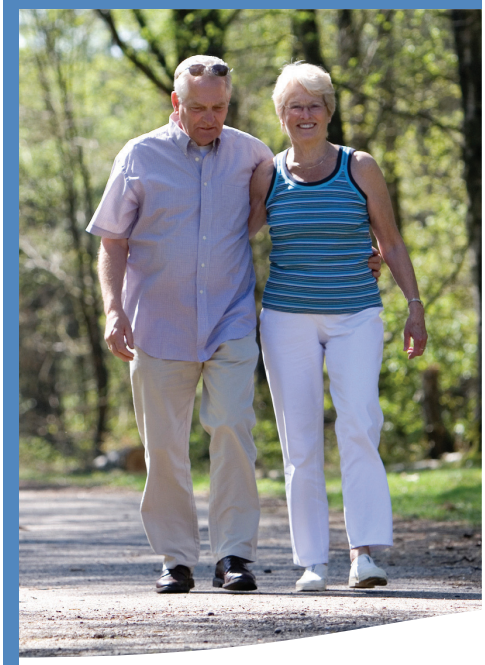
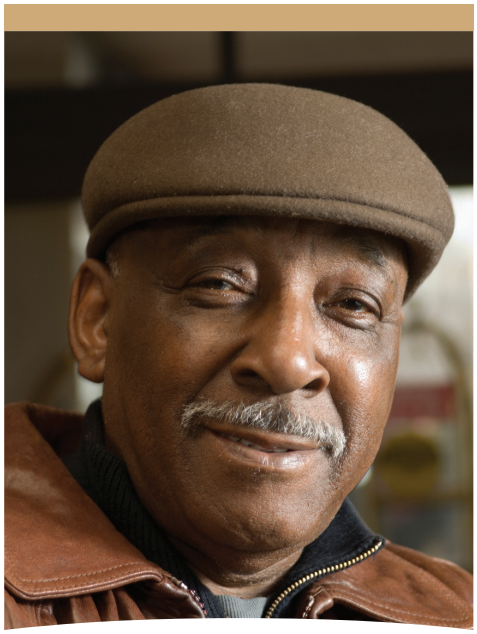
Your Heart, Your Questions





A book to help you understand and learn to live with heart disease

Hamilton Health Sciences
PATIENT EDUCATION

St. Joseph's Healthcare Hamilton

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Introduction

This book will give you, your family and friends information to help you:

- understand your own heart disease
- learn how to live with heart disease, and
- know when and how to get help

You may have one or more of the following:

- heart attack also called myocardial infarction
- angina pain
- heart failure

There is a lot of information in this book and there will be some information you do not need right now. Take your time reading the sections that are important for you to know.

Keep this book and refer to it any time you want to look up information or have a question. Let members of your family and friends read it too.

We hope this book helps you take part in your own care and well being.

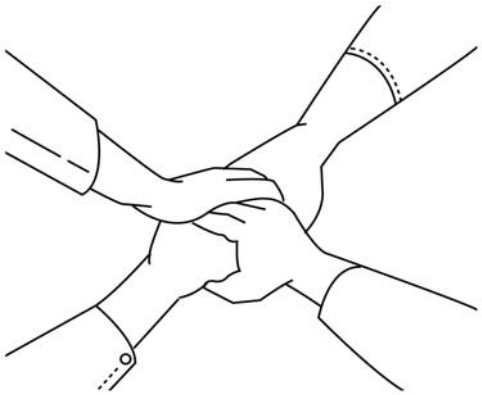
This book supports information that members of the health care team tell you. Health care information changes quickly.

If you have any questions, talk to a member of your health care team.

We work together

You will meet many members of the health care team. They will help you learn what you would like to know. Members of your team may include:

- nurses
- doctors
- resident doctors
- social workers
- physiotherapists
- occupational therapists
- pastoral or spiritual care workers or chaplains
- dietitians
- pharmacists
- kinesiologists
- psychologists
- volunteers
- technicians
- students in all of these services



The team works with you, your family and friends to plan your care and meet your learning needs.

About the heart and heart disease

How does the heart work?

The heart is a muscle that pumps blood throughout your body.
Blood contains oxygen and nutrients that your body needs.

The heart is divided into 4 chambers:

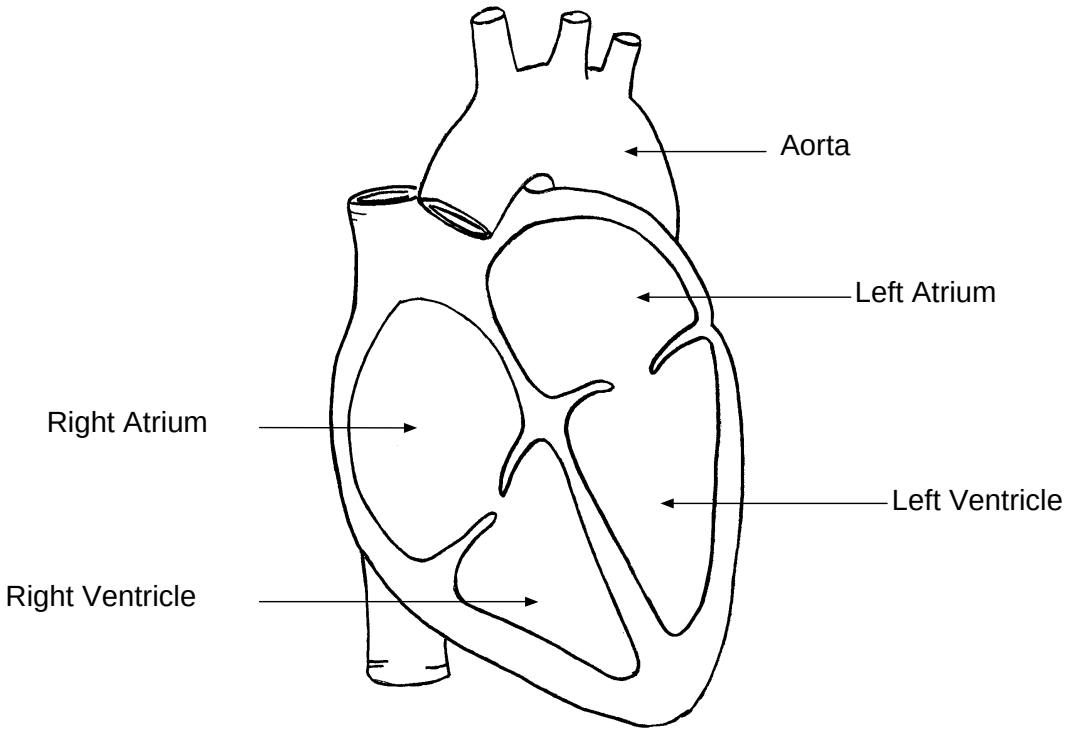
- 2 upper chambers called the right and left atrium
- 2 lower chambers called the right and left ventricles

The right atrium receives blood from your body.

The right ventricle pumps blood to your lungs to get oxygen.

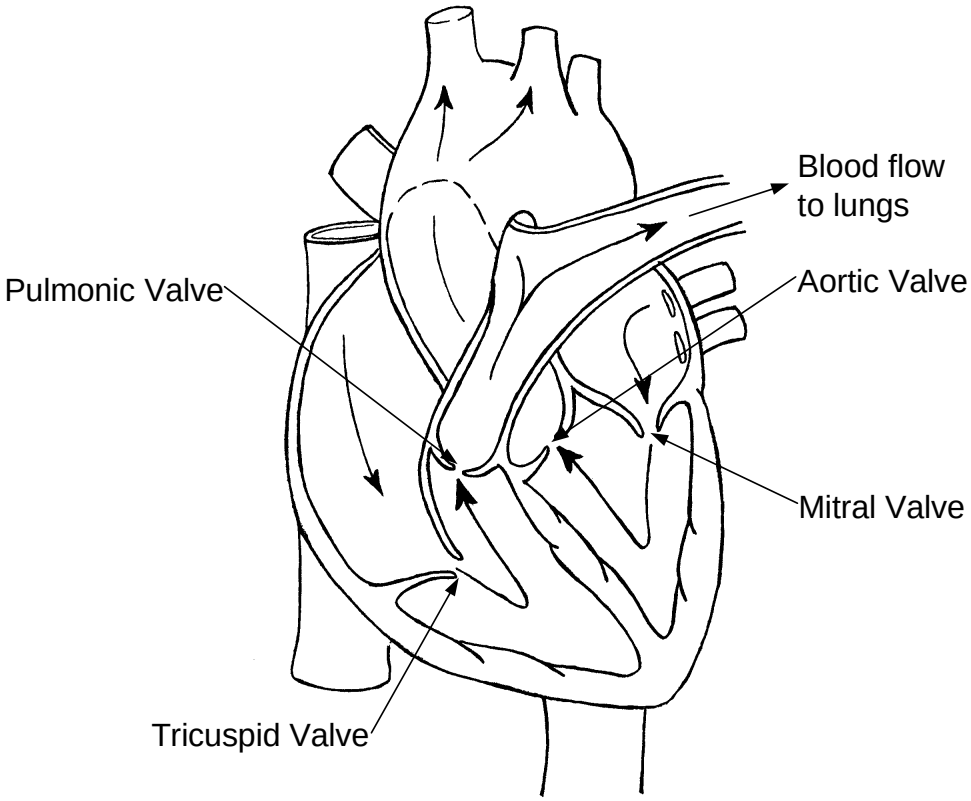
The left atrium receives blood from your lungs.

The left ventricle pumps blood with oxygen into the aorta to your body.
Oxygen is the fuel that your heart and body needs to work.



There are 4 valves in the heart. The valves act as one-way doors to keep blood flowing forward. The names of the valves are:

Tricuspid	Between the right atrium and right ventricle
Pulmonic	Between the right ventricle and the lungs
Mitral	Between the left atrium and the left ventricle
Aortic	Between the left ventricle and the aorta, the main artery to the body

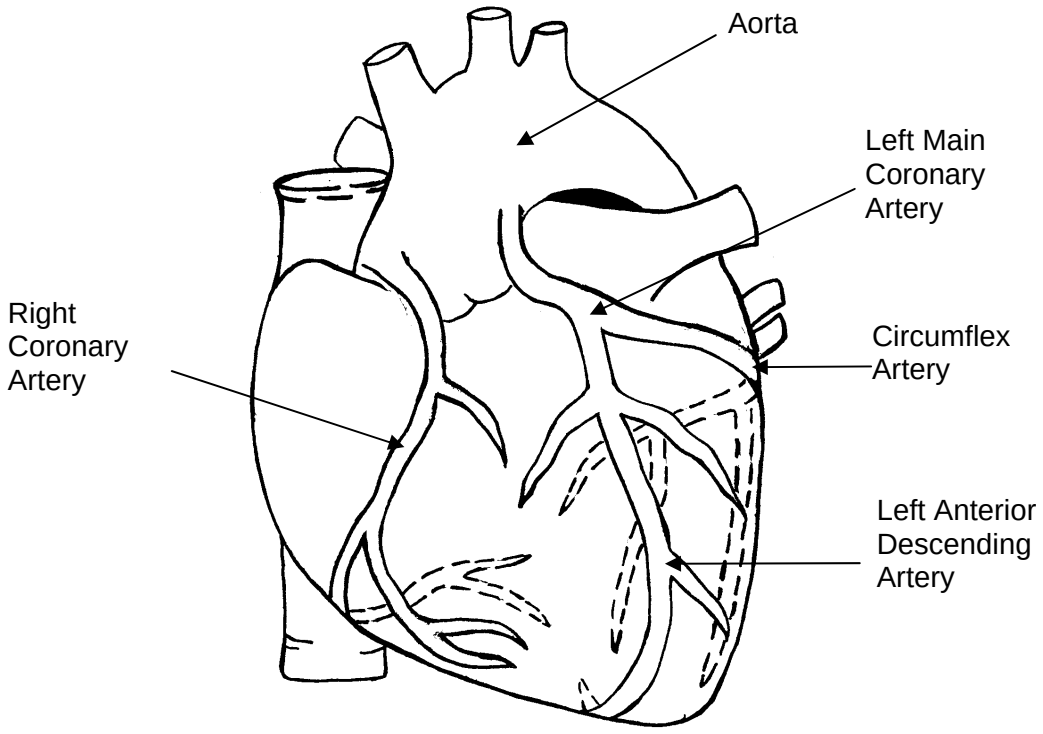


What are coronary arteries?

The arteries that bring oxygen to your heart muscle are called coronary arteries. Your heart has 2 main coronary arteries:

- right coronary artery
- left coronary artery. This divides into 2 large branches called the circumflex and the left anterior descending coronary artery.

These arteries spread over the outside of the heart and then enter the heart muscle. They give the heart oxygen.



What is heart disease?

Heart disease is any condition that affects:

- the heart muscle
- the heart valves
- the arteries or
- the heart's electrical system

Heart disease is caused by many different problems. It can happen to both men and women.

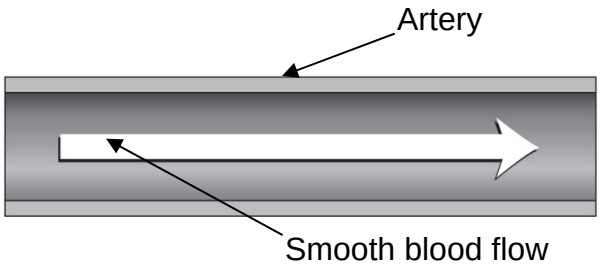
This book will review the common problems in heart disease:

- coronary artery disease which includes angina and myocardial infarction or heart attack
- heart failure

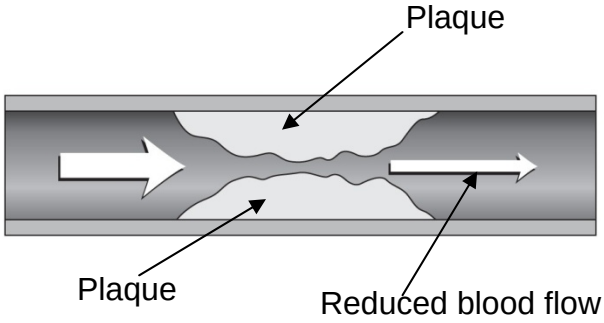
What is coronary artery disease?

Coronary artery disease is a build up of fat and other materials inside the arteries called atherosclerotic plaque. Coronary artery disease is also called hardening of the arteries. The artery walls become thick, narrow and rough inside. Blood, which carries oxygen to the heart, cannot flow well through these arteries.

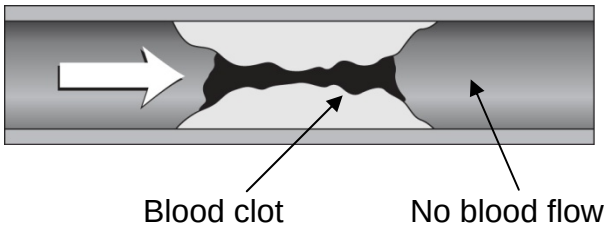
Angina can occur when arteries are severely narrowed. A heart attack can occur when the blood flow to the heart muscle is reduced or blocked.



Normal Artery – The blood flows through easily.



Severely Narrowed Artery – Blood flow becomes partially blocked because of build up of plaque. This decreases the amount of oxygen your heart gets during exercise. You may have symptoms of angina or chest pain.



Blocked Artery – The plaque can burst open, causing a blood clot to form and block the artery.

A heart attack happens when oxygen cannot reach your heart due to a blocked artery.

Your arteries change over time for many reasons.

The main reasons or risk factors are:

- smoking
- high blood pressure
- diabetes or high blood sugar
- being overweight
- high cholesterol and high triglycerides
- not doing enough exercise
- constant tension or stress
- a family history of heart disease
- age

Most of these risk factors you can control but some you cannot.

What is Acute Coronary Syndrome (ACS)?

Acute Coronary Syndrome includes angina and heart attack (myocardial infarction).

What is angina?

Angina occurs when the heart does not get enough oxygen.

Angina can occur when:

- you are exercising
- you are excited or under stress
- it is too hot, humid or cold outside
- you have eaten a heavy or large meal
- you are having sex

You can also have angina when you are resting.

What does angina feel like?

Each person is different. You may feel discomfort or pain in different parts of your body such as:

- across the chest
- in the neck
- in the back
- down one arm
- in the jaw
- down both arms
- in the shoulders

Other symptoms include:

- pressure or heaviness on chest
- tightness
- squeezing
- aching
- burning
- cramping
- trouble breathing or shortness of breath
- indigestion
- nausea
- tingling down one or both arms

The feelings of angina may be mild. They may go away when you STOP what you are doing and rest or take nitroglycerin.

What is stable angina?

Stable angina is when you feel signs of angina that happen during activity and go away with rest and nitroglycerin.

What is unstable angina?

Unstable angina is a change in your usual pattern of symptoms. It is caused by an abrupt narrowing of the coronary arteries. This means the blood flow to the heart muscle is reduced even more for longer periods of time. Your symptoms may become more severe. Unstable angina may progress to a heart attack.

Unstable angina can occur:

- when you are resting
- while you are sleeping and it can wake you up
- frequently with severe discomfort, lasting 10 minutes or more
- with less activity than before
- with some or no relief from rest or taking nitroglycerin

Tell your doctor if:

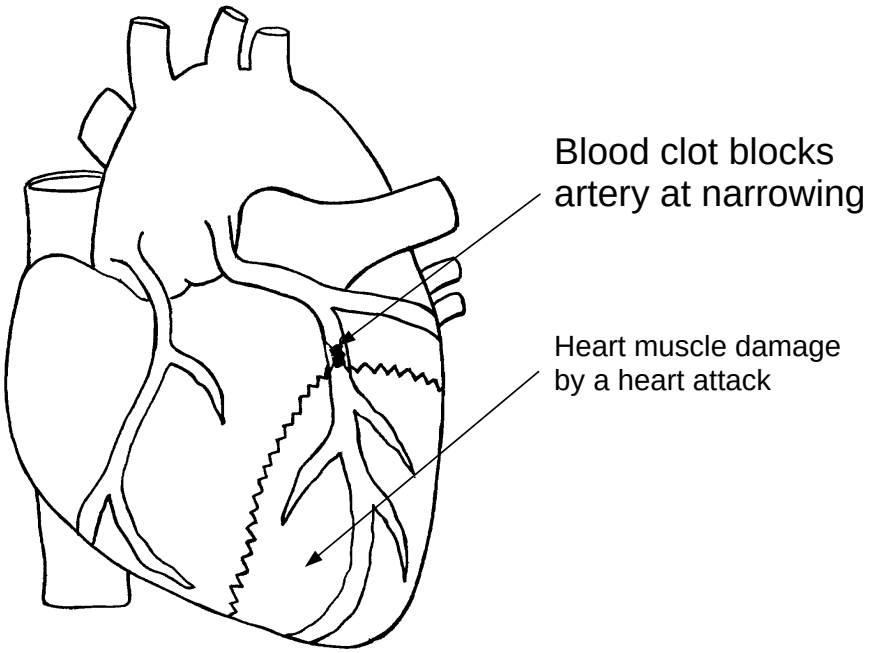
- you need to take more medication to get relief of angina
- you begin to feel the signs of angina in new parts of your body
- you get angina with less physical activity

When you get angina:

1	**Rest**	Stop what you are doing right away. Sit or lie down. This will decrease the work of the heart.
2	**Relax**	Take slow, deep breaths.
3	**Take nitroglycerin**	Take your nitroglycerin as prescribed: • take your 1st dose of nitroglycerin. Spray or place tablet under your tongue. • if the chest pain does not go away after 5 minutes, take a 2nd dose. • if the chest pain is still there after 5 or more minutes (now a total of 10 minutes), take a 3rd dose.
4	**Get help**	If you still have chest pain or discomfort after taking 3 nitroglycerins at 5 minute intervals (now a total of 15 minutes): • have someone call 911 for an ambulance right away. • do not drive yourself to the hospital.

What is a heart attack?

A heart attack usually occurs when blood and oxygen cannot flow to a part of the heart muscle caused by a narrow coronary artery blocked by a blood clot. Without blood and oxygen for more than 20 minutes, that part of the heart muscle is damaged. A heart attack is also called a myocardial infarction.



A heart attack may occur suddenly and without warning:

- at rest
- with increased activity
- during a time of emotional stress

It can happen to anyone with or without previous heart disease.

What does a heart attack feel like?

Each person is different. You may feel discomfort or pain in different parts of your body such as:

- across the chest
- in the neck
- in the back
- down one arm
- in the jaw
- down both arms
- in the shoulders

Other symptoms include:

- sweating
- nausea and vomiting
- dizziness
- trouble breathing or shortness of breath
- a feeling of the heart pounding
- indigestion
- feeling faint
- feeling anxious
- weakness
- tingling in arms or numbness

Sometimes symptoms of a heart attack are vague. If you are unsure, go to the hospital.

What happens at the hospital after a heart attack?

It is very important to get to the hospital right away. Medications can be given to dissolve the blood clot blocking an artery. The medication must be given as soon as possible to reduce damage to the heart muscle.

You may go directly to the Heart Investigation Unit for an emergency procedure to restore blood flow to your heart.

Doctors can tell if you have had a heart attack by:

- your description of your symptoms
- electrocardiogram test called an ECG
- blood tests

How does my heart heal after a heart attack?

Soon after a heart attack, your damaged heart muscle will start to heal.

The blood vessels around the damaged muscle may become larger. Smaller, new blood vessels may grow to carry more blood and oxygen to the damaged area. This is called collateral circulation.

Healing is different for each person.

Some factors that affect healing are:

- the amount of damage to the heart
- previous damage to the heart
- other health problems you may have
- your own rate of healing

It is important for you to take rests and slowly increase your activity. If you start back to normal activity too soon, this may slow down the healing in your heart.

Medications and lifestyle changes help after a heart attack. You will learn about your medications and how to make lifestyle changes as you recover.

> When your pain has gone for a few days and you feel well, your heart is still weak. You need time to heal.

Understanding heart failure

What is heart failure?

With heart failure or HF, your heart is not able to pump enough blood to all parts of your body. Heart failure does not mean your heart has stopped beating.

It may also be called congestive heart failure or CHF.

What causes heart failure?

Heart failure can be caused by:

- heart attack
- coronary artery disease
- high blood pressure
- heart valve problems
- heart muscle infection
- alcohol and drug abuse
- some types of chemotherapy
- genetics

Sometimes, the cause is not known.

What happens in heart failure?

Heart failure usually happens when the heart muscle is either weak or stiff.

When your heart muscle is weak, it is not strong enough to pump blood to the rest of your body.

When your heart muscle is stiff, the heart cannot stretch to fill with enough blood in between each heartbeat. As a result, there is not enough blood to pump out of your heart.

At first your body will try to adapt to your heart's pumping problems. However, these changes can only work for a short time. In the long-term these changes can make your heart failure worse.

What are the symptoms of heart failure?

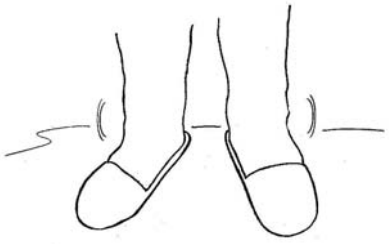
With heart failure, you may feel tired or have trouble breathing.

Sometimes blood can back up waiting to enter your heart. This build up of blood causes fluid to leak out of your blood vessels and causes congestion in your lungs, swelling in your body or both. Usually swelling happens in your feet, legs and waist.

> You are the expert on how you feel. Take time each day to notice whether your heart failure is stable or getting worse.

What symptoms do I watch for each day?

- swelling in your feet, legs or waist
- gaining or losing weight
- stomach feels bloated or full
- little or no appetite
- changes in your breathing



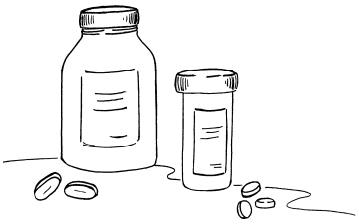
Other information about heart failure …

Weigh yourself every morning

If you gain or lose 2 pounds (1 kg) in a day or 5 pounds (2 to 3 kg) in a week, call your health care provider. Your medications may need to be changed.

Know your medications

Take your medications as prescribed, even if you feel well.



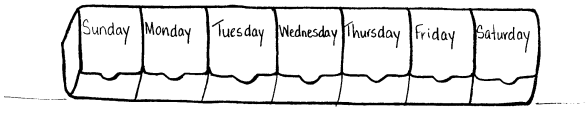
Your medications usually help to prevent your heart failure from getting worse. Know the names, amount you take, how often you take it, and the reason for being prescribed each medication.

Always carry a current list of your medications with you wherever you go.

Use the chart included in this handout to list all of your medications. If you need help, talk to your nurse, pharmacist or doctor.

Organize your pills using a pill box.

Talk with your pharmacist about your medications and how to organize them.



Watch your intake of salt and sodium

Avoid processed foods such as sausages, pickles, hotdogs, TV dinners and bacon.

Avoid canned foods such as soups and spaghetti sauce.

Take the salt shaker off of the table.

See pages 54 and 55 for more information on how to reduce salt and sodium.

Drink less fluid

Do not drink more than 2 litres or 6 to 8 cups of fluid in a day.

If you are thirsty suck on a lemon wedge, hard candies or chew gum.

You can also rinse your mouth with ice-cold water but do not swallow the water.

Be active

Stay as active as possible.

Exercise is an excellent way to manage your heart failure. It is important to exercise regularly, but you need to pace yourself. Balance periods of rest with periods of activity.

Walk on level surfaces and avoid hills. Walk indoors when it is too hot, humid or cold outside. Do not walk if you are unusually tired or ill.

Heart disease and emotions

What are some emotions I may feel?

Finding out you have heart disease can be frightening. It is normal for you to have changes in your feelings and moods as you recover.

Anger

You may feel angry and wonder why this happened to you. You may try to hide your anger and become short tempered or unusually quiet with your family or friends. Try to remember that they want to help. Sharing your feelings with your family and friends can help you feel better and help them understand what you are going through.

Anxious

You may feel anxious about being in the hospital and having tests and treatments. You may also feel anxious wondering if your heart will heal, whether you will get better or if you will be able to go back to work. You may worry about dying. You may be anxious when you go home because you may feel unsure about what you can and cannot do.

It is common to feel anxious. People usually feel better when they have information about how they are doing and understand what they can do. Ask your health care provider to answer your questions. This can help you to feel more in control and less anxious.

Anxiety

Anxiety is different from feeling anxious. Anxiety becomes serious when it interferes with your daily life, affects your behaviour, thoughts and feelings, and prevents you from doing things you normally enjoy. If this is the case, speak to your health care provider.

Pay attention to these symptoms:

- uncontollable worry that is constant and long-lasting
- restlessness
- irritability
- sleep problems
- fatigue
- trouble breathing
- increased heart rate
- sweating
- feeling lightheaded
- muscle tension

Sadness

It is also common to feel sad. This may be because you do not know what to expect or you are not able to do the things you normally do without becoming overly tired. Temporary feelings of sadness are normal and should go away within a few weeks as you get back to your normal routine and activities.

It is common to:

- worry about the future
- be concerned about returning to work
- worry about taking care of your family
- be concerned about changes in your activities or lifestyle

If feelings of anger, anxiousness or sadness last longer than 4 weeks, talk to a member of your health care team about it.

Depression

Depression is different from feeling sad. A depressed mood can prevent you from getting back to your normal routine. It can also make it hard for you to exercise regularly, eat healthy or become smoke-free.

Symptoms of depression:

- Loss of interest in other people and what is happening around you.
- Changes in appetite together with a change in weight.
- Feeling tired most of the time.
- Having trouble sleeping or you are sleeping more than usual.
- Difficulty with concentration or memory.
- Crying easily and you cannot figure out why.
- Loss of interest in activities you used to enjoy.
- Feelings of worthlessness, helplessness or hopelessness.
- Reduced interest in sex.
- Thoughts of death or suicide.

> When you have any symptoms of depression that continue every day for 2 weeks, talk to a member of your health team for help.
>
> Seek help right away if you are having thoughts of death or suicide.

Your emotional recovery is as important as your physical recovery. In fact, they work together, so discuss with your doctor how you have been feeling.

What can I do as a family member, partner or friend?

As a family member, partner or friend, you will have many feelings as well. You may wonder what you can do or say.

Here are some helpful ideas:

- Let the patient rest. Rest is needed for recovery. Long and frequent visits will not help the patient recover.
- Offer to make a casserole, do laundry or look after the children so there are less worries around home.
- Pass on any news or messages to other family and friends to limit the number of phone calls to the hospital.

More helpful ideas:

- When you visit, listen to the patient. Patients often do not make the best listeners and many want to talk. It is best to be honest with your feelings but not to show fear or talk about your own problems at this time.
- Be tactful. Patients need love and support. They do not need instructions or advice. Share good news but check with the nurse or doctor in hospital before you talk to the patient about anything that may be stressful.
- Look after yourself. This is also a stressful time for you. You are part of the patient's recovery so you need to eat well, get enough rest and look after yourself.
- Ask the patient what else you can do to help him or her rest and recover.
- As a family member, partner or friend, you may need to talk to someone about your feelings. You may have a close friend, chaplain or group with whom you can share your feelings. There are also Community Support Groups you may wish to join.

Learning to live with heart disease is a life long process. Contact your local chapter of the Heart and Stroke Foundation for other resources.

Getting better

Why do I need to take medications?

Medications are used for many reasons. You will have your own medication plan to follow based on your condition. You may need medication to:

- lower your blood pressure
- help your heart beat more slowly and stronger
- relax and open up the blood vessels
- help keep your heart beat in a regular rhythm
- manage your blood cholesterol levels
- thin your blood

Take your medications as prescribed, even when you feel better. You may need to continue some medications to help you stay well. Never take anyone else's medications. Do not share your medications with others.

> Do not stop taking your medications without talking to your doctor first.

What are the common medications?

The chart on the next few pages lists the common medications used to treat heart disease. Medication names are listed by their generic name first and then some of the common trade names in brackets.

As many companies can make the same medication, not all names are listed. Also, new medications often come on the market that may not be listed as well.

If you have any questions, please ask your doctor, nurse or pharmacist.

Type of medication	Generic and Trade Names (Generic names are listed first with no capital letters)	What medication does
Ace Inhibitors	benazepril (Lotensin®) captopril (Capoten®, Apo-Capto®) cilazapril (Inhibace®) enalapril (Vasotec®) fosinopril (Monopril®) lisinopril (Prinivil®, Zestril®) perindopril (Coversyl®) quinapril (Accupril®) ramipril (Altace®) trandolapril (Mavik®)	• helps slow down the further weakening of the heart • treats heart failure • lowers high blood pressure • improves blood flow to and from the heart • delays or prevents kidney damage from diabetes
Angiotensin Receptor Blockers (ARB's)	candesartan (Atacand®) eprosartan (Teveten®) irbesartan (Avapro®) losartan (Cozaar®) telmisartan (Micardis®) valsartan (Diovan®) olmesartan (Olmetec®)	• lowers blood pressure • treats heart failure • improves blood flow to and from the heart

Type of medication	Generic and Trade Names (Generic names are listed first with no capital letters)	What medication does
Beta Blockers	acebutolol (Sectral®, Monitran®) atenolol (Tenormin®) bisoprolol (Monocor®) carvedilol (Coreg®) labetalol (Trandaxe®) metoprolol (Lopressor®) nadolol (Corgard®) pindolol (Visken®) sotalol (Sotacor®) timolol (Blocadren®)	• lowers heart rate and blood pressure • helps to treat and prevent angina • helps to prevent a heart attack in patients who have had one • keeps your heart beat in a regular rhythm
Calcium Channel Blockers	**Heart rate controlling:** diltiazem (Cardizem®SR, Cardizem®CD, Tiazac®) verapamil (Isoptin®, Isoptin SR®, Chronovera®)	• lowers heart rate and blood pressure • helps prevent and treat angina • keeps your heart beat in a regular rhythm
	Non-heart rate controlling: amlodipine (Norvasc®) felodipine (Plendil®, Renedil®) nifedipine (Adalat PA, Adalat XL®)	• lowers blood pressure • helps prevent and treat angina

Type of medication	Generic and Trade Names (Generic names are listed first with no capital letters)	What medication does
Diuretics	amiloride hydrochloride (Amilide®) furosemide (Lasix®) hydrochlorothiazide (Apo/ Hydro®/Novo-Hydrazide®) indapamide (Lozide®) metolazone (Zaroxolyn®) spironolactone (Aldactone®)	• removes excess fluid from the body which reduces swelling • lowers high blood pressure
Lipid Lowering Agents	**Statins:** atorvastatin (Lipitor®) fluvastatin (Lescol®) lovastatin (Mevacor®) pravastatin (Pravachol®) rosuvastatin (Crestor®) simvastatin (Zocor®) **Fibrates:** bezafibrate (Bezalip®) fenofibrate (Lipidil Micro®, Lipidil Supra®, Lipidil® EZ) gemfibrozil (Lopid®) **Others:** ezetimibe (Ezetrol®) nicotinic acid (Niacin)	• lowers total cholesterol and LDL cholesterol (bad cholesterol) • lowers triglycerides • increases HDL cholesterol (good cholesterol)

Type of medication	Generic and Trade Names (Generic names are listed first with no capital letters)	What medication does
Nitrates	**Long acting:** isosorbide dinitrate (Isordil®) nitroglycerin patch (Nitro-Dur®, Minitran®) isosorbide mononitrate (Imdur®)	• relaxes blood vessels to reduce the work of the heart • treats and prevent angina
	Short acting: nitroglycerin spray (Nitrolingual Pumpspray®) nitroglycerin sublingual tablets (Nitrostat®)	• relaxes blood vessels to reduce the work of the heart • gives immediate relief of your angina pain
Platelet Inhibitors and Anticoagulant Medications	acetylsalicylic acid (Aspirin®, Entrophen®, Novasen®, ASA) apixaban (Eliquis®) clopidogrel (Plavix®) dabigatran (Pradaxa®) prasugrel (Effient®) rivaroxaban (Xarelto®) ticagrelor (Brilinta®) warfarin (Coumadin®)	• prevents blood clots or platelets from sticking together • helps to reduce the chance of another heart attack • you may be on more than one of these
Other	amiodarone (Cordarone®) digoxin (Lanoxin®)	• keeps your heart beat in a regular rhythm • lowers heart rate and strengthens the heart
	hydralazine (Apresoline®)	• lowers blood pressure and treats heart failure

Sometimes a medication can be a combination of 2 different medications. Here is a list of some of these medications.

Brand name	Generic names of medication in product
Accuretic™	quinapril and hydrochlorothiazide
Altace-HCT®	ramipril and hydrochlorothiazide
Aldactazide®	spironolactone and hydrochlorothiazide
Apo®-Triazide	triamterene and hydrochlorothiazide
Atacand® Plus	candesartan and hydrochlorothiazide
Avalide®	irbesartan and hydrochlorothiazide
Caduet™	amlodipine and atorvastatin
Coversyl® Plus	perindopril and indapamide
Coversyl® Plus HD	perindopril and indapamide
Coversyl® Plus LD	perindopril and indapamide
Diovan-HCT®	valsartan and hydrochlorothiazide
Hyzaar®	losartan and hydrochlorothiazide
Hyzaar®DS	losartan and hydrochlorothiazide
Inhibace® Plus	cilazapril and hydrochlorothiazide
Micardis® Plus	telmisartan and hydrochlorothiazide
Olmetec® Plus	olmesartan and hydrochlorothiazide
Prinzide®	lisinopril and hydrochlorothiazide
Tenoretic®	atenolol and chlorthalidone
Teveten®Plus	eprosartan and hydrochlorothiazide
Viskazide®	pindolol and hydrochlorothiazide
Vaseretic®	enalapril and hydrochlorothiazide
Zestorectic®	lisinopril and hydrochlorothiazide

Some medications may cause problems - what do I need to know?

Some medications may cause problems that were not planned. These are called adverse effects. You can learn more about these effects and what to do by reading the medication information handout given by:

- a member of your health care team in the hospital
- your pharmacist where you get your medications

Carry an up-to-date list of your medications and dosages with you at all times.

Include the name, the dose and how often you take it.

What do I need to know about my medications before I leave the hospital?

You, your family members and partner need to know:

- the correct name and dose of your medications
- why you are on these medications
- how long you will be on these medications
- when and how to refill your prescription
- when and how to take your medications
- where to store your medications at home
- the possible adverse or side effects of your medications

Your nurse, doctor and pharmacist will help you learn this information about your medications while you are in the hospital. Your community pharmacist will review this information with you.

Prescriptions from the hospital do not have repeats. Your prescription may still need to be refilled even when the label says “zero” or “no repeats”.

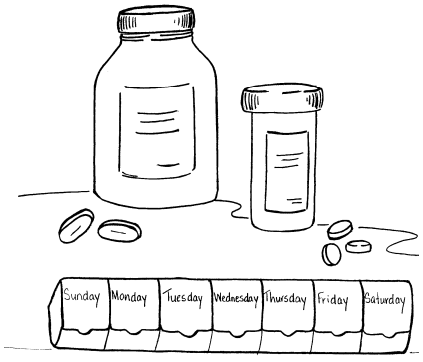
You must see your family doctor to get these prescriptions renewed.

What do I need to know about getting my medications at the pharmacy?

- Fill all your prescriptions at the same pharmacy.
- Tell the pharmacist if you are allergic to any medication.
- Allow 1 to 2 days to fill a repeat prescription. Do not wait until all of your medications are gone before you get a refill on a repeat prescription. This will allow time if your pharmacist needs to speak to your doctor.

What do I need to know about taking my medications at home?

- Take your medication at the same time each day.
- If you miss taking your medications 2 or 3 times in a row, do not catch up. Call your doctor or pharmacist for advice.
- Use a pill organizer or blister pack (prepared at your pharmacy) to help you remember to take your medication.



- Bring extra medications with you when you go away for weekends, holidays or vacations.
- Always carry an up-to-date list of the medications you are taking. Include herbal and vitamin supplements. Include the name, the dose and how often you take it. This list will allow your health care provider such as your dentist, pharmacist or a doctor in the Emergency Department know what you are taking.
- Check with your doctor or pharmacist before you take any non-prescription products such as vitamins, herbal products or over the counter medications. These may interact with the medications your doctor has ordered or they may directly affect your heart.

How do I store my medications?

- Store your medications in a dry place. Do not store medications in damp places like the bathroom or beside the kitchen sink.
- Keep medications away from heat and sunlight.
- Get rid of any medications you no longer use. Take your unused medications to your pharmacy for environmentally safe disposal. Do not throw medication in the garbage, down the sink or toilet.

Do I need a medical alert identification?

A medical alert identification is a bracelet, necklace or wallet card that contains information about your health. This may be needed if you cannot speak for yourself.

You will need a medical alert identification if:

- you are taking a medication called warfarin or Coumadin®
- you have a permanent pacemaker, implantable cardiodefibrillator device (ICD) or mechanical heart valve
- you have any medication allergies

Ask your community pharmacist for a medical alert identification form or visit **www.medicalert.ca**

What activity will I do in the hospital?

At first, rest is very important. You will begin more activity by doing some of your own personal care and getting out of your bed to a chair. You will slowly increase the amount of walking you do until you can walk up and down the hospital hallway several times a day.

Stop, rest and tell your nurse right away if you have any of these feelings during activity:

- chest pain or discomfort
- pressure or tightness in your chest
- shortness of breath or trouble breathing
- fatigue

Before you go home you will learn to judge how much activity is right for you. You will also learn how to safely increase your activity.

What activity can I do at home?

When you go home, it is important to be active every day. You can return to your usual daily activities gradually as tolerated.

See pages 62 to 65 for more information on exercise at home.

When am I able to have sex?

In general, you can have sex in 3 to 4 weeks. Your heart works harder during sex. When you can climb 24 stairs without any chest pain, discomfort or trouble breathing (shortness of breath), you can safely have sex.

Some people with heart disease may have little desire for sex. Couples may also be afraid to have sex. Feel free to talk about your feelings or concerns with your health care provider.

A copy of "**Living Loving and Your Heart**" is available. Ask a member of your health care team.

Key points about sex:

- Be relaxed and rested before you begin.
- Choose a place where you are comfortable.
- Choose a position that you are comfortable in. Some positions make your heart work harder.
- Avoid positions where your arms are holding your weight.
- Avoid large meals, drinking too much alcohol and smoking before sexual activity. These all increase the work of the heart. Sex would then increase the work of the heart even more. Wait at least 2 hours after a meal.

Can I take medication to improve erectile dysfunction?

Talk to your doctor about whether you can take erectile dysfunction medications, such as Viagra® (sildenafil) or Cialis® (tadalafil).

Do not take erectile dysfunction medications if you have taken a medication called nitrates as it will cause your blood pressure to become so low you may faint. For more information on nitrates – see the chart on page 28. Very low blood pressure puts stress on you and your heart.

If you have any chest discomfort while having sex after taking a medication for erectile dysfunction:

- STOP what you are doing
- sit or lie down
- do **NOT** take any nitroglycerin

If you still have chest pain or discomfort after resting for 5 minutes, have someone call 911 for an ambulance right away.

When should I stop an exercise, activity or sex?

Your body should let you know when you need to slow down or stop.
If you have any chest discomfort:

1	**Rest**	Stop what you are doing right away. Sit or lie down. This will decrease the work of the heart.
2	**Relax**	Take slow, deep breaths.
3	**Take nitroglycerin** Do not take nitroglycerin if you have taken a medication for erectile dysfuntion.	Take your nitroglycerin as prescribed: • take your 1st dose of nitroglycerin. Spray or place tablet under your tongue. • if the chest pain does not go away after 5 minutes, take a 2nd dose. • if the chest pain is still there after 5 or more minutes (now a total of 10 minutes), take a 3rd dose.
4	**Get help**	If you still have chest pain or discomfort after taking 3 nitroglycerins at 5 minute intervals: • have someone call 911 for an ambulance right away. • do not drive yourself to the hospital.

When can I go back to work?

The time you can return to work will vary depending on the type of work you do. Talk to your doctor about the type of work you do and plan a gradual or full return.

When can I drive?

If you have had a heart attack, you will generally have to wait 4 weeks before you can drive.

If you drive a commercial vehicle, the Ministry of Transportation will suspend your license for at least 3 months depending on your condition.

Ask your heart doctor or specialist about when you can drive.

What about travelling?

Travelling is relaxing for some people and stressful for others. Your doctor will tell you when it is safe for you to travel.

Key points about travelling:

- Discuss any travel plans with your doctor.
- Make sure you have health insurance coverage when you are outside of the province and Canada. Having insurance coverage can let you relax and enjoy the trip.
- Check your insurance coverage if you have had a change in medications or a visit with your doctor for a health problem in the last 6 months. You may no longer be covered for a health problem outside of the country.
- Tell your doctor where you are going and how long you will be there. You may need to take extra medications. The Customs Department may require a letter from your doctor if you take any medications or needles when you cross the border. Do this well in advance so there is time to get all this ready.
- Use lightweight luggage and suitcases with wheels.

- Leave plenty of time to get to the airport, drive to the cottage, eat a meal or enjoy a visit.
- Balance periods of activity with periods of rest.
- Keep your medications in their original containers.
- Carry an up-to-date list of all your medications with the amounts you take.
- Keep your medications safe. Carry your medications with you in case you need to use them right away. Do not store your medications in places that might get too hot or too cold.
- Always carry your health card and insurance papers with you in your purse or wallet.

Your travel checklist:

❒ doctor's permission

❒ doctor's letter indicating your recent health history

❒ a copy of a recent electrocardiogram called an ECG or EKG – ask your doctor for a copy

❒ up-to-date list of medications and dosages

❒ health card

❒ insurance coverage forms

❒ medications in their original containers

Cardiac Rehabilitation

You will be referred to the Cardiac Health and Rehabilitation Centre at the Hamilton General Hospital.

If you live outside of Hamilton and prefer to attend a program closer to your home, talk to your nurse **before** you leave the hospital. Making arrangements before you leave the hospital will help prevent delays in attending cardiac rehabilitation.

How will a cardiac rehabilitation program help me?

Taking part in a cardiac rehabilitation program will:

- help you manage many of the risk factors that lead to heart disease.
- keep you safe while making you strong.
- allow you to return to the activities you enjoy.
- reduce your chances for future heart problems.

What types of programs are offered at the Cardiac Health and Rehabilitation Centre?

We offer services such as:

- an exercise program designed specifically for you, and exercise counseling
- nutrition counseling and education
- nursing education and support
- stress management
- smoking cessation support
- you may also see a doctor as needed

The health care team is trained to help you make lifestyle changes that are right for you.

Our gym includes:

- a walking track
- treadmills, stationary cycles, arm cycles, stair climbers and weights
- locker rooms with showers

How long is the cardiac rehabilitation program at the Hamilton General Hospital?

Your cardiac rehabilitation program may last up to 6 months depending on your needs.

Where is the Cardiac Rehabilitation Centre located?

3rd Floor, Section E
Hamilton General Hospital
237 Barton Street East
Hamilton, Ontario
L8L 2X2

Phone:	905-577-8033
Fax:	905-528-3148

CHRC

We look forward to helping you reach your heart health goals!

Risk factors

Risk factors increase your chance of developing heart disease.

Risk factors that you **cannot** change include:

- family history
- your age (if you are over 45 years for a man, and over 55 years for a woman)
- menopause

Risk factors that you **can** manage include:

- smoking
- high blood pressure
- high blood sugar and diabetes
- high blood fats such as cholesterol and triglycerides
- unhealthy eating
- being overweight
- lack of exercise
- stress
- depression

This section of the book will help you learn about how you can manage these risk factors. Your health care team can help you.

Living a healthy lifestyle will help you to stay well and do all the things you like to do. Read on to see what makes up a heart healthy lifestyle.

Be smoke free

Quitting smoking is not easy but it is the best thing you can do for your heart and your body. Smoking causes the heart to beat faster and work harder. It narrows your arteries and damages the lining of the arteries. Smoking speeds the build up of fat deposits in all blood vessels in your body.

What can I do to stop smoking?

- Think of yourself as a non-smoker. You have not smoked since you came into the hospital.
- Make note of the times and situations where you are most likely to smoke. Try to change these. Learn to do something new.
- Ask someone to be your helper. Talk to this person when you are having a hard time.
- Tell your friends and the people you work with that you quit smoking. Sit with non-smokers at work and social events.
- Chew gum, eat carrot and celery sticks and fruit to avoid gaining weight. This also keeps your hands and mouth busy while not smoking.
- Include regular exercise while quitting smoking. This will help to prevent weight gain. Talk to your doctor about what type of exercise is right for you.
- Use the money you have saved to treat yourself every once and a while for being a non-smoker.
- Join a stop smoking group. Your local Lung Association, Public Health Services or Cardiac Rehabilitation Program can tell you where these groups meet. They can help you to deal with any withdrawal symptoms and cravings you may have.
- Talk to your doctor about smoking cessation medications that can help you quit.
- Women who take birth control pills should not smoke. Taking birth control pills and smoking greatly increases the risk of heart disease and stroke. Talk to your doctor about other birth control methods if you continue to smoke.

Manage your blood pressure

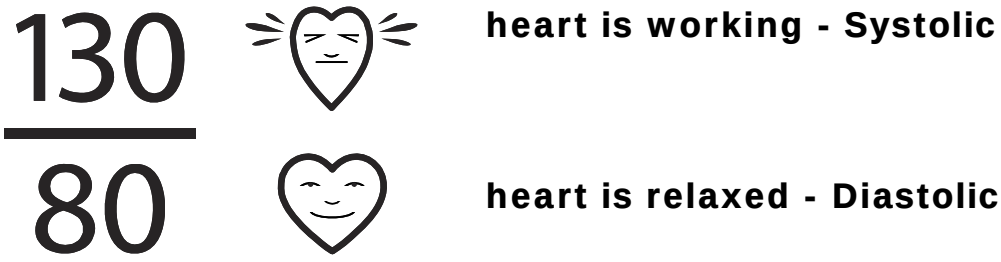
Blood pressure is the force of your blood on the walls of your arteries.

High blood pressure causes extra work for the heart. The heart must pump harder to force the blood through the arteries which deliver oxygen and nutrients throughout your body.

High blood pressure often has no symptoms. The only way to really know if you have high blood pressure is by having your blood pressure measured. Blood pressure is measured in millimetres of mercury (mm Hg) and recorded as 2 numbers:

1. Systolic blood pressure is the 1st or top number. This is blood pressure when your heart is working (contracting).

2. Diastolic blood pressure is the 2nd or lower number. This is blood pressure when your heart is relaxed.



What should your blood pressure be?

Most adults	Less than $\frac{140}{90}$ mm Hg
Adults with diabetes	Less than $\frac{130}{80}$ mm Hg

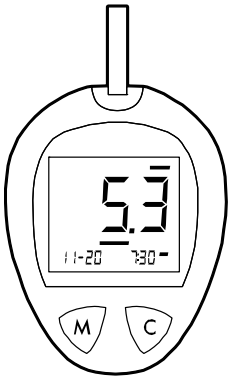
Reference: 2013 Canadian Hypertension Education Program Recommendations

These are general guidelines. Ask your doctor or health care provider what your blood pressure should be.

You can lower your blood pressure by following the DASH eating plan. **DASH** stands for **D**ietary **A**pproaches to **S**top **H**ypertension.

The DASH eating plan includes fruit and vegetables, low fat milk products, whole grains, fish, poultry and nuts. It is also reduced in sodium. Ask staff for a copy of “Blood Pressure and Your Health” (includes the DASH eating plan) or print it from: www.hhsc.ca/PEDL

Manage your diabetes



Diabetes is a condition where you have too much sugar in your blood. The sugar from the food you eat stays in your blood instead of going into your cells. Normally the sugar goes into your cells with the help of insulin. Insulin is produced in the pancreas. People with diabetes have little or no insulin, or the insulin does not work properly. This leads to extra sugar in the blood. High blood sugar can damage the blood vessel walls in the heart, other organs and throughout the body.

There are two types of diabetes:

- ✓ **Type 1 diabetes** occurs when the pancreas does not produce any insulin. People with Type 1 diabetes must take insulin by injection every day.

- ✓ **Type 2 diabetes** occurs when the pancreas makes less insulin, or the body cannot use the insulin properly. When this happens, the insulin is not able to lower the blood sugar to normal levels. With Type 2 diabetes, you may need to adjust the amount of food you eat and lose weight if you are overweight. You may also need to take oral medication, insulin or both to control your blood sugar levels.

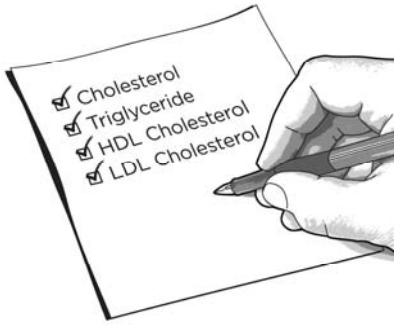
The main things that will help you manage blood sugars are:

- eating healthy – see pages 50 to 58. A heart healthy diet is suitable for people with diabetes.
- doing regular activity – see pages 62 to 65.
- taking diabetes medications as directed.
- checking your blood sugars.

For more information on how to manage diabetes, ask staff for a copy of "Diabetes - The Basics" or print it from: www.hhsc.ca/PEDL

Manage your blood fats

Cholesterol



Cholesterol is a wax-like fatty substance in your blood. It is made in your body by the liver. Small amounts of cholesterol are important for many body functions. Too much blood cholesterol or fat can build up in your blood vessels and block the blood flow to your heart. This may lead to heart disease and stroke.

There are 2 types of cholesterol in your blood:

1. **High Density Lipoprotein (HDL) Cholesterol – GOOD cholesterol**

   Think of **H**DL as your "**H**ealthy" cholesterol.

   HDL takes blood cholesterol back to your liver where it can be removed from your body. High levels are healthy for your heart.

2. **Low Density Lipoprotein (LDL) Cholesterol – BAD cholesterol**

   Think of **L**DL as your "**L**ousy" cholesterol.

   LDL leaves cholesterol in the walls of your arteries causing them to narrow over time. High levels can lead to heart disease.

Will the cholesterol in my diet raise my LDL cholesterol?

The cholesterol in food can raise LDL cholesterol in some people. But it does not have as big an impact as saturated and trans fat on LDL cholesterol.

For a heart healthy diet, you should still limit dietary cholesterol.

Foods that are high in cholesterol include: animal foods such as untrimmed or marbled meat, poultry with skin, organ meats, high fat milk products and egg yolks. Eat these foods less often.

Triglycerides

Triglycerides are another type of fat found in the blood. High triglyceride levels are also linked to heart disease.

What can I do to reduce my triglyceride levels?

- limit foods high in sugar and sweets
- eat several small meals throughout the day instead of 1 or 2 meals a day
- limit or do not drink alcohol
- reach and maintain a healthy weight and waistline
- include exercise
- if you have diabetes, maintain ideal blood sugar levels

Eat heart healthy

Recent studies show that following a Mediterranean-type diet is heart healthy.

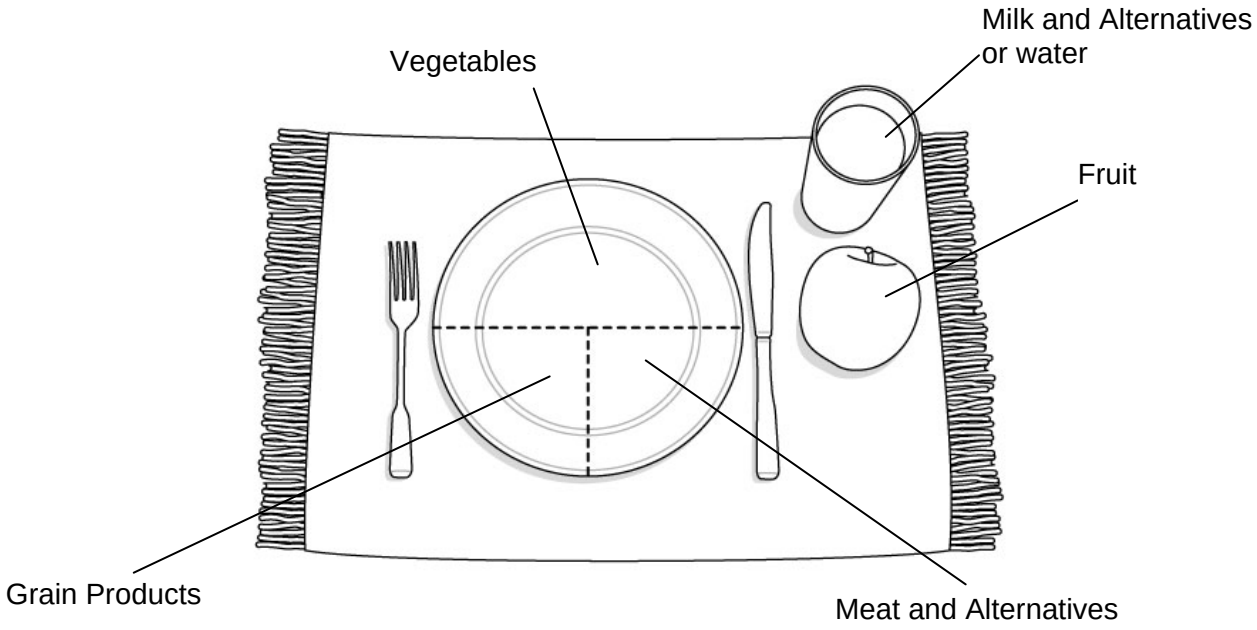
How do I follow a Mediterranean-type diet?

- Eat mostly plant based foods such as:
  - Vegetables and fruit
  - Legumes (such as kidney beans, chick peas and lentils)
  - Nuts, nut butters and seeds (unsalted)
- Eat fish often.
- Eat chicken, turkey, legumes and nuts often.
- Limit beef, veal, pork, lamb and cheese.
- Replace butter with healthy fats such as olive oil, canola oil and non-hydrogenated margarine.
- Use herbs, spices and lemon juice instead of salt and salt containing seasonings to flavour food.
- Drink wine in moderation – check with your doctor first.
- Enjoy meals with family and friends!

How to build a healthy meal

As much as possible, plan your meals to include vegetables, fruit, whole grains, legumes, nuts and seeds, olive or canola oil, and herbs and spices.

- ✓ **Vegetables and Fruit** – Make ½ of your plate vegetables. Choose dark green, red and orange colours more often. Have a piece of fruit for dessert.
- ✓ **Grain Products** – Make ¼ of your plate whole grain pasta, whole grain bread or brown rice.
- ✓ **Meat and Alternatives** – Make ¼ of your plate, low fat meat and alternatives such as fish, legumes (kidney beans, chickpeas, and lentils) or tofu.
- ✓ **Milk and Alternatives** – You may include a glass of skim or 1% milk or a small container of 1% or less MF yogurt to complete your meal.



Eat more	Serving size	Eat less often or avoid
Vegetables 4 to 5 servings each day (Include at least 2 deeply coloured vegetables a day)	• 1 cup raw, ½ cup cooked leafy vegetables • ½ cup raw or cooked vegetables • ½ cup 100 % juice	• Limit potatoes to ½ cup a day
Fruit 4 to 5 servings each day (Have whole fruit more often than juice)	• 1 medium sized fruit • ½ cup fresh, frozen or unsweetened canned fruit • ¼ cup dried fruit • ½ cup 100% juice	• Sweetened canned fruit
Grain Products 3 or more servings each day	• 1 slice whole grain bread (at least 2 grams of fibre) • ½ cup cooked whole grain such as brown rice or whole grain pasta • high fibre cereal (at least 4 grams of fibre) - serving size varies • ¾ cup cooked oatmeal or oatbran	• Refined grains such as white bread, rice, pasta • Low fibre cereals
Milk and Alternatives 2 to 3 servings each day	• 1 cup skim or 1% milk or fortified soy beverage • ¾ cup (175 gram) yogurt (1 % MF or less) • skim milk cheese (7 % MF) (as desired)	• 1 ½ oz partly skim milk cheese (20% MF or less) or regular cheese (more than 20% MF)
Vegetable oils and other fats 2 to 6 servings each day	• 1 teaspoon olive oil, canola oil, sunflower oil, non-hydrogenated margarine	• Butter or hard margarine • Palm kernel or other tropical oils • **Avoid** trans fats
Fish and shellfish 4 servings each week	• 3 ounces cooked or canned fish	• Commercially prepared deep fried or breaded fish
Legumes and soy 3 or more servings each week	• ¾ cup cooked chickpeas, kidney beans, lentils, black beans, soybeans • ¾ cup tofu • 3 oz soy based meat alternatives	

Eat more	Serving size	Eat less often or avoid
Nuts and seeds 5 or more servings each week	• ¼ cup (small handful) unsalted nuts or seeds • 2 tablespoons nut butter	• Salted nuts or seeds
Chicken or turkey 2 or more servings each week	• 3 ounces, cooked, with visible fat and skin removed	• Chicken or turkey skin • Dark meat • Deep fried or processed
Egg whites As desired	• 2 egg whites • ¼ cup egg substitute	

Eat less	Serving size	Avoid
Egg yolks 2 or less servings each week.	• 1 egg yolk	
Red meat 1 or less servings each week	• 3 oz of lean cuts, cooked with no visible fat or marbling	• Bacon, hot dogs, sausage, cold cuts, deli meats and other processed meats
Desserts and sweets 5 or less servings each week	• 1 tablespoon maple syrup, sugar, jelly or jam • ½ cup sorbet or Jello™ • 5 jelly beans or one small candy • 1 cup pop or lemonade • 1 cookie or small muffin	

Conversions

1 cup = 250 ml ½ cup = 125 ml ¾ cup = 175 ml
1 tbsp = 15 ml 1 tsp = 5 ml 1 oz = 30 g

Tips

- Plan your meals around vegetables and legumes such as a spinach salad with a lentil stew.
- Instead of red meat like beef, pork and lamb, eat fish, skinless poultry and legumes.
- Fish (fatty) such as salmon, sardines, halibut and tuna provide heart healthy omega 3 fat. Rinsed or low sodium canned salmon or tuna make quick lunches in a salad or sandwich filling.
- When cutting back on red meat, eat more legumes, vegetables, nuts and whole grains rather than refined grains like white bread, white rice, white pasta or other processed foods.
- Add chickpeas, kidney beans, split peas or lentils to soups, stews and salads. Try hummus or bean dip with raw veggies or whole grain crackers. Make a bean salad for a change.
- Bake extra chicken and use it the next day in sandwiches and salads instead of using processed deli meat. Try ground chicken or turkey in your favourite chili or spaghetti sauce recipe.
- Try different whole grains like barley, quinoa, brown rice or wild rice in soups, salads or pilafs.
- Use fresh or dried herbs, spices, no salt added seasonings and lemon juice to season foods instead of table salt, sea salt or seasonings that include salt.

Eat less salt (sodium)

Most Canadians eat more salt and sodium than they need. Too much much salt and sodium can lead to high blood pressure, heart failure or kidney disease.

Most of the salt and sodium in our diet is from processed or convenience foods. Sodium is added to food that you buy in boxes and cans and frozen meals.

Ways to reduce salt and sodium include:

- ✓ Eat less processed or convenience foods that are high in salt and sodium:
  - canned soups
  - spaghetti or tomato sauce
  - processed cheese
  - soy sauce
  - pickles
  - frozen meals

- ✓ Eat less processed meats:
  - sausage
  - bacon
  - hot dogs
  - deli meats or cold cuts such as bologna, turkey breast, salami or ham

- ✓ Compare the sodium in food products. Read labels and choose products with lower sodium levels.

- ✓ Have restaurant or take out foods less often.

  You might be aware that pizza, hot dogs and hamburgers are high in sodium. But did you know that “healthier” choices such as stir fries, salads, vegetable soup and sandwiches are often high in sodium too?

  Check websites for the sodium content of meals before you eat out.

- ✓ Cook more often. If you prepare more meals or parts of meals from scratch you can lower your sodium intake a lot!

- ✓ Take the salt shaker off the table. Try seasoning your foods with herbs, spices and lemon juice instead.

- ✓ Replace onion, garlic and celery salt with the fresh product or powder.

Common nutrition terms you may hear…

Fibre

There are 2 types of dietary fibre: soluble and insoluble. Both types of fibre are important for good health.

Increasing soluble fibre in your diet can help to lower the risk of heart disease by reducing bad LDL cholesterol levels. Soluble fibre is also called, viscous fibre.

Soluble fibre is found in:

- dried or canned legumes such as kidney beans, chickpeas and lentils
- whole grains such as oats, oat bran and barley
- cereal with Psyllium fibre (All Bran™)
- fresh fruits such as citrus fruit, apples, apricots, pears, prunes and strawberries
- vegetables such as artichoke, broccoli, Brussels sprouts, carrots, corn and squash

Insoluble fibre, once called roughage, comes from the tougher part of plants. It adds bulk to the stool, making it softer and easier to pass through the digestive tract.

Insoluble fibre is found in:

- wheat bran, wheat germ
- whole grains such as wheat, rye and barley
- whole grain breads and cereals made with whole wheat or bran
- brown rice
- vegetables such as asparagus, beets, broccoli, Brussels sprouts, cabbage, carrots, cauliflower, corn, green peas, squash and turnip
- fruit such as apples or pears with skin, apricots, bananas, all types of berries, citrus fruit and prunes
- nuts

Drink 8 to 10 cups of fluids (2 to 2½ litres) a day when increasing your fibre intake, **unless told otherwise by your health care provider**.

Saturated fat

Foods high in saturated fat include:

- ✓ fatty meats such as prime rib and regular ground beef
- ✓ regular luncheon meats such as salami and bologna
- ✓ sausage, hot dogs and bacon
- ✓ full fat milk products such as whole milk, high fat cheese
- ✓ cream, butter and lard
- ✓ coconut, palm and palm kernel oil

Saturated fats can raise your bad LDL cholesterol.

Trans fat

Trans fats raise your bad LDL cholesterol. Trans fat also decreases your good HDL cholesterol.

Foods high in trans fat include:

- ✓ shortening
- ✓ commercial baked goods
- ✓ fast foods, deep fried foods and foods made with shortening or partially hydrogenated oils
- ✓ margarines made with partially hydrogenated oils

Unsaturated fat

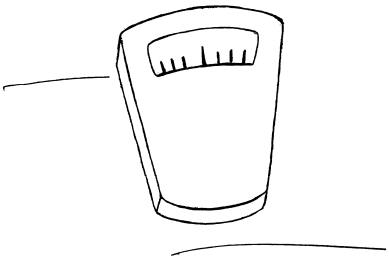
These fats do not raise your blood cholesterol levels. They can help lower LDL cholesterol when used in place of saturated fat and trans fat. Include foods that have unsaturated fat more often.

Heart healthy fats are the unsaturated fats (monounsaturated, polyunsaturated and omega-3 fat) in your diet.

Foods high in unsaturated fat include:

- olive oil
- canola oil
- sunflower oil
- corn oil
- non-hydrogenated margarines
- fatty fish
- flaxseed

Achieve a healthy weight



If you are overweight, a small weight loss (5 to 10% of your body weight*) can have big benefits such as improved:

- ✓ blood fats such as cholesterol and triglycerides
- ✓ blood pressure
- ✓ diabetes

*For example, if you weigh 200 lbs, this means losing 10 to 20 lbs.

How do I tell if I am overweight?

There are 2 ways to tell:

1. Measure your waist.
2. Know your BMI (Body Mass Index).

What is a healthy waist measurement?

A healthy waist measurement is:

- Women: Less than 31” (80 cm)
- Men: Less than 37” (94 cm)
- Men**: Less than 35” (90 cm)

The higher your waist measurement, the more you are at risk for developing heart disease.

** With specific ethnic backgrounds including South Asian, Chinese, Japanese and South and Central American.

What is BMI and how do I know mine?

The BMI is a calculation of your weight in kilograms (kg) divided by your height in metre squared (m^2).

Look at the chart on page 60 to find your BMI.

You can also search for BMI calculators on the web.

Here is one from the Canadian Diabetes Association www.diabetes.ca/diabetes-and-you/nutrition/bmi/ .

BMI	What does it mean?
Less than 18.4	Underweight
18.5 to 24.9*	Healthy
25.0 to 29.0	Overweight
30 and above	Obese

*A healthy BMI for South Asians is 18.5 to 23.

Ask a member of your health care team if you need help to figure out your BMI and what it means.

Even small changes in your weight can improve your health.
If weight loss is a goal for you, ask to see a Registered Dietitian.

What's your BMI (Body Mass Index)?

- BMI – Weight (kg) / Height (m)2
- Healthy BMI for South Asians is less than 23 kg/m2

Weight lbs		100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215
kgs		45.5	47.7	50.0	52.3	54.5	56.8	59.1	61.4	63.6	65.9	68.2	70.5	72.7	75.0	77.3	79.5	81.8	84.1	86.4	88.6	90.9	93.2	95.5	97.7
Height in/cm			Underweight					Healthy					Overweight					Obese					Extremely obese		
5'0"	152.4	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
5'1"	154.9	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	36	37	38	39	40
5'2"	157.4	18	19	20	21	22	22	23	24	25	26	27	28	29	30	31	32	33	33	34	35	36	37	38	39
5'3"	160.0	17	18	19	20	21	22	23	24	24	25	26	27	28	29	30	31	32	32	33	34	35	36	37	38
5'4"	162.5	17	18	18	19	20	21	22	23	24	24	25	26	27	28	29	30	31	31	32	33	34	35	36	37
5'5"	165.1	16	17	18	19	20	20	21	22	23	24	25	25	26	27	28	29	30	30	31	32	33	34	35	35
5'6"	167.6	16	17	17	18	19	20	21	21	22	23	24	25	25	26	27	28	29	29	30	31	32	33	34	34
5'7"	170.1	15	16	17	18	18	19	20	21	22	22	23	24	25	25	26	27	28	29	29	30	31	32	33	33
5'8"	172.7	15	16	16	17	18	19	19	20	21	22	22	23	24	25	25	26	27	28	28	29	30	31	32	32
5'9"	175.2	14	15	16	17	17	18	19	20	20	21	22	22	23	24	25	25	26	27	28	28	29	30	31	31
5'10"	177.8	14	15	15	16	17	18	18	19	20	20	21	22	23	23	24	25	25	26	27	28	28	29	30	30
5'11"	180.3	14	14	15	16	16	17	18	18	19	20	21	21	22	23	23	24	25	25	26	27	28	28	29	30
6'0"	182.8	13	14	14	15	16	17	17	18	19	19	20	21	21	22	23	23	24	25	25	26	27	27	28	29
6'1"	185.4	13	13	14	15	15	16	17	17	18	19	19	20	21	21	22	23	23	24	25	25	26	27	27	28
6'2"	187.9	12	13	14	14	15	16	16	17	18	18	19	19	20	21	21	22	23	23	24	25	25	26	27	27
6'3"	190.5	12	13	13	14	15	15	16	16	17	18	18	19	20	20	21	21	22	23	23	24	25	25	26	26
6'4"	193.0	12	12	13	14	14	15	15	16	17	17	18	18	19	20	20	21	22	22	23	23	24	25	25	26

Be active

Regular exercise is one of the most important things you can do for your health. It will help you:

- manage your weight
- manage your blood pressure
- lower your blood sugar
- lower your blood fats
- strengthen your heart and lungs
- manage stress and anxiety
- have more energy

Getting started with exercise at home

Use the FITT guide below when you begin to exercise.

Remember that everyone is different in the amount and type of exercise they can do. It is important to "listen to your body" and do what you can do. Start slowly and gradually increase your intensity.

F requency:	Most (3 to 5) days of the week.
I ntensity:	Moderate work level (3 to 5 on the RPE scale – page 63).
T ime:	Total of at least 30 minutes. You may begin with 3 sets of 10 minutes and gradually increase this to 30 minutes of continuous exercise.
T ype:	Do any type of aerobic exercise that you like. Examples include walking, cycling, swimming and stair climbing.

The Rate of Perceived Exertion (RPE) Scale

The Rate of Perceived Exertion or RPE Scale is used to measure how easy or hard you find an activity.

The scale has numbers from 0 to 10. The numbers describe how easy or hard you find an activity. For example, 0 (nothing at all) would be how you feel when you are resting in a chair; 8 to 10 should be how you feel when you have finished an exercise stress test.

Try to reach level 3 to 5 on the RPE Scale when you exercise.

When you use this scale, include any symptoms such as shortness of breath and how tired you feel in your legs and body.

The Rate of Perceived Exertion (RPE) Scale

0 ..... Nothing at all, very easy

1 ..... Very slight

2 ..... Slight

3 ..... Moderate

4 ..... Somewhat hard

5…….Hard

6 .....

7 ..... Very hard

8 .....

9 ..... Very, very hard (almost maximal)

10……. Maximum

Walking

Walking is one of the best types of exercise to begin with. Start by walking about one block. Walk with someone the first few times. This will make you and your family feel confident.

It is important to plan your walks and start off slowly. A shopping mall is a good place to walk. It is climate controlled and the surface is flat. There are usually benches along the way to rest. Wear proper walking shoes to avoid muscle and joint problems.

Stop exercising if you:

- ✓ have any chest pain or discomfort
- ✓ have trouble breathing or shortness of breath

Key points about exercise

- Always start with a 10 minute warm up of slow walking and stretches. This will give your arteries time to open up and deliver the extra blood and oxygen that your muscles will need.
- Plan to exercise at a time when you feel rested.
- Avoid exercising after a heavy meal. Wait at least 90 minutes.
- End your exercise session with a cool down of slow walking and stretches to help the blood return from your muscles back to your heart.
- Record your activity in the exercise record on page 65.

Exercise Record

Date	How long I walked (minutes)	Time of day	How I felt	RPE Scale 0 to 10
Apr 26	***5 min***	***12:00 pm***	***Felt well***	***3***

Reduce the amount of stress in your life

What is stress?

Stress is your body and mind's response to any demand. It is sometimes called the "flight or fight" response. It is important to understand that everyone experiences stress in their lives. It is impossible to remove it completely. However, there are ways you can learn to deal with your stress.

Common sources of stress include:

- work
- family and relationships
- physical environment
- daily hassles
- major life changes such as job loss, retirement and getting married

As you can see, stress can be good or bad. Stress becomes a problem when there is too much for your body to manage.

What are the effects of stress?

- Increases blood cholesterol levels.
- Makes platelets (cells in the blood that help promote clotting) more sticky and clump together more easily.
- Increases blood pressure, causing your heart to work harder.
- When you are under significant stress, it can be hard to find time to exercise, eat healthy, get enough rest and stop smoking.
- Long term or chronic stress can also lead to anxiety and depression.

Benefits of reducing stress

When you reduce your stress, you not only help yourself but you also help those around you. Stress affects your mood and emotions which in turn, can have an effect on your behavior. You may become quick tempered or withdraw from people. Neither response is healthy as you risk taking out your frustrations on your close family members and friends. This does not deal with the main problem of how you are feeling.

A calm and more positive response to stress will help your family and friends enjoy your company and help you maintain a sense of well-being.

What can you do to reduce stress?

The first step in dealing with stress is to recognize the signs and symptoms in your body:

- headache, clenching jaw, grinding teeth and feeling agitated or fatigued
- decreased concentration and mind racing
- being irritable, anxious or crying
- fidgeting or nail biting

While we cannot get rid of stress completely, the good news is we can learn ways to help manage and reduce the amount of it in our lives. There are three types of strategies to help you manage your stress:

1. Action strategies - Think about what you can **do** about the situation.
2. Thinking strategies - How else can you **think** about the situation.
3. Self-management strategies - How can you **reduce** the actual stress in your body?

Action strategies:

- Look around your surroundings. Is it noisy or cluttered? If so, change it.
- Be assertive. You may need to set boundaries or limits such as start saying no to demands on your time and energy that you find too much.
- Manage your time.
- Solve problems.
- Leave a situation if it causes you stress.

Thinking strategies:

- Reframe the problem or situation

  Try to look at the problem or situation from different angles and ask others for their views. We often think our way of viewing things is the **only** way but in fact it is only **one** way. Viewing the situation differently can often give you a new perspective and decrease the stress associated with it.

- Change your beliefs

  We all have ideas or beliefs about a whole range of things including what it means to be a good worker, parent, friend, how and when are homes should be cleaned and whether or not we should have time for ourselves. Think about what your beliefs are and consider if some ideas could change. Does the house **have** to be cleaned on a certain day of the week and all at once? Is it really bad to take a nap in the afternoon? Is it ok to say no to children and grand-children sometimes?
  Being flexible about our beliefs, challenging them and being open to change them can be helpful in reducing stress.

- Stop negative thoughts

  Negative or stressful thoughts can impact how we feel and how we behave. Become **aware** of your negative thoughts, **recognize** them and then **stop them**. Diverting your attention to something else and changing the thought to something more positive or realistic can be a very helpful strategy in reducing stress.

- Set realistic expectations

  We often have high expectations of ourselves and of those around us. When you are recovering it is important that you not be too hard on yourself. What would you advise a friend who was in the same situation as you? You would probably tell them to not be so hard on themselves, be patient and give it time. So, take your own advice.

Self-management strategies:

- Be active – see pages 62 to 65.
- Do relaxation exercises such as deep breathing, progressive relaxation, listening to music, or take a warm bath.
- Take a timeout. Give yourself a break from the situation
- Get more sleep. Decrease caffeine intake.
- Talk to friends and family for support.
- Laugh and use humour whenever you can.

When to call for help

Call your health care provider within 24 hours if you:

- gain or lose 2 pounds (1 kg) in a day.
- gain or lose 5 pounds (2 to 3 kg) in a week.
- have more shortness of breath with your usual activities or new shortness of breath while resting.
- find it harder to breathe when you are lying down.
- find it easier to sleep by adding pillows or sitting up in chair.
- lose your appetite, feel bloated or full in your abdomen (belly).
- have nausea, vomiting or diarrhea for more than one day.
- feel more tired or weak.

Call 911 right away if you:

- are struggling to breathe.
- have severe shortness of breath that will not go away.
- have chest discomfort or pain that lasts for more than 15 minutes and is not relieved by rest or nitroglycerin.
- have fast or irregular heart beats or a “racing heart” that makes you feel dizzy or unwell.
- have fainted.
- are coughing up frothy, pink sputum.

Tests and procedures

There are many tests and procedures to help figure out heart problems and how to treat them. This section describes the common tests and procedures you may have in alphabetical order:

- cardiac catheterization or angiogram
- cardiac nuclear scan
- radionuclide assay (RNA) studies
- coronary artery bypass graft
- echocardiogram
- electrocardiogram (ECG)
- holter monitor
- implantable cardioverter defibrillator (ICD)
- pacemaker
- percutaneous coronary intervention (PCI) or angioplasty
- stress test
- valve surgery

If a test or procedure is scheduled, you will be given information about how to prepare for them.

You will need to sign a consent form for some tests and procedures. The doctor will explain the benefits and risks to you before you sign.

Your family doctor and specialist will receive a written report of these tests and procedures.

Cardiac Catheterization or Angiogram

This is a test where the doctor injects a special dye into your arteries. An x-ray camera takes moving pictures that show your heart and the arteries that supply blood to the heart muscle. By filling the chambers with dye, the x-ray pictures can also show the structure and function of your heart valves and chambers of the heart.

A cardiac catheterization is able to show:

- any blockages or narrowing in the coronary arteries
- the function of the heart valves
- how well the heart pumps blood to the rest of the body
- any abnormalities in the heart
- the pressures inside the heart

A cardiac catheterization is also called a:

- coronary angiogram
- heart catheterization
- cardiac cath

Coronary Artery Bypass Graft

When you have coronary artery disease, one or more of your coronary arteries have become blocked. Coronary artery bypass graft is a type of open heart surgery. This is done to re-route or bypass the blood around a clogged coronary artery. It is often called CABG pronounced like cabbage.

You will have a Cardiac Catheterization or angiogram first to see if a coronary artery bypass graft is the best way to manage the problem.

The surgeon uses a piece of vein or artery to make the bypass. If a vein is used, it may be taken from your leg. If an artery is used, it may be taken from your chest or arm.

Not every blockage needs this type of surgery.

Echocardiogram

An echocardiogram is an ultrasound of your heart. The doctor can watch the walls of the heart move as the blood flows through the heart chambers and valves. A qualified technician does this test after your doctor orders it.

There is no special preparation for this test.

Your doctor may order other types of echocardiograms called Transesophageal or Dobutamine. If one of these tests are ordered, you will receive information about them.

Electrocardiogram

An electrocardiogram is also called an ECG or EKG. It is an electrical tracing of your heartbeats recorded on paper. If your heart has been damaged, these tracings will look different. This helps your doctor determine what has happened to your heart.

ElectroPhysiology Heart Study (EPS)

EPS is short for **E**lectro**P**hysiology Heart **S**tudy. This procedure looks at the electrical system of your heart. An EPS will show if you have a heart rhythm problem and what is causing the problem. This procedure is done when you have problems such as fainting, dizziness, heart palpitations or an abnormal heart beat.

Cardiac Nuclear Scan

A Cardiac Nuclear Scan shows the blood flowing to your heart muscle. This is called perfusion. A small amount of a radioactive substance, such as Thallium, Cardiolite or Sestamibi is injected into your blood through an intravenous. This substance travels to the coronary arteries and spreads through the heart muscle. A special camera measures the amount of radioactive material that reaches the heart muscle.

The type of test will determine whether you are told to exercise or rest first. If you are unable to exercise, you will be given a medication such as Persantine or Dobutamine through your intravenous (IV). The medication will exercise your heart.

Radionuclide Assay (RNA) Studies

An RNA study looks at the pumping action of your heart either at rest or during exercise.

A blood sample will be taken. Then you will be given IV injections. The injections make it possible for a special camera to take pictures of your heart pumping.

You will lie on your back on an exercise table. You must lie still while the pictures are being taken of your heart before you exercise.

You will then pedal an exercise bicycle while lying on your back. At first it will be easy to pedal. Every 3 minutes the tension on the bicycle will be increased. Pictures of your heart's pumping action will be taken every 3 minutes.

The total time for an RNA study is about 1½ hours.

Holter Monitor

A Holter Monitor is a portable ECG recorder that you wear for about 24 hours. The recorder is about the size of a pocket book and is lightweight. The monitor will continuously record your heart rhythm while you do normal activities.

Putting the monitor on

You need to wear a top that buttons in the front. Women should not wear a bra when wearing the monitor. A technician will tape paper electrodes, called leads, on your chest. The leads are attached to a small pocket-sized tape recorder.

Wearing the monitor

You will be asked to keep a diary of all your activities and how you felt over the next 24 hours. It is very important to record the exact time when you do your activities. Write down any unusual symptoms and what you were doing at the time.

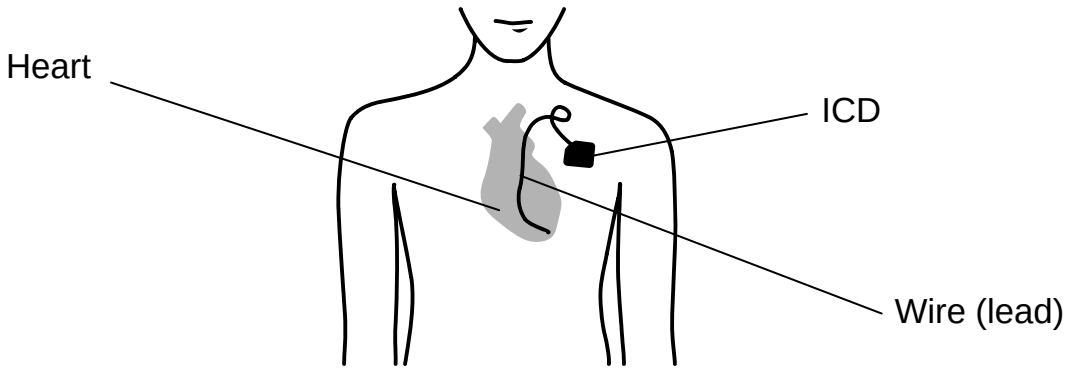
These might include:

- ❒ dizziness
- ❒ fainting
- ❒ chest pain
- ❒ trouble breathing or shortness of breath
- ❒ heart skipping beats
- ❒ fluttering
- ❒ heart racing
- ❒ heart attacks
- ❒ extra heart beats
- ❒ blackouts
- ❒ lightheadedness
- ❒ weakness

Implantable Cardioverter Defibrillator (ICD)

An ICD is a device inserted into your upper chest just below the skin near your collarbone. This will be done as a minor surgery. It is connected to wires (leads) that are inserted into the heart. An ICD is inserted when your heart beats too fast. This is called Ventricular Tachycardia (VT) or Ventricular Fibrillation (VF).

An ICD is a device inserted into your upper chest just below the skin near your collarbone. It is connected to wires (leads) that are inserted into the heart. This will be done as a minor surgery.



Pacemaker

A pacemaker is used to help your heart beat at a normal rate. There are 2 parts to a pacemaker. One part is a generator that stimulates the heart to beat. The other part holds the pacemaker wires that lie in your heart and are attached to the generator.

Types of pacemakers

There are 2 types of pacemakers. One is called a temporary pacemaker and one is called a permanent pacemaker.

If you have a temporary pacemaker, the generator remains outside of your body. This may stay in place from 5 to 7 days while you are in hospital.

If you have a permanent pacemaker, the generator will be placed under the skin of your chest or stomach.

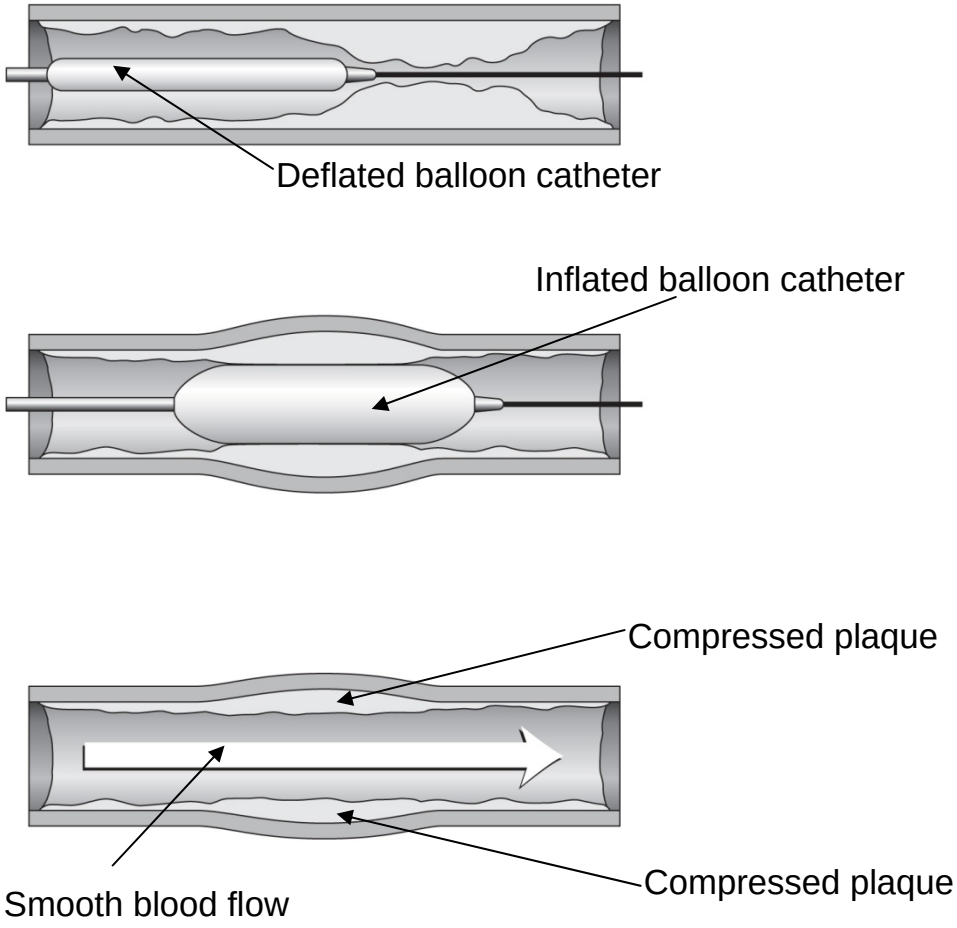
You will be given a book about permanent pacemakers to learn more about what to do.

When you have a pacemaker, you must carry a pacemaker identification card with you at all times. It is also important to keep all appointments at the pacemaker clinic and with your doctor.

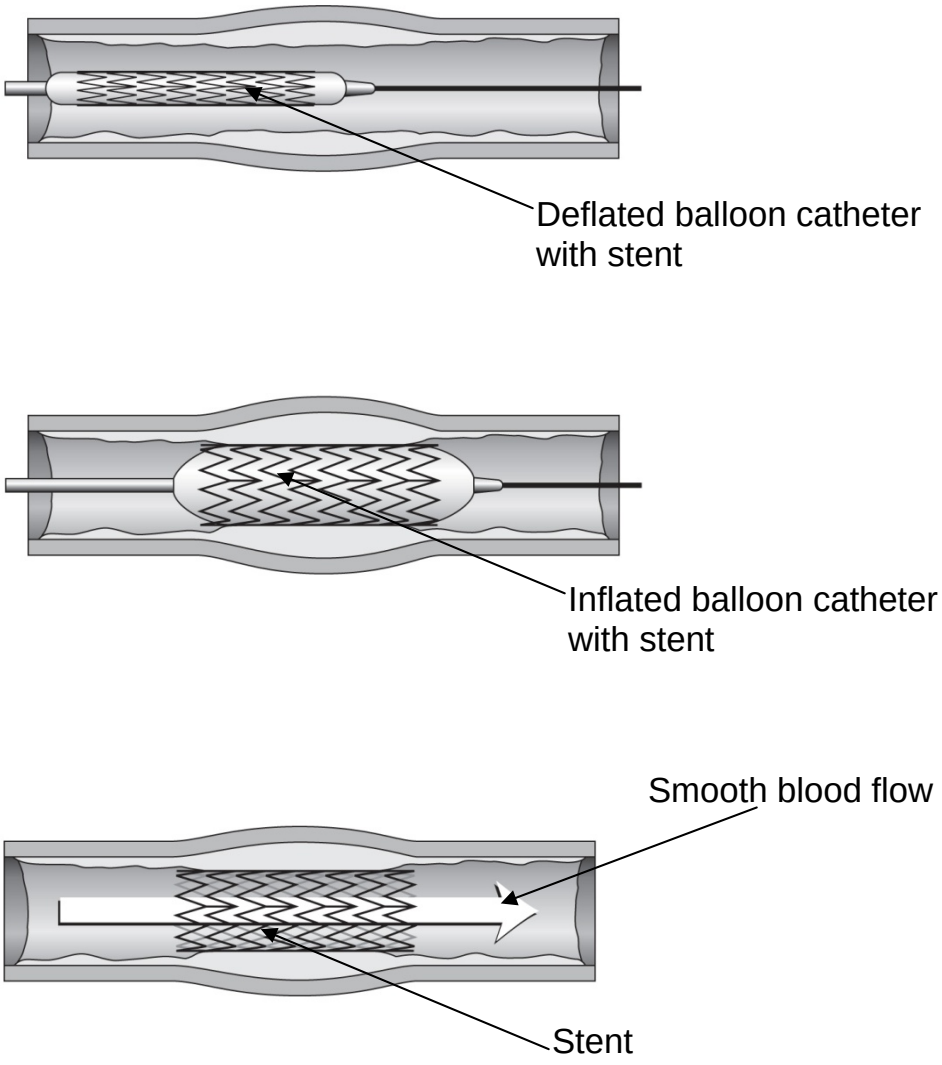
Percutaneous Coronary Intervention (PCI) or Angioplasty

Percutaneous **C**oronary **I**ntervention **(PCI)** or angioplasty is a procedure used to open up a narrowing in your artery. You may have a narrowing in one or more arteries that supply blood and oxygen to your heart. Lack of oxygen causes angina pain and sometimes, heart attacks.

A long, thin tube called a catheter with a small balloon on the end is placed through the artery in your arm or groin. Using X-ray, this catheter is guided up the artery to your heart. The balloon is blown up to widen the artery wall by pressing the plaque against the artery wall. The plaque remains on the artery wall. It is not removed. Then the balloon and catheter are removed. The artery is now wider so more blood and oxygen can flow through.



Most often one or more stents will be carefully placed in the artery after the balloon process. A stent is a wire mesh tube used to help support the open artery after angioplasty.



Stress test

A stress test measures your heart's response to the stress of physical activity on an exercise bike. The heart's response is measured by an ECG and frequent blood pressure readings.

Valve surgery

Heart valves can be damaged by infection, rheumatic fever, scarlet fever, birth defects or high blood pressure. A damaged valve can become stiff and scarred. It can be too stiff to completely open or close and blood must "squeeze" through a narrow opening.

When a heart valve does not open or close properly the heart muscle must work harder to pump blood. If your heart muscle becomes too tired, you may get symptoms such as trouble breathing or shortness of breath, swelling, dizziness, chest pain or you may feel very tired.

Heart valve disease can be treated by medications to help your heart pump better. If the medications cannot fix the problem, surgery to repair or replace the heart valve may be needed. The aortic and mitral valves are the most common valves that are affected.

If your valve is to be replaced, you and your surgeon will decide what kind of valve is best for you. There are valves made of pig or cow tissue or mechanical valves. Open heart surgery is needed to repair or replace a heart valve.

After valve repair or valve replacement surgery, you will need to take antibiotics to prevent infection. Talk to your doctor about when you need to take antibiotics to prevent infection in your heart valve.

After surgery you will probably also need to take blood thinners for at least 3 months. Some people will have to take blood thinners for the rest of their life. Talk to your doctor and nurse about taking blood thinners after your heart valve surgery.

Community resources

Where can I get more information?

There are many community resources available to people with heart disease. Some are listed here. Use your telephone book to find local telephone numbers and addresses. Many cities have a community service help guide as well. Your community library can also be very helpful for books, DVDs, group activities and much more.

Transportation services

There are transportation services that provide transportation for people who are disabled or cannot use public transportation without assistance. Check your telephone book.

Community support groups

Take Charge – Free workshops offered locally to help support people living with chronic health conditions.

www.takecontroltakecharge.ca or 1-855-333-2376

Websites

Canadian Diabetes Association
http://www.diabetes.ca

Hamilton Health Sciences
http://www.hamiltonhealthsciences.ca/

Healthy Living Hamilton
http://www.doitwell.ca/

Heart and Stroke Foundation – 1-800-360-1557
http://www.heartandstroke.ca/

St. Joseph's Healthcare, Hamilton
http://www.stjosham.on.ca/

The Lung Association
http://www.on.lung.ca/

Your Heart, Your Questions

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