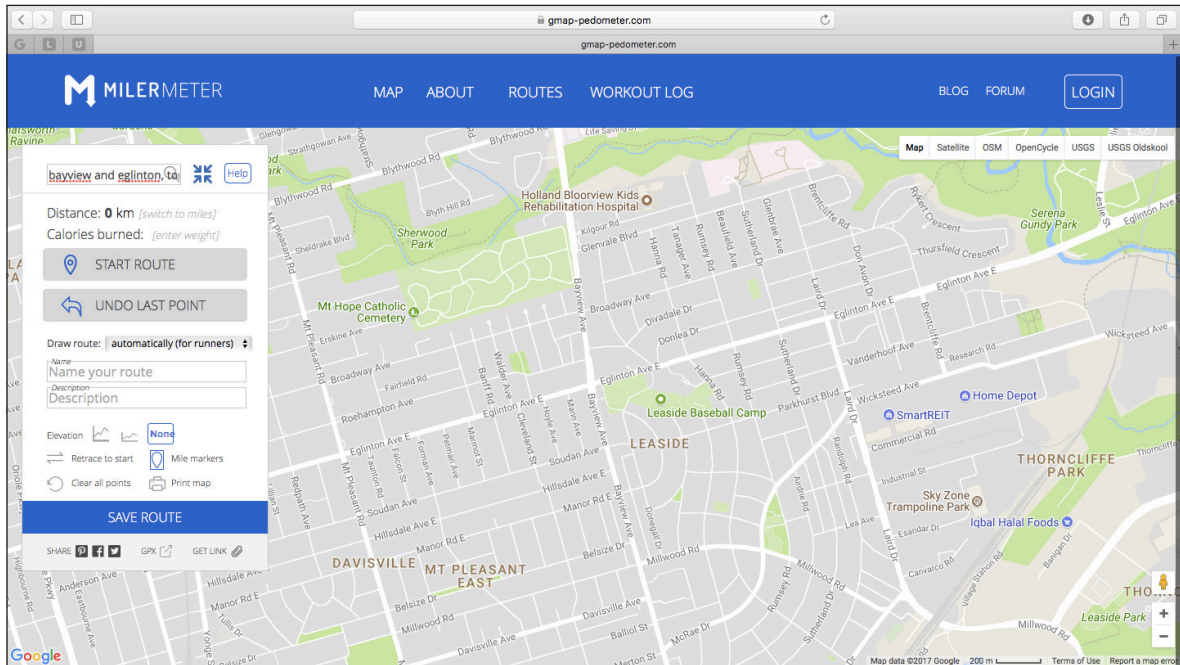
If your exercise prescription includes walking or running, there is a certain distance that is included. How do you know if you have walked that distance?

There are a few ways to measure your walking route:

- Use the odometer on your car to measure the route
- Use an indoor or outdoor track. You will need to know how many laps around the track is equal to a mile or kilometer
- If you are walking in a mall, ask the mall staff if they have measured the distance.
- Use a surveyor's measuring wheel to measure your distance. Talk to your Cardiac Rehab Supervisor about borrowing the wheel from the program
- Go to this website [www.gmap-pedometer.com](http://www.gmap-pedometer.com). You can find the outdoor location of your route and measure it online.

## Aerobic Exercise

The website page will look like this:



Although aerobic exercise is central to good health, daily physical activity is too. You may be interested in getting back to the activities (for example golfing) you enjoyed before your heart event.

Talk to your Cardiac Rehab team if you are interested in playing sports or other recreational activities. Your Cardiac Rehab team will let you know when it's safe for you to get back to the activities you enjoy.

### **What intensity level do I exercise at?**

Intensity level measures how hard you are working when you exercise. Measure your intensity level to ensure you exercise at the right level. There are 3 ways to measure your intensity level.

The 3 measures are:

### 1. Rating of Perceived Exertion (RPE):

The Borg Rating of Perceived Exertion (RPE) Scale is a tool to measure the intensity of your exercise. RPE is a scale from 6 to 20. You choose a number to describe the amount of effort, strain and/ or discomfort that you feel during exercise. A score of 6 is resting with no effort at all. A score of 20 is the most amount of effort you could imagine doing (maximal effort).

Your Cardiac Rehab team will recommend you exercise at a RPE between 11 (fairly light effort, strain and/ or discomfort) to 14 (between somewhat hard and hard effort, strain and/ or discomfort) for moderate intensity exercise.

Use this scale to help you know if you are working too hard during your exercise. If you rated your RPE 15 (hard effort) or higher, then you should slow down your exercise.

You can also use this scale to know if you could exercise harder. If you rated your RPE at 10 or lower, try to walk a little faster.

For moderate intensity exercise, the goal is to exercise between 11 and 14.

<b>Rating of Perceived Exertion Scale (RPE)</b>	
6	
7	<b>Very very light</b>
8	
9	<b>Very light</b>
10	
11	<b>Fairly light</b>
12	
13	<b>Somewhat hard</b>
14	
15	<b>Hard</b>
16	
17	<b>Very hard</b>
18	
19	<b>Very very hard</b>
20	

### **2. Talk Test:**

The talk test is a tool to measure your effort level while you exercise. Do the Talk Test while you exercise. Talk with your exercise partner and pay attention to your breathing. For moderate intensity exercise, your breathing rate increases but still allows you to speak without gasping for breaths between words. You should be able to talk comfortably but not sing.

### **3. Heart Rate:**

Your heart rate is another good measure to assess your intensity level. Measure your heart rate by feeling and counting your pulse. You could also use a heart rate monitor.

### **Facts about your pulse**

Your pulse rate is the same as your heart rate

- Your pulse count should go up during exercise because your heart beats faster and harder
- Your pulse rate may not be the same as someone else's
- Some medicines can affect your heart rate

## **Taking your pulse**



To feel your pulse, put 2 or 3 fingers on your skin at your wrist below the base of your thumb.



Put 2 or 3 fingers on the side of your neck in the hollow area beside your Adam's apple. Be careful you do not press too hard; there is a risk you can get lightheaded.

Move your fingers until you feel your pulse. Use a timer (stop watch) and count the number of beats you feel for 10 seconds. For example at rest, you may feel 12 beats in a 10 second count. 12 beats in 10 seconds is 72 beats per minute.

Ask your Cardiac Rehab team for the right heart rate for your exercise. To see how your body responds to exercise, measure your pulse rate before and immediately after exercise (before you cool down).

Count the number of beats you feel in 10 seconds. It is important to count the number of beats you feel for 10 seconds as your heart rate drops quickly after exercise. For example, you may feel 20 beats in a 10 second count. 20 beats in 10 seconds is 120 beats per minute. Adjust your effort level to make sure you exercise with the right heart rate while keeping your RPE between 11 and 14.

### 4. Watch for symptoms:

Stop and talk to your Cardiac Rehab team (or doctor) if you have any symptoms such as:

- Pain
- Shortness of breath
- Dizziness

They will teach you how to modify your exercise so you are safe. For more information about symptoms, refer to the booklet titled, 'Managing Your Symptoms'.

#### **Safety Alert!**

Angina is a warning sign that your heart is under stress. When there is not enough blood and oxygen getting to your heart, you may feel pain or discomfort in one or more areas listed below.

You may feel pain (discomfort) in your:

- Chest
- Jaw
- Arms
- Upper back
- Throat

You may also feel short of breath, feel very tired (fatigue) or have nausea (upset stomach). Talk to your doctor and Cardiac Rehab team if you experience angina, dizziness or any other pain during exercise!

### **How do I progress my aerobic exercise?**

Over time, exercise starts to feel easier. Increase your exercise (time and intensity) to challenge yourself.

#### Step 1.

Ask your Cardiac Rehab team how you can safely progress your exercise program. Generally, we recommend increasing time first. Increase the amount of time you spend exercising by 5 to 10 minutes every 3 or 4 weeks. Work your way up to a total of 30 to 60 minutes each exercise session. You can break this time up with rest breaks or into 10 minute bouts of exercise throughout your day. When increasing the amount of time you spend exercising keep your exercise intensity the same.

#### Step 2.

Your Cardiac Rehab team will work with you to increase the intensity of your exercise program. After 3 or 4 weeks of 30- to 60-minute exercise sessions, your Cardiac Rehab team may suggest that you increase your exercise intensity level. They will teach you how to use the rating of perceived exertion (RPE) scale, Talk Test and heart rate when you increase your exercise.

### **Track your aerobic exercise**

Track your progress on your exercise diary. Your exercise team will review your exercise diary and help you progress your aerobic training program.





# Getting Active Tool

Name: \_\_\_\_\_

Exercise Prescription: \_\_\_\_\_

## Aerobic Training Diary

Date (mm/dd)	Type of Exercise	Distance (miles)	Duration (min/sec)	10 sec pulse		RPE	Symptoms/ Remarks/Other Activities
				Pre Ex.	Post Ex.		

<p><b>My Action Plan:</b></p> <ul style="list-style-type: none"> <li>➤ What do I want to do?</li> <li>➤ What will I realistically be able to do this week?</li> </ul> <p><b><u>My plan will include:</u></b></p> <ul style="list-style-type: none"> <li>➤ <u>What</u> I am going to do</li> <li>➤ <u>When</u> I am going to do it</li> <li>➤ <u>Where</u> I am going to do it</li> <li>➤ <u>How Much</u> I am going to do it</li> <li>➤ <u>How Often</u> I am going to do it</li> </ul>	<p>This week I will</p> <ul style="list-style-type: none"> <li>➤ _____ (what)</li> <li>➤ _____ (when)</li> <li>➤ _____ (where)</li> <li>➤ _____ (how much)</li> <li>➤ _____ (how often)</li> </ul> <p><b>My confidence rating that I can do this plan is:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; text-align: center;">1</td> <td style="width: 10%; text-align: center;">2</td> <td style="width: 10%; text-align: center;">3</td> <td style="width: 10%; text-align: center;">4</td> <td style="width: 10%; text-align: center;">5</td> <td style="width: 10%; text-align: center;">6</td> <td style="width: 10%; text-align: center;">7</td> <td style="width: 10%; text-align: center;">8</td> <td style="width: 10%; text-align: center;">9</td> <td style="width: 10%; text-align: center;">10</td> </tr> <tr> <td colspan="3" style="text-align: center;">not confident at all</td> <td colspan="4"></td> <td colspan="3" style="text-align: center;">totally confident</td> </tr> </table>	1	2	3	4	5	6	7	8	9	10	not confident at all							totally confident		
1	2	3	4	5	6	7	8	9	10												
not confident at all							totally confident														

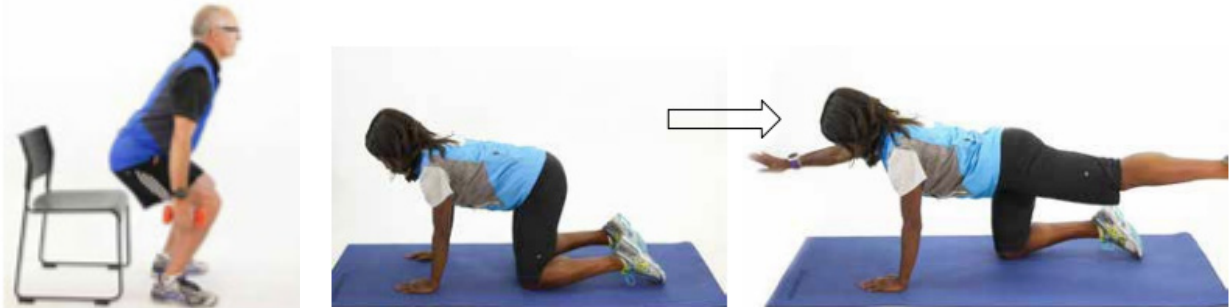
- Rating of Perceived Exertion (RPE)
- 6
  - 7 Very, Very Light
  - 8
  - 9 Very Light
  - 10
  - 11 Fairly Light
  - 12
  - 13 Somewhat Hard
  - 14
  - 15 Hard
  - 16
  - 17 Very Hard
  - 18
  - 19 Very, Very Hard
  - 20



# Resistance Training

## What it is

### What is resistance training?



Resistance training is a type of exercise that increases the strength and endurance of your muscles. Resistance training is done by lifting weights (also called dumbbells), using your body weight for resistance, or using exercise bands. There are many types of resistance training.

Below is a list of 3 types of resistance training. Your Cardiac Rehab team will recommend the type that will work best for you.

### Dumbbells or free weights



Dumbbells are common pieces of resistance training equipment. Dumbbells are also called ‘free weights’. They come in many different materials. Dumbbell materials include rubber, cast iron, and plastic. Dumbbells can come as a fixed weight in one solid piece. They can also come as adjustable weights, with a solid bar that you add weighted plates to.

### Resistance Training Machines



Resistance training machines are large pieces of equipment. Resistance training machines are usually found in a gym. Training machines use a weight and pulley system to give you resistance. You can buy these machines for home use.

### Exercise Bands

Exercise bands are large elastic bands used for resistance training. Exercise bands are a good choice if you don't have room for equipment. These bands are also portable, so they are good for travel. The colour of your exercise band tells you how much resistance it has.



Your Cardiac Rehab team will recommend a weight or resistance that is comfortable and challenging for you. You will be prescribed one of the following resistance training programs:

- Mini-Resistance Training Program (5 core exercises to get you started)
- Standard Resistance Training Program (10 exercises that will use the major muscle groups of your body from head to toe using a combination of your own body weight, dumbbells and exercise bands for resistance)
- Exercise Band Program (10 exercises that will use the major muscle groups of your body from head to toe using your own body weight and exercise bands for resistance)

Your Cardiac Rehab team will prescribe a program that is safe and effective for you.

### How it helps your heart

#### **What are the benefits of resistance training?**

Resistance training and aerobic exercise are both part of your exercise program. Both types of exercise help you make the most gains in your fitness.

As you get older, your muscles change and you lose almost one third of your muscle. This loss in muscle lowers your strength. Doing resistance training can reduce how much muscle you lose as you get older. It slows down your muscle loss.

The value of resistance training is that it:

- Increases your muscle
- Increases your strength
- Lowers your body fat
- Helps to manage your blood sugar (if you have diabetes or prediabetes)
- Helps to prolong independent living
- Makes everyday activities feel easier
- Helps make your bones stronger
- Helps make your joints stronger
- Improves your balance and reduces falls
- Improves your mood
- Improves your sleep
- Raises your self-confidence, self-image and quality of life

### How to exercise safely

#### What do I need to know before I start resistance training?

Speak to your Cardiac Rehab team if you have any of the health problems listed below. Your Cardiac Rehab team can make changes to your resistance training program to ensure you are safe.

- Untreated high blood pressure
- Abdominal or inguinal hernias that have not been repaired
- Glaucoma (eye problem) that is not treated
- Problems with your eyes because of diabetes, such as retinopathy
- Muscle or joint problems
- Difficulty getting up from the floor

#### How do I start resistance training?

Your Cardiac Rehab team will help get you started with resistance training. Generally, we recommend a weight (or colour of exercise band) that feels comfortable to do 10 repetitions.

#### How much weight should I lift?

Your Cardiac Rehab team will help you find out if you are using the correct weight or exercise band. They will ask you the following questions:

1. After doing the last repetition, do you feel that you can do 5 to 10 more repetitions? A repetition is one complete motion of an exercise. If you answer yes, the weight or exercise band is **too light or easy**.
2. Are you struggling to do the last repetition? If you answer yes, the weight or exercise band is **too heavy or hard**.

3. After the last repetition, do you feel as if you could do 2 to 3 more repetitions and no more? If you answer yes, this is a **good starting weight or exercise band to use.**

Keep your RPE between 11 (fairly light effort, strain and/ or discomfort) and 16 (a solid hard effort, strain and/ or discomfort).

Start with 1 set of 10 repetitions for each exercise. For example, perform the bicep curl 10 times. Start with 1 circuit of the exercise routine. For example, a circuit includes all the exercises in your program. Complete each exercise in the entire routine once before doing a second set.

### **How often and how intense is my resistance training?**

Your Cardiac Rehab team will recommend you do resistance training 2 times each week. This is the lowest number of times needed for you to gain benefit. If you enjoy resistance training, you can do it every other day, which is 3 times per week. Leave at least one day of rest between each resistance training session. This allows your body time to rest and repair your muscles between each exercise session.

The intensity of resistance training differs for everyone.

Below outlines the factors that change the intensity of your resistance training program:

1. The amount of weight you lift or amount of resistance from an exercise band will change the intensity. The heavier the dumbbell (or more resistance from a band) the higher the intensity.
2. The number of times you perform an exercise will change the intensity. The number of times you perform an exercise is called repetitions. The more repetitions you do, the higher the intensity.

## Resistance Training

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- 1 bicep curl = 1 repetition
- 2 bicep curls = 2 repetitions
- 3 bicep curls = 3 repetitions

Start with doing a bicep curl 10 times or 10 repetitions.

3. The number of times you repeat a group of repetitions changes the intensity. A set is a group of repetitions done without stopping. For example, doing a bicep curl 10 times without stopping.

If you do more than 1 set, take a rest between sets. The more sets you do, the higher the intensity.

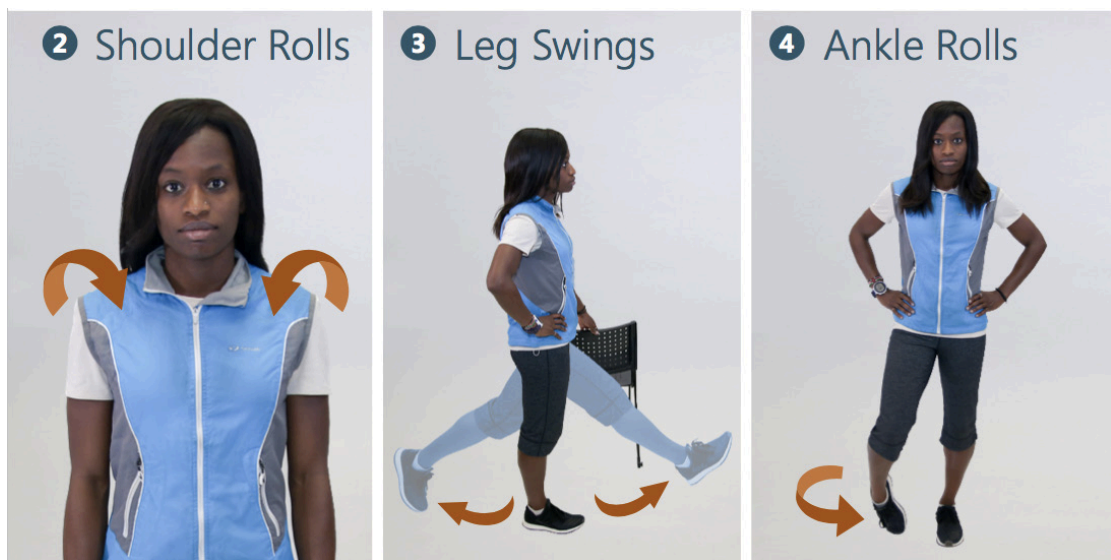
For example, do 2 sets of 10 bicep curls with a break in between.

### Safety tips for resistance training

Below are tips to ensure you are safe when you are doing resistance training.

Safety tips are:

- Stretch your muscles before you warm-up. Dynamic (moving) stretches may help improve your flexibility.





## Resistance Training

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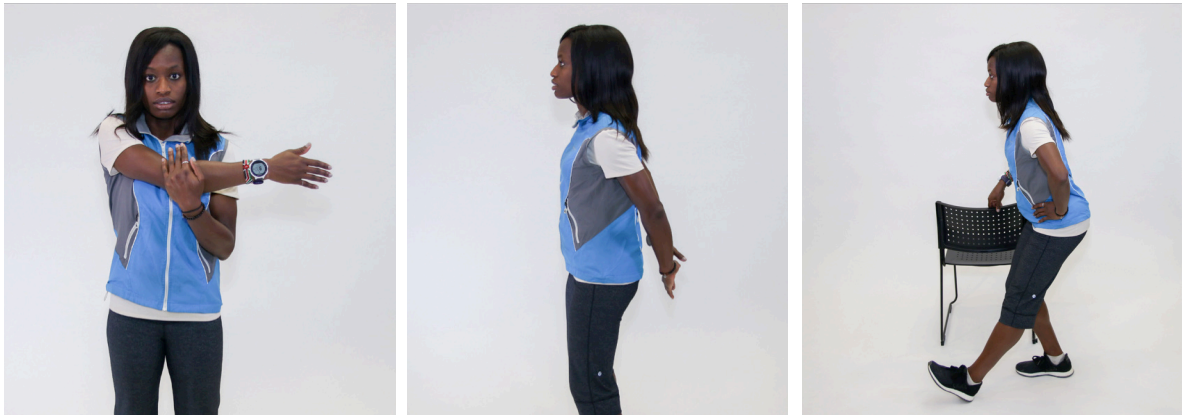
- Warm-up before resistance training and cool-down after resistance training. Try walking comfortably for 5 to 10 minutes as you warm-up and cool-down
- Do all exercises in the order prescribed
- Take at least a 30 to 60 second rest between exercises
- Use proper technique for each exercise. Technique is the way you do the exercises. Talk to your Cardiac Rehab team for help with your resistance training technique
- Do each exercise slowly and breathe normally. Do not hold your breath – this increases your blood pressure
- Lift the weight to a count of 2, lower the weight to a count of 3. This pace will ensure you are not rushing which can lead to injuries
- Keep your Rating of Perceived Exertion (RPE) between 11 (fairly light effort, strain and/ or discomfort) and 16 (a solid hard effort, strain and/ or discomfort). Keeping your RPE between 11 and 16 will ensure you are working at an intensity to get benefit without injuring yourself.

<b>Rating of Perceived Exertion Scale (RPE)</b>	
<b>6</b>	
<b>7</b>	<b>Very very light</b>
<b>8</b>	
<b>9</b>	<b>Very light</b>
<b>10</b>	
<b>11</b>	<b>Fairly light</b>
<b>12</b>	
<b>13</b>	<b>Somewhat hard</b>
<b>14</b>	
<b>15</b>	<b>Hard</b>
<b>16</b>	
<b>17</b>	<b>Very hard</b>
<b>18</b>	
<b>19</b>	<b>Very very hard</b>
<b>20</b>	

## Resistance Training

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- Stretch your muscles after you cool-down. Static (not moving) stretches may help improve your flexibility.



- Take at least one rest day between resistance training sessions. Rest will prevent injuries and allow your muscles to recover before the next session
- Stop your exercise if you feel:
  - Angina symptoms (chest discomfort)
  - Dizzy
  - Short of breath
  - Muscle or joint soreness

### Safety Alert!

Angina is a warning sign that your heart is under stress. When there is not enough blood and oxygen getting to your heart, you may feel pain or discomfort in one or more areas listed below.

You may feel pain (discomfort) in your:

- Chest
- Jaw
- Arms
- Upper back
- Throat

You may also feel short of breath, feel very tired (fatigue) or have nausea (upset stomach). Talk to your doctor and Cardiac Rehab team if you experience angina, dizziness or any other pain during exercise!

- Track your progress on your exercise diary. Your exercise team will review your exercise diary and help you progress your resistance training program. The resistance training exercises listed on the exercise diary can be found on the website 'Cardiac College' at [www.cardiaccollege.ca](http://www.cardiaccollege.ca)
- After your resistance training, your muscles may feel sore and stiff. This is normal. Muscle soreness happens because of very small tears that occur within your muscle. Muscle soreness happens when you first start resistance training, try a new exercise or increase the weight you lift.
- Soreness and stiffness happens many hours after you exercise and can last up to 4 days. Wait until all soreness and stiffness is gone before

trying the exercises again. Giving your muscles time to heal will allow you to make the most gains in strength. Talk to your exercise team if you are sore and stiff for more than 4 days

### How do I progress my resistance training?

Your body will adapt to each exercise over time. Your Cardiac Rehab team will progress your resistance training to ensure your body is still working hard enough to gain all the benefits of resistance training.

### How do I progress my repetitions and weights (or resistance bands)?

When you are ready, slowly increase the number of repetitions you do from 10 to 15



Once you can do 15 repetitions with ease:


- Increase the weight you lift by 2 to 5 pounds and drop your repetitions back down to 10


**OR**

- Change your exercise band for one that has more resistance and drop your repetitions back down to 10

Use the chart below to help you select the next correct weight or band colour

**Tool to help you increase the weight you lift or band you use**

<b>When progressing your dumbbells, follow this order</b>												
Lightest  Heaviest												
1 lb	2 lbs	3 lbs	5 lbs	8 lbs	10 lbs	12 lbs	15 lbs	20 lbs	25 lbs	30 lbs	35 lbs	40 lbs

<b>When progressing your exercise bands, follow this order</b>				
Lightest  Heaviest				
Yellow	Red	Green	Blue	Black

It is important to remember that:

- Not all exercises progress at the same rate
- Not all muscle groups will be ready to progress at the same time
- Not all muscles use the same weight

**How do I progress my sets?**

Once you can do 1 set for each exercise with ease, increase to 2 sets for each exercise. This can take 2 to 3 weeks. Do not do more than 2 sets.

**Track your resistance exercises**

**Resistance Training Diary**

Exercises	1. Dumbbell Row	2. Half Squat	3. Bicep Curl	4. Leg Curl	5. Lateral Raise	6. Heel Raises	7. Supine Fly/Wall Push up	8. Abdominal Exercise	9. Tricep Extension	10. Bird Dog
Other Exercise										
Date:										
Weight										
Reps & #Sets										
RPE										
Date:										
Weight										
Reps & #Sets										
RPE										
Date:										
Weight										
Reps & #Sets										
RPE										

**Medical Visits & Medication Changes:** List any changes in medication and hospital/emergency/lab/doctor's visits

Visits & Reason	Date	Name of Service/Test/Procedure

Medication(s)	Date of Change	Dose/Frequency

# Tips for Buying Exercise Equipment

Exercise equipment is great to use when the weather is too cold or too hot.

Before buying the equipment ask yourself the following questions:

- What is my current fitness level now?
- What is my goal?
- Is the item safe for me to use?
- How much do I want to spend?
- Does the item have a warranty?
- How does this item compare to other equipment?

Talk to your Cardiac Rehab Team to help answer these questions.

Below is a list of various types of exercise equipment and information about what you should consider before buying.

## **Treadmills**

### **Price:**

Treadmills vary in price. The difference in price is based on durability and the extra features included (such as computer programming and heart rate monitors). The durability and construction of the treadmill is most important.

### **Motor:**

It is important that the treadmill you purchase has a motor. Do not buy a manual treadmill. Manual treadmills make you drive the belt forward. The motor on the treadmill should be at least a 1.5 horse power motor. Turn on the motor of the treadmill and listen to much noise and vibration it makes. This will be important for you when you are listening to music or the TV while exercising.

## Tips for Buying Exercise Equipment

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### **Belt Widths and Lengths:**

The width of the belt is important for safety and comfort. Usually the width ranges from 17" to 22" and the lengths from 45" to 60".

### **Emergency Shut Off:**

The treadmill you choose should have an emergency shut off. This allows the treadmill to shut off if you fall.

### **Computer Feedback and Control Panel:**

The control panel of the treadmill should display speed, distance and time. Pre-programmed workouts may be an option that most treadmills have. They are not necessary.

### **Heart Rate Monitors:**

Some treadmills have contact heart rate monitors. You hold on to a hand-rail and the treadmill reads your heart rate and displays it on the control panel. It is not as accurate as taking it on your own or through the use of a transmitter type heart rate monitor.

## **Stationary Bikes**

### **Price:**

Prices ranges for stationary bikes depend on how many features are included.

### **Bike Styles:**

Choose a bike style best for you. This will depend on your comfort and any joint/muscle problems you have.

Upright Style: set up and look is very similar to traditional outdoor bikes.

Recumbent Style: these bikes have a wider chair/seat with a back support and the pedals are out in front of you unlike the upright bike where the



pedals are below you. This style of bike is becoming more popular as the comfort of the seat is greater.

### **Control Panel Features:**

You should be able to determine:

- the speed at which you are pedaling (revolutions per minute (RPM), kilometers per hour (KMPH) or miles per hour (MPH))
- the distance covered
- the time of cycling
- what level/tension you are working at

### **Other important features:**

- Foot straps
- Adjustable seat height so when seated, there is a 15 degree bend in your knee on extension
- Seat tilt

## **Elliptical Machines**

This machine is a great alternative for people who want to have a non-impact aerobic workout. It mimics walking or running and offers the option of incorporating the use of arm work as well.

### **Style:**

It is important to try the machine before buying. The size of machines and comfort can be different from each other. Some elliptical machines offer forward movement as well as backward movement.

### **Control Panel Features:**

You should be able to determine 1) the speed you are moving (revolutions per minute (RPM), kilometers per hour (KMPH) or miles per hour (MPH)),

2) the distance covered, 3) time of exercise, and 4) your level of intensity (how hard you are working).

### **Resistance Training Equipment**

There is a variety of equipment for resistance training.

The following options can be purchased:

- Dumbbell weights or “free weights” are common pieces of equipment to use for resistance training. They can be purchased in different materials, including rubber, cast iron or plastic. They can also be purchased as a fixed or adjustable weight.
- Resistance training machines are the pieces of equipment usually found in a gym. They incorporate a weight stack and pulley system that gives you resistance against a fixed movement. These machines can be purchased for home use as well.
- Exercise bands can be used for resistance training and may be a good choice if you do not have a lot of room to store equipment. If you need to, you can travel easily with this equipment. Each band colour equals a certain amount of resistance. The lighter the colour, the less resistance on the band. The darker the colour, the more resistance there is on the band.

### **Heart Rate Monitors**

Monitoring your heart rate during exercise is important to make sure you are working at a safe intensity. Manually checking your heart rate is usually done by feeling your pulse on your wrist or neck and counting the beats you feel over 10 seconds. Sometimes this can be challenging. A heart rate monitor may be used instead. A belt with a transmitter is worn around your chest and sends the information to a watch that you wear on your wrist. You

## Tips for Buying Exercise Equipment

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simply glance at your watch during your workout to know your heart rate. These monitors are very accurate. If you have an arrhythmia (irregular heart rhythm), it may not be accurate. Speak to your Cardiac Rehab Team before buying a heart rate monitor.



# Common Exercise Safety Tips

## General tips

### **Can I drink alcohol, have caffeine, smoke, or eat before I exercise?**

Do not have alcohol, caffeine, cigarettes or marijuana before exercise. Alcohol, caffeine, cigarettes and marijuana can increase your heart rate. If your heart rate is above your target heart rate range, then exercise is not safe. Alcohol, caffeine, cigarettes and marijuana also make your exercise feel harder.

Avoid exercise within 2 hours after a heavy meal. Your body needs time to digest all the food before it is ready for exercise. You can do light physical activity instead such as going for a slow walk with your dog, family or friends. Follow your usual eating and medicine schedule. Fit your prescribed exercise into your day when you are not too full from a meal.

### **Can I exercise when I'm ill?**

Do not exercise if you are ill with a chest infection or flu. If you have an infection and taking antibiotics you need to rest. Your body needs time to rest and to fight the illness.

Talk to your Cardiac Rehab team or doctor about when you can return to exercise.

Allow yourself the time to rest. When you are feeling better, restart your exercise slowly over time. Restart your exercise by doing half the time and less intensity. Think about how long you stopped exercising. It will take the same amount of time to build back up.

## Common Exercise Safety Tips

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For example, if you are prescribed to walk 2 miles in 40 minutes (a 20 minute per mile pace) and you stop exercising for 2 weeks then:

- Restart with 1 mile and build up slowly to 2 miles over the first week. Walk slower than your prescribed walking pace. Walk at a 22 minute per mile pace or slower.
- If you feel up to it, work on speeding your walking pace back to your prescribed pace during week 2

If you have questions, talk to your Cardiac Rehab team for help.

### **Do I need to wear running shoes?**

Use running shoes for your exercise. Do not use cross trainers, court shoes or walking shoes. Running shoes are more stable, have cushions and support. Have someone check your feet and the way you walk before you buy running shoes. This kind of check is done by a professional and a qualified salesperson to determine your specific shoe needs.

Shop for shoes during the middle of the day. Shop at this time since your feet naturally expand due to swelling and activity.

Your shoes must fit you well. Try different models of shoes. If the shoes are too tight, you can get blisters, sores and bruises. Have 1 cm or ½ inch width of space between your longest toe and the end of the shoe. This extra space allows for swelling when you exercise. Wear your shoes indoors only for the first 1 to 2 weeks. During this time indoors you can decide if the shoes are right for now. These shoes last 6 to 12 months or about 500 miles (800 to 1200 km).

### **Can I prevent muscle or joint injuries?**

If you have any muscle or joint injuries, start your exercise program slowly. Also start your exercise program slowly if you have old muscle or joint injuries. Allow your body to rest and heal from any injury. Start your exercise program slowly to prevent feeling tired as well. Your exercise program should not cause any pain or discomfort. Stop your exercise if you have any pain or discomfort. Try to exercise at a lower intensity or use lighter weights. Lighter intensity may lower your pain and discomfort. Talk to your Cardiac Rehab team or physiotherapist for help.

Once you exercise regularly, you may have some aches and pains. These aches and pains are from pushing yourself too hard. Pushing yourself too hard can cause injuries.

To avoid injuries, ensure you:

- Exercise at the right intensity level as prescribed by your Cardiac Rehab team
- Take rest days
- Do full warm-ups and cool-downs

If you start to feel any aches in your feet, knees, hips or lower back, take action:

First – Try a brand new pair of running shoes. Your old pair of shoes might be worn out. Worn out shoes no longer have the amount of cushioning and support you need.

Next – Walk at a slower pace. Take shorter steps while walking and see if this lowers your discomfort. Talk to your doctor or a physiotherapist if the discomfort persists.

After exercise, it is normal to be sore and stiff. Feeling sore and stiff happens when you try a new exercise or increase your intensity level. Most often, soreness and stiffness will go away on its own. Do a cool-down and stretch to decrease soreness and stiffness. If you feel sore and stiff for more than a week, see your doctor.

### How to exercise safely in hot weather

#### Can I exercise safely in hot weather?

High heat and humidity causes higher heart rates and blood pressures during exercise. Heat and humidity may also cause shortness of breath even with normal activity. You may also feel angina symptoms (chest pain), irregular heartbeats (palpitations), light-headed or dizzy.

Hot days also increase the smog and pollution in the air. Smog and pollution may also cause angina symptoms, irregular heartbeats, light-headedness or dizziness.

See the Heat Safety Index and Air Quality Health Index to see if it is safe for outdoor exercise.

#### Follow these steps:

##### Check the Weather Report

Check the local weather report at the time of your exercise and note the temperature, humidity and the air quality (smog alerts and the air quality health index).

##### Check the Heat Safety Index

The Heat Safety Index can help you decide if it is safe to exercise and go outdoors. This index uses temperature and percentage of humidity (how



## Common Exercise Safety Tips

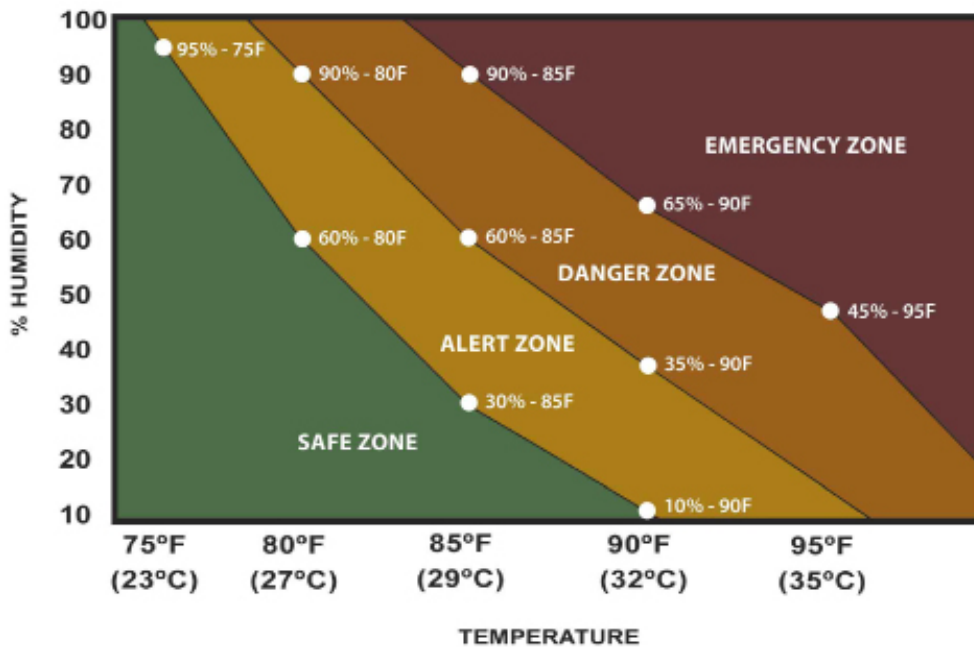
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much water is in the air) to create four safety zones: safe, alert, danger and emergency.

To use this index:

- Find the current local temperature along the bottom of the scale
- Find the current percentage of humidity along the left hand border of the scale
- Find the point on the graph where these two points come together. See what safety zone this point is found in
- Follow the instructions in the 'what you do for each heat safety zone' chart

### Heat Safety Index



*Take Heart, 2004; Dr. T. Kavanagh*

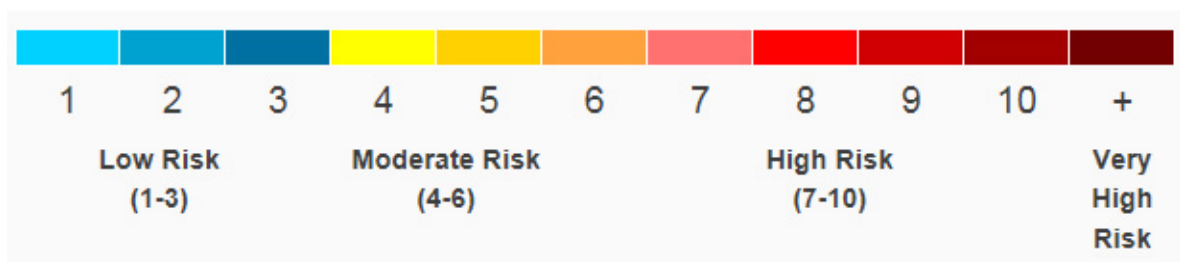
**What you do for each heat safety zone**

Safe	Alert	Danger	Emergency
<ul style="list-style-type: none"> <li>• Exercise as usual</li> <li>• Safe to exercise outdoors</li> </ul>	<ul style="list-style-type: none"> <li>• Decrease your exercise intensity</li> <li>• Watch for symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• No outdoor exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid going outdoors</li> </ul>

**Check the Air Quality**

Check the air quality before you exercise outdoors. When you check the air quality you are seeing how much air pollution there is. Air pollution happens when many pollutants (a substance that is harmful to your health) are in the air. Air pollution is a health concern for all people. It is an even greater concern for people living with heart or lung disease, older people and younger children.

When you check the weather report for air quality, look for:



## Common Exercise Safety Tips

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Air pollution can be measured by the Air Quality Health Index (AQHI). This index tells you the level of common air pollutants.

In Ontario, the range for the index is 0 to 10. The lower the number, the better the air quality. If you live outside of Ontario, go to your local public health website to find out how your area lists the air quality index.

Check the air quality index before you exercise outdoors then follow the instructions in the 'what you do for each air quality category' chart.

### What You Do for Each Air Quality Category

Low Risk 1 to 3	Moderate Risk 4 to 6	High Risk 7 to 6	Very High Risk 4 to 6
<ul style="list-style-type: none"><li>• Exercise as usual</li><li>• Safe to exercise outdoors</li></ul>	<ul style="list-style-type: none"><li>• Decrease your exercise intensity</li><li>• Watch for symptoms</li><li>• Consider rescheduling your outdoor exercise</li></ul>	<ul style="list-style-type: none"><li>• No outdoor exercise</li><li>• Exercise in an air conditioned environment only</li></ul>	<ul style="list-style-type: none"><li>• Avoid going outdoors</li></ul>

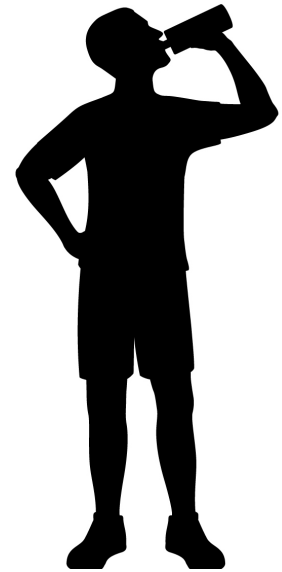
### **Stay hydrated (ensure you drink plenty of water)**

Drink water before, during and after your exercise. Dehydration (loss of body fluids) can lead to higher heart rates, angina symptoms (chest pain), shortness of breath and feeling dizzy.

If you exercise for up to 1 hour, follow the guidelines below:

- Drink 6-8 ounces of water (about 175 to 240mL) before exercise
- Drink 6-8 ounces of water (about 175 to 240mL) every 20 minutes during exercise and after you cool down
- Do not wait until you feel thirsty

Speak to your doctor if you have limits on how much fluid you can have each day.



### **Wear light coloured, loose, comfortable clothing**



This clothing reflects the sun and allows air flow to help you stay cool. Choose a fabric that helps sweat move away from your body. Dry wick (synthetic man-made) fabrics work best. Wear a hat or visor and use sunscreen to protect your skin. If you are traveling, give yourself about a week to adjust to the new temperature.

### **Do your warm up and cool down**

Warming up and cooling down for 5-10 minutes will reduce your chance of getting symptoms such as angina (chest pain), feeling dizzy, irregular beats (palpitations) and shortness of breath.

### **Reduce your speed and distance**

- Give your body time to get used to the hot weather. When the outdoor temperature goes up quickly, exercise at a slower pace and for a shorter distance for at least one week
- Use your heart rate and the rating of perceived exertion (RPE) scale to help you adjust how hard you are working while you exercise
- Plan your outdoor route to be a short “out and back” route

### **Know what medicines you take**

- Some beta blockers may make it harder for you to sweat and maintain your body temperature
- Diuretics (water pills) may cause a loss of a substance called potassium from your body. Potassium is also lost in sweat. Too much or too little potassium can cause irregular beats (palpitations)
- Diabetes medicines may not work as well in hot weather leading to hypoglycemia (low blood sugar level) or hyperglycemia (high blood sugar level)
- Talk to your doctor or pharmacist about your medicines. If you take any of the medicines above, you will need to take extra care to avoid overheating or dehydrating (loss of body water) in hot weather

### **Be aware of symptoms**

Be aware of angina symptoms (chest pain), feeling dizzy, irregular heartbeats (palpitations) or shortness of breath. If you feel any of these symptoms, slow down your exercise at once. If you have angina, follow the steps to manage your angina (refer to the booklet, ‘Managing Your Symptoms’).

Speak with your Cardiac Rehab team to see if your exercise prescription needs to be changed.

## Common Exercise Safety Tips

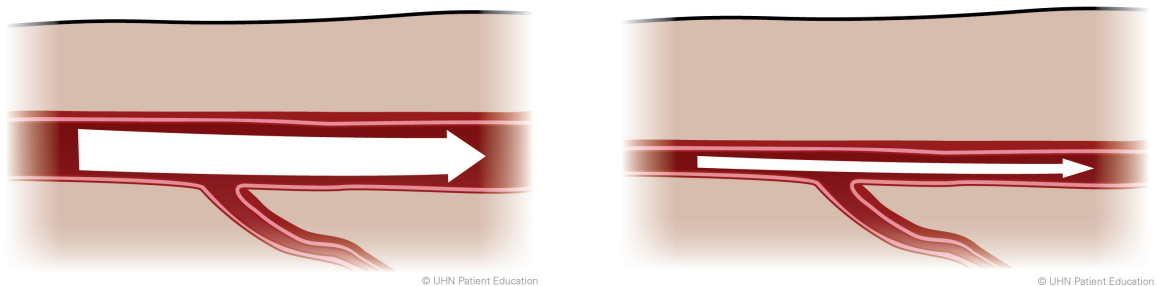
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**Stop** and talk to your Cardiac Rehab team (or doctor) if you have any symptoms such as pain, shortness of breath or dizziness. They will teach you how to modify your exercise so you are safe.

### How to exercise safely in cold weather

#### Can I exercise safely in cold weather?

Cold weather can make your exercise feel harder. Cold weather makes your arteries tighten.



When your arteries tighten, it is harder for blood to get through to deliver oxygen to your heart and exercising muscles. Cold weather also causes your heart rate and blood pressure to rise. High heart rates and blood pressures make your heart work too hard and put you at risk for heart problems.

You may experience:

- Symptoms of angina (chest pain)
- Irregular heartbeats (palpitations)
- Shortness of breath
- Dizziness

Breathing in cold air can also cause your coronary arteries (the blood vessels that bring blood and oxygen to your heart) to become narrow. This is known as a spasm of the coronary arteries and may result in angina.

You may prefer to exercise outdoors even when it's cold. Follow the precautions below for safe exercise:

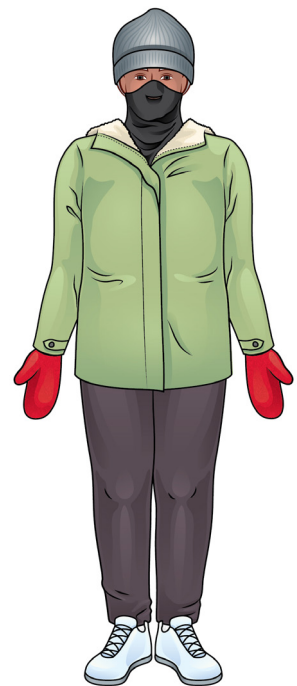
### **Check the weather forecast**

Do not exercise outdoors if the temperature with wind chill is below  $-10^{\circ}\text{C}$ . Your body will have to work too hard with colder temperatures. Take a rest day if it is too cold to exercise outdoors or exercise indoors.

### **Wear layers of clothing**

Staying warm will make exercise feel more comfortable. It also keeps your arteries wider to let blood flow to your heart and muscles

- The layer of clothing next to your skin should be moisture wicking 'dry-fit' material. Choose a clothing material such as polyester or a ribbed shirt with wool/cotton blend. You will be too cold if the layer on your skin gets wet from your sweat
- Wear a hat to help keep you warm
- Cover your mouth and nose with a scarf. This scarf helps warm the air you breathe and keeps you warmer
- Remove a layer of clothing if you get too warm



### **Wear your running shoes outdoors**

Your running shoes have the best traction and are lightweight.

### **Reduce Your Speed and Distance**

- Give your body time to get used to the cold weather. When the outdoor temperature drops quickly, exercise at a lower speed and for a shorter distance for at least one week
- Slow your pace of walking if the weather is causing you to work harder
- Use your heart rate and the rating of perceived exertion (RPE) scale to help you adjust how hard you are working while you exercise
- Slow down if it is windy or icy. A slower pace prevents falls
- Plan your outdoor route to be a short 'out and back' route in case the weather changes during your exercise
- Ask your Cardiac Rehab team to help you adjust your speed and distance when you exercise in cold weather

### **Choose an exercise route clear of snow and ice to avoid falls**

### **Drink water before, during and after your exercise**

Follow these guidelines to ensure you drink enough water:

- Drink 6-8 ounces of water (about 175 to 240mL) before exercise
- Drink 6-8 ounces of water (about 175 to 240mL) every 20 minutes during exercise and after you cool down
- Do not wait until you feel thirsty to drink
- Speak to your doctor if you have limits on how much fluid you can have each day



### **Be aware of symptoms**

Be aware of angina symptoms (chest pain), feeling dizzy, irregular heartbeats (palpitations) or shortness of breath. If you feel any of these symptoms, slow down your exercise at once. If you have angina, follow the steps to manage your angina (refer to the booklet, 'Managing Your Symptoms').

Speak with your Cardiac Rehab team to see if your exercise prescription needs to be changed.

**Stop** and talk to your Cardiac Rehab team (or doctor) if you have any symptoms such as pain, shortness of breath or dizziness. They will teach you how to modify your exercise so you are safe.

### **What exercise is not safe for me to do in cold weather?**

#### **Do not shovel snow**

Many people believe that shovelling snow is a great way to get exercise in the winter. But the effort required to remove snow is equal to non-stop jogging or running. This effort, combined with the added strain on your heart caused by cold weather, will put you at high risk for a heart event.

Research says that the highest number of people going to the emergency room for heart problems and sudden cardiac death occur with the first heavy snowfall of the year. Your risk of having a heart attack is higher if you have heart disease, a low level of fitness or if you had a stroke in the past.

To protect your heart, ask someone in your household not living with heart disease to shovel the snow.

## Common Exercise Safety Tips

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If you do not have someone in your household who can shovel snow, some cities/townships offer a free snow removal service for people living with heart disease or a chronic health problem.

Contact your local city/township office to inquire about the snow removal services offered to people living in your area. If your city/township does not offer a free snow removal service, you can also hire a snow removal service or a neighbour.

# Where to Learn More

**Cardiac College**

[www.cardiaccollege.ca](http://www.cardiaccollege.ca)

**Heart Wise Exercise**

[www.heartwiseexercise.ca](http://www.heartwiseexercise.ca)

**The Weather Network**

[www.theweathernetwork.com](http://www.theweathernetwork.com)

**Environment Canada**

[www.weather.gc.ca](http://www.weather.gc.ca)

**Air Quality Ontario - Ontario Ministry of the Environment and Climate Change**

[www.airqualityontario.com](http://www.airqualityontario.com)



EAT HEALTHY

# Eating well for a healthy heart





# Eating Well for a Healthy Heart

For people living with heart disease and their caregivers

Read this booklet to know:

- What a heart-healthy diet is
- Why it is important to eat a heart-healthy diet
- How to make healthy food choices every day





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# Eating the Mediterranean Way

## What it is

### What is the Mediterranean way?

There are powerful health benefits to eating in the traditional way of people living around the Mediterranean Sea. This includes eating healthy foods, enjoying meals with others and having an active lifestyle.

### How will this help my heart?

Eating the Mediterranean way can:

- Help control your blood pressure, blood cholesterol and blood sugars
- Lower your chance of developing health problems including heart disease, stroke, diabetes, and some cancers
- Lower your chance of having another heart attack

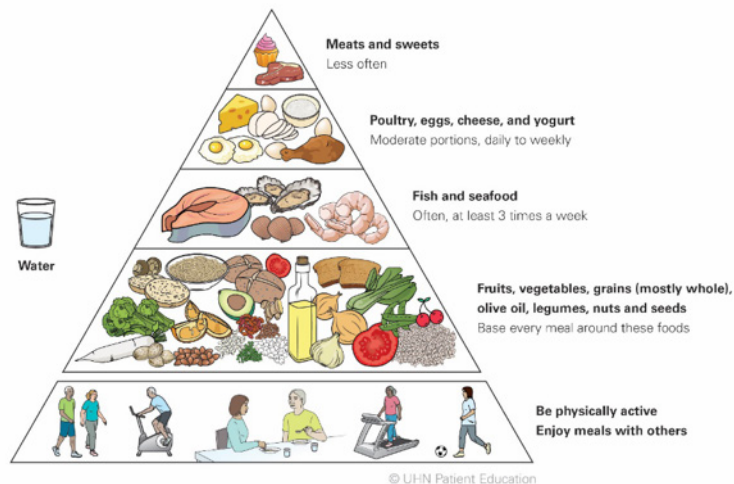
Eating the Mediterranean way includes:

- Lots of foods from plants (fruits, vegetables, whole grains and legumes)
- Eating fish and seafood more often
- Choosing healthy fats such as olive oil, nuts, and seeds regularly
- Having dairy, poultry, and eggs in moderation
- Having very little red meat (beef, pork, lamb) and sweets

### How to eat the Mediterranean way

#### How do I eat the Mediterranean way?

There is no right way to do this. You can choose foods that you like, using the pyramid as your guide (shown in the next image). Everyday foods and activities are at the base of the pyramid, along with olive oil. Foods closer to the top should be chosen less often.



#### The 11 steps to eating the Mediterranean way:



##### 1. Cook at home more often

- Use fresh, whole food ingredients to make your favorite dishes
- Avoid processed or prepared foods
- Eat out or get take out less often

### 2. Eat fruits and vegetables every day

- Fruits and vegetables are packed with heart healthy nutrients like vitamins, minerals, fibre and antioxidants. Antioxidants protect the cells in your body from damage that could lead to health problems
- Eat a variety of fruits and vegetables every day to lower your risk of heart attack, stroke and some cancers


Tip: Fill half your plate with vegetables at lunch and dinner.

	How much a day?	What is a serving?
<b>Fruits</b> 	3 or more servings	1 medium fruit ½ cup fruit
<b>Vegetables</b> 	5 or more servings	½ cup cooked, raw or frozen vegetables 1 cup leafy greens

### 3. Choose whole grains regularly

- Whole grains contain insoluble fibre that keeps your bowels regular and makes you feel full. Some whole grains also contain soluble fibre that helps lower cholesterol and manage blood sugar

Tips: Choose a whole grain cereal like oatmeal for breakfast, instead of processed cereals. At main meals, fill at least  $\frac{1}{4}$  of your plate with whole grains.

<p><b>Whole grains</b></p> 	<p><b>One portion is:</b></p> <ul style="list-style-type: none"><li><math>\frac{1}{2}</math> cup barley, farro, quinoa, bulgur, buckwheat, brown, or wild rice, freekeh</li><li><math>\frac{3}{4}</math> cup cooked oatmeal (large flake or steel cut)</li><li><math>\frac{1}{2}</math> cup whole grain pasta</li><li>1 slice 100% whole grain bread</li><li><math>\frac{1}{2}</math> small whole grain pita or tortilla</li></ul>
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### 4. Have legumes at least 3 times a week

- Legumes are rich in fibre, vitamins, minerals and protein
- Legumes contain soluble fibre that helps lower cholesterol and control blood sugar
- Legumes can help control blood pressure because they are high in nutrients like magnesium and potassium

Tips: Use legumes as an alternative to meat. Sprinkle them on salads, add them to soups or enjoy them as a healthy snack.

### Legumes



Beans, split peas, lentils, chickpeas, soybeans (tofu, tempeh and edamame)

**One portion is:**  $\frac{3}{4}$  cup cooked legumes

### 5. Include healthy fats with all meals

- Extra virgin olive oil is a high quality, healthy oil. Use extra virgin olive oil every day


Tips: Dip whole grain bread into olive oil, instead of using butter. Brush fish or vegetables with olive oil before broiling or grilling.

### Healthy fats




### 6. Enjoy nuts each week

- Nuts are a source of healthy fats. Eating them regularly can help lower cholesterol
- Eating one portion of nuts 3 or more times a week (as part of eating the Mediterranean way) can lower the risk of heart events in people at risk

<p><b>Nuts</b></p> 	<p>Portion size is important because nuts contain a lot of energy (calories).</p> <p><b>One portion is:</b></p> <p>1 oz dry roasted, raw, or unsalted nuts (This is about ¼ cup or a small handful)</p> <p>2 tablespoons of all natural nut butter (such as peanut or almond butter). Choose ones that are ‘100% nuts’ with no other ingredients.</p>
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**7. Choose fish and seafood at least 3 times a week**


- Fish and seafood contain healthy fats, which help prevent heart disease
- Choose fatty fish such as tuna, salmon, herring and sardines
- Choose seafood such as clams, scallops, oysters and mussels

<p><b>Fish and Seafood</b></p> 	<p>Choose fresh, frozen or canned.</p> <p>Choose canned fish or seafood that is packed in water and labelled ‘low sodium’.</p> <p><b>One portion is:</b> 3 to 4 oz This is about the size of a deck of cards</p>
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### 8. Have 2 to 3 servings of milk or alternatives each day

- Milk products (such as milk, yogurt and cheese) and alternatives (such as soy beverage) contain calcium, vitamin D and protein that keep bones healthy. And can also help to lower or manage blood pressure

<p><b>Milk and alternatives</b></p> 	<p><b>One portion is:</b></p> <p>1 cup (8 oz/250 mL) of milk, or soy milk</p> <p><math>\frac{3}{4}</math> cup plain kefir, yogurt, ricotta or cottage cheese</p> <p>1.5 oz part-skim cheese with 15 to 20% milk fat (MF)</p>
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### 9. Choose meat in moderation

- Plan your meals around foods from plants (such as vegetables, whole grains and legumes) instead of meat
- Use meat and poultry (chicken, turkey or duck) weekly, in moderation, to add flavour to vegetable dishes

<p><b>When you do eat meat</b></p>	<p>Choose poultry more often than red meat (beef, pork and lamb).</p> <p>Avoid processed meats such as sausages, bacon and deli meats.</p> <p><b>One portion is:</b> 3 to 4 oz This is about the size of a deck of cards.</p>
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**10. Flavour foods with tomatoes, garlic and onion at least 2 times a week**

- This sauce is used to flavour fish, chicken, pasta, vegetable and rice dishes.
- This sauce is an important part of eating the Mediterranean way because it is high in antioxidants. Antioxidants protect the cells of your body from damage that could lead to health problems
- To make this sauce, sauté tomatoes, garlic and onions (or leeks) in a little olive oil



**11. Eat less salt (sodium)**

- Flavour foods with herbs and spices instead of salt. Use little or no salt when cooking. Do not add salt at the table
- Use store-bought sauces and processed foods less often
- Eat out less often. When you do eat at a restaurant, ask for food to be prepared without salt or have sauces and dressings on the side

<b>Choosing foods low in sodium</b>	<b>Check the label! Choose products marked:</b>  'Low in sodium'  'No salt added'  '%Daily Value' of sodium is 5% or less
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### Sample menu

#### Breakfast

Plain oatmeal (large flake or steel cut) with  $\frac{1}{2}$  cup berries and  $\frac{3}{4}$  cup plain Greek yogurt

#### Morning snack

1 medium fruit and  
1 oz (or small handful) unsalted mixed nuts

#### Lunch

Bean pasta:  $\frac{3}{4}$  cup mixed beans, wholegrain pasta, vegetables, extra virgin olive oil and fresh herbs

Side salad:  $\frac{1}{8}$  avocado,  $\frac{1}{2}$  tomato,  $\frac{1}{2}$  cucumber drizzled in extra virgin olive oil and fresh herbs and lemon or balsamic vinegar.

#### Afternoon snack

Chickpea dip (hummus) with  
1 cup sliced red and yellow peppers

#### Dinner

Fish dish: 4 oz fish cooked in tomato, garlic and onion sauce with wild rice

Side salad: 2 cups green salad with, 1 oz feta cheese, extra virgin olive oil, and fresh herbs with lemon or vinegar.

#### Dessert

1 medium fresh fruit or  $\frac{1}{4}$  cup dried fruit



# Choosing Healthy Fats

## What is fat

### What are fats?

There are different types of fats in food. Having fat in your diet is important for your health. You can include fat in your diet and still have a healthy heart. Some fats are healthy for you and some are not. The type of fat you eat is more important than the total amount of fat you eat.



If certain types of fats (like saturated or trans fats) are eaten often and in large amounts they can:

- Increase your LDL (bad) cholesterol level
- Make your heart disease worse

Choosing foods with healthy fats can lower your LDL (bad) cholesterol levels.

### What are the different types of fats?

There are 3 main types of fat in the foods you eat:

- Unsaturated fats (oils, plants and fish)
- Saturated fats (animal foods and tropical oils)
- Trans fats (commercially prepared, processed foods)

### Choose more unsaturated fats

#### What is an unsaturated fat?

Unsaturated fats are known as “healthy” fats. They may also be referred to as monounsaturated and polyunsaturated fats.



Examples of foods with unsaturated fats are:

- All oils such as: olive oil, canola oil, peanut oil, sesame oil, corn oil and sunflower oil
- Olives
- Peanuts and natural or organic peanut butter
- Avocado
- All nuts such as: almonds, cashews, hazelnuts, pecans, and pistachios

Tip: To eat more unsaturated fats, use olive oil or canola oil for cooking.

Unsaturated fats lower your LDL (bad) cholesterol and can reduce your risk of heart attack and stroke. Unsaturated fats are mostly found in the oils of plants and fish.

#### What is an omega-3 fat?

Omega-3 fats are a type of unsaturated fat. They are found in both plants and fish.

Omega-3 fats can lower your triglyceride (a type of fat in your blood) levels. High triglyceride levels increase the chance that you will have a heart attack or stroke. This means you can reduce the chance that you will have a heart attack or stroke by eating foods with omega-3 fats. You will learn more about triglycerides later in this booklet.

## Choosing Healthy Fats

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Plant sources of omega-3 fats include:

- Walnuts
- Ground flaxseed and flaxseed oil
- Hemp hearts and hemp seeds
- Chia seed
- Canola oil

Omega-3 fats are also found in fatty fish.

Examples include:

- Trout
- Halibut
- Bass
- Salmon
- Tuna
- Mackerel
- Sardines

### **How much unsaturated fat should I eat?**

Be sure to include unsaturated fats in your diet in moderate amounts.

Canada's Food Guide recommends eating 2 to 3 tablespoons of healthy fats and oils each day for good health. This includes fats and oils added to foods (such as oil in salad dressing or spreads), as well as oils used for cooking.

### Choose less saturated fat

#### What are saturated fats?

Saturated fats are found in all animal products and tropical oils such as: cocoa butter, palm oil, coconut oil and palm kernel oils. Foods that have high levels of saturated fats include marbled or fatty meats and high fat dairy products.

Food that is high in saturated fats increases the LDL (bad) cholesterol in your blood.



#### Should I eat less saturated fat?

Choose foods with less saturated fats, eat smaller amounts and eat them less often. Focus on eating more plant proteins such as, legumes (dried beans, chickpeas, lentils), nut butters, soy products (such as tofu and edamame) and nuts and seeds to make your diet more heart healthy.

### Choose less trans fat

#### What is a trans fat?

Trans fats are made when an unsaturated fat (an oil) goes through a chemical process called “partial hydrogenation”. Partial hydrogenation is when food producers add hydrogen atoms (hence the term hydrogenation) to a healthy oil (such as safflower, canola or olive oil). This allows the liquid to become a solid and hard fat. Hydrogenation prevents separation of the fat. It can also help with the texture, look and feel of the product and help it stay fresh longer.





Peanut butter is a good example to show hydrogenation.

- Natural peanut butter needs to be stirred before spreading. The oil separates from the crushed nuts.
- Regular (processed) peanut butter does not need to be stirred. Hydrogenation prevents the oil from separating

Natural peanut butter is a better choice because it does not go through hydrogenation (so it does not contain trans fats).

### **Where are trans fats found?**

Trans fats are mostly found in prepared, processed foods like store-bought cookies, pies, muffins and crackers. They are also found in deep fried restaurant foods such as French fries, sweet potato fries, fried chicken and donuts.

Trans fats increase your LDL (bad) cholesterol and triglyceride levels and lower your HDL (good) cholesterol levels.

### **Should I eat less trans fat?**

It is best to avoid foods with high levels of trans fats. Trans fats are also called partially hydrogenated vegetable oil or shortening. Check the ingredients list on packaged foods for partially hydrogenated or hydrogenated oils/fats or vegetable shortening. This is a clue that trans fats are in the product.



# Choosing More Fibre

## What is fibre

### What is fibre?

Fibre is the part of the plant that your body cannot digest or break down. It is often called “roughage”. Fibre is only found in plant foods.



Examples of plant foods include:

- Vegetables and fruit
- Whole grains and cereals
- Legumes
- Nuts and seeds

### Why do I need to eat lots of fibre?

Eating fibre helps you manage your health.

You should eat a lot of fibre to:

- Lower your blood sugar
- Lower your LDL (bad) cholesterol
- Lower your blood pressure

Fibre also helps you feel full longer, after a meal. Feeling full longer can help you eat the right amount of food for your body (and not too much).

As fibre passes through your bowels, it attaches to fat and sugar. This delays absorption into your body. The waste is then removed from your body when you have a bowel movement (poo). Regular bowel movements (poos) also keep your digestive tract healthy.

### What are the different types of fibre?

Two types of fibre found in food are:

- Soluble
- Insoluble

Eating plant foods will give you both types of fibre.

### Soluble fibre

#### What is soluble fibre?

Foods with soluble fibre absorb water. The water makes the fibre swell and thicken to form a sticky gel.



Soluble fibre can help:

- Lower your blood cholesterol
- Manage your blood sugar
- Manage your blood pressure

Some examples of foods that are high in soluble fibre include:

- Barley
- Okra
- Eggplant
- Ground flax seed
- Legumes (beans, split peas, and lentils)
- Oats
- Avocado
- Pectin-rich fruits (apples, pears, berries, and citrus fruits like oranges)

## Choosing More Fibre

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- Psyllium
- Squash
- Sweet potato
- Turnip

### Insoluble fibre

#### What is insoluble fibre?

Foods with insoluble fibre do not absorb water.

Insoluble fibre:

- Helps prevent constipation (not able to poo)
- Keeps your digestive system healthy
- Prevents some types of cancers



Insoluble fibre is found in the bran portion of whole grains and the skins of fruit and vegetables.

Some examples include:

- Bran cereal
- Broccoli
- Brown rice
- Cabbage
- Celery
- Corn bran
- Green beans
- The skin on kidney beans and other legumes
- Leafy green vegetables

## Choosing More Fibre

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- Nuts
- Raisins
- Root vegetable skins
- Seeds
- Wheat bran
- Whole grains (such as wheat and rye)

### How to eat more fibre

#### How much fibre do I need every day?

Aim to eat 25 to 50 grams of fibre every day to keep your body healthy and manage your blood sugar.

If you do not eat 25 to 50 grams of fibre every day, you should increase the amount of fibre that you eat to this amount.

- Increase the amount of fibre you eat slowly, over time. This will help prevent gas and bloating.
- As you eat more fibre, make sure you drink more water. This will help the fibre work better. It will also help prevent gas and bloating.

Use the charts and tips in the next section to help you eat more fibre.

#### How can I eat more fibre?

There are many ways to eat more fibre. Below are tips on how to increase the amount of fibre you eat:

- Start your day with a cereal that is high in fibre. Try steel cut oats, Bran buds® or Fibre 1® cereal

## Choosing More Fibre

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- Add foods that are high in fibre to your cereal and yogurt. These foods include:
  - Fruit
  - Nuts
  - Ground flax seeds
  - Chia seeds
  - Psyllium
  - Oat bran
- Add high fibre foods (like the ones listed above) to recipes when you cook or bake
- Plan your meals and snacks to always include fresh or frozen fruit and vegetables
- Aim to fill half your plate with vegetables. The more colour on your plate, the more fibre and the more nutrition you get
- Add other foods that are high in fibre to meals. For example, add legumes, such as beans, dried split peas, chickpeas, or lentils. Try adding kidney beans or chickpeas to salads or rice dishes. Put lentils or black beans in soups. Include a bean salad as a side dish. To learn more about how to include beans/lentils in your diet please refer to the following pages, *“Cooking Tips for Legumes.”*

## Choosing More Fibre

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### Fibre chart

The next table is a list of plant foods and the amount of fibre each one contains. Use this table to help increase the amount of fibre you eat. Recall that you should eat 25 to 50 grams of fibre every day.

Food	Serving Size	Total Fibre (g)
<b>Vegetables</b>		
Artichoke, cooked	medium	4.7
Asparagus, cooked	6 spears	1.8
Beans, snap (Italian, green or yellow) cooked	125 mL (½ cup)	2.1
Beets, skinless	125 mL (½ cup)	1.8
Broccoli, cooked	125 mL (½ cup)	2.0
Brussels sprouts, cooked	125 mL (½ cup)	3.0
Carrots, cooked	125 mL (½ cup)	2.2
Carrot, raw	1 medium	1.5
Collard greens, cooked	125 mL (½ cup)	4.0
Corn, yellow on or off the cob, cooked	125 mL (½ cup)	2.1
Eggplant, cooked	125 mL (½ cup)	1.3
Kale, cooked	125 mL (½ cup)	1.4
Okra, cooked	125 mL (½ cup)	2.1
Peas, green, cooked	125 mL (½ cup)	5.6
Pepper, green or red	medium	1.1
Potato, white, with skin, baked	1 small	2.9
Rapini, cooked	½ cup	1.8



## Choosing More Fibre

Food	Serving Size	Total Fibre (g)
<b>Vegetables (continued)</b>		
Spinach, cooked	½ cup	2.3
Spinach, raw	1 cup	0.7
Sweet Potato, cooked, skinless	125 mL (½ cup) small	3.5 2
Squash, cooked	125 mL (½ cup)	1.3
Turnip, cooked	125 mL (½ cup)	1.6
<b>Fruit</b>		
Apple with skin	1 medium	3.5
Apricots, raw, with skin	3	2.1
Apricots, dried	60 mL (¼ cup)	1.7
Avocado	½ fruit	6.7
Banana	1 medium	2.1
Blueberries	125 ml (½ cup)	2.0
Figs, dried	2	1.6
Fig, fresh	2	2.9
Mango	½ fruit	1.7
Nectarine, raw with skin	1 medium	2.3
Orange	1 medium	2.3
Peach, raw with skin	1 medium	2.9
Pear, with skin	1 medium	5.3
Pineapple	125 mL (½ cup)	1.2
Prunes, dried	3	2.1
Plum, with skin	1 medium	1.1

## Choosing More Fibre

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Food	Serving Size	Total Fibre (g)
<b>Fruit (continued)</b>		
Raspberries	125 mL (½ cup)	4.2
Strawberries	125 mL (½ cup)	2.0
<b>Grains &amp; Cereals</b>		
Bran Buds (with Psyllium)	30 g (⅓ cup)	11.2
Barley, pearled, cooked	125 mL (½ cup)	2.0
Bread, whole grain	30 g (1 slice)	2.1
Brown rice, medium grain, cooked	125 mL (½ cup)	2.0
Bread, rye	35 g (1 slice)	1.4
Bran cereal (non flake)	30 g (½ cup)	9.7
Crisp bread crackers	3 crackers	5.0
Melba toast, whole wheat	4 crackers	1.5
Oat bran, cooked	175 mL (¾ cup)	5.9
Oatmeal, cooked	175 g (¾ cup)	3.7
Cheerios™	30 g (1 cup)	3.2
Pasta , cooked (whole wheat)	125 mL (½ cup)	2.1
Quinoa, cooked	125 mL (½ cup)	2.7
<b>Meat Alternatives- Plant Proteins</b>		
Almonds	60 mL (¼ cup)	3.8
Black beans, cooked	250 mL (1 cup)	12.7
Chickpeas, cooked	250 mL (1 cup)	7.9
Cashews	33 g (¼ cup)	1.0
Edamame, (soybean, green, cooked)	125 mL (½ cup)	4.0

## Choosing More Fibre

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Food	Serving Size	Total Fibre (g)
<b>Meat Alternatives - Plant Proteins (continued)</b>		
Flax seed (linseed), ground	15 ml (1 Tbsp)	1.9
Kidney beans, cooked	250 mL (1 cup)	12.3
Lentils, cooked	250 mL (1 cup)	8.9
Lima Beans	250 mL (1 cup)	9.5
Soybean, cooked	250 mL (1 cup)	11.4
Sunflower seeds, dry roasted	60 mL (¼ cup)	3.6
Tofu, fried pieces	150 g (¾ cup)	5.8
Peanuts	60 mL (¼ cup)	3.1

Source: “Canadian Nutrient File 2015.” [http://www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf\\_downloads-telechargement\\_fcen-eng.php](http://www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen-eng.php)  
[Accessed May 31, 2017]

## Choosing More Fibre

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### Sample menu

Here is a sample day's menu showing how to eat enough fibre (25 to 50 grams) in one day:

<b>Breakfast</b>	<b>Amount of Fibre (g)</b>
Oatmeal, cooked 175 g (¾ cup)	3.7
Blueberries, ½ cup	2.0
Soy beverage or skim milk, 1 cup	0
Almonds, ¼ cup	3.8
Flax seed (linseed), ground, 1 tablespoon	1.9
<b>Breakfast Total</b>	<b>11.4</b>

<b>Lunch</b>	
Spinach salad, 3 cups	2.1
Chickpeas, canned, low sodium, 1 cup	7.9
Cherry tomatoes, 15	1.5
Banana	2.1
Whole grain bread, 1 slice	2.1
Homemade dressing, olive oil and balsamic vinegar	0
Water	0
<b>Lunch Total</b>	<b>15.7</b>

## Choosing More Fibre

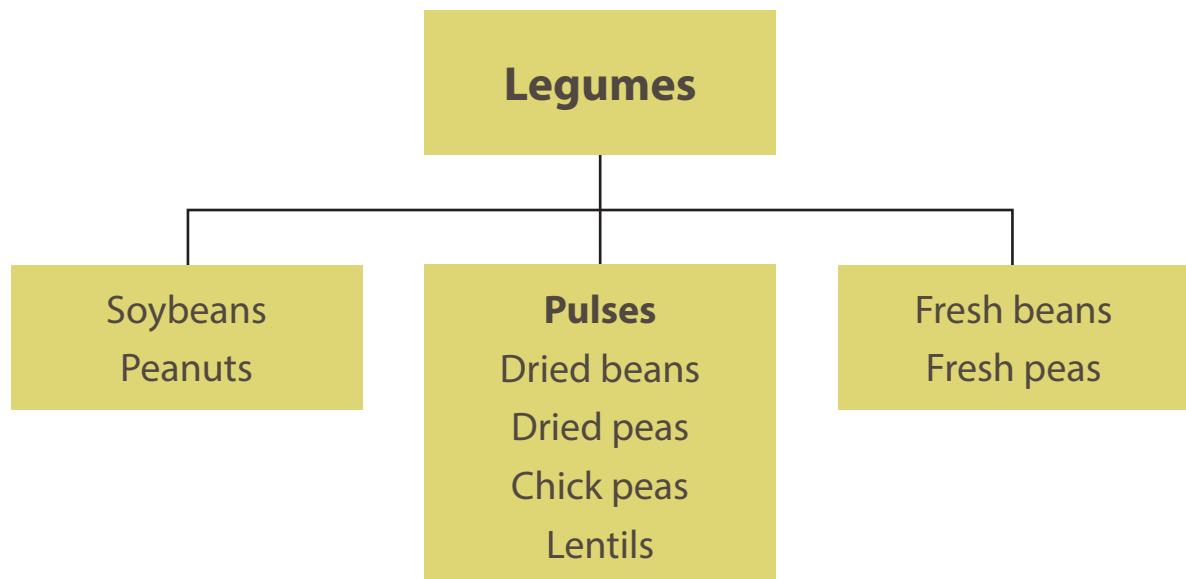
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<b>Dinner</b>	<b>Amount of Fibre (g)</b>
Grilled salmon, 4 oz (120 g)	0
Rapini, cooked, 1 cup	3.7
Carrots, cooked, ½ cup	2.2
Quinoa, cooked, 1 cups	5.4
Water	0
<b>Dinner Total</b>	<b>11.4</b>

<b>Total fibre for the day</b>	<b>38.4</b>
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### Cooking tips for legumes

Legumes refer to the plants whose fruit is enclosed in a pod, which include pulses, beans and lentils. “Pulses” refer to dried seeds (not fresh beans or peas). Soybeans and peanuts are different from pulses because they have more fat.



### Step 1: Buying and storing legumes/beans

Canned Legumes/Beans	Dried Legumes/Beans
Convenient and ready-to-use (no soaking required).	Need time to prepare.
Look for “Low Sodium” or “No Salt Added” options.	Found in bulk stores or in grocery stores (usually packaged in clear bags and found beside canned beans).
Thoroughly rinse and drain canned pulses to reduce your sodium intake.	Store in a container with a tight lid, in a cool, dark place.

**Storage:** Enjoy your legumes/beans within a year of buying them. Store your cooked legumes/beans in the fridge for 1-3 days or in the freezer for several months.

### Step 2: Rinsing and Soaking Dry Legumes/Beans

1. Rinse all dried legumes, beans and lentils before soaking
2. Discard soaking water and rinse beans with cold water. Rinsing will help wash away the part of the bean that causes gas

Which legumes, beans or lentils need to be soaked before cooking?

Soaking required	No soaking required (just rinse)
Dry beans, whole peas, chickpeas	Dry lentils, split peas

### Step 3: Cooking Dry Pulses

Cook dry legumes, beans and lentils using the stove, microwave, slow cooker or pressure cooker

Use 3 cups (750 mL) of water for every 1 cup (250 mL) of soaked beans

For the stove-top method:

1. In a pot, combine soaked beans and water. Boil the water.
2. Reduce heat and simmer.
3. To check for readiness, taste the bean for desired firmness.

## Choosing More Fibre

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<b>Legumes, Beans, Lentils</b>	<b>Cooking Time</b>
Beans	45-60 minutes
Peas	
Whole	1 – 1 ½ hours
Split	40 – 45 minutes
Lentils	
Whole green	30 – 45 minutes
Split red	10 – 15 minutes
Chickpeas	1 – 1 ½ hour

(Pulse Canada, 2012)



# Choosing Less Added Sugars

## **What is added sugar?**

The American Heart Association defines “added sugars” as the sugars and syrups added to foods during the processing or preparation. The sugars and syrups that are added at the table are also added sugars.

Sugars that are locked in and naturally found in foods such as fruit, vegetables, milk and whole grains are healthy choices. These foods are recommended as part of a healthy diet.

## **Why is added sugar bad for my heart?**

High sugar intake from added sugars is linked to high triglyceride levels. High triglyceride levels in your blood increase the chance that you will get diabetes and heart disease. Sugar in your diet will also raise your blood sugar.

## **How much added sugar can I have?**

The World Health Organization, Diabetes Canada and the American Heart Association recommend adults consume less than 10% of total calories from added or free sugars.

For women: No more than 100 calories or 6 teaspoons from added sugars each day

For men: No more than 150 calories or 9 teaspoons from added sugars each day

1 teaspoon has 4 grams of sugar.

### **How can I tell how much sugar is in my food?**

Look at the label. Sugar appears in many forms. Look for the names below in the ingredient list to find sugar in your food.

- Molasses
- Fruit puree
- Liquid sugar
- Honey
- Juice
- Invert sugar
- Cane sugar
- Agave
- Dextrin
- Sugar beets
- Sucrose
- Dextrose
- Maple syrup
- Brown sugar
- Glucose-fructose
- Malt syrup
- Anhydrous dextrose
- Brown rice syrup
- Cane syrup
- Fruit-juice concentrate
- High fructose corn syrup
- High maltose corn syrup

## Choosing Less Added Sugars

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The example below is an ingredient list for a food that has a lot of sugar:

**INGREDIENTS:** GLUCOSE-FRUCTOSE, CHICORY ROOT EXTRACT (INULIN FIBRE), SUGAR, WHOLE GRAIN ROLLED OATS, PUFFED WHEAT, HIGH MALTOSE CORN SYRUP, WHOLE GRAIN BARLEY FLAKES, CHOCOLATE CHIPS (CHOCOLATE LIQUOR, SUGAR, COCOA BUTTER, MILK INGREDIENT, SOY LECITHIN, NATURAL FLAVOUR), CORN BRAN, PALM KERNAL OIL, CRISP RICE (RICE FLOUR, MALT EXTRACT, SUGAR, SALT), CANOLA OIL, WHEAT BRAN, GLYCERIN, COCOA, WHOLE GRAIN WHEAT, GRAHAM FLOUR, SOY LECITHIN, CORN STARCH, NATURAL FLAVOUR, MALTODEXTRIN, SALT, TRISODIUM PHOSPHATE, BHT.

### Key Point:

You are more likely to get heart disease if you replace animal fats in your diet with processed or refined carbohydrate foods (such as added sugar, white flour and other low fibre foods). You can lower the chance that you will get heart disease by eating fats that come from plants (oils, avocado, nuts and seeds) instead of animal fat.

## Choosing Less Added Sugars

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### Sugar chart (amount of TOTAL sugar in common foods)

Total sugar includes naturally occurring and added sugars (1 teaspoon of sugar is equal to 4 grams).

Food	Serving Size	Total Sugar (g)	Teaspoons of Sugar
<b>Sugar sweetened beverages</b>			
Fruit juices	8 oz (250 mL)	30	7.5
Iced tea	1 can (355 mL)	32	8
Regular soda (dark & light colas)	1 can (355 mL)	34	8.5
Tomato juice	8 oz (250 mL)	10	2.5
<b>Cereals</b>			
All Bran Buds	1/3 cup	8 (contains 11 g of fibre)	2
Cheerios	1 cup (250 mL)	1 (contains 3 g of fibre)	-
Corn Flakes	1 cup (250 mL)	2	-
Fibre 1	1/2 cup (125 mL)	0 (contains 14 g of fibre)	-
Honey Nut Cheerios	1 cup (250 mL)	12	3
Raisin Bran	1 cup (250 mL)	17	4
<b>Milk &amp; Alternatives</b>			
Mango Lassi	8 oz (250 mL)	20	5

## Choosing Less Added Sugars

Food	Serving Size	Total Sugar (g)	Teaspoons of Sugar
<b>Milk &amp; Alternatives (continued)</b>			
Almond, soy, rice beverage, flavoured (e.g. chocolate, vanilla)	8 oz (250 mL)	20	5
Ice cream, chocolate	1 cup (250 mL)	36	9
Yogurt, plain	$\frac{3}{4}$ cup (175 mL)	13	3
Yogurt, fruit bottom	$\frac{3}{4}$ cup (175 mL)	26	6
Unsweetened yogurt (made with artificial sweetener)	100 g	8	2
<b>Sugars &amp; Sweets</b>			
Agave	1 tablespoon (15 mL)	14	3.5
Brown sugar	1 tablespoon (15 mL)	12	3
Gor (Jaggery)	1 tablespoon (15 mL)	13	3
Chocolate bar	1 bar (50 g)	26	6.5
Hard candy	3 pieces (18 g)	12	3
Honey	1 tablespoon (15 mL)	18	4.5
Jams & marmalades	1 tablespoon (15 mL)	10	2.5
Jelly beans	10 beans (28 g)	20	5
Maple syrup	10 beans (28 g)	12	10 beans (28 g)
Condensed Milk, canned	2 tablespoons (30 mL)	42	10.5

## Choosing Less Added Sugars

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Food	Serving Size	Total Sugar (g)	Teaspoons of Sugar
<b>Sugars &amp; Sweets (continued)</b>			
Gulab Jamun	2 (60 g)	30	7.5
Jalebi	2 (60 g)	27	7
Ras Malai	2 (160 g)	28	7
Besan Laddu	2 (90 g)	40	10
Kheer	$\frac{3}{4}$ cup (187 mL)	15	3
<b>Sauces &amp; Condiments</b>			
Tomato sauce (jarred or canned)	$\frac{1}{2}$ cup (125 mL)	6	1.5
Ketchup	1 tablespoon (15 mL)	3	1
Sweet 'n sour sauce	1 tablespoon (15 mL)	3	1
Mango Chutney	1 tablespoon (15 mL)	6.5	1.5
<b>Alcoholic Beverages &amp; Liqueurs</b>			
Vodka cooler	1 bottle (390 mL)	12	3
Sangria	8 oz (250 mL)	20	5
Cocktail, daiquiri	8 oz (250 mL)	14	3.5
Liqueur, coffee & cream	1.5 oz (45 mL)	10	2.5
Dessert wine, sweet	4 oz (125 mL)	10	2.5

## Choosing Less Added Sugars

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Source: "Canadian Nutrient File 2010." <http://www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/index-eng.php> [Accessed March 14, 2014]; USDA National Nutrient Database. <http://ndb.nal.usda.gov/ndb/search/list> [Accessed March 17, 2014] and Manufacturer's Data from Nutritionist Pro accessed June 2017.

**References:** Johnson, R.K. et al. (Sept. 2009). Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement From the American Heart Association. *Circulation*. 120: 1011- 1020. <http://circ.ahajournals.org/cgi/content/full/120/11/1011>





# Choosing Less Sodium

## **What is sodium?**

Sodium is a mineral that is needed for your body to maintain blood pressure and a normal fluid balance. Your muscles need sodium to contract and your nerves need sodium to send signals through your body.

## **Why do I need to manage how much sodium I eat?**

Your body needs some sodium to work well. Most Canadians eat too much sodium. Eating too much sodium can lead to high blood pressure. High blood pressure can lead to heart disease, stroke and kidney failure.

## **How to eat less sodium**

### **How much sodium do I need every day?**

People with heart problems or diabetes should eat 2000 mg or less of sodium each day. Talk to your Cardiac Rehab team to learn how much sodium is right for you.

All types of salt (for example, table salt, Kosher salt, rock salt, sea salt, and Himalayan salt) contain the same amount of sodium. One teaspoon of all types of salt has about 2300 mg of sodium.

### **How do I eat less sodium every day?**

Most [75 percent (%)] of the sodium that people in Canada eat comes from processed and restaurant foods. Only 10-25% comes from the salt shaker. This means that eating fewer processed and restaurant foods will reduce the amount of sodium you eat each day.

## Choosing Less Sodium

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Try these tips for eating less sodium:

1. Use herbs and spices in place of salt
2. Eat fresh food. For example, choose to eat home-cooked, oven-roasted beef instead of beef jerky or deli meats. Unprocessed fresh foods such as fruits and vegetables are naturally low in sodium
3. Look at the serving size. Compare the serving size to how much you eat. If you eat more than the serving size, you also eat more sodium than what the nutrition facts table shows you
4. Look at the nutrition facts information on packaged foods to see how much sodium is in food. Choose products with 5% Daily Value of sodium or less. For more information on how to read food labels, refer to the section titled 'How to read a food label' in this booklet. In restaurants, ask about lower sodium options. Ask for no salt added if possible. For example, ask for oil and vinegar to replace a creamy salad dressing
5. Eat less soups made with salty broths and salads with salty toppings (such as croutons, creamy salad dressings and salted nuts)
6. Rinse canned beans or canned fish before you eat them

**Sodium chart**

<b>Food</b>	<b>Serving Size</b>	<b>Sodium (mg)</b>
<b>Vegetables and fruit</b> Fresh and most frozen vegetables contain very little sodium.		
Tomato sauce (plain or with vegetables), canned/bottled	125 mL (½ cup)	585-721
Sauerkraut, canned/bottled	125 mL (½ 1/2 cup)	496
Peppers (jalapeno, hot chilli), canned/bottled	30 mL (2 Tbsp)	211-361
Pickles (sour, dill)	1 small	324-447
Vegetables, all varieties, canned	125 mL (½ cup)	255-417
Tomato juice and vegetable cocktail	125 mL (½ cup)	345
Stewed tomatoes, canned	125 mL (½ cup)	298
Sun-dried tomatoes	7 tomatoes	287
Pizza sauce	125 mL (½ cup)	246
Olives, canned	4 olives	135-233
<b>Grain products</b> Grains such as rice, barley, quinoa, oats and wheat are low in sodium.		
<b>Cereal</b>		
Cream of wheat, all types, cooked	175 mL (¾ cup)	370
Dry, all varieties	30 g	242-332
Oatmeal, instant, cooked	175 mL (¾ cup)	216-240

## Choosing Less Sodium

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Food	Serving Size	Sodium (mg)
<b>Other grain products</b>		
Crackers, all varieties, salted	30 g	192-335
Bread roll (rye, French)	1 roll (35 g)	231-321
Bread, all types	1 slice (35 g)	147-238
Muffin (carrot, blueberry, chocolate chip)	1 small (66 g)	203-232
Soda crackers, unsalted	10 (30 g)	230
Bagel, all varieties	½ bagel (45 g)	199-226
<b>Milk and alternatives</b>		
Buttermilk	250 mL (1 cup)	223-272
<b>Cheese</b>		
Cottage cheese (1%, 2%)	250 mL (1 cup)	788-970
Blue	50 g (1 ½ oz)	698-904
Processed cheese slices (cheddar, Swiss)	50 g (1 ½ oz)	685-794
Feta	50 g (1 ½ oz)	558
Cheese spread	30 mL (2 Tbsp)	491-503
Cheddar, Colby, edam, gouda, mozzarella, provolone, camembert	50 g (1 ½ oz)	208-482
Cottage cheese, fat free	250 mL (1 cup)	287

## Choosing Less Sodium

Food	Serving Size	Sodium (mg)
<b>Meat and alternatives</b>		
Fresh and unprocessed frozen meat, poultry and fish contain very little sodium. Bagged dried peas, beans and lentils contain little sodium.		
<b>Meat</b>		
Bacon, cooked	75 g (2 ½ oz)	1555-1920
Bacon (back bacon/peameal, English style bacon), cooked	75 g (2 ½ oz)	982-1160
Ham, cured, cooked	75 g (2 ½ oz)	621-1125
Beef jerky	75 g (2 ½ oz)	976
Corned beef, canned	75 g (2 ½ oz)	754
Ham, reduced sodium, cooked	75 g (2 ½ oz)	727
<b>Poultry</b>		
Turkey bacon	75 g (2 ½ oz)	1714
Turkey, smoked	75 g (2 ½ oz)	747
Chicken/turkey, rotisserie/ready to serve, barbecued	75 g (2 ½ oz)	253-628
Chicken/turkey, canned	75 g (2 ½ oz)	350-540
Chicken nuggets or burger, cooked	75 g (2 ½ oz)	334-418
<b>Meat products</b>		
Salami or pepperoni, all varieties	75 g (2 ½ oz)	753-1695
Ham or chicken, canned	75 g (2 ½ oz)	774-1024
Luncheon/deli meat, all varieties	75 g (2 ½ oz)/ 3 slices	552-970
Wiener, frankfurter, all varieties, cooked	75 g (2 ½ oz)	598-943

## Choosing Less Sodium

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Food	Serving Size	Sodium (mg)
Chorizo (beef, pork)	75 g (2 ½ oz)	926
Sausage, all varieties, cooked	75 g (2 ½ oz)	418-905
Luncheon/deli meat (pork, chicken), reduced sodium	75 g (2 ½ oz)	710
Salami or bologna, all varieties, reduced sodium	75 g (2 ½ oz)	467-702
Ham, honey, cooked	75 g (2 ½ oz)	675
Liverwurst	75 g (2 ½ oz)	525-645
Pate, canned	75 g (2 ½ oz)	290-605
Blood sausage/blood pudding, cooked	75 g (2 ½ oz)	510
Sausage, all varieties, reduced sodium, cooked	75 g (2 ½ oz)	441
Wiener, frankfurter, all varieties, reduced sodium, cooked	75 g (2 ½ oz)	233
<b><i>Fish and seafood</i></b>		
Mackerel or cod, salted	75 g (2 ½ oz)	1353-3338
Anchovies, canned	75 g (2 ½ oz)	2751
Fish, all varieties, smoked	75 g (2 ½ oz)	572-764
Herring, pickled or kippered	75 g (2 ½ oz)	652-688
Shellfish (crab, shrimp, calamari, oyster, lobster, mussels), canned or cooked	75 g (2 ½ oz)	250-631
Caviar (red, black)	75 g (2 ½ oz)	450
Fish sticks, cooked	75 g (2 ½ oz)	316
Fish (sardines, salmon, tuna, mackerel), canned	75 g (2 ½ oz)	254-379

## Choosing Less Sodium

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Food	Serving Size	Sodium (mg)
<b><i>Meat alternatives</i></b>		
Meatless (bacon, bacon bits), cooked	75 g (2 ½ oz)	418-905
Baked beans, all varieties, canned	175 mL (¾ cup)	710
Refried beans, canned	175 mL (¾ cup)	467-702
Meatless (sausage, chicken, meatballs, fish sticks, wiener, luncheon slices), cooked	75 g (2 ½ oz)	675
Legumes (dried beans, pea, lentil), canned all varieties	175 mL (¾ cup)	525-645
Vegetarian meatloaf or patty, cooked	75 g (2 ½ oz)	290-605
Pumpkin or squash seeds, salted, without shell	60 mL (¼ cup)	510
Nuts (peanuts, almonds, cashews), salted, without shell	60 mL (¼ cup)	441
Egg substitute	125 mL (½ cup)	233
<b><i>Other</i></b>		
Salt (table, Kosher, pickling, sea)	5 mL (1 tsp)	1720-2373
Salt, seasoned	5 mL (1 tsp)	1550
Yeast extract spread	2 Tbsp (30 g)	1322
Soy sauce	15 mL (1 Tbsp)	914-1038
Salt substitute, Cardia	5 mL (1 tsp)	1080
Salt substitute, half salt	5 mL (1 tsp)	800
Sauce, teriyaki	15 mL (1 Tbsp)	700

## Choosing Less Sodium

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<b>Food</b>	<b>Serving Size</b>	<b>Sodium (mg)</b>
Soy sauce, reduced sodium	15 mL (1 Tbsp)	608
Sauce (cheese, nacho cheese)	60 mL (1/4 cup)	367-529
Oyster sauce	15 mL (1 Tbsp)	499
Salsa, all varieties	60 mL (1/4 cup)	394-466
Sauce (steak, barbecue)	30 mL (2 Tbsp)	355-435
Ketchup, yellow mustard or relish	30 mL (2 Tbsp)	334-358
Sauce, teriyaki, reduced sodium	15 mL (1 Tbsp)	325
Capers, canned	15 mL (1 Tbsp)	258
<b>Snacks</b>		
Pretzels (soft, hard)	1 small or 50 g	860-870
Cheese puffs	50 g	455-642
Popcorn, flavoured or plain microwave (packaged)	50 g	314-529
Popcorn, flavoured, reduced sodium	50 g	245
Corn nuts, all varieties	50 g	274-488
Chips (tortilla, vegetable, potato, soy), all varieties	50 g	421-502

Source: Dietitians of Canada (from Canadian Nutrient File 2011)



### Sodium content in some restaurant foods

Food	Portion	Sodium (mg)
Pepperoni pizza slice, large	295 g	1630
Bacon & 2 eggs	124 g	929
Big Mac	208 g	1020
Fries, small	70 g	190
Chicken Caesar salad	317 g	1100
Oven roasted sliced turkey meat sandwich on whole wheat bread	236 g	1380



# Keeping Healthy Triglyceride Levels

## What are triglycerides?

Triglycerides are a form of fat that is carried in your blood.

- High levels of triglycerides increase your risk for heart disease and a heart attack
- High fat foods, sugar and alcohol can lead to high levels of triglycerides
- People living with pre-diabetes or diabetes often have a higher than normal triglyceride level
- A Mediterranean diet pattern can lower your triglyceride level

## What is the healthy target for my triglyceride level?

A healthy target for triglycerides is less than 1.7 mmol/L. Ask your doctor about your triglyceride level the next time you get your blood work results from the lab.

## How do I lower my triglyceride level?

Eat foods that are part of the Mediterranean Way of eating to lower your triglyceride level:

### 1. Vegetables, fruit, whole grains, legumes, nuts and seeds

These foods are high in fibre and provide lots of vitamins and minerals that your body needs.

- Aim to include a vegetable and/or fruit every time you eat a main meal
- Eat a mix of different coloured vegetables. Eating vegetables of different colours will give you different nutrients
- Choose low glycemic index foods made from whole grains (such as barley, oatmeal, quinoa, brown or wild rice, kasha)

## Keeping Healthy Triglyceride Levels

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- Add legumes (dried beans, chickpeas and lentils) to foods you already eat. Add a handful of legumes to a green salad or pasta dish.
- Have nuts and seeds as a snack instead of granola bars

### 2. Fish

Omega-3 fats are a type of healthy fat found in fish and some plant foods. Omega-3 fats can lower triglycerides and reduce inflammation (damage to the tissues of your body that can lead to disease such as arthritis, heart disease and cancer).

- Aim to eat fatty fish 3 times each week (fresh or canned). Examples include: trout, halibut, bass, salmon, tuna, mackerel and sardines
- Eat plant sources of omega-3 fats such as walnuts, ground flaxseed & flaxseed oil, hemp seeds and hemp hearts, chia seed, and canola oil. Add hemp hearts, chia seed or ground flax seed to other foods

### **Avoid foods that raise triglyceride levels:**

#### **1. Added or free sugars including:**

- All types of sugar (raw sugar, white or brown sugars)
- Honey
- Sweets, pastries, desserts, granola bars
- Juices
- Jams, jellies, syrup
- Chocolate
- Candy
- Regular pop
- Sugar sweetened drinks

### **2. Refined and processed carbohydrate foods:**

- Sugar
- Crackers
- White flour (such as white bread)
- Short grain sticky white rice or instant rice
- Instant mashed potatoes
- Instant noodles
- Rice cakes

### **3. Too much alcohol**

Some of the medicines you take may react poorly with alcohol. Talk to your doctor or pharmacist about how your medicines react with alcohol before you drink alcohol.

If you do not drink alcohol, we are not suggesting you start. If you drink alcohol, limit the amount you drink to avoid high triglyceride levels.

- Men: limit alcohol to 14 drinks each week at most and no more than 2 drinks on any day
- Women: limit alcohol to 9 drinks each week at most and no more than 2 drinks on any day

One Standard Drink equals 17.2 mL of ethanol or:

- 355 ml (12 oz) of 5% beer
- 44 ml (1.5 oz) of 80 proof (40%) spirits (such as vodka, rum, whisky, and gin)
- 148 ml (5oz) of 12% wine

### **4. Trans fats – (refer to the section titled, ‘Choose less trans fats’ in this booklet to learn more).**



# Keeping Healthy Cholesterol Levels

## What is cholesterol?

Cholesterol is a wax-like substance found in your body.

Your body needs cholesterol to:

- Make vitamin D
- Make bile (a fluid made by the liver to help break down fats)
- Make male and female hormones (testosterone and estrogen)
- Keep your cell membranes (the wall that lines the cells in your body) healthy

Your liver makes most of the cholesterol in your body. The rest comes from the animal products you eat. Only animal products have cholesterol (animal products include meat, fish, eggs, and dairy). This does not mean you need to avoid these foods.

## Types of cholesterol

There are two main types of cholesterol:

1. Low density lipoprotein (LDL) cholesterol
2. High density lipoprotein (HDL) cholesterol

## What is LDL Cholesterol?

LDL cholesterol is often called 'bad' cholesterol. You need some LDL cholesterol for your body to function. LDL cholesterol is a problem when levels get too high in your blood.

- When LDL (bad) cholesterol gets too high, it can slowly collect as plaque on the walls of your blood vessels.
- If too much plaque collects, the plaque narrows or blocks your blood vessel. This prevents blood from getting to your heart or brain.

- When blood cannot get to your heart or brain, you can have a heart attack or stroke.

You will learn how to keep your LDL (bad) cholesterol level low later in this chapter.

### **What foods increase my LDL cholesterol?**

Foods high in trans and saturated fat increase your LDL (bad) cholesterol level. Trans fats are found in prepared, processed foods. Saturated fats are found mostly in animal foods (such as meat, eggs and dairy).

### **What is the healthy target for my LDL cholesterol level?**

Your LDL (bad) cholesterol level is measured from a blood test. A healthy target for your LDL (bad) cholesterol level is less than 2.0 mmol/L.

### **What is HDL cholesterol?**

HDL cholesterol is often called 'good' cholesterol. HDL cholesterol helps carry LDL (bad) cholesterol away from the walls of your blood vessels.

### **What foods increase my HDL cholesterol level?**

Foods that have unsaturated fats can increase your HDL (good) cholesterol level. For more information about unsaturated fats, refer to the section titled, 'Choose more unsaturated fats', in this booklet.

### **What is the healthy target for my HDL cholesterol level?**

Your HDL (good) cholesterol level is measured from a blood test. A healthy target for your HDL (good) cholesterol level is greater than 1.0 mmol/L.



# Keeping a Healthy Blood Pressure

The 5 actions below are proven to help people reduce their blood pressure.

## **1. Limit foods with a lot of added sodium**

Eat less of processed, prepared, packaged foods such as frozen dinners and instant side dishes. These foods are often higher in sodium.

Some people try the DASH eating plan. DASH stands for "dietary approaches to stopping hypertension (high blood pressure)." Research shows how the DASH eating plan can help lower your blood pressure. The DASH eating plan is a similar eating pattern to the Mediterranean way of eating.

The DASH eating plan includes:

- Low sodium foods
- Whole grains
- Lots of fruits and vegetables
- Lower fat dairy products
- Fish and poultry
- Unsalted nuts and seeds
- Legumes

The DASH eating plan also suggests lower amounts of:

- Processed, prepared foods
- Red meat
- Sweets
- Drinks that contain sugar

## Keeping a Healthy Blood Pressure

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Food Group	Daily Servings
Grains and grain products	7–8
Meats, poultry, and fish	2 or less
Vegetables	4–5
Fruit	4–5
Low-fat or fat-free dairy products	2–3
Fats and oils	2–3
Nuts, seeds, dry beans, and peas	4–5 per week

Source: *National Heart, Lung and Blood Institute* For more information on the DASH eating pattern visit: <http://www.nhlbi.nih.gov/health/health-topics/topics/dash/>

### **2. Eat foods (not supplements) that contain potassium, magnesium and calcium**

Potassium, magnesium and calcium from food sources may help to reduce blood pressure.

Get potassium from fruit, vegetables, nuts/seeds, fish and poultry and whole grains.

Get magnesium from legumes, nuts, dark green vegetables and whole grains.

### **3. Get calcium from eating dairy products, fortified soy beverages, tofu, broccoli, almonds, sardines, kale and cooked collard greens**

Sardines are high in calcium but can also have a high amount of sodium per serving. Choose canned fish in water without added salt (labeled 'no salt added' or 'low sodium').

### **4. Drink less alcohol**

Too much alcohol at one time can increase your blood pressure. The amount of alcohol you can drink without raising your blood pressure differs for women and men.

- Men: limit alcohol to 14 drinks each week at most and no more than 2 drinks on any day
- Women: limit alcohol to 9 drinks each week at most and no more than 2 drinks on any day

One Standard Drink equals 17.2 mL of ethanol or:

- 355 ml (12 oz) of 5% beer
- 44 ml (1.5 oz) of 80 proof (40%) spirits (such as vodka, rum, whisky, and gin)
- 148 ml (5oz) of 12% wine

### **5. Exercise regularly**

Doing aerobic exercise such as walking or biking can lower your blood pressure. Follow your exercise prescription to make the most gains in your health while keeping your heart safe.



# How to Read a Food Label

## What is a food label?

Food labels are found on packaged foods and include a list of ingredients, a nutrition facts table and nutrition claims. In Canada, there are laws that describe how food must be labeled. Almost all packaged foods must have a list of ingredients and a nutrition facts table.

## List of ingredients

### What should I know about the list of ingredients?

All ingredients in the food item are listed by most to least amount of weight. This means that foods contain more of the ingredients at the start of the list and less of the ingredients at the end of the list. The ingredient list can help you look for certain ingredients and help you avoid those that you have been advised not to eat.

## Nutrition Facts Table

### What should I know about the Nutrition Facts Table?

The nutrition facts table tells you the amount of nutrients in a packaged food per serving size. Nutrients are the parts of food that you need for health and wellness. There are 13 nutrients that must be listed on the nutrition facts table. The 4 nutrients from this table that affect your heart health the most are: saturated fat, trans fat, sodium and fibre.

<b>Nutrition Facts</b>	
<b>Valeur nutritive</b>	
Serving Size (172 g) / Portion (172 g)	
Amount	% Daily Value
	% valeur quotidienne
<b>Calories / Calories</b> 200	
<b>Fat / Lipides</b> 1 g	<b>1 %</b>
Saturated / saturés 0.3 g	<b>1 %</b>
+ Trans / trans 0 g	
<b>Cholesterol / Cholestérol</b> 0 mg	
<b>Sodium / Sodium</b> 7 mg	<b>0 %</b>
<b>Carbohydrate / Glucides</b> 36 g	<b>12 %</b>
Fibre / Fibres 11 g	<b>45 %</b>
Sugars / Sucres 6 g	
<b>Protein / Protéines</b> 13 g	
Vitamin A / Vitamine A	1 %
Vitamin C / Vitamine C	1 %
Calcium / Calcium	4 %
Iron / Fer	24 %

### **Serving Size**

The nutrition facts table tells you how much of the packaged food is in 1 serving. In the nutrition facts table shown, it tells you that one serving of this food is 3/4 cup or 175 grams (g). If you eat the serving size shown in the table you will get the amount of calories and nutrients that are listed. Always compare the serving size on the package to the amount that you eat.

### **Sodium**

Sodium is found in salt. Sodium helps to balance the fluids in your body. For some people, eating too much sodium can be harmful to your body.

### **Fibre**

Getting enough fibre is important to manage your cholesterol level and blood sugar level. Fibre also helps you to have regular bowel movements (poos).

### **% Daily Value**

5% daily value or less means the food has a little of the nutrient. Choose a lower % daily value for nutrients you want less of. For example, saturated fat and sodium. Aim for zero trans fat.

15% daily value or more means the food has a lot of the nutrient. Choose a higher % daily value for nutrients you want more of. For example, fibre, vitamins and minerals.

For more information about using % Daily Value, refer to the handout titled, 'Focus on the Facts' at the end of this booklet

### How to use serving size and % daily value:

#### START with Serving Size

You can find the Serving Size under the header 'Nutrition Facts'. Information in the Nutrition Facts table is based on this quantity of food.

#### USE % Daily Value

You can find the % Daily Value on the right side of the Nutrition Facts table. Use the % Daily Value to see if the Serving Size has a little or a lot of a nutrient.

#### LOOK at a Nutrient

Choose packaged food that has more of the nutrients you want and less of the nutrient you don't want.

5% Daily Value or less is **a little**

15% Daily Value or more is **a lot**

When you are making an informed food choice here are some nutrients you may want...

#### a little of

- Saturated and trans fats
- Sodium

#### a lot of

- Fibre
- Vitamin A
- Calcium
- Iron

### Nutrition Claims

Nutrition claims are statements on packaged foods that give you details about nutrients in the food.

#### **Cholesterol Free/No Cholesterol**

##### **What does this claim mean?**

A very small amount or no cholesterol could be in the food. Cholesterol is only found in animal products.

##### **Where will I see this claim?**

Potato chips  
Maple Syrup

##### **What should I know about this claim?**

Cholesterol free foods may still be high in fat or sugar.

#### **Low Fat**

##### **What does this claim mean?**

A very small amount of fat is in the food (3 grams of fat or less per serving).

##### **Where will I see this claim?**

Fruit bottom yogurt

##### **What should I know about this claim?**

Low fat foods may still be high in sugar or sodium.



### **No Sugar Added**

#### **What does this claim mean?**

Granulated white sugar and other ingredients that contain added sugars have not been added to the food (but other types of natural sugar could be in it)

#### **Where will I see this claim?**

Juice

#### **What should I know about this claim?**

Foods, such as juice, that say, 'no sugar added' may still contain a lot of natural sugar.

### **Light**

#### **What does this claim mean?**

This food may be lower in fat or calories than the original version of the food.

#### **Where will I see this claim?**

Mayonnaise

#### **What should I know about this claim?**

Sometimes when a package says 'light' it means the colour or texture of the food is light.

Although claims may be helpful it is always a better idea to look at the nutrition facts panel and ingredient list.



# Know Your Serving Sizes

## Fruits and vegetables

**Vegetables & Fruit, Aim for 7-10 Servings Daily**

**One serving equals:**



Medium piece of fruit, the size of a tennis ball



Green leafy veggies 250mL (1 cup)



Fresh or frozen fruit or cut vegetables 125 mL (1/2 cup)



Dried fruit, 2 tablespoons



## Grain products

**Grain Products, Aim for 6-8 Servings Daily**

**One serving equals:**

- Cooked grains (rice, oats, pasta, etc.) - 1/2 cup
- Breads (1 slice, 1/2 pita, 1/2 small bagel) - 30g
- Cereals (1/3 cup for bran type or 2/3 cup flaked) - 30g
- Mashed potato - 1/2 cup
- Potato, sweet potato, yam - 1/2 medium



## How to Read a Food Label

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### Milk and alternatives

#### Milk & Alternatives, Aim for 2-3 Servings Daily

One serving equals:



Unsweetened yogurt,  
175g (3/4 cup)  
Plain or fruit flavour



Skim milk, 1%, 2%, or soy,  
Almond or rice milk 250 mL (1 cup)

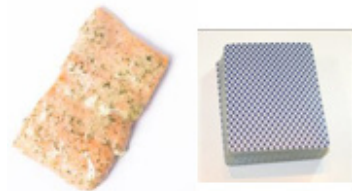


Cheese (15% MF or less),  
50g (1.5 oz)

### Meat and alternatives

#### Meat & Alternatives, Aim for 2-3 Servings Daily

One serving equals:



75g or 2.5 oz fatty fish, lean beef,  
pork, chicken or turkey



3/4 cup beans, lentils,  
peas (cooked or canned)



60 mL (1/4 cup) shelled  
nuts and seeds



30 mL (2 Tbsp) peanut or  
almond butters



2 eggs

### Oils and fats

#### Oils & Fats, Aim for 2-3 Tablespoons Daily

(There are 3 teaspoons in 1 tablespoon)

One serving equals:



1 tsp of oil



1/8 avocado = 1 tsp



1 tsp butter or  
non-hydrogenated margarine

# Track What You are Eating and Drinking

## **Tips for keeping a food diary:**

- Track what you eat for two (2) weekdays and one (1) weekend day
- Use a separate diary page for each day
- Use the sample food diary and the section in this booklet 'Know Your Serving Sizes' to help you complete your diary.

Ask your doctor to refer you to a registered dietitian. Discuss your diary with the dietitian once you have filled it in.

## Track What You are Eating and Drinking

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### Example: My daily food diary

Time of Day	What I Ate (please provide details)
8:00 a.m.	<ul style="list-style-type: none"><li>- 2 slices whole grain bread with 2 tsps margarine</li><li>- 1 banana, medium</li><li>- 8 oz or 1 cup (250ml) 1% milk</li><li>- Coffee with 1 tbsp cream, 1 tsp sugar</li></ul>
10:00 a.m.	<ul style="list-style-type: none"><li>- 1 medium size apple</li></ul>
1:00 p.m.	<ul style="list-style-type: none"><li>- 1 can sardine, canned, packed in lemon juice</li><li>- 2 slices rye bread</li><li>- ½ cup or 6 cherry tomatoes</li><li>- 2 clementines</li></ul>
4:30 p.m.	<ul style="list-style-type: none"><li>- ¾ cup plain 1% M.F. yogurt with added cinnamon</li><li>- ¼ cup unsalted almonds</li></ul>
7:00 p.m.	<ul style="list-style-type: none"><li>- 6 oz salmon, grilled with dressing</li><li>- Dressing: 1 tbsp oil, lemon juice, spices</li><li>- 1 cup wild rice, cooked</li><li>- 1 cup spinach, steamed with mushrooms and 1 tsp oil</li><li>- 1 cup broccoli, steamed, plain, no oil</li></ul>

## Track What You are Eating and Drinking

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### My daily food diary

Time of Day	What I Ate	How Much?

## Track What You are Eating and Drinking

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### My daily food diary

Time of Day	What I Ate	How Much?



## Track What You are Eating and Drinking

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### My daily food diary

Time of Day	What I Ate	How Much?

## Where to Learn More

**Cardiac College**

[www.cardiaccollege.ca](http://www.cardiaccollege.ca)

**Cookspiration**

[www.cookspiration.com](http://www.cookspiration.com)

**US Dry Pea & Lentil Council**

[www.pea-lentil.com](http://www.pea-lentil.com)

**Pulse Canada**

[www.pulsecanada.com](http://www.pulsecanada.com)

**Canadian Lentils**

[www.lentils.ca](http://www.lentils.ca)

**Half Your Plate**

[www.halfyourplate.ca](http://www.halfyourplate.ca)

**Unlock Food**

[www.unlockfood.ca](http://www.unlockfood.ca)

**Call 1-877-510-5102 to talk to a Registered Dietitian for free**

**Heart and Stroke Foundation**

[www.heartandstroke.ca](http://www.heartandstroke.ca)

**Dietitians of Canada**

[www.dietitians.ca](http://www.dietitians.ca)

**Sodium 101**

[www.sodium101.ca](http://www.sodium101.ca)

## Where to Learn More

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### **Nutrition Action**

<https://cspinet.org/>

### **Health Canada**

[www.healthycanadians.gc.ca](http://www.healthycanadians.gc.ca)

### **Oldways**

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

### **Spilling the Beans**

Julie Van Rosendaal, Sue Duncan

### **The New Moosewood Cookbook**

Mollie Katzen

### **The New Becoming Vegetarian**

Brenda Davis, RD & Vesanto Melina, MS, RD, BPC.

### **Becoming Vegan**

Brenda Davis, RD & Vesanto Melina, MS, RD, BPC.



FEEL WELL

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# Managing stress for a healthy heart





# Managing Stress for a Healthy Heart

For people living with heart disease and their caregivers

Read this booklet to know:

- What stress is
- Why stress is bad for your heart
- Common causes of stress
- How to lower stress in your life





# Table of Contents

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# What is Stress

## What is stress?

Stress is a state of mental strain that puts pressure on your body. This pressure can lead to health problems that include high blood pressure, high cholesterol, unhealthy eating and social withdrawal.

Stress is common in heart patients. After your heart event, it is important that you focus on your mental health. It is common for heart patients to feel stressed, have anger, have anxiety or be depressed. Stress puts your heart at risk.

## What causes stress?

There are 7 main causes of stress in heart patients:





# Common Causes of Stress

## Depression

### What is depression?

If you are depressed, you may feel hopeless and no longer enjoy the things you used to like. Depression is not the same as feeling sad sometimes. With depression, the feeling of sadness is constant and lasts for a long time.

Depression has many symptoms. The symptoms of depression are listed below. Think about your mood over the past 2 weeks.

You may have depression if you:

- Do not enjoy the activities that you often enjoyed
- Feel hopeless or sad
- Have a hard time falling asleep or staying asleep
- Have low energy
- Have changes in how you eat, either more or less
- Have bad thoughts about yourself
- Find it hard to focus
- Have lost your interest in sex
- Feel angry or get annoyed easily
- Have thoughts of death or suicide. Talk to someone (such as your doctor, family member or friend) right away if you are having thoughts of death or suicide.

### Why is depression bad for my heart?

Being depressed makes you more likely to have heart problems. When you are depressed, there are changes in how your brain and body function which can affect your heart.

Depression can cause the chemical levels in your brain to be out of balance and that changes how your brain works and how you feel.

For example:

- Your blood may be more sticky (causing clots)
- Your body's immune system is less able to ward off viruses and bacteria
- You may have an increase in a stress hormone called cortisol in your body
- You may get more irregular heartbeats

### **How can I manage depression?**

If you are living with depression, it is important to find an action that works for you.

Below is a list of methods you can try:

#### 1. Talk to your doctor

- Tell your doctor how you feel. Your doctor will help you know if you have depression. If you have depression your doctor may prescribe medicine. Your doctor may also send you to another health care provider (such as a psychiatrist, psychologist or social worker)

#### 2. Change the way you connect and talk with people

- Connect with people you trust and share how you feel
- Join a group, connect with old friends, get involved in your community or volunteer. All of these activities will help you feel less depressed

### 3. Learn new skills

- Find healthy ways to manage your feelings
- Be proactive. This means do not delay doing things that need to be done
- Start each day by choosing something helpful you can do for yourself (such as exercise)

## Sleep apnea

### What is sleep apnea?

Sleep apnea means you stop breathing when you sleep. You stop breathing because soft tissue in the back of your throat blocks the air passage to your lungs. This block makes your stress system wake you up so you can start to breathe again.

Sleep apnea makes your stress system wake you up as many as 30 times every hour to breathe. When you wake up this often you cannot get into a deep sleep at night. You wake up feeling like you did not sleep at all.

### What are some signs of sleep apnea?

Many people have sleep apnea and do not know it.

Here are four common signs of sleep apnea:

- You snore loudly at night
- You are very tired throughout the day
- Someone else sees you stop breathing at night
- You have high blood pressure

If you have some of these signs you may have sleep apnea. Ask your doctor if you should go for a sleep test.

### **Why is sleep apnea bad for my heart?**

Sleep apnea makes your health worse. When you have sleep apnea your body's stress system works very hard. The level of oxygen in your blood drops lower. This causes problems in your brain, blood, immune system, heart and blood vessels.

Sleep apnea can lead to these problems:

- You feel tired during the day
- Your blood sugar (glucose) levels increase
- Your blood becomes more prone to clotting
- It is hard for your body to fight illness
- Plaque collects in your blood vessels which can cause a heart attack
- You have irregular heartbeats

## **Distress**

### **What is distress?**

When you have been facing stress in your life for a while, you may feel overwhelmed with emotions and feelings that can get in the way of your daily living.

Everyone reacts in their own way to distress.



Examples:

- Fatigue (feeling very tired often)
- Sadness
- Anxiety
- Avoiding social situations (not wanting to be around friends or family)
- Fear
- Anger
- Feeling moody

### **What causes distress?**

You may become distressed when you are faced with stressors that place demands on you that you cannot cope with.

Demands that cause distress can be:

- Trauma (such as having a heart attack or major car accident)
- Major life events (such as retirement or death of a loved one)
- Everyday stressors (such as paying bills or going to work)
- Health issues (being unwell)

Research tells us that people who experience distress are twice as likely to die from a heart attack or other chronic illness. It is important to work with a psychologist, social worker or psychotherapist to help you.

### Poor sleep

#### What is poor sleep?

Poor sleep (also called disturbed sleep) is when you wake up often during the night, and you do this many nights in a row. Poor sleep is when you get less than 5 hours of actual sleep per night. Getting the ideal amount of sleep (7.5 hours) at night allows your body to function well over a 24 hour day.

If you struggle with poor sleep, you are likely to have problems with "burn out" or emotional exhaustion across your daytime activities.

#### Why is poor sleep bad for my heart?

Your cardiovascular system needs a regular routine of rest at night so it is ready to be active the next day. When your sleep is disturbed at night, there is a breakdown in this "rest and restore" period.

Poor sleep can cause problems with your blood sugar (glucose), insulin and stress hormones in your body. This can cause weight gain, high cholesterol levels and high blood pressure.

#### What can I do to sleep well?

Follow the tips below to help you have a good night sleep:

- Be active during the day
- Go to sleep and wake up at the same time every day
- Keep your room cool and dark
- Remove devices from the room where you sleep. This means no computers, television or smart phones

- Take 1 hour to relax before bed. To relax you might take a hot bath, listen to music, read, watch TV, or knit
- Limit having caffeine, nicotine or alcohol less than 4 hours before bed
- Limit doing exercise less than 4 hours before bed
- Avoid a lot of fluids before bed
- Make a sleep routine before bed like reading, listening to calm music, or relaxation exercises
- Avoid a heavy meal 2 hours before sleep

### Feeling loss of control

#### What is a feeling of losing control?

When you have deadlines, conflict in your life or surprise setbacks, you may feel you are losing control. It may be at work, at home, in relationships, or in financial matters. Feeling that you have no control can lead to anxiety or depression.

#### How do I manage this feeling?

You can try to:

1. Be aware of your sense of helplessness. Are you ready to take action?
2. Take 15 minutes and write down ideas about how you can change the problems you are facing. Do not criticize or judge any of your ideas
3. Rate each idea from 1-10 on how likely you will try the idea in the next week
4. Pick one idea that you rated as a 7 (or your highest one) and use it this week

### Chronic stress

#### What is chronic stress?

Chronic stress is when you experience stress that continues for weeks or months without a break (such as work, home or finances). Having constant stress in any of these areas will make the stress risks to your health greater.

#### Why is chronic stress bad for my heart?

Chronic stress causes constant stress reactions in your body such as:

- Causing your heart rate and blood pressure to rise
- Causing plaque to collect in your blood vessels
- Causing your blood to become stickier (form clots)

Research tells us that having ongoing chronic stress increases your chances of having a heart attack.

#### How can I manage my chronic stress?

Try one of these ideas to manage your chronic stress:

- Diaphragmatic breathing techniques (learning to breathe from your diaphragm or stomach)
- Progressive muscle relaxation
- Yoga
- Visualization
- Affirmations (think good things about yourself)
- Meditation

- Cognitive reframing (changing negative thoughts or learning to look at things differently)
- Take a stress reduction program

If you are not seeing change, get help from a coach, counsellor or psychotherapist.

### Stressful life events

#### What are stressful life events?

Stressful life events occurring in the past year are big events like losing your job, death of a loved one, injury or illness. They are called stressful because they trigger a big reaction in the mental, emotional and physical systems in your body.

You might have a sense of disbelief, or be asking yourself, "Why me?"

#### Why are stressful life events bad for my heart?

Stressful life events make your whole body work harder.

Things that happen in your body include:

- Your heart rate and blood pressure rise
- Plaque collects in your arteries
- Your blood becomes stickier (forms clots)

#### How can I manage my stressful life events?

Stressful life events cannot be controlled.

But, you can try these tips to reduce your stress:

- Develop a stress hardy personality
  - Think about what your priorities are
  - Set goals on what you can control
  - Learn to say "no" to requests that do not fit your priorities
  - Take care of yourself
  - Practice meditation
  - Make time to be with your partner, your family or friends for support
  - Think about the positive events in your life
- Learn how to get a relaxation response in your body
  - Learn how to breathe from your stomach (diaphragmatic breathing)
  - Learn how to use muscle relaxation

# Where to Learn More

## **Help Guide**

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

## **Cardiac College**

[www.cardiaccollege.ca](http://www.cardiaccollege.ca)

## **Time Management from the Inside Out. 2nd Edition (2004)**

Julie Morgenstern, Henry Holt Co: New York.

## **The Disease to Please: Curing the people pleasing syndrome (2001)**

Harriet B. Braiker, McGraw-Hill: New York.

## **The Relaxation and Stress Reduction Workbook. 6th Edition (2008)**

M Davis, E., Robbins Eshelman and M McKay, New Harbinger Publications:  
Oakland CA.





FEEL WELL

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# Enjoying a healthy relationship and sexual intimacy





# Enjoying a Healthy Relationship and Sexual Intimacy

For people living with heart disease and their caregivers

Read this booklet to know:

- What a healthy relationship is
- How heart disease can affect your sexuality
- How heart medicines affect your body
- How to talk about sex with your partner
- How to restart sex safely



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# Healthy Relationships

## **What is a healthy relationship?**

Healthy relationships are an important part of good health. Relationships act as your social supports. It is important to talk to others to get support.

Social supports can include:

- Family
- Friends
- Colleagues
- Your community
- Your place of worship
- Your health care team

How you talk and feel is important for a good relationship.

Below is a list of ways you can build healthy relationships:

- Talk about your feelings openly and honestly
- View yourself as a person who has important feelings
- Use feeling words when you are talking (such as mad, sad, frustrated and scared)
- Use the word “I” when talking about your feelings such as, “I feel angry when you tell me what to eat” or “I feel sad when I cannot walk as fast as you”
- Be clear and direct about the help you want
- Do not to assume that others know how you feel or think. People cannot read your mind. Tell them what you feel and need. Telling them what you feel will allow you to get the support you want

To get the support you need, tell your family how you feel.





# Sexual Intimacy and How Heart Disease Affects It

All healthy relationships need respect, sharing and trust. In a romantic relationship, intimacy and sexuality are also important. Learn how heart disease can affect sexual intimacy to help you have a healthy relationship.

Sexual intimacy is being physically affectionate with another person (using your body to show that you like someone). Sexual intimacy is important for healthy relationships. Heart disease can cause problems with your sexual intimacy.

## Heart disease and a women's sexuality

### How does heart disease affect a women's sexuality?

Some heart medicines can cause sexual dysfunction. Vaginal dryness is a common symptom of sexual dysfunction. Vaginal dryness means you are not able to produce the natural lubricant in your vagina. Vaginal dryness causes discomfort and pain during sex. Vaginal dryness also causes trouble with orgasms and can lower your interest in sex.

Some heart medicines affect the flow of blood through your vagina. Less blood flow to your vagina means that area will be less sensitive. This means it may take longer to have an orgasm.

You are not alone. Many women with heart disease have vaginal dryness and difficulty reaching orgasm too. Talk to your doctor if you are concerned.

If you have vaginal dryness or difficulty reaching orgasm, there are still many ways to be intimate with your partner.

## Sexual Intimacy and How Heart Disease Impacts It

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Before sex you can try to:

- Check your medicines. Some heart medicines lower blood flow to your vagina. Talk to your doctor about the medicines you are taking
- Limit the amount of alcohol you drink. Drinking too much alcohol can cause dehydration (not enough water in your body). Dehydration can lead to vaginal dryness
- Talk to your doctor about depression, anxiety and stress. Depression, anxiety and stress cause changes in your interest in sex
- Talk openly with your partner about any sexual problems. Even with the most loving couples, sexual problems can cause a strain on the relationship if you don't discuss concerns in an open and loving way

During sex you can try to:

- Use lubrication. This will make sex more comfortable. Your health care team may suggest lubrication when you are not having sex too. Using lubrication often may bring you comfort
- Plan more time for foreplay if it takes you longer to orgasm. Taking the pressure off yourself (and your partner) to achieve an orgasm may make the intimacy you share less stressful and more enjoyable
- Explore parts of your body other than your vagina. Using other body regions allows you to have intimacy in other ways
- Find other ways to be intimate. Such as hugging, snuggling, touching, kissing, massaging, making eye contact, and holding hands. These other ways of intimacy allow you to be close with your partner

### Heart disease and a man's sexuality

#### How does heart disease affect a man's sexuality?

Some heart medicines can cause sexual dysfunction. The most common problem is erectile dysfunction (also known as impotence). Erectile dysfunction is when you cannot get or keep an erection long enough to have intercourse.

Most men – with or without heart disease – will find it hard to have an erection at times. Some factors that can make it hard to have an erection include being tired, stressed, depressed, drinking too much alcohol or low levels of testosterone (a male hormone). If you find it hard to have an erection at times, it does not always mean you have erectile dysfunction.

Erectile dysfunction is stressful and hard to understand. Erectile dysfunction can cause problems with intimacy and sex. There are many ways to improve intimacy with your partner.

Here are some things you can try:

- Check your medicines. Some heart medicines cause erectile dysfunction (such as beta blockers). Talk to your doctor about the medicines you are taking
- Talk to your doctor about depression, anxiety and stress. Depression, anxiety and stress can make you lose interest in sex and make it hard to have an erection. Medicines to treat depression can also lower your interest in sex
- Limit the amount of alcohol you drink. Drinking too much alcohol can make it hard to have an erection
- Stop smoking. Smoking narrows your blood vessels and will worsen your erectile dysfunction

- Find other ways to be intimate (such as hugging, snuggling, touching, kissing, massaging, making eye contact, and holding hands). These other ways of intimacy allow you to be close with your partner
- Talk to your doctor about medicines that can be prescribed for erectile dysfunction. These medicines increase the blood flow to your penis. Warning: if you take a type of medicine for erectile dysfunction and use nitroglycerin (a drug to help your angina), your blood pressure can get so low that you could die. Always speak to your doctor and pharmacist before you try new medicines. Bring a list of your medicines to your appointment.
  - **Do not use nitroglycerin ('nitro') if you are taking medicine for erectile dysfunction**

### Restarting sex safely

#### When is it safe to have sex after a heart attack?

Most people with little damage to their heart can get back to sexual activity within 2 to 3 weeks of going home from the hospital.

If you have had a heart attack, your risk of having another heart attack while having sex is very low. If you can walk up two flights of stairs or walk briskly with ease, your heart should be safe during sex.

Speak to your cardiologist to confirm that sex is safe.

#### What are the safest sexual activities for my heart as it heals?

Some sexual activities are safer than others, and these activities may be a good option while your body heals.

Sexual activities that are often safer for your heart:

- Caressing
- Touching each other
- Massaging
- Embracing
- Holding eye contact

Your heart rate and blood pressure increase when you are aroused. During the sexual activities listed above, it is likely that your heart rate and blood pressure will remain at safe levels. During these activities, you can feel pleasure and share intimacy with your partner while keeping your heart safe.

### **What are some sexual activities that may make my heart work too hard as it heals?**

Some sexual activities that make your heart work hard include:

- Intercourse
- Penetration
- Oral sex

The sexual activities listed above may involve a moderate to vigorous effort (just like exercise). These activities can increase your heart rate and blood pressure to levels that are not safe for someone healing from a heart attack.

Once your cardiologist confirms you are ok to have sex again:

- Try to let go of any fears or thoughts you may have at the time. Be in the moment. This helps to enjoy the closeness with your partner
- Do what is comfortable for you

## Sexual Intimacy and How Heart Disease Impacts It

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- Go slow. Getting back to your normal intimacy takes time. It is normal for anyone who has had a heart event to have anxiety, fears and even depression. Many patients need a few months for this to get better. If you struggle with this, you may also find that your normal interest in intimacy and sex have gone
- Slow down your body movement during sexual activity and do not hold body positions where you have to support your own body weight. Have your partner on top to lower your effort. This will help prevent angina symptoms (chest pain) during sex. If you do get angina, talk to your doctor.

# Where to Learn More

**Cardiac College**  
[www.cardiaccollege.ca](http://www.cardiaccollege.ca)





TAKE CONTROL

# Setting goals for a healthy heart





# Setting Goals for a Healthy Heart

For people living with heart disease and their caregivers

Read this booklet to know:

- How to manage your health
- The steps to change your life
- How to review your action plan
- How to manage challenges



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# Managing Your Health

## **What is a self-manager?**

Self-management means you take an active role in your health.

A self-manager learns about heart disease and how to control it. Sometimes being a self-manager means making changes. Become a self-manager and commit to making changes as needed to manage your heart disease.

Being a self-manager means you:

- Know about your health problems
- Make informed choices about your health
- Track and manage your symptoms
- Find answers and solve problems about your health

Your health care team will help you become a self-manager.

## **How can self-management help me?**

Self-management helps you take better control of your heart disease.

Taking control means you manage your:

- Blood pressure
- Cholesterol
- Fitness
- Stress, depression and anxiety
- Smoking (or exposure to second-hand smoke)
- Blood sugar (if you have diabetes or pre-diabetes)

To help manage these factors:

- Take your medicines as prescribed by your doctor
- Eat healthy
- Exercise and be active
- Learn ways to manage your stress, depression and anxiety
- Avoid smoking or breathing second-hand smoke
- Monitor your blood pressure, cholesterol and blood sugar levels

Self-management will help you live longer and feel better.

### **What changes can I make to become a self-manager?**

You can make changes to become a self-manager. These changes will affect many areas of your life.

Changes can include:

- Taking your medicine as prescribed
- Eating healthy foods
- Getting active
- Sleeping better
- Coping with stress and emotions
- Quitting smoking and avoiding second-hand smoke

These changes can affect your family, work and social life.



### **Who can help me become a self-manager?**

Many people will help you become a self-manager. They can support you with your changes.

Talk to the people below for help:

- Family doctor
- Heart doctor (cardiologist)
- Pharmacist
- Exercise team
- Social worker or psychologist
- Family and friends
- Other people living with heart disease



# Steps to Change Your Life

Become a self-manager to make changes in your life.

There are 3 steps to help make changes:

1. Define your vision
2. Set goals
3. Build action plans

## 1. Define your vision

The first step to make changes is to define your vision. Your vision is what you work toward. Read the examples below to help you define your vision.

Picture yourself in the future and ask yourself 2 questions:

### **What do I want to feel like in the future?**

For example:

- I will feel good
- I will feel healthy
- I will have more energy
- I will be happy
- I will feel closer to family and friends

### **What do I want to do differently in the future?**

For example:

- I will do all the things I need to do each day
- I will be able to play with my grandchildren
- I will be able to play sports

- I will volunteer
- I will travel

Post your vision statement (either written or a picture) where you can see it every day. Places like in your home or office are great ideas. See it every day to remind you what you are working toward.

## 2. Set goals

After you have a vision, you need to make changes. These changes will help you reach your vision. Set goals to help you make these changes. You can set a few goals to reach your vision.

### **Ask yourself this question: What do I need to do to reach my vision?**

There can be a few things you need to do to reach your vision.

For example:

- Sleep better
- Eat healthy
- Exercise
- Manage stress
- Take your medicines as prescribed by your doctor

Achieve your goals to get closer to your vision. For example, when you eat healthy and exercise you will have more energy.

As you write out your goals you may feel like the changes are too much to handle. It is normal to feel that way. Pick one goal to start. Do not make too many changes at once. If you still feel it is too much to handle, talk to your healthcare team for help.

**Choose one goal to work on. Write this goal below.**

**The one goal I will work on is:**

**Example**

Exercise regularly

**Answer the questions below about your goal.**

**List the reasons why you want to reach this goal. Think about how your life will change if you reach this goal.**

Examples of why you want to **exercise regularly**

- I will feel better in body and mind
- I will sleep better
- I will have more energy

## Steps to Change Your Life

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**How important is this goal right now?** Circle a number on the scale below.

0      1      2      3      4      5      6      7      8      9      10

Not very important

Very important

You are more likely to achieve your goal if it is important to you. Your rating should be 7 or higher to succeed. If the goal is important, you will work hard to achieve it. If you circled 6 or less the goal is not important enough right now. Choose a new goal.

If you circled 7 or higher, answer the next question below.

**How confident are you to achieve this goal?** Circle a number on the scale below.

0      1      2      3      4      5      6      7      8      9      10

Not very confident

Very confident

If you are confident, you are more likely to achieve your goal. Your rating should be 7 or higher to succeed. If you circled 6 or less, you need more confidence to achieve this goal. Try to make changes to your goal to feel more confident. If you can't make changes to your goal, choose a new goal.

If you circled 7 or higher, answer the next question.

## Steps to Change Your Life

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**How ready are you to work on this goal?** Circle a number on the scale below.

0      1      2      3      4      5      6      7      8      9      10

I am not ready                                      I am almost ready                                      I am very ready

You are more likely to achieve your goal if you believe you are ready. Your rating should be 7 or higher to succeed. If you circled 6 or less, then you are not ready to work on this goal. Choose a new goal.

You are more likely to achieve your goal if you:

- ✓ 1. Believe your goal is important,
- ✓ 2. Feel confident you can do it, and
- ✓ 3. Feel ready to work on the goal

### **Making Your Goal Detailed**

Write down your goal. The next step is to make sure your goal is detailed.

Ask yourself these 4 questions:

**1. How will I know I have reached my goal?**

**Example goal: Exercise**

I will know I have reached my goal when I am walking for 30 minutes, 3 to 5 times each week.

**2. Can I do what it takes to reach my goal?  
Is it too hard?**

**Example goal: Exercise**

I will start with 10 minutes of exercise 3 days a week. Then I will build up from there. If I take it slow then I think I can do this.

**3. Is this goal going to help me reach my vision?**

**Example goal: Exercise**

Yes. If I exercise I will improve my health and have more energy. I will be able to play with my grandchildren.



### 4. When do I want to achieve this goal? Is there enough time?

#### Example goal: Exercise

I want to achieve this goal in 3 months. This is a good amount of time for 5 reasons:

- It gives me time to talk to my healthcare team about exercise
- It is enough time to find out what kind of exercise I like
- I have time to buy a pair of running shoes
- I will have time to figure out where I am going to exercise
- I will also have time to build the habit of doing exercise

### 3. Build action plans

Once you have your goal you will need an action plan. Create an action plan each week to achieve your goal. These action plans will help you take steps to achieve your goal.

## Steps to Change Your Life

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You will need to make changes to achieve your goal. Making changes can feel like it is too much to handle. It is normal to feel this way. Divide your goal into smaller steps each week. This will make it easier to change. Weekly action plans help you decide what you do each week. Action plans describe your actions to reach your goal.

### Steps to Building Your Action Plan

Answer the questions below to build your action plan each week:

1. What am I going to do?
2. When am I going to do it?
3. Where am I going to do it?
4. How much am I going to do it?
5. How often am I going to do it?

Fill in the blanks:

This week I will:

\_\_\_\_\_ (Example: walk)  
(what)

\_\_\_\_\_ (Example: after dinner)  
(when)

\_\_\_\_\_ (Example: around the block)  
(where)

\_\_\_\_\_ (Example: 15 minutes)  
(how much)

\_\_\_\_\_ (Example: 3 days this week)  
(how often)





# Review Your Action Plan

Review your action plan once a week. Think about how you did with last week's action plan.

Ask yourself:

- What went well with last week's action plan?
- What did not go well with last week's action plan?

If you achieved your action plan – that is great. Make a new plan for this week. Each week will keep you moving toward your goal and vision.

If you did not achieve your action plan - do not worry. Something may have got in your way. It can take months to create healthy habits that last. It is important to learn how to handle this. You must problem solve when you do not achieve your action plan. Problem solving helps you take charge of your life. It will also help you achieve your goal.



# How to Manage Challenges

## Problem Solving

It is okay if your weekly action plan does not go as planned. Problem solving helps when your action plan does not go well. Problem solving is a key skill to learn.

Here are steps to follow when things do not go as planned:

1. Describe the problem
2. What stopped you from doing your action plan?
3. Brainstorm and think about other ways to achieve your plan
4. Pick one idea to try
5. Build your next action plan
6. Try a new idea if the first idea did not work

### Remember

You are not alone. Talk to your healthcare team for help. Your family members or friends can also help. They can help you problem solve and stay on track.





# Where to Learn More

**Cardiac College**

[www.cardiaccollege.ca](http://www.cardiaccollege.ca)

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Patient & Family Education

University Health Network  
Toronto Rehab

Cardiovascular Prevention & Rehabilitation Program

347 Rumsey Road, Toronto, ON M4G 1R7

Phone: (416) 597-3422 ext. 5200

Website: [www.cardiaccollege.ca](http://www.cardiaccollege.ca)