Living well with heart disease

A guide for people with coronary artery disease

Heart&Stroke™

Acknowledgements

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- People living with heart disease — your personal experiences are helpful to people facing similar challenges.
- Care partners — you bring an important point of view to the story of living with heart disease.
- Healthcare providers and experts — your expertise, insight and care ensure current and accurate information in this guide.

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How to use this guide

Living Well with Heart Disease is written for adults with coronary artery disease. But your care partners, family and friends will find it helpful too.

> "When I first faced heart disease, I really felt like my body had betrayed me. It took me a long time to feel confident again. A guide like this will help people in the early days."
> — **Sandra**

Coronary artery disease can lead to:

- Chest pain (angina)
- Heart attack (myocardial infarction)
- Sudden stopping of the heart (cardiac arrest)

You may feel worried and afraid. These are normal feelings. You may also have questions, such as:

- Why did this happen to me?
- How will this change my life?
- What can I eat?
- Can I be physically active?
- What are these medications for?
- What about my future?
- Where can I go for more information or for help to get better?

This guide answers your questions and gives you tools to help your recovery. There is even space for you to write down your ideas and questions.

You can read *Living Well with Heart Disease* from cover to cover, or you can just look at the parts you need when you need them. Share the guide with family, friends and your healthcare team (the health professionals who are helping you). Knowing how you are doing will help t hem to support you.

Your recovery — getting you back to health

Finding out you have coronary artery disease is a major life change. Your life with coronary artery disease may be quite different from the life you had before.

Your healthcare team is an important part of your recovery. Your team may include doctors, nurses, physiotherapists, pharmacists, dietitians, occupational therapists, social workers and counsellors. Listen to what they say, follow their advice, and make healthy lifestyle changes now.

Your care partners — the family and friends who support you most — also play important roles in your recovery.

Your recovery is everyone's goal, so reach out for help and support.

How can I help my recovery?

- **Learn.** You need to know the facts about coronary artery disease and recovery. Learn about your treatment options and the lifestyle changes you need to make.
- **Get involved.** You need to be involved in planning your care and setting goals. Ask questions and get answers.
- **Do your part.** Do what needs to be done to get better. You can't get better unless you make some lifestyle changes. That means eating a healthy diet and exercising regularly. Take your medication. This guide will provide support on this challenging journey.

You don’t have to face this alone

If you have experienced heart disease, or are caring for someone who has, connecting with other people who know what you are going through can help the recovery journey.

Our **Community of Survivors** and **Care Supporters’ Community** are two separate members-only Facebook groups: one for survivors of heart disease or stroke, and one for those who provide support or care to them. Community members can find social and emotional support in a safe, inclusive and respectful environment.

Both are free, both are bilingual.

Our Facebook communities are places you can be reassured that you are not alone. There are others who are living similar experiences, and who understand and can offer practical advice. You may also wish to share your experience and wisdom, extending a caring word to others. Members care, share and help pay it forward.

Join a Community and learn more at **heartandstroke.ca/connect**

What are members saying?

> The "magic" of this group happens if we tell about our experiences, our journey, so we all can learn from each other and get inspired, empowered to keep going and growing. Those who can fully understand our journey are the ones who are on the same road. We have different stories and circumstances, but we do know the struggle, we do understand when we read other survivor's experiences.”
> **— Community of Survivors members**

> I have learned a lot from this group. I don’t feel so alone anymore. It helps to know that other patients worry about the same things that I do”
> **— Community of Survivors members**

> Hello to all of you, I am a natural caregiver to my elderly mother for several years. I had to retire to be more present with her. She suffered a stroke in 2015, and she recovered well enough. Thank you for accepting me in your group! It'll be good to talk to people who know what it's like to be a natural carer”
> **—Care Supporters’ Community members**

Roles and relationships

> What is important? It's your family, it's your health, those are the things that matter."
> **— Meldon**

Each family is different. And every member has a role to play in the family. Coronary artery disease can change the family balance. Roles — both for the person with the condition and for other family members — may change. The same may be true with friendships. During recovery, you may need to work out a new role in your family and with your friends.

How can I help my loved ones help me? How can supporting each other help my recovery?

1. Talk positively, clearly and practically. Listen carefully. Always think about how the other person is feeling.
2. Support each other. Figure out what support you need and ask for it. Do you need help doing something? Is it emotional help you need? Do you need help learning how to do things differently?
3. Make sure you have different people to help you. Knowing you can ask them if you need to can be a big help.

A message for care partners

Juggling roles and providing daily support for your loved one can be tiring for even the most devoted person, no matter how happy you are to take on this role. To prevent burnout, it helps to eat well, stay active, get a good night's sleep and make time for enjoyable activities.

Care partners and family members should watch themselves and one another for signs of burnout. Reach out to family, friends, support groups or your healthcare team if you see these signs:

- Feeling unusually tense or edgy
- Being angry
- Feeling sad, tearful or dissatisfied with life in general
- Feeling very tired and saying things like, "It is too much"
- No longer seeing friends
- Getting sick more often and taking an unusually long time to recover (lowered immunity)
- Showing an increased need for drugs or using alcohol too much
- Feeling out of control, with no sense of how to regain that control
- Having trouble sleeping or having disturbing dreams
- Not eating well

Heart and Stroke Foundation online information can help you to manage and live healthy after heart disease. Visit **heartandstroke.ca/heart**

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Chapter 1.

Understanding your heart and the causes of heart disease

The heart

Your heart is a muscle just behind your breastbone (sternum), the bone that connects your ribs. It is roughly the size of your fist, and weighs about 300 grams (one-half a pound). Each heartbeat pumps blood to all parts of the body. Your heart beats about 100,000 times a day.

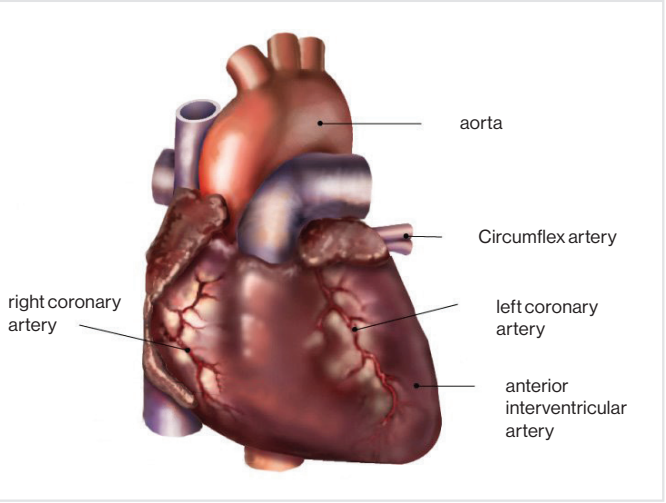
Chad shares his story

Chad was 28 when he suffered a heart attack during a recreational game of hockey. Even though several relatives died of heart attacks, including his father, he said, "I was young and naïve and thought it couldn't happen to me." Chad was being treated for high blood pressure and high cholesterol, but he was in the prime of his life and said, "I didn't feel sick."

Chad believes in the power of being informed and emphasizes that resources for people living with heart disease are critical. "You only have one heart," he says. He notes that his heart attack has changed his life and that he is grateful for the information he received during his recovery, which has helped him understand and cope with these changes. "I'm one of the lucky ones," he says. When asked about prevention, Chad speaks to the impact of a strong family history, but emphasizes "If you can avoid heart disease, avoid it at all costs."

The blood vessels

Blood vessels called arteries and veins carry blood around the body. Your body has about 113,000 kilometers of blood vessels. Arteries carry blood rich in oxygen from the heart to the body. Your body needs a constant supply of oxygen. Your body removes oxygen from the blood and uses it. Veins carry blood back to the heart and lungs to pick up more oxygen. The heart then pumps the oxygen-rich blood back again to the whole body.



The coronary arteries

Your heart also needs its own constant supply of oxygen to keep pumping. Coronary arteries carry blood rich in oxygen to the heart.

Heart disease

Heart disease is a group of conditions affecting the heart. Your healthcare provider has told you that you have coronary artery disease.

In coronary artery disease, one or more of the coronary arteries becomes narrow or blocked. This stops the heart from getting enough oxygen to pump well. Coronary artery disease can cause:

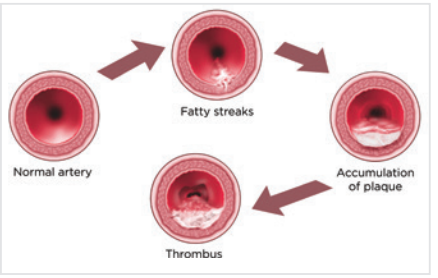
- Chest pain (angina)
- Heart attack (myocardial infarction)
- Sudden stopping of the heart (cardiac arrest)

Coronary artery disease

Normally, blood flows through blood vessels like water through a hose. In coronary artery disease, the coronary arteries become narrowed or blocked, which reduces blood flow to the heart. This is often called hardening of the arteries or atherosclerosis.

Atherosclerosis

Atherosclerosis is the buildup of plaque on the inside wall of an artery. Plaque is a sticky mixture of fatty streaks that build up, making the walls of the arteries thick and hard. The coronary arteries and the arteries in the neck and the legs are affected most often.



Atherosclerosis usually starts early in life. Many people have plaque by middle age. Over time, the artery narrows or gets blocked. This stops blood from flowing through the artery. A plaque can also break open. If this happens, a blood clot (thrombus) forms at the break and blocks blood flow.

Mild plaque often does not affect blood flow very much. Atherosclerosis does not usually have any symptoms until the artery is blocked by at least half. Severe blockage causes symptoms in most people. The first symptom of coronary artery disease is often chest pain caused by angina.

Angina

What is angina?

Angina is caused by a drop in blood flow to the heart. This means the heart muscle does not get enough oxygen to work well. Angina is a serious warning signal. It can happen before or after a heart attack or by itself. Over time, many angina attacks can weaken the heart muscle, so that it does not pump well. This means your body does not get the oxygen it needs to carry out normal activities. Stress can cause angina because it makes your heart work harder.

What are the signs of angina?

The signs of angina vary from person to person and between sexes.

Pain	• Tightness, pressure or discomfort in the chest • Ache or discomfort in areas other than the chest: neck, jaw, throat, shoulder, arms or back • Vague pain (more common in women) • Indigestion or heartburn • Pain that goes away with rest
Shortness of breath	• Difficulty breathing
Tiredness (fatigue)	• Being tired all the time for no obvious reason • Trouble getting through normal, everyday activities • Weakness

Angina and heart attack are different conditions, but both can be caused by narrowing of the coronary arteries. Many things can lead to atherosclerosis and coronary artery disease. You will learn more about risk factors later in this chapter.

What do I do if I have angina?

Rest or a medication called nitroglycerin (or nitro) usually helps angina. Nitroglycerin widens or opens up the coronary arteries. This allows more blood to reach your heart. You need to see a doctor if you are having angina. The doctor will prescribe nitroglycerin. Always carry it with you.

Stable angina	Unstable angina
• The same each time • Length of discomfort lasts for less than 15 minutes • Physical activity, exercise and/or emotional stress are common causes or triggers	• Less predictable • Length of discomfort lasts for more than 15 minutes • Can happen at any time, even during sleep • You feel chest pain you did not have before

What can I do to reduce my angina?

Avoid the four E's:

Exertion: too much physical activity
Eating a large meal
Emotional stress
Environment: too hot or too cold

Any of the four Es make your heart work harder. This means your heart needs more oxygen. If your heart does not get enough blood, angina can occur.

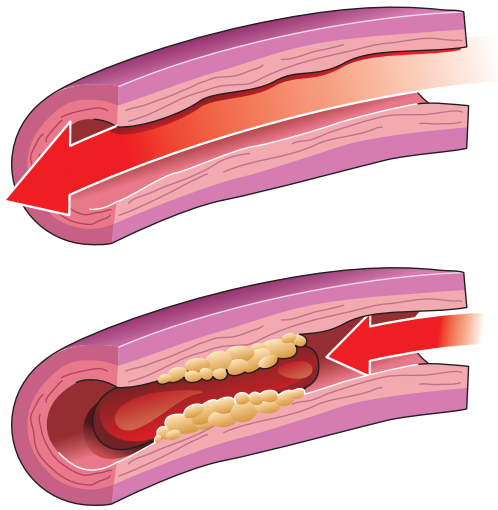
Heart attack

What is a heart attack?

A heart attack (**myocardial infarction**) happens when the blood flow through one or more of the coronary arteries is blocked. The blockage stops oxygen from reaching parts of the heart. Not getting oxygen is what damages that part of the heart. The faster you seek medical attention and the artery is unblocked, the less damage will be done.

A heart attack can be caused in three different ways:

1. **Atherosclerosis.** Plaque build-up can block a coronary artery so that little or no blood gets through. At the time of a heart attack, a small break in the plaque or a small blood clot (thrombus) often occurs.



Normal blood flow through healthy artery (top) and blocked blood flow in artery with yellow plaque and red blood clot (bottom).

2. **Blood clot (thrombus).** Plaque is fragile and blood flow in an artery can break it open. The body tries to mend the break by making a clot. A blood clot in a coronary artery can block blood flow and cause a heart attack.

3. **Coronary artery spasm.** Sometimes coronary arteries go into spasm (squeeze closed or contract strongly, then relax). This can stop the flow of blood through the artery and can cause a heart attack. Often, the causes of spasms are not known.

What are the common signs of heart attack?

Chest discomfort

Pressure, squeezing, fullness or pain, burning or heaviness

Upper body discomfort

Neck, jaw, shoulder, arms, back

Shortness of breath

Sweating

Nausea

Light-headedness

If you are experiencing any of these signs, you should:

- **CALL 9-1-1 or your local emergency number immediately** or have someone call for you.
- Stop all activity and sit or lie down, in whatever position is most comfortable.
- If you take nitroglycerin, take your normal dosage.
- Chew and swallow one 325 mg tablet or two 81 mg tablets of ASA (Aspirin), as long as you are not allergic or intolerant.
  - Do not take other pain medications such as acetaminophen (Tylenol), or ibuprofen (Advil) instead of Aspirin.
  - Do not substitute Aspirin for medical care.
- Rest and wait for Emergency Medical Services (EMS) to arrive.
- Keep a list of your medications in your wallet and by the phone. Emergency personnel will want this information.

How is angina different from a heart attack?

Angina is not a heart attack, but angina may develop into a heart attack. The main difference between them is heart damage. Angina does not cause damage or death of the heart muscle, but a heart attack does. That is why you must act right away if you think you are having a heart attack!

	Angina	Heart attack
When does it happen?	More often during physical effort (exercise) or stress, or if you are in a very cold place, or after a large meal	Often at rest
What does it feel like?	• Pain or discomfort may spread to chest, neck, jaw, shoulders, both arms (mostly the left arm), and back • Chest tightness, burning, heaviness, feeling of squeezing or not being able to breathe • People with diabetes may only have trouble breathing	
What are other symptoms?	Sometimes dizziness, paleness, weakness	Often nausea, throwing up (vomiting), weakness, tiredness, sweating
How long does it last?	Three to five minutes, rarely more than 15 minutes	Mostly more than 30 minutes
What helps or relieves it?	Rest, nitroglycerin	Nitroglycerin or rest do not help
What happens to the heart?	No damage to the heart muscle	Small or large scar on heart muscle. This damage may be permanent if you wait too long before getting to the hospital for medical help.
What are the causes?	Short or temporary lack of oxygen to the heart	Lack of oxygen to the heart for a long time. This is usually caused by a blood clot that blocks a coronary artery.

Risk factors for coronary artery disease

Risk factors for heart disease are conditions or habits that make it more likely that you will get heart disease. Some risk factors for coronary artery disease can be changed and others cannot.

> “Heart disease is one of the leading causes of death among First Nations. But it doesn’t have to be this way. In order to reduce the poor health and obesity associated with heart disease, we need to eat healthy foods and exercise at least 30 minutes per day.
>
> We need to return to the days when our Peoples maintained very active lifestyles. As the Chair of the national AFN Chiefs Committee on Health, I am making it a priority that our Peoples have access to healthy foods and health prevention and promotion programming. Together, we can become healthy and happy, and inspire others to do the same.”
> **— Ontario Regional Chief Isadore Day**

Medical conditions that are risk factors

High blood pressure

Blood pressure measures the pressure of blood on the walls of your arteries. High blood pressure (hypertension) is when your heart muscle has to work harder than normal to pump blood through your arteries. It can weaken your artery walls, and increase your risk of heart disease. Your blood pressure target depends on your age and whether you have diabetes. Speak to your healthcare provider about what blood pressure is considered high for you.

My blood pressure is

_____

High blood cholesterol and triglycerides

Three main types of fats (lipids) are normally found in the blood and in the cells of the body:

- LDL cholesterol is called bad cholesterol because it can increase plaque buildup (atherosclerosis). High levels of LDL cholesterol increase your risk of heart attack.
- HDL cholesterol is called good cholesterol because it helps move bad cholesterol to the liver for breakdown. Low levels of HDL cholesterol increase your risk of heart attack. High levels are good.
- Triglycerides are a type of fat (not a type of cholesterol). Your body switches some calories from food to triglycerides.

LDL

HDL

Cholesterol is important. It is found in all cells of the body. Your body makes most of the cholesterol in your blood — only one-fifth comes from food.

My cholesterol level is

_____

Diabetes

Diabetes is a condition that develops when the body does not make enough insulin or does not use insulin well. Insulin is a hormone. It breaks down sugar in the blood into energy for your body. If your body does not make enough insulin or cannot use it properly, then you will have high blood sugar. High blood sugar increases plaque buildup and narrowing of the arteries (atherosclerosis) which raises the risk of high blood pressure, stroke and heart attack.

Learn more about diabetes from the Canadian Diabetes Association at **diabetes.ca**

Pre-eclampsia

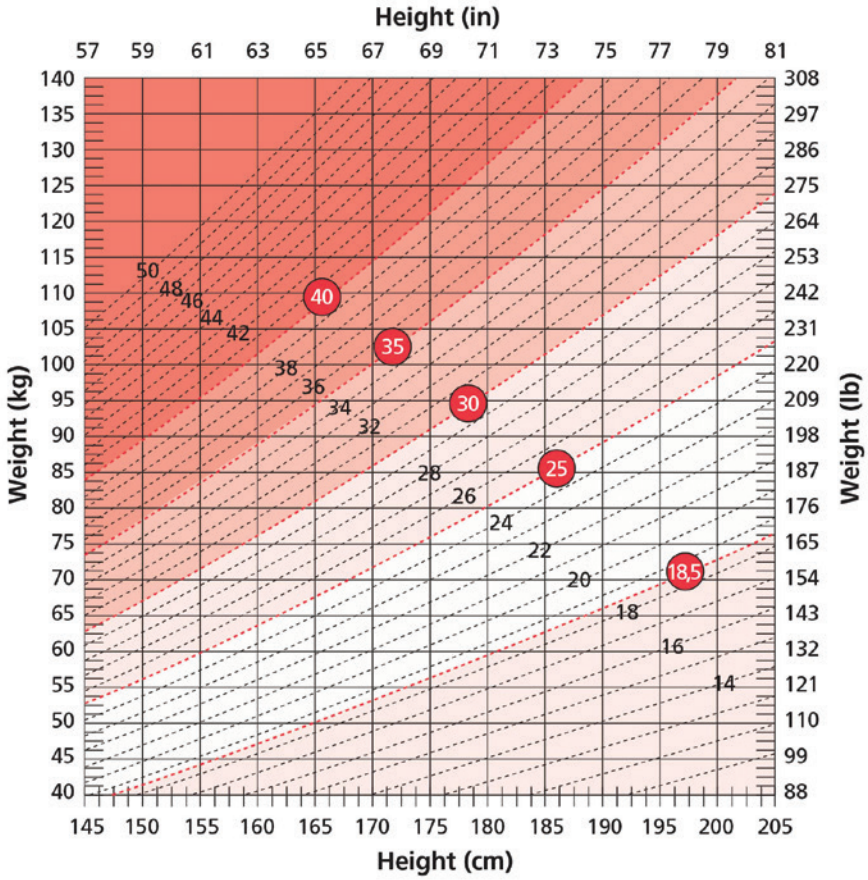
Women who have had preeclampsia during pregnancy have an increased risk of high blood pressure and heart disease.

Lifestyle risk factors

Unhealthy weight

Being overweight is a risk factor for heart disease. Achieving and maintaining a healthy weight can reduce your risk. It can also help control high blood pressure, high blood cholesterol and diabetes. You can assess your weight in two ways: finding your BMI (body mass index) and measuring your waist circumference.

BMI is based on your height and weight. Finding your BMI can tell you if you are overweight, normal weight, or underweight. This chart is for people 18 to 65 years old, except if they are pregnant, breastfeeding or very muscular.

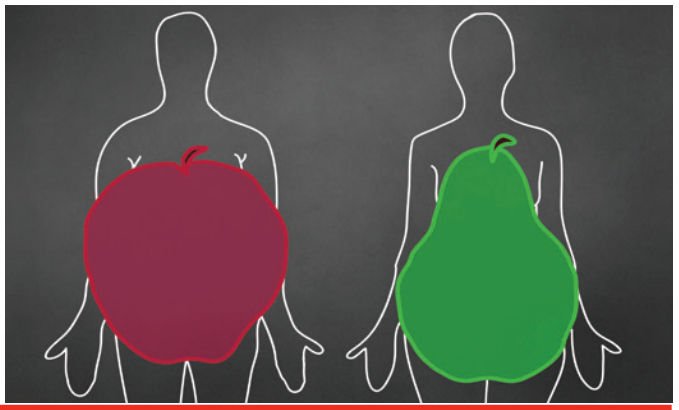


My BMI is _____

Source: Health Canada, Canadian Guidelines for Body Weight Classification in Adults. Ottawa: Minister of Public works and Government Services Canada; 2003, available online at http://www.hc-sc.gc.ca/fn-an/nutrition/weights-poids/guide-ld-adult/bmi_chart-graph_imc-eng.php

The size of your waist can help you know if you have a high risk of heart disease. Even if you are at a healthy weight, too much fat around your waist can raise your risk of high blood pressure, high blood cholesterol, heart disease and type-2 diabetes.

People with apple body shapes have a higher risk of heart disease than people with pear body shapes. The best way to find out if your waistline is increasing your risk of heart disease is to measure it.



	Increased risk	Substantially increased risk
Male*	More than 94 cm (37 inches)	More than 102 cm (40 inches)
Female*	More than 80 cm (31.5 inches)	More than 88 cm (35 inches)

* Some ethnic-groups or people living with risk factors may have increased risk even at lower waist circumference measurements.

Even if you have a small waist, you can have a higher risk if you are part of a certain ethnic group, if you have a family background of heart disease, or if you have other conditions such as high blood pressure or diabetes.

My waist circumference is

_____

Alcohol and recreational drug use

Drinking too much alcohol is a risk factor for high blood pressure, weight gain and heart disease. Alcohol may also make your medications not work as well. Ask a healthcare professional for more information. Recreational drug use can increase your risk of having a stroke and developing heart disease.

Not enough exercise

Not getting enough exercise can cause heart disease and diabetes. It can lower good (HDL) cholesterol.

Smoking

Smoking tobacco is the most common preventable cause of death in Canada. Smoking causes almost half of all deaths from heart disease among Canadians. Even exposure to second-hand smoke increases your risk. Smoking makes the heart work harder and decreases oxygen in the blood. Damage to your arteries from smoking also leads to a buildup of plaque.

If you smoke, quitting smoking is one of the most important things you can do to lower your risk of heart disease.

Stress

Some people who have high levels of stress — or are stressed over a long time — have higher cholesterol and blood pressure.

Unhealthy diet

Eating a healthy, balanced diet is one of the most important things you can do to protect your health.

A healthy diet can help lower your risk of heart disease and stroke by improving your cholesterol levels, reducing your blood pressure, helping you manage your body weight and controlling your blood sugar.

Risk factors for coronary artery disease that you cannot control

Age

The older you are, the higher your risk.

Sex

Your risk of heart disease and stroke increases after menopause.

Family and medical history

If you have a close relative who has experienced heart disease at an early age, you are at an increased risk.

Indigenous heritage

First Nations, Métis and Inuit peoples have a higher risk of coronary artery disease. This is because they are more likely to have high blood pressure (hypertension) and diabetes. Both conditions can cause coronary artery disease.

South Asian & African heritage

People of African or South Asian heritage are more likely to have high blood pressure, diabetes or other risk factors.

Personal circumstances

Personal circumstances and environmental factors have an influence on your health. This includes things such as access to healthy food, safe drinking water, health services and social services.

Your risk factors

The first step in reducing your risk of developing heart disease is finding out your risk factors. Talk to your healthcare team. Together, you can learn what you can do to improve your health.

What are your risk factors? List them here:

Things you can do to lower your risk

> People living with heart disease must get the information they need from their healthcare team and take it seriously enough to change their lifestyles. You only have one heart."
> **— Chad**

It is up to you to decide what and how much to change. Ask yourself: "Is there anything I would like to do for my health over the next few weeks or months?" You can only change when you have a goal. So set a goal for each change you want to make. You may decide to quit smoking, drink less alcohol or become more physically active. You may have several lifestyle change goals. But remember, change can be hard — especially lifestyle changes — so tackle them one at a time. Go to page 17 for help to develop healthy lifestyle habits that stick.

Go to **heartandstroke.ca/risk** to take a 10 minute risk assessment quiz. You will get a personal report on how to reduce your risk.

Control your blood pressure

Know your blood pressure so that you can control it. Here are some steps you can take:

- Have a healthcare professional check your blood pressure regularly.
- If you choose to buy a home blood pressure monitor, your doctor or pharmacist can help you choose a monitor and the right cuff size for you. Get your pharmacist to show you how to use the monitor.
- Ask a doctor for information about the right target numbers for you.

My blood pressure target is

_____

> My blood pressure and cholesterol levels are spot on for the first time in years.
> **— Chad**

Visit **heartandstroke.ca/bloodpressure** for more information to help you manage your blood pressure:

- Learn how to measure your blood pressure at home
- Use a web-based tool to track your BP readings over time
- Learn about how the DASH eating plan can reduce your blood pressure

If you have been prescribed medication to lower your blood pressure, take it as directed. Do not stop taking it without talking to your doctor first.

- Know your target blood pressure
- Follow a healthy diet
- Reduce salt in your diet
- Keep to a healthy body weight
- Be physically active
- Manage and reduce your stress
- Quit smoking

Control your cholesterol and triglycerides

Your healthcare team tracks your health by comparing the fats levels in your blood test with your target levels. Check with a healthcare professional for more information about the target.

My cholesterol target is

_____

- Follow a healthy diet
- Monitor and limit your alcohol consumption
- Be physically active regularly
- Quit smoking
- Maintain a healthy weight
- If you have been prescribed medication to lower your cholesterol, take it as directed

Control your diabetes

If you have diabetes, the best way to reduce the impact it can have on your health is by controlling your other risk factors :

- Maintain a healthy weight
- Follow a healthy diet
- Work closely with your healthcare team to set goals for your blood glucose and know your target levels.
- Learn how to monitor your blood sugar and tell your doctor if you cannot keep it in control.
- Be physically active.

Pre-eclampsia

Women with pre-eclampsia should be screened and treated for high blood pressure, obesity, smoking and high blood cholesterol during and after pregnancy.

Follow a healthy balanced diet

For information on eating for a healthy heart, see Chapter 3.

Keep a healthy body weight

The size of your waist or BMI on one day doesn't tell you everything you need to know about your weight issues. Watching your waist size and body weight over time is an excellent way for you and your healthcare provider to learn how your body is changing as you age and to look out for your risk of heart disease and stroke.

Staying at a healthy weight isn't always as simple as eating healthy and being active, but it is a great beginning.

See Chapter 3 and Chapter 4 for more information about getting to a healthy body weight.

Follow the instructions or watch a video on how to measure your waist at **heartandstroke.ca/healthywaist**

My BMI is _____

My waist circumference is _____

Limit the alcohol you drink

Know how many drinks you have every day and week. If you drink alcohol, limit yourself to small amounts, pace yourself and drink plenty of water at the same time.

Where should I go for help?

- New low-risk drinking guidelines have been released and are being reviewed. For up-to-date information on alcohol, heart disease and stroke, go to **heartandstroke.ca/alcohol**.
- Talk to your healthcare team if you would like to find a program to help you deal with alcohol problems.

Be physically active

Regular physical activity can be a lifesaver — literally. At least 150 minutes of physical activity a week can reduce your risk of heart disease. And being active is also a great way to keep to a healthy weight, lower high blood pressure, lower cholesterol levels and manage stress. Chapter 4 has more information about physical activity and exercise plans.

Quit smoking

Quitting smoking is one of the best things you can do to reduce your risk of heart attack. Twenty minutes after your last cigarette, your blood pressure and heart rate drop. The stress on your heart and blood vessels goes down.

- Within 48 hours, your risk of heart attack starts to go down. Your sense of smell and taste begin to improve.
- Within one year, your risk of heart attack is cut in half.
- Within 10 to 15 years, your risk of heart attack is the same as someone who never smoked.

You may be afraid that quitting will be too hard. There is lots of help for you when you are ready. Do not get discouraged or give up. It is never too late to quit.

Where should I go for help?

- Call **1-866-366-3667** to talk to someone about quitting. There are lots of helpful booklets and online programs and support to help you through the process.
- Your healthcare team can help with nicotine replacement and other therapies.

Manage stress

For information on managing stress, see Chapter 5.

What else do you need to know about the heart and heart disease?

Medications containing estrogen

Medications that contain estrogen — the female hormone — increase the risk of heart attack. Hormone replacement therapy (usually prescribed for the symptoms of menopause) and many birth control pills contain estrogen. Female smokers older than 35 years have the most risk. If you take birth control pills or hormone replacement therapy, discuss the benefits and risks with your healthcare professional.

Sleep apnea

Sleep apnea is a serious medical condition that can cause your breathing to stop and start many times while you sleep. There is a strong link between sleep apnea and high blood pressure, heart disease and stroke. Even short pauses in breathing while you sleep are hard on the heart because they lower the amount of oxygen reaching the heart. It is important to treat sleep apnea, so talk with a healthcare professional if you think that you or your partner may have it.

Abnormal heartbeat (arrhythmia)

Arrhythmia is an abnormal heartbeat or rhythm. The heartbeat might be too fast, too slow or not regular (uneven). A lack of blood flow to the heart can cause arrhythmia. An arrhythmia may last for a short time or it may be how a person's heart always beats. It may not matter very much, or it might be extremely dangerous.

Learn more about arrhythmia at **heartandstroke.ca/heartdisease**

Peripheral artery disease

What is peripheral artery disease?

Peripheral artery disease (PAD) is the hardening of the arteries (atherosclerosis) outside the heart which reduces blood flow. PAD most often affects the legs. It can also affect the aorta (the main artery in the body) and arteries going to the brain, arms, kidneys and stomach.

PAD is a serious condition. It raises your risk of heart attack and stroke. PAD can even result in loss of a leg. Finding and treating peripheral artery disease early can lower your risk of heart attack, stroke, and loss of a limb.

What are the causes of peripheral artery disease?

The causes of peripheral artery disease are the same as for coronary artery disease. The more risk factors you have, the higher your risk.

What are common signs of peripheral artery disease?

Peripheral artery disease develops slowly, over many years. In the early stages, most people have no symptoms. Eventually many people with peripheral artery disease will experience:

- Cramping, tiredness or pain (claudication)
- Pain in your foot or toe that disturbs your sleep
- Cuts or sores on your feet that only heal slowly (two to three months) or not at all

It is very important to talk to a doctor if you have any pain in your lower legs, thighs, or butt. Pain may be a warning sign of peripheral artery disease.

Notes

Worksheet: How to make healthy lifestyle changes

Ask yourself: "Is there anything I would like to do for my health? Is there anything I can do to improve my quality of life with heart disease?"

The key to making lifestyle changes is developing healthy habits that stick. The change will become a habit that you do every day without thinking, like brushing your teeth. Here are seven tips to help you plan for change:

> "I have learnt how to manage my new life and I have rolled with it. I had to change my lifestyle."
> **— Chad**

1. Set a SMARTER goal

Your healthcare team can help you decide which lifestyle change would have the greatest impact on your overall health and heart disease. Make sure it is a change that you feel confident about.

When you have your goal, make it into a SMARTER goal:

- **S**pecific: Vague goals produce vague results. Know what the goal is, and the when, where and how of the goal.
- **M**easurable: Putting a number in your goal makes it easier to measure your progress towards the goal.
- **A**ttainable: You have to be able to achieve the goal. An extremely difficult goal will set you up for failure.
- **R**ealistic: Is this something that you are willing and able to work towards?
- **T**imely: Set a time to achieve your goal.

Try to choose one goal that you can achieve in a short period. For example, "I will walk around the block once a day for a week." Make the goal specific and realistic. Set yourself up to succeed!

2. Figure out how you will achieve your goal

Planning is one of the most important steps to success. Ask yourself, "What do I need to do to reach my goal?"

Then make a plan that sets out specific steps to success. For example, if your goal is to eat seven servings of vegetables and fruit every day, you could break it down this way:

How many servings of vegetables and fruit do I eat now?

- I eat four per day. I will need to add three to reach my goal.

Ideas to add servings each day

- Eat salad of colourful vegetables for lunch.
- Make vegetable soup for lunches.
- Have a piece of fruit for an afternoon snack.
- Choose a vegetable stir-fry when out for dinner.

What I can do to make it happen

- Plan my meals for the week.
- Shop with a list that includes extra fruit and vegetables.
- Wash and cut up fruit and vegetables ahead of time.
- Keep track of the fruit and vegetables I eat each day.

3. Prepare for obstacles

Try to think ahead about the challenges you might face. Develop a plan to meet them. For instance, you may have to miss a morning walk if you have a doctor's appointment. Plan to walk after lunch or dinner.

4. Get support

Cardiac rehabilitation programs are run by people who are experts in helping you make lifestyle changes and get comfortable with life with heart disease. Programs are offered in person, over the phone and online.

Check with the Canadian Association of Cardiovascular Prevention and Rehabilitation at **cacpr.ca** to find a program near you. If you cannot find a centre near you, talk to your doctor.

You can also find support closer to home from your family and friends. If you have a partner, ask them to make the change with you. Here are some more tips on reaching out for support:

- Ask a family member, friend or neighbour to go for a walk with you.
- Ask for help to cut up vegetables and fruit.
- If you don't buy the groceries, ask whoever does to only buy healthy snacks.
- Ask the people in your house not to smoke at home or in your presence.
- Ask your healthcare team for information and coaching. For instance, your physiotherapist can give you a safe exercise routine. Your dietitian can help with healthier food choices.

5. Track your progress

The more you track your progress, the greater your chances of achieving your goal. For example, if your goal is go outside for a walk after dinner four times a week, this simple log will track the time you spend walking for each day of the week.

You only need to track the changes until you feel that they have become a regular habit.

Date	Time spent walking
Sun	
Mon	
Tues	
Wed	
Thurs	
Fri	
Sat	

6. When things go off plan, keep going

It can be hard to stick to a plan if you are tired, stressed, or not feeling well. Setbacks are a normal part of the process — they are not a failure. Don't give up. Here are some tips to help you turn a setback around:

- Remind yourself why you want to make the change. Think about how important it is.
- Look at what you've achieved so far. It is human nature to focus on the things we don't get right, but try instead to give yourself credit for what you have accomplished.
- Start keeping a log again.
- Look at what caused the setback. What can you do if it happens again?
- Look for support. Ask your family to help you get back on track.
- Check your goals again. Are they specific, realistic and measurable? Do you need to change them?
- Do you need to change your plan?

7. Celebrate success!

Whenever you make a small step toward your goal, pat yourself on the back and congratulate yourself. Reward yourself with something you like — like reading your book after your walk. And, remember, focus on the small steps you have achieved. If your goal was to walk every day one week, and you only did it 5 times, don't focus on not quite making it to your goal. Focus on the fact that you accomplished walking 5 days in row!

Notes

Chapter 2.

Knowing your medications

Medication

Prescription medications help your heart get better and protect you from more harm. People who take their medications over the long term, as prescribed, have fewer additional attacks or heart events and lower their risk of dying from heart disease. If you stop taking your medication without being told by your heart doctor, you will be giving up those benefits.

Medications in the hospital

If you are in the hospital, you are probably taking several medications for your heart. If you arrived at the hospital by ambulance, you might have been given some medications by the paramedics before you even reached the hospital.

- You may have been asked to chew and swallow one or more tablets of ASA (Aspirin) to make your blood less sticky (an "antiplatelet" effect). That helps if a clot has formed in your heart arteries. You may also have been given a stronger antiplatelet medication later.
- Fast-acting nitroglycerin given as a spray or tablet under the tongue opens your heart arteries. You may have been given several doses.
- Blood thinners (anticoagulants) treat any clot that has formed in your heart arteries and keep the clot from getting worse. Blood thinners are injected with a needle into a vein (intravenously) or under the skin (subcutaneously).
- Some kinds of heart attack are treated with a clot-busting drug (thrombolytic), which can dissolve a clot in a heart artery. A clot buster is usually only given when an X-ray of the heart (coronary angiogram procedure) cannot be done right away.
- If you are having a coronary angiogram procedure, you will be given medication to help you relax. It may make you feel sleepy, but you will still be able to wake up easily.

Talk to your pharmacist, nurse practitioner or doctor if you have questions or concerns about any of the medications you have been given in the hospital.

Medications when you leave the hospital

Some of the medications you are prescribed when you leave the hospital must be taken for the rest of your life. It is important to take them exactly as you were told. Stopping your heart medications without being told by your doctor will increase your risk of having another cardiac event and dying. Talk to your pharmacist, nurse practitioner or doctor if you have questions or worries about any medications.

Main medications used to treat and prevent coronary artery disease

This chart lists the most commonly prescribed heart medications. Here are some tips to help you use the chart:

- Each "class" has many different drugs within it
- Within each class, the generic drug names are listed first
- Following the generic name — in brackets — are the most commonly prescribed brand names in Canada. The list doesn't include every brand name. If your prescription medication isn't on the list, your healthcare provider or pharmacist are the best sources for more information

Medication class	Effects
Antiplatelet medications ASA (Aspirin, Asaphen, Entrophen, Novasen) Clopidogrel (Plavix) Prasugrel (Effient) Ticagrelor (Brilinta)	• Makes blood less sticky to protect blood vessels and stents from clots. • If stents* are placed in an artery, or you have a heart attack (with or without stents) you will take ASA plus another antiplatelet medication (clopidogrel, prasugrel, or ticagrelor) for a period of time. • Make sure you know how to take your antiplatelet medications and how long you are supposed to take them (ASA is usually taken for the rest of your life). **Do not stop taking your antiplatelet medications unless you are told to do so by your heart doctor.**
Cholesterol-lowering medications ("statins") Atorvastatin (Lipitor) Fluvastatin (Lescol) Lovastatin (Mevacor) Pravastatin (Pravachol) Rosuvastatin (Crestor) Simvastatin (Zocor)	• Slows or stops plaque formation inside blood vessels and stops existing plaques from getting worse. Their effect on plaques is powerful but slow so these drugs must be taken long-term. • Usually continued for the rest of your life, regardless of blood cholesterol levels since the effects of statins on plaque formation do not depend only on blood cholesterol levels. • Side effects are uncommon and usually minor. People may experience muscle aches or cramps. Talk to your healthcare provider if this happens to you. Muscle aches or cramps from statins usually get better after lowering your statin dose or by taking a different statin medication.
Beta-blockers Acebutolol (Sectral) Atenolol (Tenormin) Bisoprolol (Monocor) Carvedilol (Coreg) Labetalol (Trandate) Metoprolol (Lopressor, Betaloc) Nadolol (Corgard) Pindolol (Viskazide) Propranolol (Inderal) Timolol (Blocadren)	• Protects the heart from stress and abnormal heartbeats, protects a weakened heart muscle, prevents angina. • Will lower blood pressure and slow your pulse — watch for dizziness or feeling faint. • May make you feel more tired or fatigued, but this usually gets better with time. • Talk to your healthcare professional if you develop trouble breathing, swelling of the feet or ankles, depression or nightmares.

Medication class	Effects
Angiotensin converting enzyme (ACE) inhibitors Benazepril (Lotensin) Captopril (Capoten) Cilazapril (Inhibace) Enalapril (Vasotec) Fosinopril (Monopril) Lisinopril (Prinivil, Zestril) Perindopril (Coversyl) Quinapril (Accupril) Ramipril (Altace) Trandolapril (Mavik)	• Makes it easier for the heart to pump blood, lower blood pressure, protect a weakened heart muscle. • Protects the kidneys in people with diabetes or kidney disease. • Usually continued for the rest of your life if you have coronary artery disease for protection of the heart and blood vessels. • Will lower blood pressure — watch for dizziness or feeling faint. • Talk to your healthcare professional if you develop a dry cough or tickle in the throat after starting an ACE inhibitor. • Seek medical attention right away if you develop swelling of the face, mouth, or throat • You will need blood tests after starting an ACE inhibitor to check your kidney function and potassium. Avoid potassium supplements and salt substitutes unless prescribed by your healthcare provider.
Angiotensin receptor blockers (ARBs) Azilsartan (Edarbi) Candesartan (Atacand) Eprosartan (Teveten) Irbesartan (Avapro) Losartan (Cozaar) Olmesartan (Olmetec) Telmisartan (Micardis) Valsartan (Diovan)	• Makes it easier for the heart to pump blood, lower blood pressure, protect a weakened heart muscle. • Protects the kidneys in people with diabetes or kidney disease. • Usually taken for the rest of your life if you have coronary artery disease, for protection of the heart and blood vessels. • Will lower blood pressure — watch for dizziness or feeling faint. • You will need blood tests after starting an ARB to check your kidney function and potassium. Avoid potassium supplements and salt substitutes unless prescribed by your healthcare provider.
Nitroglycerin/nitrates spray (Nitrolingual) Nitroglycerin tablets (Nitrostat) Nitroglycerin patch (Nitro-Dur) Isosorbide dinitrate (Isordil) Isosorbide mononitrate (Imdur)	• Opens heart arteries to prevent or treat heart pain. • Make sure you know how to use your fast-acting nitroglycerin and always keep it handy. Turn to page 25 for more information on how and when to take nitroglycerin. • Nitroglycerin patch, isosorbide dinitrate, and isosorbide mononitrate provide a more long-lasting nitroglycerin effect than fast-acting spray or tablets. • Nitroglycerin and nitrates interact with drugs like sildenafil (Viagra), vardenafil (Levitra), and tadalafil (Cialis). Do not take any of these drugs without first talking to your healthcare provider.

* Stent is a small structure used to open up blood vessels in the heart that have been narrowed by plaque buildup.

When and how to take nitroglycerin (tablets or spray)

Nitroglycerin is used to relieve chest pain from **angina** that you may experience as a result of blockages in your heart arteries.

If you have chest pain or discomfort that you think is due to your heart, **stop** whatever you are doing and sit or lie down.

Place one tablet or give 1 spray **under** the tongue, and leave it there.

- **Do not** chew or swallow the tablet, or inhale or swallow the spray.
- If the pain or discomfort is **not** relieved after 5 minutes, repeat the dose.
- If the pain or discomfort continues after 2 doses (10 minutes), use a third dose and **immediately** call your local emergency number to take you to the nearest hospital. **Do not** drive yourself and **do not** delay.

Carry a supply of nitroglycerin with you **at all times**. Make sure a family member knows where the nitroglycerin is stored. If you forget or lose your nitroglycerin, it can be purchased at any pharmacy without a prescription.

You may experience a headache or dizziness after taking your nitroglycerin. This is a common side effect and will only last for a short time.

Do not store nitroglycerin in your car or in another place that may get very hot or very cold. Nitroglycerin will not work if it has gotten too hot or too cold.

Special instructions for nitroglycerin **tablets**

- Keep the tablets in the original small brown glass bottle and keep the lid closed tightly. When you get a new bottle, remove the seal and cotton so the tablets will be ready to use when you need them.
- Store the tablets in a cool dry place, **not** in the bathroom medicine cabinet or on top of the refrigerator.
- When away from home, carry a small number of tablets in a brown glass bottle in your pocket or purse (but only use bottles made for carrying nitroglycerin tablets).
- When you use a nitroglycerin tablet, place it under your tongue. **Do not** swallow the tablet, or it will not work.
- If you have moved some tablets to a different container, replace them after 3 months.
- Only use bottles specially made for storing nitroglycerin tablets.
- A tingling or burning sensation does **not** mean that the tablet is working.

Special instructions for nitroglycerin **spray**

- Make sure you 'prime' the spray by spraying into the air as directed when you purchase it or when it has not been used for several days or more.
- Do not shake the canister before using or you may not get a full dose.
- **Do not** inhale or swallow the spray, or it will not work.
- Most people find nitroglycerin spray easier to use than tablets. However, people who have trouble pushing the button on the spray bottle may prefer to use tablets.

Some people have angina whenever they are **active or exercise**. A small number of people with angina are told by their doctor to take nitroglycerin 5-10 minutes before they start each exercise session. Speak with your pharmacist or other healthcare provider if using nitroglycerin before exercising is right for you

Do not take sildenafil (viagra or revatio), vardenafil (levitra), or tadalafil (cialis or adcirca) without talking to your healthcare provider first. **Do not** use nitroglycerin (tablet, spray or patch) for 24 hours after taking sildenafil or vardenafil and do not use nitroglycerin for 48 hours after taking tadalafil. Talk to your pharmacist or other healthcare provider for more information.

Other medications that may be prescribed for people with coronary artery disease

The following medications are only prescribed for some people, for certain conditions.

Class	Effects
Calcium channel blockers Amlodipine (Norvasc) Diltiazem (Cardiazem, Tiazac, Tiazac XC) Felodipine (Plendil) Nifedipine XL (Adalat XL) Verapamil (Isoptin, Isoptin SR, Verelan)	Lowers blood pressure, prevents heart pain. Some will slow the heart rate (pulse)
Diuretics (water pills) Chlorthalidone Ethacrynic acid (Edecrin) Furosemide (Lasix) Hydrochlorothiazide Indapamide (Lozide) Metolazone (Zaroxolyn)	Helps the kidneys make more urine. Some will lower blood pressure. Some will help with ankle swelling and water in the lungs.
Aldosterone antagonists Eplerenone (Inspra) Spironolactone (Aldactone)	Protects a weakened heart
Other cholesterol-lowering medications Bezafibrate (Bezalip) Ezetimibe (Ezetrol) Fenofibrate (Lipidil) Gemfibrozil (Lopid) Niacin	Helps to improve your lipid levels
Cardiac glycosides Digoxin (Lanoxin, Toloxin)	Controls heart rate (pulse), helps with symptoms of heart failure (weakened heart)
Antiarrhythmics Amiodarone (Cordarone) Sotalol	Prevents and treats abnormal heart beats
Anticoagulants Apixaban (Eliquis) Dabigatran (Pradaxa) Rivaroxaban (Xarelto) Warfarin (Coumadin)	Prevents clot formation and treats abnormal clots

* Commonly prescribed examples of each class are listed in the chart. Not all examples are included. May be subject to change.

Talk to your pharmacist, nurse practitioner or doctor if you have questions or concerns about any medications.

Other prescription medications, natural and alternative therapies, and non-prescription (over-the-counter) medications

What if I am taking medications not listed here?

Some medicines and treatments can stop your heart medications from working properly and can cause other health problems. Tell your doctor and pharmacist about all the medications you are taking to make sure they are all safe for you. This includes:

- Prescription medications for other conditions or illnesses
- Medications for any purpose that you buy without a prescription (non-prescription or over-the-counter medications)
- Vitamins or mineral supplements
- Sample medicines a doctor might have given to you for free
- Inhalers
- Creams and ointments
- Herbal and natural health products
- Traditional medicines
- Alternative therapies

If you have questions or concerns about any of your medications, talk to your pharmacist, nurse practitioner or doctor.

What do I need to know about non-prescription (over-the-counter) medications?

Medicines you can buy without a prescription include painkillers, allergy medications, antacids, cold and flu products, vitamins and mineral supplements. Some of these can cause serious problems for people with heart disease.

What do I need to know about alternative therapies?

Some examples of alternative therapies include:

- Herbal medicine
- Natural health products
- Traditional medicines and therapies

The government does not control or regulate alternative medicines and therapies as strictly as prescription medications. So we don't always know if they are safe or useful for you — or if they are changing the effectiveness of your heart medications.

Safety tip

Some non-prescription products and therapies can cause serious problems for people with heart disease. Always check with your doctor, nurse practitioner or pharmacist before taking any non-prescription medications or alternative therapies.

Managing your medications

Filling your prescriptions

Here are some tips to make sure you do not miss any doses:

- Fill the prescriptions you have been given at your local pharmacy right away. Sometimes, the hospital can fax your prescription to your pharmacy, so you can pick up your medications on the way home.
- Order all your prescriptions from the same pharmacy so that the pharmacist knows all the medications you are taking.
- Order your refills a few days early to make sure the pharmacy has your medications when you need them. Some prescriptions can be renewed by a phone call from your pharmacy to your doctor or nurse practitioner.
- Know how many refills are left on your prescriptions so you don't run out. Follow up with your doctor or nurse practitioner to get new prescriptions when you need them.

Taking your medications as prescribed

Your healthcare team has chosen your heart medications and set the doses carefully to treat your coronary artery disease, protect your heart muscle and prevent serious problems in the future. Most people need to take their heart medications for the rest of their lives. If you stop taking them without your doctor knowing, you risk serious damage to your heart and health. It is very important to take your medications exactly as you have been told.

This means:

- Take each medication at the same time(s) each day, at the dose you have been prescribed
- Never share your medications with anyone else
- **Do not** change how you take your medications on your own. Talk to your doctor, nurse practitioner or pharmacist first.

If you have trouble remembering to take your medications, there are several things you can do:

- Buy a pill organizer from your pharmacy. They have a separate spot for you to put your pills for each day. Some have spots for different times of the day. A quick look can tell you if you have forgotten a pill or need to take one.
- Ask your pharmacy if you can get your medication in blister packs, also called bubble packs. Some pharmacies prepare these with enough medication for a week or more. Each pill is placed in a bubble, which is marked for a certain time of day. Just push the pill out of its bubble when you need to take it. Make sure you know how to push it out of the bubble and make sure you are strong enough to do it.
- Keep your medications out in the open where you can see them to remind you to take them (but away from children and pets).
- Set a reminder on your watch or phone or use a smartphone app.

Dealing with side effects

Medications can cause side effects. Some side effects are mild, but others can be more serious. You need to learn the most common side effects of each medication you take so you will know if they happen. If you take a medication that makes you sleepy or dizzy, don't drive or do other activities that may not be safe. If you are having a problem with side effects, talk to your pharmacist, nurse practitioner or doctor.

Watching out for interactions with food and alcohol

Ask your pharmacist about the effect of alcohol and food on your medications.

- Grapefruit and grapefruit juice change the way some medications work, including some statins.
- Make sure you know which medications need to be taken with food and which should be taken on an empty stomach.
- Don't drink alcohol if you have problems with dizziness or light-headedness or if your medication makes you sleepy. It is usually safe to drink a small amount of alcohol with most medications, but check with your pharmacist first if you are not sure.

Storing and getting rid of medications

- Keep all medications in safe containers, out of reach of children and pets.
- Do not store medications in warm or humid places, such as the bathroom or on top of the refrigerator.
- Take your old and unused medications back to the pharmacist. Do not put them in the garbage or down the sink or toilet.

Travelling with medications

- Check with your healthcare provider before you travel. You may need to get prescription refills or tests before you leave or while you are away.
- Make sure you have enough medication for the whole trip with some extra doses in case you are late getting home.
- Keep your medications in their original labeled containers. Ask your pharmacist for smaller containers if you need them.
- If you are flying or taking a train, keep your medications together in a clear plastic bag in your carry-on luggage (the bag you keep with you).
- If you are driving, keep your medications cool and dry. Do not leave them in the glove compartment or in a hot car.
- Refilling your prescriptions while you are away:
  - **In Canada:** ask for your refill to be switched or transferred from your home pharmacy or go to a walk-in clinic for a new prescription. Your medications may cost more if you are not in your home province.
  - **Outside Canada:** it can be hard to fill a prescription. Plan ahead to avoid this problem.

Your medication list

Make a list of all your medications and always carry the list with you. Your pharmacy can print a list for you or use the chart on page 31. A full list includes your prescription and non-prescription medications, vitamins, supplements and herbal and alternative products. This is especially important if you take antiplatelet or anticoagulant medications, since they may affect whether certain medical procedures can be done safely.

Make sure all your healthcare providers — doctors, dentists, pharmacists, massage therapists, physiotherapists, nurse practitioners and naturopaths — know all the medications you take. Also, a MedicAlert ID bracelet will list your illnesses or conditions if you are hurt and can't speak.

Travel tip

Planning a trip? Check your insurance. It may be hard to get travel insurance after a cardiac event. Travelling without insurance can be very costly if you need medical care during the trip.

Worksheet: My medications

List all your medications in the chart — following the example below.

Take this chart to your doctor's appointments in case your prescriptions are changed.

Name	Medication class	What is it for?	When to take, how to take and how many?	What are the side effects (when do I call the doctor)?
Example: Lipitor	Cholesterol-lowering medication ("statin")	Slows or stops plaque formation inside blood vessels and stops existing plaques from getting worse.	Evening (9pm), every day. 1 pill with water, on empty stomach.	Muscle cramps or aches — uncommon

Pharmacy name: _____ Telephone: _____

Ask your pharmacist for a list of your medications. Or take a picture of your pill bottles on your cell phone, print it out and leave copies in handy places.

Notes

Chapter 3.

Eating for a healthy heart

Healthy eating

Chad shares his story

When asked about his new reality after surviving a heart attack, Chad says, "I've learnt how to manage my new life and I've rolled with it. I had to." Chad had been relatively active all his life but felt he needed help to improve his diet. "I've changed my lifestyle," he says. Thanks to all the help from the dietitian, "Grocery shopping now takes me two hours," Chad jokes. He now understands the importance of reading labels and choosing foods with less saturated fat, added sugar and sodium. He says, "My blood pressure and cholesterol levels are spot on for the first time in years."

What is heart-healthy eating?

The foods you eat affect your health. A healthy diet can help reduce your risk of heart disease by:

- Improving your cholesterol levels
- Reducing your blood pressure
- Managing your body weight
- Controlling your blood sugar

Food plays many roles in our lives and we eat for lots of reasons other than hunger. Listen to your body for the signs of hunger.

This is what a heart-healthy diet looks like. It is an overall balance of whole, natural foods. It has few highly processed, unhealthy foods.

- **Vegetables and fruits** are a good source of antioxidants, vitamins, minerals and fibre. Fill half your plate with vegetables and fruit at each meal and snack.
- **Whole grain foods** have lots of fibre, B-vitamins and minerals. Fill a quarter of your plate with whole grain foods.
- **Protein foods** build and repair tissues. Fill a quarter of your plate with protein foods. Choose plant-based protein foods more often. Protein foods include:
  - Legumes, nuts and seeds
  - Tofu, fortified soy beverage
  - Fish, shellfish, eggs, poultry, lean red meat including wild game
- **Lower fat milk** lower fat yogurts, lower fat kefir, and cheeses lower in fat and sodium.

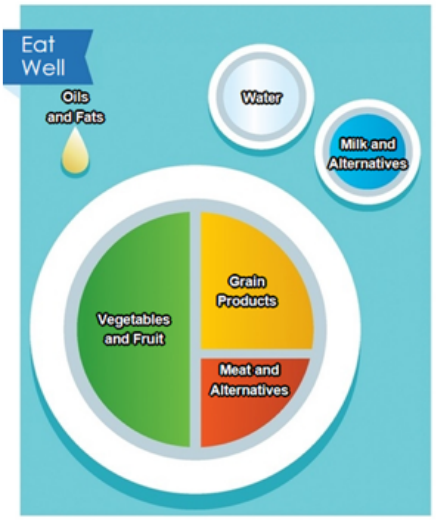
What changes can you make to start a heart-healthy diet?

Prepare meals at home using fresh, whole foods.

- Combine vegetables and fruits for a great appetizer or salad.
- Choose whole grains like whole wheat, oatmeal, oat bran, bulgur, quinoa, brown or wild rice and hulled barley for at least half of your grain servings each day.
- Add legumes such as lentils, kidney beans, and chickpeas to soups, salads and main dishes.
- Eat fish at least twice a week. Choose fatty fish like salmon, mackerel and herring.
- Add milk or fortified soy beverages to your oatmeal, soups, hot beverages, etc.

Fill half your plate with vegetables and fruits.

- Choose a range of brightly coloured vegetables and fruits every day. Eat them raw, roasted, steamed or stir fried.
- Choose orange and dark green vegetables more often: carrots, butternut squash, sweet potatoes, romaine lettuce, broccoli and kale.
- Try unsweetened frozen or canned fruit in the winter.
- Choose whole fruit over juice, even if the juice is unsweetened.
- Use the plate method to plan out meals. Half your plate for vegetables and fruit, a quarter of your plate for protein foods and a quarter of your plate for whole grains.



Source: Eat Well Plate from Government of Canada, available online at http://healthycanadians.gc.ca/eating-nutrition/healthy-eating-saine-alimentation/tips-conseils/interactive-tools-outils-interactifs/eat-well-bien-manger-eng.php

Drink water or lower-fat plain milk or milk alternatives if you are thirsty.

- Choose skim, 1% or 2% plain milk and yogurt.
- Avoid pop, sports drinks, ready-to-drink tea and coffee drinks, fruit drinks and juices.

Use less sugar, salt and fat when preparing or cooking meals.

- Rinse canned vegetables and fruit that could have added sugar or salt.
- Replace salt with herbs and spices, ginger, garlic, onion, lemon juice or pepper to flavour foods.
- Use smaller amounts of condiments like ketchup, prepared mustard, light soy sauce, salted herbs and poultry or steak spices.

Choose foods higher in fibre.

- Eat more vegetables.
- Eat fruits with their peels if possible.
- Add a vegetable and/or fruit to every meal and snack.
- Choose whole grain bread, flour, pasta or rice instead of white.
- Add one to two tablespoons of bran, high-fibre cereal, psyllium, chia or ground flaxseed to your favourite cereal.
- Add fibre to your diet slowly to prevent gas, bloating or diarrhea.

If you do eat out, choose restaurants that serve freshly prepared foods.

- Look for menu items that say steamed, broiled, boiled, grilled, baked, roasted or poached.
- Avoid items that say fried, deep-fried, battered, breaded, pickled or smoked.
- Replace fries with a salad, vegetables or rice for a healthier side dish.
- Ask for gravies, dips and sauces on the side so you can control how much to add.
- Avoid menu items with a cream, cheese or butter sauce.
- Skip the bread and butter.
- Choose fresh fruit or yogurt for dessert.
- Ask for a doggie bag to take leftovers home if you can't finish your meal.

Eat fewer highly processed foods.

Highly processed - or ultra-processed – foods are changed from their original food source and have many added ingredients. Different flavours, preservatives and other chemical ingredients are added in a factory. Highly processed foods also include refined foods which have had important nutrients such as vitamins, minerals and fibre taken out. Highly processed foods are often convenient, packaged foods that are easy to grab or are ready-made. But beware — they are often high in calories (energy), sugar, salt and saturated fat

- Hot dogs, deli meats and fast food burgers
- Chips, crackers
- Cakes, donuts, cookies
- Candies and chocolate bars
- Pop, sports drinks and ready-to-drink tea and coffee drinks
- Ice cream and ice cream bars
- Frozen pizzas, rice or pasta entrees

Understanding fat, sodium, added sugar and alcohol

Oils and fats

A small amount of fat is necessary for health. Fat can help your body absorb vitamins but it is also high in calories. The best way to avoid eating too much fat is to eat a diet full of natural, whole foods and to limit highly processed foods.

The type of fat and where it is found is just as important as the amount you eat. There are three main types of dietary fats:

- **Unsaturated fats** come from plant sources and from fish, and are good for your heart and blood vessels. Unsaturated fats are liquid at room temperature.
- **Saturated fats** are commonly found in processed and fried foods. They can also occur naturally in animal products and some plant-based and vegetable oils. Saturated fat raises bad (LDL) cholesterol which is a risk factor for heart disease.
- **Artificial trans fats** are created when hydrogen is added to liquid oils. They are solid at room temperature. Trans fats are used in processed foods to increase their shelf life, but they increase the risk of heart disease, diabetes and other health problems. On food labels, they may be called "hydrogenated oils." Artificial trans fats are being phased out of the Canadian food supply and should be completely removed by September 2020.

Plant sterols

Plant sterols are a type of vegetable fat. They lower bad (LDL) cholesterol and reduce your risk of heart disease. Plant sterols are found in:

- **Vegetable oils:** Corn, sesame, safflower, wheat germ
- **Nuts and seeds:** Pistachios, pine nuts, sesame and sunflower seeds
- **Vegetables and fruit:** Carrots and oranges.

Plant sterols are added to some foods, like non-hydrogenated margarine. Talk to your dietitian or doctor about adding sterols to your diet, especially if you take medication to lower your cholesterol.

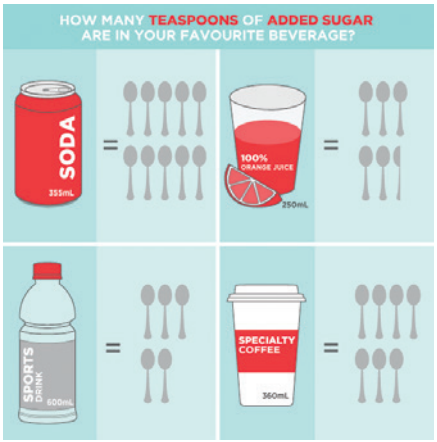
Healthy eating tip	Type of fat	Source
Choose more often	Omega 3-polyunsaturated	**Cold-water fish:** Salmon, trout, mackerel, sardines, herring **Oils:** Canola, soy **Nuts and seeds:** Walnuts, flaxseed (ground), chia seeds **Omega-3 eggs** **Legumes:** Soybeans and products, such as tofu
	Monounsaturated	**Oils:** Olive, canola, peanut **Non-hydrogenated margarine from these oils** **Salad dressings from these oils** **Nuts and nut butters:** Almonds, pecans, hazelnuts, peanuts **Avocados**
Eat in moderation	Omega 6-polyunsaturated	**Oils:** Safflower, sunflower, corn **Non-hydrogenated margarine from these oils** **Salad dressings from these oils** **Nuts, nut butters and seeds:** Pine nuts, sunflower seeds
Choose less often	Saturated	**Processed meats:** Sausages, bologna, salami, hot dogs, liver or meat paté **High-fat meats:** Lard, regular or medium ground beef, prime rib, lamb, poultry with skin, duck fat, visible fat from meat **Full-fat dairy products:** Whole milk, high-fat cheese, cream, butter **Oils:** Coconut, palm, palm kernel oil
Avoid	Trans	**Shortening** **Hard, hydrogenated margarine** **Commercial baked goods:** Donuts, cookies, crackers, croissants, pastries, pies, commercial muffins **Products containing partially hydrogenated oils**: Fast food, deep fried food

Added sugar

Sugar provides the body with energy. Milk, fruit, vegetables, starches and grains all contain sugar. Added sugars are not listed as part of the Nutrition Facts table. Only total sugars are listed.

Sugars added to food can include:

- White sugar, beet sugar, raw sugar or brown sugar
- Agave syrup, honey, maple syrup, barley malt syrup or fancy molasses



- Fructose, glucose, glucose-fructose (also known as high fructose corn syrup), maltose, sucrose or dextrose
- Fruit juice and purée concentrates that are added to replace sugars in foods

Added sugars are grouped together in the ingredient list. If sugar is near the beginning of the ingredient list, that food will be high in added sugar.

Added sugar gives you energy for a short time, but doesn't help you in any other way. A high-sugar diet is linked to heart disease, stroke, obesity, diabetes, high cholesterol, cancer and cavities in your teeth.

Limit the amount of sugar in your diet:

- Eat whole, natural foods.
- Read food labels to identify and avoid foods with added sugars.
- Drink water instead of sweetened beverages such as pop, chocolate milk, sports drinks, juice, ready-to-drink coffees and teas.

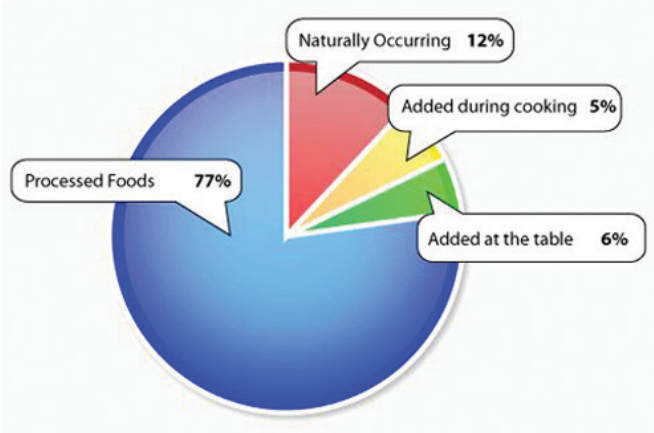
Understand what the sugar claims on packaged foods mean:

- **No added sugar:** The food item doesn't have added sugars such as glucose, fructose, honey or molasses. However, it may contain naturally occurring sugars from fruit and dairy products.
- **Reduced or lower in sugar:** The food item contains at least 25% and at least 5 grams less sugar than the food to which it is compared.
- **Unsweetened:** The food item contains no added sugars and it doesn't contain artificial sweeteners like aspartame or sucralose.
- **Sugar-free or sugarless:** Each standard serving contains less than 0.5 grams of sugar and less than 5 calories per serving.

Added sodium

Your body needs sodium to maintain the balance of water in your body. Salt is the main source of sodium. Other salts, such as sea salt and gourmet salts, all have similar sodium content. Salt is found naturally in shellfish, dairy products, meat and vegetables. In this book, we will use the term "salt" instead of "sodium".

Normally, your kidneys get rid of extra salt in your urine. This keeps your water balance normal. If you regularly have a lot of salt, it can make your body hold extra water. Too much water increases the total amount of blood in your body, which increases blood pressure. A high-salt diet may cause or worsen high blood pressure. Most of the salt found in the typical Canadian diet comes from processed food, **not** the salt shaker.



> "I loved salt, and all that, and I didn't think I would ever be able to change, but I did."
> **— Meldon**

Reducing salt in your diet will decrease your risk of high blood pressure. It may take some time, but your taste buds will adjust and you will want less salty food. If you reduce your salt intake to 2,300 mg of sodium per day (one teaspoon of salt), you reduce your risk of heart disease.

People with high blood pressure or heart failure should limit salted foods. If you have any concerns about salt in your diet, talk to your dietitian, doctor or nurse practitioner.

Get more tips to reduce your salt intake at **dietitians.ca** and **UnlockFood.ca**

Alcohol

Heavy drinking and binge drinking are risk factors for high blood pressure and stroke. A high alcohol intake can increase your blood pressure, your body weight and your triglyceride levels. Alcohol may also cause problems by interacting with your medications. And many drinks and drink mixes can be high in added sugars too.

If you drink alcohol, limit yourself to small amounts, pace yourself and drink plenty of water at the same time.

"A drink" means:

- 341 mL / 12 oz (1 bottle) of regular strength beer (5% alcohol)
- 142 mL / 5 oz wine (12% alcohol)
- 43 mL / 1½ oz spirits (40% alcohol)

New low-risk drinking guidelines have been released and are being reviewed.

For up-to-date information on alcohol, heart disease and stroke, go to **heartandstroke.ca/alcohol**.

Adopting a heart-healthy eating pattern

What you eat is important to your health. But how you eat may also be important to your family and social life. Well prepared and colourful food can be a feast for the eyes and your taste buds. Here are some tips to help you with heart-healthy eating.

Eat at the table

- Eat with family members or friends. Make the meal a chance to connect.
- If you are eating alone, think about or plan your day.
- Enjoy your food.
- Turn off the television and the computer.
- Pay attention to the look, smell and taste of your meal.
- Eat slowly and put your fork down between bites.
- Be aware of how much you eat.

Eat often enough

- Eat a meal or snack within an hour or two of waking up.
- Eat at least three times each day. Try to eat every five hours or sooner if possible.
- Do not skip meals: You may be too hungry by your next meal and eat too much.
- Plan healthy snacks if you get very hungry between meals. You might make unhealthy food choices or eat too quickly when you are very hungry. A healthy snack contains a combination of protein foods or whole grains with vegetables and fruit. It is recommended to have 1-2 servings of vegetables and/or fruit with each snack.

Prepare food at home

- Meals don't have to be fancy; they can be as simple as a peanut butter and banana sandwich on whole grain bread with a glass of milk.
- Cook a little extra so you have food ready for the next day. You can also make more and freeze future meals.
- Cut your vegetables before you put them in the fridge. Also, marinate meats before your freeze them. These tricks save time when you are ready to make a meal.

Shop for heart-healthy eating

- Shop in stores and markets with a good choice of fresh foods.
- Read the Nutrition Facts table on food packages.
- Make a meal plan with a shopping list to avoid impulse buys.
- Shop when you are not hungry.
- Buy mostly vegetables, fruits and whole grains.
- Buy lower-fat dairy and lower-fat cheese (<20% M.F.).
- Buy lean meat and alternatives, such as beans and fish.
- Buy time-saving products, such as bagged and washed salad, ready-to-eat dips, such as hummus or tzatziki, canned legumes and bagged baby carrots.

Other heart-healthy diets and menus

There are many heart-healthy ways of eating. The DASH diet and the Mediterranean diet have been proven to reduce the risk of heart disease. The DASH (Dietary Approaches to Stop Hypertension) diet is high in vegetables and fruits, and milk products. The Mediterranean diet is high in fruits, vegetables and whole grains, and is low in milk products, red meat, processed food and sweets. These diets are good tools to help you understand healthy serving sizes and plan your heart-healthy menu.

Learn more about:

- The DASH diet at **heartandstroke.ca/dash**
- The Mediterranean diet at **icm-mhi.org/en**

Find an eating plan that works for you

Finding an eating plan that works for you doesn't have to be complicated. You can simply decide to eat fresh unprocessed foods and cook at home more often. Or you can use the DASH diet or Mediterranean diet to design your menu.

Your eating plan is something that should work for the rest of your life. Diets that limit your food choices do not work long-term. You may not get needed nutrients and could gain weight back that you lost.

Whatever eating plan you pick, the bottom line is to choose a wide range of healthy foods. Eat more vegetables and fruits, whole grains and proteins – especially plant-based proteins such as legumes, nuts and seeds. Explore new recipes and foods from other cultures. Use this meal planning chart to get you started on planning healthy eating. Talk to a dietitian if you have any questions about your diet.

Discover new recipes at **heartandstroke.ca/recipes**

Meal	Sample menu	My choices
Breakfast	¾ cup oatmeal 1 cup skim milk 1 cup berries 2 tbsp ground flaxseed	
Snack	1 home-baked bran muffin 1 orange	
Lunch	1 cup homemade vegetable soup Salmon sandwich: ½ can (75g) salmon 2 slices whole grain bread 1 tsp mayonnaise lettuce 1 tomato 1 apple	
Snack	1 cup raw vegetables ½ cup hummus	
Dinner	1 cup tofu vegetable stir fry 1 cup brown rice ¾ cup of plain yogurt with added vanilla extract ½ cup berries	

Go to page 17 for help to develop healthy eating habits that stick.

Find a dietitian by contacting your provincial dietitians' association

Notes

Worksheet: Food labels

Food labels have important information to help you make healthy choices. The most important information is in the Nutrition Facts table and the ingredient list.

Things to look for on the Nutrition Facts table:

Serving size (at top of table)
Is this the amount you are eating? If not, you need to adjust calories (at the top) and nutrients (listed below) based on how much you eat.

Calories
This describes how much energy you get from the food. This is very important if you are watching your weight.

Fat content
Look at the amount of fat — this gives total fat content including unsaturated, saturated and trans. Aim for zero trans fat as it is unhealthy and should be avoided.

Sodium
Look at the "mg" of sodium and remember the maximum recommended is 2,300 mg per day (less if you are on a low-salt diet). Avoid high-salt foods (more than 15% daily value).

Fibre
Look under carbohydrates. Choose foods with at least 2 grams of fibre per serving.

Sugar
The sugar value listed is for total sugars. Avoid high sugar foods (more than 15% daily value).

Potassium, calcium and iron
Choose foods that provide these vitamins and minerals.

Nutrition Facts
Valeur nutritive
Per 1 cup (250 mL)
pour 1 tasse (250 mL)

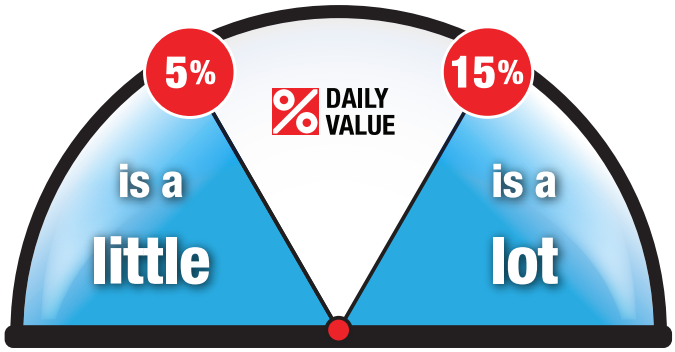
Calories 110	**% Daily Value*** / **% valeur quotidienne***
Fat / Lipides 0 g	0 %
Saturated / saturés 0 g + Trans / trans 0 g	0 %
Carbohydrate / Glucides 26 g	
Fibre / Fibres 0 g	0 %
Sugars / Sucres 22 g	22 %
Protein / Protéines 2 g	
Cholesterol / Cholestérol 0 mg	
Sodium 0 mg	0 %
Potassium 450 mg	10 %
Calcium 30 mg	2 %
Iron / Fer 0 mg	0 %

*5% or less is **a little**, 15% or more is **a lot**
*5% ou moins c'est **peu**, 15% ou plus c'est **beaucoup**

Source: Canadian Food Inspection Agency

% Daily Value (DV)

The "% daily value" tells you if the food has a little (5% or less) or a lot (15% or more) of a certain nutrient: This applies to all nutrients.



The percent daily value (% DV) found in a Nutrition Facts table can help you make informed food choices..

Ingredients

Each food label has an ingredient list. It lists the order of ingredients from largest to smallest quantity. Here are some tips for understanding the ingredient list:

Unsaturated fats: oils (soybean, corn, safflower, canola, olive, sesame, flaxseed), nuts (peanuts, cashews, almonds, pecans, walnuts) and non-hydrogenated margarine.

Saturated fats: fat, lard, butter, oils (palm, coconut, palm kernel), monoglycerides, diglycerides or tallow.

Trans fats: hydrogenated or partially hydrogenated vegetable oil, hard margarine or shortening.

Added sugar: sugar, honey, molasses, anything that ends in "ose" (dextrose, sucrose, fructose, maltose, lactose) or syrups. Added sugars are grouped together on the ingredient list.

Added salt: sodium, sodium chloride, sodium bicarbonate or baking soda, baking powder, monosodium glutamate (MSG), sodium/disodium/monosodium phosphate, brine, sea salt, soy sauce or spices.

Learn about the Nutrition Facts table at **hc-sc.gc.ca**

Worksheet: My healthy eating

How I eat now

Do I ... (check off all that apply)

- ☐ Eat foods that are high in salt or add salt to my food?
- ☐ Eat highly processed snack foods such as donuts, cookies, chips and crackers?
- ☐ Eat highly processed meats such as hot dogs, burgers, sausages and deli meats?
- ☐ Eat fried foods such as French fries, onion rings and chicken nuggets?
- ☐ Eat frozen dinners such as pizza and meat pies?
- ☐ Drink sugary drinks such as pop, fruit drinks, 100% fruit juices, sports drinks or specialty coffees and/or teas?
- ☐ Skip meals?
- ☐ Eat while watching TV?
- ☐ Eat when I do not feel hungry?

What changes can I make to eat healthier? Am I eating foods from all four food groups?

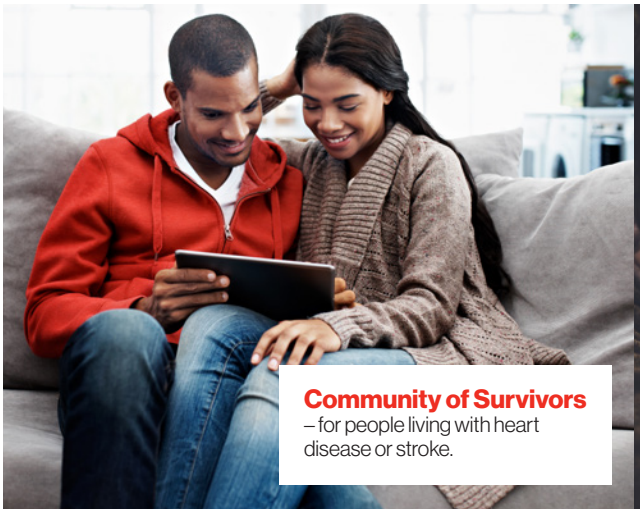
Group	What I eat now	How I can improve
Vegetables and fruits		
Whole grain foods		
Protein foods (especially plant-based proteins: beans and lentils, nuts and seeds, lean meats, poultry and fish, lower-fat milk, yogurt, cheeses)		

Notes

The power of Community

Have you experienced heart disease or stroke, or are you caring for someone who has?

Our members-only Facebook groups are safe, welcoming and helpful online communities. Ask questions, give and receive support and get practical advice. You're among friends here.



Community of Survivors
– for people living with heart disease or stroke.

Care Supporters' Community
– share, support and lean on others who, like you, are caring for others.

Join a Community and learn more at heartandstroke.ca/connect

Chapter 4.

Taking control of your physical recovery

Exercise and active living

You have been told that exercise or becoming active in your life is your path to recovery. Being faced with exercise after you have had a heart attack (with or without stents), heart surgery or a heart procedure, can be a bit scary. But we know that exercise is the one sure way to work your heart muscle back to health. It is very important to work with your health care team to find the type of physical activity that is right for you to start with — and to slowly build your strength towards health.

Before you start to exercise we recommend that you ask the follow questions of your health care team.

- When is it safe for me to start to exercise after heart attack, heart surgery or my heart procedure?
- What are the do's and don'ts that I need to know as I start to get active?
- What activities would a good starting point for me?

Everyone's recovery is different. How much activity you can do at the beginning of your recovery will depend on:

- The condition of your heart after your heart attack, procedure or surgery
- Your previous level of activity
- Your fitness level now

It is likely that your healthcare team has given you instructions specific to your situation. If you are looking for more information, many hospitals such as the University Health Network in Toronto have fact sheets on exercise and specific heart conditions (go to their Patients and Families Health Information section on their website for pages on heart and circulation conditions). You can also find more information on activity after a heart attack on the Heart & Stroke website in the Recovery and Support section.

Tip Please make sure you read this chapter before you start to become active and always refer to a professional if you have any questions.

Make a commitment to your health today

"I am scared. I don't trust my body."

It is normal to be afraid. Many people feel this way after something goes wrong with their heart. Start with small, safe activities to build back the trust in yourself.

Safety tip

Safety tip Read this entire chapter before you start to exercise!

"I am too busy with work. I have no time."

You can be active any time — even at work. Use the stairs and take a walk at lunch. Start a new family habit with a short walk after dinner. This way, the whole family gets time together.

"I have never exercised. I don't know where to start."

No problem. Start with something you like — walking, skating, swimming or dancing. The walking program on page 56 is a great place to start.

"My body hurts when I exercise."

Start slowly. Do not overdo it. Build strength bit by bit.

Why is exercise so important?

Tip Make exercise an important part of each day. Too much sitting is not good for anyone. Even if you exercise regularly — **keep moving** during the rest of the day.

Exercise is one of the most important things you can do for your heart health. Exercise helps you live longer and reduces the risk of dying from heart disease by up to 50 per cent!

Why do you need exercise?

- It helps you feel better physically and mentally
- It reduces the risk of having more heart problems
- It helps you live longer

People who are **not** active have double the risk of heart disease and stroke as well as increased risk of diabetes, cancer and dementia. Being active helps your heart, brain, muscles, bones and mood.

Exercise for 30 minutes every day can:

- Lower blood pressure
- Improve cholesterol levels
- Lower blood sugar
- Help you achieve a healthy weight
- Build stronger bones
- Strengthen muscles
- Build energy
- Reduce stress and improve sleep
- Improve your mood

> “I was lucky to be able to get into a rehab program.”
> **— Dorothy**

Tip Find a cardiac rehab program close to you **cardiachealth.ca**

What is cardiac rehabilitation?

Cardiac rehab teaches you how to safely become more active and make lifestyle changes so you improve your heart health and reduce your risk of future heart problems. Program teams may include a:

- Cardiologist
- Nurse
- Exercise professional
- Dietitian
- Psychologist
- Social worker

Your healthcare team will help guide you toward heart health. They can help to set you up with a program in your community.

> If you have an opportunity to take a cardiac rehab program, take it! It's worth every penny. Although you already know a lot of the information they give you, it's good to be reminded and sometimes there will be new ways of looking at things."
> **— Linda**

> Get into a rehab program after your operation and stay with it."
> **— Tom**

No cardiac rehabilitation in your community?

If you can't find a cardiac rehab program in your community, you can help yourself by following the program outlined in this chapter. **Always check** with your healthcare provider before beginning any physical activity program.

Safety tip

If you think you need more support to follow this program you can ask for help from a local physiotherapist or kinesiologist. Ask your family doctor about finding one.

Let's get started

This test is used across Canada to know if you are strong enough to begin exercising. Take a moment to fill in this Physical Fitness Readiness Questions (PAR-Q).

Yes ☐	**No** ☐	Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor?
Yes ☐	**No** ☐	Do you feel pain in your chest when you do physical activity?
Yes ☐	**No** ☐	In the past month, have you had chest pain when you were not doing physical activity?
Yes ☐	**No** ☐	Do you lose your balance because of dizziness or do you ever faint or lose consciousness?
Yes ☐	**No** ☐	Do you have a bone or joint problem (for example, back, knee or hip) that could be made worse by exercising?
Yes ☐	**No** ☐	Is your doctor currently prescribing drugs (for example, water pills or diuretics) for your blood pressure or heart condition?
Yes ☐	**No** ☐	Do you know of any other reason(s) why you should not do physical activity?

If you answered YES to any of the above:
Talk to your family doctor about starting physical activity. Your doctor will help you decide what type of activity is suitable for you to start with.

The F.I.T.T. Principle

Frequency. Intensity. Time. Type.

The F.I.T.T. Principle is a guideline to help you set up a workout routine which fits your goals and fitness level, while helping you get the most out of your exercise program. It helps you to track and measure your progress.

Frequency (How often?)

The goal is to exercise most days of the week.

Intensity (How hard?)

The Rate of Perceived Exertion (RPE) is how hard you feel your body is working. It is based on the physical way your body feels during exercise, including increased heart rate, breathing rate, sweating and muscle tiredness.

Time (How long?)

Exercising 150 minutes each week is proven to be good for your heart health. You can break your exercise down into blocks of time. To do 30 minutes a day, try three 10-minute walks or two 15-minute walks. Do that five days a week.

Type (What kind?)

- **Aerobic** — or endurance — exercise involves continuous movement of your large muscles (like your legs). It increases your breathing and heart rate which improves your heart, lungs and circulatory system. This could include: walking, bicycling, swimming, jogging, dancing, skating, active yard work and walking up stairs.
- **Resistance** exercise involves the development of muscle strength and endurance. This could include: lifting weights, using resistance bands, and pushing or pulling your own body weight.
- **Stretching** activities, also known as flexibility exercise, keeps your muscles relaxed and your joints mobile so that you can get dressed and reach for objects more easily.

Safety tip

We will use the F.I.T.T. principle in the aerobic and resistance plans included in this chapter.

Tip RPE involves listening to your body and feeling **comfortable** while you exercise.

Aerobic exercise plan

Step 1: Warm up

Aerobic exercise starts warming up your body to work out safely. The warm-up is a must-do before starting aerobic exercise — it allows your blood vessels to relax, open up and increase the blood flow to your heart and muscles, including the heart muscle.

How to warm up safely

- Warm up for **at least 5 minutes**.
- Begin slow-and-easy to get your body working
  - If you walk for your exercise, then walk at a slow pace for a minimum of 5 minutes.
  - If you exercise on a stationary bike, then start out slowly with little or no resistance.

F.I.T.T. for aerobic exercise

Frequency (How often?)

Aim to exercise most days of the week

Intensity (How hard?)

The Rate of Perceived Exertion (RPE) is how hard you feel your body is working. It is based on how you physically feel during exercise and in this case, talking is the measure. If you can't talk without gasping, you are working too hard (see chart)

Aerobic exercise should not be very hard. For those just starting an exercise program, begin with an RPE of 3 (the yellow zone on the chart). That means the exercise is a little more difficult than easy, but not what you would say is hard. It is a medium level of exercise for you.

If you are starting with a higher fitness level, aim for moderate to hard RPE of 3 to 5 (yellow zone). The goal is to build up to 30 minutes. Pace yourself.

RPE	How it feels	What you can do
0.5	Very, very easy	Sing You have enough breath to sing
1	Very easy	
2	Easy	
3	Moderate	Talk You have enough breath to talk or speak
4	Somewhat hard	
5	Hard	
6		GASP You cannot say more than 4-6 words without gasping
7	Very hard	
8		You cannot say more than 2-3 words without gasping
9	Very, very hard	
10	Maximum	You cannot talk at all

If you are working in the red zone (RPE 6-10) you are working too hard. Get back to the yellow zone.

Time (How long?)

Exercising 150 minutes each week is good for your heart health.

- How long you work out each session depends on your fitness level and how hard you exercise. The goal is 30 to 60 minutes of aerobic exercise a session.
- If that is too much, you can break your exercise time down into smaller blocks of time, for example, three 10-minute walks in a day add up to 30 minutes of walking.

Step 2: Type (What kind of exercise?)
Just starting to exercise? Begin by walking

For many people, it is easy to start with walking. Below is an example of a walking program. Walk in the hallway, walk the length of your driveway, walk in the mall, walk a block, walk for 10 minutes. **Remember you are starting slow and easy**. You may need to plan rest areas or places to stop and sit along the way. This program can be used for biking, stationary bike, water walking and swimming .

At home	Warm up	Training period	Cool down
Week 1 Every second day		10-minute walk at an easy pace	
Week 2 Every Second day	5-minute easy walk	10-minute walk at a faster pace 5-minute easy walk	5-minute easy walk and stretches
Week 3 4 times a week	5-minute easy walk	15-minute walk at a faster pace	5-minute easy walk and stretches
Week 4 4 times a week	5-minute easy walk	20-minute walk at a faster pace	5-minute easy walk and stretches
Weeks 5-6 At least 5 days a week	10-minute easy walk	25-30 minute walk at a faster pace Start to pump or swing arms Walk up gentle hills leaning slightly forward	5-minute easy walk and stretch for each walk

There are many types of aerobic activities you can do, **depending on your fitness level**, joint health, ability and interest. Here are some examples of activities you can start — or return to — as your fitness improves.

- Walking
- Bicycling / stationary bike
- Jogging / running
- Cross country skiing on flat ground
- Yoga
- Fitness / aerobic classes
- Aqua fit / swimming

Listen to your body

Safety tip

Your starting point is where you are right now. Increase your activity slowly, steadily and safely.

The best way to know if you are doing an exercise safely is to "listen to your body". You know when things are wrong in your body or breathing. The following information can help you decide if the way you feel is **normal** or not during exercise.

During slow and steady exercise it is NORMAL to feel:	During slow and steady exercise it is NOT NORMAL to feel:
Comfortable	Pain, pressure or heaviness in your chest, neck, jaw, shoulder, arm or back (angina symptoms)
Aware of your own breathing, but not out of breath	Dizzy or light headed
Able to talk	Cold and clammy
Slightly tired	An overwhelming or unusual sense of fatigue or weakness
Dry or slightly sweaty	Nauseated or sick to your stomach
Relaxed	A sense of anxiety or foreboding

You should not be working too hard during exercise. Remember the information about RPE on page 55 — you should be working in the yellow zone, not the red zone.

1. If you are feeling **not normal** symptoms, **stop** the exercise.

2. If the symptoms do not go away within a few minutes, **Call 9-1-1** or your local emergency number.

Angina during exercise

Angina is a warning sign (see pages 3-6). **A small number of people** with angina are told by their doctor to take nitroglycerine 5-10 minutes before they start each exercise session. Ask your doctor or pharmacist if using nitroglycerin before exercising is right for you.

If you are have been prescribed nitroglycerin and you feel angina during exercise:

3. Sit or lie down and take your normal dosage of nitroglycerin.
4. If angina does not go away after 5 minutes, repeat the dose and rest for 5 minutes more.
5. If no relief, use a third dose and **immediately** call 9-1-1 or your local emergency number. Do not drive yourself to the hospital.

Step 3: Cool down

To **safely** end your exercise program, cool down for at least five minutes of slow, gentle exercise. The blood that has been used in the exercising muscles will flow evenly throughout the body and not pool in the working muscles.

How to cool down safely

Cool down for at least five minutes — aim to get back to an RPE of 1-2.

- If you were walking or cycling, then slow down until it feels easy.
- Finish with gentle stretching while your muscles and joints are still warm. (See Stretching program, page 72)

Resistance exercise plan

Resistance exercise (strength training) makes your muscles stronger and helps you exercise for longer. This makes it easier for you to do everyday things like climb stairs, lift groceries and do the things you need to do at work.

When is it safe to begin resistance exercise?

You should have received information about when to start resistance exercise from your cardiologist, cardiac surgeon or family doctor. If you haven't, go back and ask for it.

Always wait until your resting blood pressure is under control, before you start resistance exercise.

General guidelines

Speak to your doctor before starting resistance exercise if:

- You have an aneurysm, hernia, eye complication due to diabetes, joint pain that doesn't go away, are frail, or have any other health issues.
- You have had a recent surgery or heart attack.

After a **heart attack** you should:

- Start resistance exercise when your healthcare team tells you it is safe to do so.

After **angioplasty** without a heart attack, you should:

- Not lift anything over 5 pounds or lift light weights until your healthcare team tells you it is safe to do so.

After **open heart surgery**, you may need to:

- Wait up to 12 weeks before beginning to exercise. When your healthcare team tells you it is safe, start very slowly using either your own body weight (as shown in the photos on page 63) or a light band, or a light weight. Listen to your body (see page 57). You should feel comfortable during the exercise.
  - Do not strain — progress gradually as your strength improves.
  - Do not rush — this takes time.
  - Stop if you feel angina, or if your body feels wrong.

Safety tip

Always breathe regularly when exercising and don't hold your breath. Resistance exercise should be about moving the muscles and returning to a starting position. Exercises that cause you to strain to hold a position or lift too heavy a weight may make you hold your breath and increase your blood pressure.

Tip Remember to count: Lift 1-2-3, breathe in Lower 1-2-3, breathe out

Step 1: Warm up

A warm-up allows your blood vessels to relax, open up and increase the blood flow to your heart and muscles including the heart muscle. A warm-up of at least five minutes will get your body ready so you can exercise safely.

How to warm up safely

- Warm up for at least 5 minutes.
- Before you start your resistance training, begin with an aerobic exercise at a slow easy pace. For example:
  - Walk at a slow pace for at least 5 minutes.
  - Exercise on a stationary bike, slowly, at an easy pace with little or no resistance.

F.I.T.T. for resistance exercise

Frequency (How often?)

- 2-3 times per week with a rest day between sessions
- It is okay to do resistance training and aerobic workouts in the same day

Tip Your muscles will likely feel sore when you begin resistance training. This is normal.

Intensity (how hard?)

The Rate of Perceived Exertion (RPE) is how hard you feel your body is working. It is based on the physical way your body feels during exercise.

Aim to work in the 3-5 RPE range (yellow zone in the chart below).

Resistance exercise should be a bit difficult, but not a lot.

If you are just starting an exercise program, begin with an RPE of 3. You should be easily able to do 2 or 3 repetitions of your exercise (repetitions are explained below under “Time”).

If you have a well-developed fitness level, begin with a moderate to hard RPE of 3 to 5 (the yellow zone on the chart below).

The goal is to build up to 30 minutes. Pace yourself by working up to that bit by bit.

If you are in the red zone (RPE 6-10), you are working too hard. Get back to the yellow zone.

Your exercise effort		How hard?	
0	Nothing at all	Light effort	You can easily do 5-10 more repetitions
0.5	Very, very easy		
1	Very easy		
2	Easy		
3	Moderate	Moderate effort	You can easily do 2-3 more repetitions
4	Somewhat hard		
5	Hard		
6		Hard effort	It is hard to finish the last 2-3 repetitions
7	Very hard		
8			
9	Very, very hard		
10	Maximum		

Time (How long?)

A Repetition or rep: Doing 1 complete exercise movement (1 arm curl)

A Set: Finishing a certain number of repetitions (10-15 curls)

For example two sets of 10 reps:

1. Do 10 arm curl exercises (1 set of 10 reps)
2. Rest 15-30 seconds
3. Do another 10 arm curl reps (another set).

Start with one set of 10 reps. Once you work up to two sets of 10-15 reps of each exercise, it will take you about 30 minutes to complete the program in this booklet.

Tip To gain strength, muscle mass and staying power, you must progress in your program. When you are able to perform 10-15 reps easily, increase the weight by one to two pounds or use a stronger resistance band (see below).

Step 2: Type (What kind of exercise?)

Strength training exercises don't need a lot of equipment. Some use an inexpensive resistance exercise band, which can be found at most sporting goods stores. They come in different tension levels (light, medium, heavy). There are a few important things to know about using exercise bands:

- Before using the band, check it for tears or small holes.
- Make sure you have a firm but comfortable hand grip on the band.
- Adjust the length of the band so you have the right tension — loose enough so that you are able to go through the full range of motion while exercising, and tight enough to give you resistance.
- You can change the tightness (resistance) by adjusting your hand position on the band. If the exercise feels too easy, hold the band closer to the centre to shorten its length, or fold the band in half, doubling it, for even more resistance. For less resistance, hold it closer to the ends.
- If you are attaching or anchoring the band to an object, give the band a few tugs to make sure it is attached to something that won't move, such as a heavy piece of furniture, or buy a "door attachment" from the sporting goods store. Before you start, give the band a few tugs to test it.

Follow the resistance exercise plan on pages 63-71 of this chapter.

Step 3: Cool down

Walk slowly around the room for five minutes to allow your heart rate to return to resting and keep the blood moving, so it doesn't pool in the working muscles and make you feel dizzy.

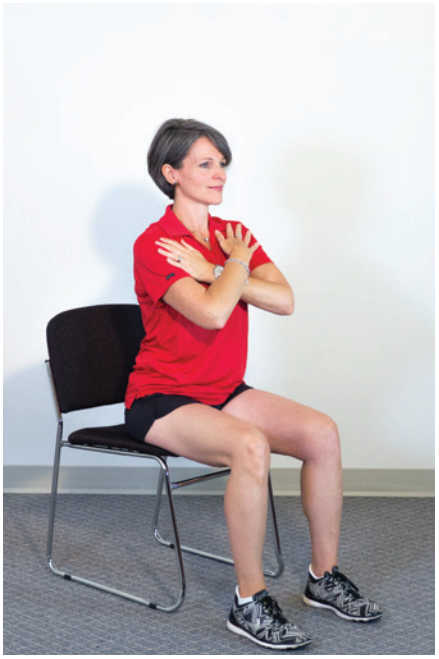
How to cool down safely

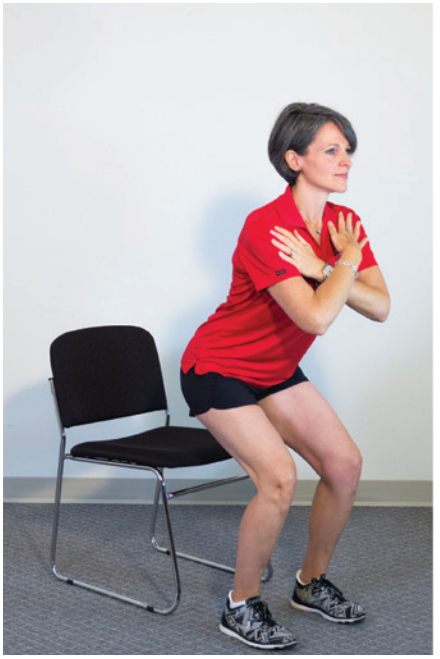
- Cool down for at least five minutes — aim to get back to an RPE 1-2.
- It's good to stretch after you have cooled down while your muscles and joints are still warm.
- See pages 72-75 in this chapter for stretching exercises.

Strength training program

Follow these 10 exercises in the order they are shown here. They start with the large muscles and move to the small ones. Sometimes there are two options for each exercise. Choose one or the other of the options when provided.

1. Seated squat (hips, thighs and buttocks)





1. Start with sitting on a chair with feet, shoulder-width apart, toes in front of knees and arms crossed across your chest.
2. Lean forward and stand up. Feel your weight on your heels, not your toes
3. Slowly sit back down
4. Do 10-15 reps, 1-3 sets.

To make this exercise harder, do the squat without sitting back down in the chair between reps (half squat). You may also hold a small weight in each hand.

Tip Move slowly, with control and remember to breathe.

2. Chest press (chest, shoulders and upper arms)

1. Lie on your back on the floor with knees bent and feet flat on the floor.
2. Hold a weight in each hand.
3. Start with your elbows bent, on the ground.
4. Push the weight slowly up towards the ceiling and then slowly lower to the start position.
5. Do 10-15 reps, 1-3 sets.

OR
press with resistance band

1. Sit in a chair.
2. Wrap resistance band around upper back and under the armpit. Hold a handle in each hand.
3. Push forward, straightening your arms.
4. Slowly go back to the start position.
5. Do 10-15 reps, 1-3 sets.

3. Dumbbell row (upper back)

1. Stand at the side of a chair or low table.
2. Place one foot in front of the other, knees slightly bent.
3. Place the palm of your hand close to the chair on the flat surface. Hold weight in the opposite hand.
4. Start the lift with your arm hanging directly below your shoulder, palm facing in.
5. Pull the weight straight up, keeping it in line with your shoulder.
6. Slowly go back to start position.
7. Do 10-15 reps, 1-3 sets.
8. Move to the other side of the chair and change arms.

OR

Standing or seated row with resistance band

1. Loop the band around a stable piece of furniture or door handle, at your chest height.
2. Stand with feet, shoulder-width apart, one foot slightly in front of the other for stability.
3. Hold the band with your arms straight out.
4. Step back to create tightness or tension in the band. Pull your hands towards your chest, squeeze your shoulder blades together.
5. Slowly go back to start position.
6. Do 10-15 reps, 1-3 sets.

4. Leg curl (hamstrings)

1. Stand behind a chair, using back of chair for support and balance.
2. Keeping your thighs in line with each other, slowly bend one leg at the knee, moving your heel towards your butt. Keep your support leg slightly bent.
3. Slowly lower your foot back to the ground.
4. Do 10-15 reps, 1-3 sets.
5. Change to the other leg.

OR
Leg curl with resistance band)

1. Stand behind chair.
2. Place exercise band around one ankle, and step on the band with the opposite foot.
3. With one hand on the chair for support, lift the heel with the band, towards the butt. Keep your knees together and the other leg firmly on the floor.
4. Do 10-15 reps, 1-3 sets.
5. Change to the other leg.

5. Heel raise (calf muscles)

1. Stand with your feet shoulder width apart.
2. Raise your heels off the floor lifting your body to stand on the balls of your feet, not on your toes. Count "1.2.3. Lift. 1.2.3. Lower."
3. Slowly lower your heels back to the floor.
4. Do 10-15 reps, 1-3 sets.




To make this exercise harder, stand with your heels over the edge of a stair.


6. Bicep curl (front of arm)

1. Sit or stand, holding a weight in each hand with your arms at your sides, palms facing forward.
2. Bend your elbows and lift the weight, keeping elbows tucked close to your sides.
3. Lower the hands slowly back to starting position.
4. Do 10-15 reps, 1-3 sets.

OR

Seated bicep curl with resistance band

1. Place your feet in the middle of the resistance band. Hold an end in each hand
2. Pull the band towards your shoulders, with elbows tucked close to your sides.
3. Lower the hands slowly back to start position.
4. Do 10-15 reps, 1-3 sets

Tip Keep your elbows tucked to your sides.

7. Tricep press (back of the arm)

1. Lie on your back with your knees bent, feet flat on the floor.
2. Hold the weights and raise your arms straight above your shoulders.
3. Bending at the elbows slowly lower the weights towards your ears. Your elbows will point up to the ceiling.
4. Slowly straighten your elbows, lowering the weights back to the start position.
5. Do 10-15, 1-3 sets.

OR

Tricep wall press

1. Stand a few feet away from the wall. Place palms flat on the wall at shoulder level.
2. Bend elbows at the same time and lean towards the wall.
3. Slowly push away from the wall back to start position.
4. Do 10-15 reps, 1-3 sets.

8. Abdominal exercise (stomach)

1. Sit at the front of a chair. Cross your arms over your chest.
2. Tighten stomach muscles by pulling in your belly button.
3. Slowly press forward as far as comfortable.
4. Slowly return to start position.
5. Do 10-15 reps, 1-3 sets.

OR

Seated crunch with resistance band

1. Sit in a chair with the band wrapped around the back for the chair. Hold the ends of the band in front of you.
2. Tighten stomach muscles by pulling in your belly button.
3. Slowly press forward, as far as is comfortable.
4. Slowly return to start position.
5. Do 10-15 reps, 1-3 sets.

9. Bridge (stomach, butt and thighs)

1. Lie on your back, knees bent and feet flat on the floor.
2. Slowly lift your hips and butt off the floor to form a bridge. Keep your shoulders on the floor.
3. Tighten your stomach muscles and tuck your "tailbone" under.
4. Slowly lower your hips back to the start position.
5. Do 10-15 reps, 1-3 sets.

Tip Tuck your tail. Tighten your tummy.

10. Four point (stomach and back)

1. Get on hands and knees (four points). Look at the floor; do not arch your neck.
2. Lift one back leg and push it straight out behind you.
3. Hold for three counts and lower back down.
4. Do the same with the other leg.
5. Do the same with your arms.
6. Do 10-15 reps, 3 sets.

Tip To make the exercise harder, lift one arm and the opposite leg together (for example right leg, left arm).

Tip Don't skip your cool down!

Stretching and range of motion exercise plan

Stretching is an important part of exercise. Stretching exercises are done after the cool down of both aerobic or resistance exercise. Your muscles and joints are still warm and you can stretch safely.

Tip

- Hold each stretch for approximately 15-30 seconds.
- Remember to breathe during your stretches.
- During your stretches, you may feel a gentle pull, but you should never feel pain.
- You can stretch every day.

1. Neck stretch.

1. Tilt your head to the right. Your ear moves toward your shoulder.
2. Press your left hand down.
3. Hold the stretch for 15-30 seconds.
4. Tilt your head to the left and press your right hand down.
5. Hold the stretch for 15-30 seconds

2. Neck stretch

1. Slowly turn your head to the right until you feel a slight stretch.
2. Do not tip or tilt your head forward or backward.
3. Hold the stretch for 15 to 30 seconds.
4. Repeat stretch to the left.

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3. Chest stretch

1. Hold your arms out at shoulder height, with your palms facing forward.
2. Slowly move your arms back and squeeze your shoulder blades together. Stop when you feel a stretch across the chest.
3. Hold the position for 15 to 30 seconds.

* Caution: This chest stretch may **not** be suitable for everyone. If you had open heart, bypass or valve surgery, check with your doctor before doing it.

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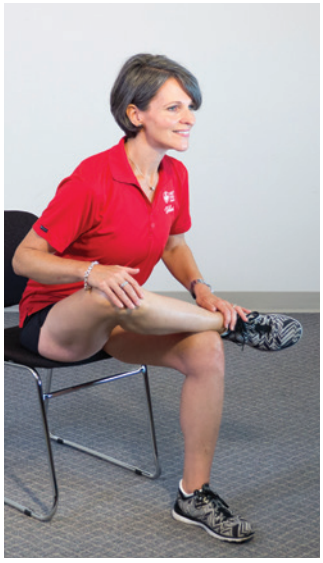
4. Upper back and shoulder stretch

1. Stretch your arms out in front of you at chest height, interlace your fingers, then turn your hands so your palms face away from you.
2. Gently press the palms away from the body. You should feel a stretch in your neck and upper back and along your shoulders.
3. Hold the position for 15 to 30 seconds.



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5. Hips and butt stretch

1. Sit in a chair with your feet flat on the floor. Rest your right ankle on your left knee.
2. Place one hand on your ankle and one on your knee.
3. Lean forward slowly until you feel a stretch along the outside of your right hip and butt.
4. Hold for 15-30 seconds.
5. Repeat stretch with the other leg.

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6. Hamstring stretch

1. Sit at the front of a chair.
2. Place your right leg in front of you, heel on the floor. Do not lock your knee.
3. Slowly lean forward at the hips, keeping your back straight.
4. Hold the stretch for 15 to 30 seconds.
5. Repeat stretch with your left leg.

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7. Upper leg stretch

1. Hold on to back of chair or the wall for support.
2. Bend your right knee and grasp your right ankle (or your pant leg for an easier hold). If you can't reach your foot or leg, loop a towel around your ankle.
3. Gently pull your heel up toward your butt.
4. Hold for 15 to 30 seconds.
5. Repeat stretch with your other leg.

OR

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1. Lie on your side on the floor with legs straight and knees together. Rest your head on your arm.
2. Bend top knee. Reach behind and grab your foot. You can hold your pant leg for an easier hold.
3. Gently pull your leg back until you feel a stretch in the front of your thigh.
4. Hold position for 15 to 30 seconds.
5. Repeat stretch on your other side.

8. Hip stretch

1. Lie on your back with your legs together. Bend knees, feet flat on the floor. Keep both shoulders on the floor during the stretch.
2. Slowly lower one knee to the side, as far as you can. Keep your feet close together and try not to move the other leg.
3. Hold position for 15 to 30 seconds.
4. Bring knee back up slowly.
5. Repeat stretch with your other leg.

9. Calf stretch

1. Stand with your palms flat against the wall at shoulder height.
2. Place one foot in front of the other.
3. Bend your front knee and lean forward until you feel a stretch in your calf at the back of your leg.
4. Hold position for 15 to 30 seconds.
5. Repeat stretch with other leg.

Why is active living important?

Active living means **moving your body**. You need 30 to 60 minutes of medium (moderate) exercise most days. What about the other 23 hours in the day?

Sitting too much increases your risk of heart disease, diabetes and death at a younger age. This is true for people of all ages, body weights and exercise levels. When you sit for a long time, blood flows more slowly in your body. Also your body stores more blood sugar as fat. This can lead to weight gain and worsen your risk factors, such as high blood pressure and high blood cholesterol.

Be as active as you can:

- Take the stairs instead of an elevator.
- Park farther from the door.
- Get up from sitting every half hour and walk for a few minutes.
- Stand up and walk when you talk on the phone.
- Stand up and walk during commercials when you watch TV.

Every step helps you improve your heart health and feel better.

Technology and exercise

The world of technology offers many tools that can help you achieve your exercise goals. Technology moves fast, so check your local store to learn about the newest devices. Here are a few tools that may interest you.

Pedometers and odometers

Pedometers count your steps. Odometers measure the distance you cycle. Use them to keep track of your daily activity level. Find these tools at your local sporting goods or running stores or online.

Fitness and health trackers

You wear these small devices on your wrist. They record your exercise, activity and sleep. Find these devices in electronic stores, running stores and online.

Applications (Apps)

You can find many apps in your phone's app store to download onto your phone.
Apps can track your heart rate, distance, food and sleep. Some are free and others can be purchased.

Internet

The Internet can be a great source of the newest fitness technology. It helps you find groups or organizations that can link you with others of similar interests. The Internet is also a source of information on local resources.

Plan ahead

- Plan yovur day so you can exercise when you have your most energy.
- Learn about programs related to heart health at your community centre.
- Be active with a friend.
- Remind yourself how good it feels to exercise! Walking requires very little equipment or money.
- Dress for the weather and use proper footwear to improve comfort and prevent injury.
- If joint or muscle pain is preventing you from exercising, contact your doctor for help.

Set SMARTer exercise goals

Think about your goals for your exercise program. Go to page 17 for help to develop healthy exercise habits that stick.

Notes

Chapter 5.

Adapting to living with heart disease

Living with heart disease

Dorothy shares her story

Dorothy was 53 when she had a heart attack. She describes the experience as "terribly frightening."

She credits cardiac rehabilitation for helping her cope with the adjustments she had to make in her life. She says, "I was lucky to have somewhere to go." She emphasizes that it is important to connect with others who had a heart episode so that you can share information and ask questions in a safe environment.

Although she has not had to make too many lifestyle changes, Dorothy explains that it is important to learn how to deal with the anxiety of a new condition. She says, "I have a stent in my heart. Now what does that mean?" Dorothy describes feeling a sense of panic or anxiety with every new little ache or pain and says it is important to seek answers to the many questions and concerns you may have after being diagnosed with a heart condition. "Information should be easily accessible, because when something like this happens to you, you want more information. Even if you do not want it, you need it," she says.

The new rules of the game: Managing your emotional reactions to coronary artery disease

Whether you've just been told you have coronary artery disease, or you have had a heart attack or surgery on your heart, it is normal to have feelings like shock, denial, guilt, anger and sadness. You need time, courage and support to get used to your "new normal."

> "I was young and naïve and thought it couldn't happen to me."
> **— Chad**

Coronary artery disease is a chronic illness. This means you need to take care of it for the rest of your life. But you can be healthy with coronary artery disease. You do this by following your doctor's advice, changing your lifestyle and caring for your emotional health.

Shock and fear

> "I had quite a shock! I was so scared of dying after my heart attack; I could not understand what was happening to me when I woke up."
> **— Paul**

You may feel shocked when you learn you have coronary artery disease. It can be hard to take in what is happening to you. You may feel frightened and worried. You may not be able to explain how you feel, or you may not feel any emotions at all. It might be hard to think about how your life is going to change. You may have come close to dying and are now afraid of death.

Useful tips if you feel shock and fear:

- Take it one step at a time.
- Your job right now is to deal with your health and your feelings.
- Remember you can get better and live a full life.
- Accept your fears. Talk to your family, friends and healthcare team. Ask questions. You will probably need to hear things a few times before you remember them!
- Wait before making big life decisions! Give yourself a few months to get used to your new heart condition, its treatment and your lifestyle changes.

Denial

> “It is not really true; I did not have a heart attack! It did not happen to me, I am not really sick, I feel much better after my surgery, like a new man that could conquer the world!”
> **— John**

Denial means acting like your heart disease didn’t happen or doesn’t matter.

Denial is not always easy to see. You may find it hard to believe you really have heart disease. You survived your heart attack. You made it through surgery. You feel better than before — almost as if nothing had happened. Your treatment is working. You may feel like stopping your medication or hiding your condition because you are afraid your family and friends will see you differently.

Denial is common when you are adjusting to an upsetting situation. When you are in denial, you may not accept that your heart disease is real and you might not want to think about how it will affect your life. You may also avoid anything that makes you think about your illness (such as your medical appointments, medication and lifestyle changes).

If it lasts for a while, denial can be harmful, because it can keep you from taking care of yourself. That can make your heart disease worse. It is important to understand that denial will not change the real fact of your heart disease.

What should I do about denial?

- Figure out what frightens you. Are you afraid of experiencing another heart attack? That loved ones may leave you? Of feeling weak? Of dying?
- Talk about your fears and emotions with someone you trust.
- Make a list of what can happen (good and bad) if you don't follow your doctor's advice.
- Take your medication properly, even if you have side effects. Talk about them with your healthcare team.
- Learn everything you can about your condition and the changes you need to make. Understand that you are in charge of your health. This will help you cope with fear and feel more in control.

Guilt

> "It is my fault that I developed angina; I knew I should have taken better care of my health before. I worked too much, was under a lot of stress and did not have time to exercise"
> **— Theresa**

Guilt can make you blame yourself for not looking after your health. You may wonder, "If I had eaten better, stopped smoking earlier, gone to the gym and lost some weight, I might never have developed coronary artery disease." Blaming yourself can stop you from taking control of your health and increase your risk of another heart attack or medical complications.

How can I deal with my feelings of guilt?

- Be kind and forgive yourself. Blaming yourself can make you feel powerless, hopeless and depressed. Have realistic expectations about adapting to your heart disease and lifestyle changes.
- Keep in mind that coronary artery disease is a complicated illness caused by different conditions and behaviours, some of which are beyond your control, such as your family history.
- Focus on what you can do now to take care of your health and get control over your life.

Anger

> "Why is this happening to me? I was in such good shape because of my job! Life is so unfair! I am 35 years old, at the beginning of my life! Nobody has a heart attack at that age!"
> **— William**

It is common to be angry after losing something as important as your heart health. You may think it is unfair and ask why it is happening to you. You may feel that you are losing control and want to fight back. You may think that life has punished you or that it is your doctor's fault. You may feel no one understands how you feel. You may be angry at your family and friends.

How can I manage the anger that I feel?

- See that you are angry and talk about it. Do not blame yourself or others.
- Let people know how you feel. Cry if you feel like crying.
- Don't hold these feelings in. Talk about them when they happen. If you let them build up, you may explode later.
- Don't attack or criticize your family or friends and hurt their feelings. Talk about how **you** feel instead.
- Learn how to deal with anger without harming your health or relationships. See Recognizing anger and hostility, page 90.

Sadness

> I will never feel like I used to before. I feel damaged, my life is over"
> **— Claire**

You may feel sadness, grief and pain for the loss of your health. You may feel sad about all the changes you need to make to take care of your heart. You may be afraid you will not be able to make them. You might be worried you will disappoint your healthcare team and your family if you cannot make these changes. You may be spending too much time alone, cry easily and not take any pleasure in doing what you used to enjoy. You may feel your heart disease has stolen a part of you and nothing will ever be the same.

And you are right! Your heart disease has changed you forever. The sadness you are feeling is different from clinical depression. It is part of getting used to coronary artery disease and usually goes away as you learn to live with your new reality. Clinical depression lasts longer, takes over your life and needs treatment. See Recognizing and dealing with depression, page 91.

How can I deal with sadness?

- Accept your feelings. Talk about them with someone you trust.
- Remember that you are still a person of value with dignity, strengths, knowledge and interests.
- Let yourself cry if you feel like it.
- Keep to your normal daily routine as much as you can.
- Stay in touch with people close to you and plan to do things you enjoy.
- Get some exercise.
- Ask your healthcare provider about seeing a mental health specialist if your sadness lasts a long time or worries you.

Acceptance

> I now accept living with my new heart disease. I am no longer scared of dying. I am now able to do all the activities that I did before, with more pleasure because I am taking the time I need and putting my heart health and my family first."
> **— August**

Acceptance of your heart disease means you feel less frightened, angry, sad or guilty. You are OK with your situation. Fighting it and running from it hasn't helped. Now you can get back to your life and do the things you care about, while you take care of your health. That will be your new way of living. And you will learn that taking good care of yourself will become easier and easier. It will become your habit. You will be able to look forward to your future with hope.

Yes, you need to take care of your heart disease for the rest of your life. But you can lead a normal life while you take good care of yourself!

> Mindfulness living, instead of living in the past or living in the future, we appreciate and live in today"
> **— Jay**

How can I learn to accept my coronary artery disease?

- Learn everything you can about your heart disease and your treatments.
  - Ask your healthcare team questions.
  - Follow your doctor's advice.
  - Take your medication.
  - Change your lifestyle.
- Find a meaning to your heart disease. Let it be the reason that you take charge of your life and make changes that are good for you and your family. You may need to work on important relationships or create new ones. You may decide to reduce stress, enjoy life more or try new activities.

Learning to live with your coronary artery disease

Many things may change after you return home from the hospital. You may feel tired for a while; you may need a new daily routine to take your medication. Your diet, amount of exercise, need for rest, family roles (e.g., making meals, cleaning the house) may change. Remember — it takes time to recover and learn to live with coronary artery disease.

Returning home

Medical questions and care

- Before you leave the hospital, get the phone number of a healthcare professional you can call with questions or worries.
- Make an appointment with your family doctor within a week or two of leaving hospital.
- Get medical help if you have symptoms that worry you (e.g., angina that gets worse; dizziness; shortness of breath, especially if at rest; irregular heartbeats).
- Write down your questions and ask them! Knowing what you can and cannot do can help you worry less.

Your daily life

- Stay involved in your life, but don't try to do too much! Spread activities out during the day. Rest if you get tired.
- Do things that give you pleasure and make you happy. Being happy is good for the heart.
- Tell others what kind of help you need and do not need. Do not let them do everything for you.
- See family and friends. If you aren't up to seeing family and friends, keep in touch by phone or email which may be less demanding on you.
- Tell your friends and family about how your heart disease is changing your life. Help them understand your feelings.

Physical activity

Image: Ontario Regional Chief Isadore Day

- Ask your doctor about the amount of exercise or physical activity that is right for you. Increase your activity bit by bit. You may need to wait up to six weeks before you can start cardiac rehabilitation.
- For more tips on how to increase your physical activity, turn to page 76.
- Walk every day unless you are told by your cardiologist not to. Walking is a great way to get stronger. It helps your heart and your moods and feelings improve.

Back to work

Returning to work is an important part of living with your heart disease. Most people with coronary artery disease go back to work one to three months after leaving the hospital. Your cardiologist will tell you if it is safe to do your job, and when you can get back to work.

Some people believe that a physical job that makes demands on your body isn't safe. This is usually not true. Jobs that involve some physical activity are often better for the heart than desk jobs.

You may also think you should retire early. It is important to take your time and talk about it over with your healthcare team, so that your decision is based on facts — not fears — about your heart condition.

Tips to make returning to work easier:

- Talk with your doctor about any fears or worries you have about going back to work and when you should do it.
- Tell your cardiologist you want return to work bit by bit — not all at once.
  - Start with half days and build up to a normal schedule over two to four weeks.
  - Don't do anything difficult or hard until you are feeling strong again.
- Talk to your healthcare team if you are having trouble paying attention, concentrating or remembering things.
- Rest when you are tired.
- Make sure to take care of yourself at work.
  - Find heart-healthy ways to eat at work.
  - Try to manage your stress as best as you can (see stress management on page 88).
  - Take breaks if you are tired.
  - Use day timers, calendars and checklists to help you remember.
  - Do the hardest work early in the day and avoid distractions and interruptions.
- Get involved in cardiac rehabilitation. It can make it easier to get back to work.

Driving and travelling by air

Check with your doctor to be sure you are OK to drive or travel by air, since some conditions can restrict you for a while. Commercial drivers may need to wait up to three months after a heart attack or heart surgery before returning to work.

- Talk to your doctor if you have any fears or concerns about driving.
- Listen to your body. Avoid driving and rest when you are tired.

Being a partner in your healthcare

It is normal to have trouble remembering to ask all your questions or to remember all the things your doctor tells you. Medical appointments can make you nervous and tense, which can increase forgetfulness. Use the form on page 101to help you prepare for a doctor's appointment.

Remember — you play the most important role in your healthcare. Your healthcare team is there to help you learn how to live with coronary artery disease. So do not be afraid to tell them anything about your health that worries you (e.g., problems you have in doing what they have told you, changing your lifestyle or taking your medications). Your team needs to know these things to make the best decisions with you.

Learning to manage your emotions, thoughts and behaviours

We know a lot about the physical causes of coronary artery disease and how to treat them with medications and lifestyle changes. But your mind and body are closely linked. Your emotions, thoughts and behaviours affect your heart condition and the success of your treatment. They can make heart disease worse if left unmanaged. As a result, dealing with your emotions, thoughts and behaviours is an important part of your recovery.

Facing the challenge of lifestyle changes

Your healthcare team may suggest you quit smoking, exercise more, eat healthier, drink less alcohol, or take new medications. Changing behaviour can be hard — almost everyone who has ever tried to diet or quit smoking knows this! This is true even when you know your health depends on change.

Typical barriers to change

- You do not know why or how you need to change.
- You enjoy things the way they are.
- Your habits and routines are tied up with other people. If they don't change, how can you?
- You are addicted to tobacco, alcohol, high-fat foods or sweets and do not know how to break the addiction.
- You have difficulty figuring out what is important and what isn't.
- You find it hard to set goals and work towards them.
- You don't have the energy or feel too stressed to deal with change.
- You are afraid of what might happen to your life or your relationships if you change.
- You think it is too late to change. The damage has been done.
- You tried to change before and failed. You do not want to fail again.
- You don't know where to go for help or what kind of help you need.

How to make lifestyle changes

It is up to you to decide what and how much to change. Ask yourself: "Is there anything I would like to do for my health over the next few weeks or months?" You can only change when you have a goal. So set a goal for each change you want to make. You may decide to quit smoking, drink less alcohol or become more physically active. You may have several lifestyle change goals. But remember, change can be hard — especially lifestyle changes — so tackle them one at a time. The approach on page 17 has helped many people to make healthy lifestyle choices. It can work for you too.

Get help

Cardiac rehabilitation programs are run by people who are experts in helping you make lifestyle changes and get comfortable with life with heart disease. Programs are offered in person, over the phone and online.

Check with the Canadian Association of Cardiovascular Prevention and Rehabilitation at **cacpr.ca** to find a program near you. If you cannot find a centre near you, talk to your doctor.

Recognizing and handling stress

Stress is a part of life for just about everyone. Sometimes it is not easy to recognize stress because we are caught up in the flow of life. The things in your life that cause you stress are called stressors. Often, stressors are things you cannot control. These could be events (like losing a job) or conditions in your life (like not getting along with a family member). Your responses to these stressors are your stress reactions. These are different for all of us. For example, if you hate your job, losing it can make you feel free. For someone else, losing a job may be terrible.

Although stress happens first in the mind, it has strong effects on the body. Stress can damage your heart health. Sudden intense stress increases the short-term risk of heart attack. Too much stress over a long time (months to years) is called chronic stress. It can also increase the risk of coronary artery disease.

Recognizing your stress reactions

Everyone has his or her own individual stress reactions. Think for a moment about when you are stressed out or upset. What happens to you?

- **Thoughts:**
  - Do you have trouble concentrating?
  - Do your thoughts race, or freeze up?
  - Do you start to think "the worst"?
  - Are you more likely to see yourself, your future or other people negatively?
- **Emotions:**
  - Does stress lead you to have angry, anxious or sad feelings?
- **Body:**
  - How do you feel physically?
  - What happens to your breathing?
  - Are your muscles tighter?
  - Does that create pain anywhere, like headache, back or jaw pain?
  - Does it make you tired?
  - What happens to your sleeping patterns?
  - How does your stomach feel?
  - Do you sweat, have dry mouth, diarrhea or constipation?
  - What happens to your heart rate?
  - If you measured your blood pressure, what would you see?
  - Are you aware of anything else physical?

- **Behaviour and actions:**
  - How do your habits and behaviours change?
  - Do you eat more or have more junk food and sugary drinks?
  - Do you stop exercising? Do you start smoking? Drink more alcohol, use prescription or non-prescription drugs?
  - Do you become nervous or keep to yourself?
  - Is there anything else you notice?

All these signs point to something real that you can feel: your mind and body are connected. Stress happens first in the mind, but has effects all through the body, including, of course, the heart and circulatory system.

How can I manage stress?

It may be possible to change or remove the stressor — for example, you may be able to change your job, your work schedule, avoid difficult people or unpleasant situations. But in many cases removing the stressor is not possible. In this situation, you need to change your stress reaction. Here are some strategies to help you:

- **Mental responses:**
  You cannot control all parts of your life, but you can control your response to stress and keep a positive attitude. Identify your "thought habits" that can make stress worse (most of us have a least one). Here are a few examples:
  - Deciding right away that it is going to be really bad, without even looking closely at the facts
  - Looking only at the bad parts and not seeing the good
  - Worrying about problems that are really not yours.
- **Emotional responses:**
  Figure out your emotional reactions to stress and talk about them.
- **Physical responses:**
  Try deep breathing and relaxation exercises.
- **Behavioural responses:**
  Decide what you can change about the stressor — for example, you may be able to change your job, your work schedule, avoid difficult people or unpleasant situations. Take action and do it. Keep up your healthy habits. Spend time with friends and family.

What else can I do to have less stress in my life?

Take care of your health and lifestyle.

- Learn about coronary artery disease and its treatments.
- Do what your healthcare team suggests.
- Follow a healthy, balanced way of eating.
- Watch how much alcohol you drink
- Cut down or stop the use of stimulants such as coffee, tea, chocolate, soft drinks and energy drinks.
- Get enough sleep.
- Exercise regularly and be physically active.
- Quit smoking.

Learn to relax and take care of yourself.

- Make sure you have enough rest.
- Take time for relaxation and vacations.
- Practice deep breathing and relaxation exercises, meditation or yoga.
- Laugh and use your sense of humour.

Make sure you have time for fun by doing things that you enjoy with your family and friends.

Change the way you think and act.

- Do only one task at a time.
- Set goals you know are reachable to avoid feelings of frustration and failure.
- Decide what it is important for you to do and don't try to do more.
- Learn to say no and get other people to help.
- Talk about your needs and emotions. Let yourself cry.
- Don't get upset about things you cannot control. Let them go.

Recognizing and managing anger and hostility

Anger is a normal and healthy emotion (for example, anger at something that isn't fair; protecting yourself or someone you love). It can be an emotional response to something you find threatening or frustrating. Anger can be mild or strong. Hostility is different — hostility is a personality trait. Hostile people tend to be aggressive and unfriendly. The combination of unmanaged anger and hostility can be dangerous for your heart health.

Anger is a normal response to a heart attack. But if you experience too much anger (for example, talking loudly, shouting, insulting, throwing things, becoming physically violent) it can damage your cardiac health. When you show your hostility openly and aggressively, your risk of suffering from complications following a heart attack or heart surgery goes up. On the other hand, trying to hold down anger and hostility does not really get rid of them, and may even make them worse. So "locking it up inside" isn't good for your heart either. So it is important to strike a balance — to manage your anger and express it in a healthy way, so that you don't hurt your arteries and heart.

Recognizing the signs of anger

Perhaps you can think of situations or people that might upset you. Are there patterns? How often does it happen? Try this scenario: Imagine you are on the highway, either driving or as a passenger. Suddenly another driver cuts in front of you without signalling, and slows down. What are your very first:

1. thoughts about the other driver?
2. emotional feelings about the other driver?
3. changes in your body?
4. behaviour and actions?

Now think: How long do these feelings last? Do they fade away in a few minutes, or do you keep thinking about the situation? Does it make you have trouble sleeping? Do you think about it the next day? Most of us might be bothered by this situation for at least a few minutes.

So how can you manage your anger?

- Learn how you personally respond to anger.
- Take care of your health and lifestyle.
- Express your needs and emotions. Allow yourself to cry.
- Calmly express your dissatisfaction right away, so it doesn't build up and make you explode later.
- Learn to say no and to get others to help.
- Don't react immediately and violently when a situation or person makes you angry.
  - Leave if you can't stay calm: Remove yourself from the situation until you are no longer angry. Tell the person in front of you that you will come back.
  - Take a step back and decide whether it is really worth getting angry about.
- Improve your communication skills; work with people, not against them!
  - Use "I" to explain how you feel. Using "I" instead of "you" helps the other person know how you feel and listen better. ("I feel angry when you watch everything I eat.")
  - Avoid blaming and generalizing. Instead, make comments on specific behaviours. ("I feel controlled and frustrated when you tell me what to eat," instead of, "You always try to control me and treat me like a child!")
  - Tell the person exactly what you want: no one can guess what you need. ("I would like you to make diet suggestions instead of telling me what I should or shouldn't eat.")
- Write down the causes of your anger and frustration and then throw them away to free yourself from them.
- Try to see both positive and negative sides of a situation.

Recognizing and dealing with depression

> "I didn't think I could be depressed. I thought it could just happen to others."
> **— Natalie**

Most people feel sad once in a while — that's a normal part of life. But sometimes this can turn into a clinical depression, which is a painful and treatable health condition. People with coronary artery disease are at greater risk for having clinical depression. Depression increases the risk of developing heart disease and can even make heart disease worse. So it is important to know if you are depressed and get the right treatment for it.

What depression looks like

The two main signs of depression are: **low, sad mood,** and/or **loss of enjoyment and pleasure or interest,** most days for at least two weeks. In fact depression can last much longer than two weeks, and involve many of the following symptoms:

- Major loss or gain of appetite or weight, not explained by other causes
- Trouble sleeping or sleeping more than normal
- Change in activity, being nervous or slowed (movement, speech, etc.)
- General feeling of tiredness and low energy
- Feeling guilty and no longer believing in yourself
- Having trouble concentrating or paying attention
- Having trouble organizing, making decisions or plans
- Feeling hopeless
- Frequent thoughts of death or suicide (with or without a plan).

Everyone feels depression differently. Some people feel hopeless and suicidal; some do not. But in all cases, it is important to recognize and treat depression. Don't be afraid to talk about it. Depression is not a flaw, and doesn't make you a less important person. If you are suffering from depression, you may feel guilty because you can't explain what is happening to you. Feeling guilty is one of the symptoms of depression. Try not to feel ashamed. Talk to your family doctor or cardiologist about how you are feeling and the treatments that might help. A combination of antidepressant medication and psychotherapy is generally recognized to be the best form of treatment for depression. Each of these should be administered by a qualified and experienced mental health professional.

What can I do to get better from depression?

- Learn as much as you can about depression.
- Stick to a healthy lifestyle as much as you can. Eat a heart-healthy diet at regular times. Exercise or be active every day.
- Keep up a healthy routine in your life. Get out of bed and get dressed around the same time every morning — and stay up. Make sure you wash, brush your teeth and take care of your skin, hair and body. Respect yourself.
- Take care of your sleeping habits. Go to bed at a regular time every night.
- Reduce or avoid alcohol and tranquillizers.
- Be good to yourself. Be proud of your strengths and accept what you can't do.
- Stay connected with family and friends.
- Do at least one fun thing each day.

Recognizing and dealing with anxiety

Anxiety is one of our most common emotional experiences and is the normal healthy reaction to a threat. And coronary artery disease is a threat!

Anxiety is necessary for survival. When we are anxious, we pay all of our attention to what we believe is dangerous. Most of the time this is healthy and keeps us safe. However, anxiety can get to the point where it

isn't healthy. It can become an anxiety disorder that damages the quality of people's lives, keeping them from living a normal life, and it needs to be treated.

However, there is an interesting impact that anxiety has on people. There appears to be a moderate level of anxiety that is healthy. Anxiety levels that are too low or too high appear to worsen your heart disease.

Too little anxiety	Excessive anxiety
No action results and this could be problematic.	Could lead to avoidance of any reminders of coronary artery disease and contribute to the development of anxiety disorders (see below).
Example: A person suffering from coronary artery disease who needs to stop smoking but never does, because he/she has little anxious reaction to the fact that smoking can make their heart disease worse. "I feel fine; I don't see what the big deal is"	Example: People who have a lot of anxiety can avoid their medical appointment as well as taking their medication which are reminders of their coronary artery disease.
Not changing risky lifestyle behaviours increases the risk of another coronary event.	Not following medical advice may actually make coronary artery disease worse.

Recognizing anxiety disorders

Two types of anxiety disorders may be more common in people with coronary artery disease than in the general public.

Generalized anxiety disorder is when a person believes there is danger in almost any situation and develops feelings of anxiety about most things in life, such as family life and work. For a doctor to say you have generalized anxiety disorder you need to have three of these six symptoms for at least six months, causing you serious distress:

- Agitation or overexcitement
- Being easily tired
- Trouble with concentration or loss of memory
- Irritability
- Muscle tension
- Sleep disturbances.

Panic disorder is when a person has recurring panic attacks that start suddenly and reach a peak within a few minutes. Panic attacks are frightening experiences because the physical feelings are overwhelming and scary and linked to a feeling of losing control or fear of dying. Some people think they are having a heart attack.

You might experience some or all of these symptoms during a panic attack:

- a fast and pounding heartbeat
- sweating
- shaking
- trouble breathing (hyperventilating or feeling breathless)
- choking
- chest pain
- nausea
- light-headedness (feeling like you might faint and sometimes you do faint)
- chills or heat
- numbness
- fear of losing control or dying

Two other anxiety disorders are important to know about.

Post-traumatic stress disorder (PTSD) is a serious condition that causes terrible emotional upset. It happens after a person goes through an experience that has horrified them or traumatized them. It can happen after seeing the horrors of war or after violent bullying, but it can also happen when a person feels their life was threatened by a heart attack. The person has flashbacks or memories of the awful experience, thoughts they can't control, and images and feelings about the event. There may also be feelings of being alone and separate from everyone else, nightmares and a struggle to live a normal life.

Specific phobia is a strong fear or anxiety about an object or situation. For instance, someone might develop a phobia about driving after a heart attack. They become terrified they might have a serious car accident if they were to have another heart attack while driving.

What can I do to handle anxiety?

Because anxiety is a normal feeling, if you think you are in danger (from your heart disease), the best way to manage it is to find ways to make yourself feel safe.

- Talking about your feelings of sadness, anger, frustration and even excitement, can reduce your anxiety.
- Care for yourself, always! Learn what you need. Be proud of your strengths and accept your limits, without blame or criticism. Make time for fun.
- Learn to reduce your stress (see Managing stress, page 88).
- Learn deep-breathing exercises. They are the foundation of most relaxation strategies and can help prevent panic attacks.
  - Place a hand over your belly button.
  - Relax your stomach muscles.
  - Inhale slowly and deeply through your nose for a count of five: feel your abdomen rise.
  - Exhale slowly through the mouth for a count of five: feel your abdomen fall.
  - Keep breathing this way until you are calm and relaxed.
- Live a healthy lifestyle. Eat heart-healthy foods, exercise regularly, and get enough sleep.
- Get proper treatment if you have a respiratory disorder (e.g., asthma) which can increase anxiety if it is not controlled.
- Stay away from caffeine (in coffee, soft drinks, tea, chocolate, energy drinks) and other stimulants such as nicotine. Do not drink too much alcohol. Don't smoke or use illegal drugs.
- Do not spend most of your time alone. Spend enjoyable time with your family and friends, talk to someone you trust when you are not feeling well.
- Find meaning in your life. Having purpose and direction helps.
- Don't be ashamed or blame yourself for your difficulties. Ask for help from your healthcare team, your community, support groups, help phone lines, or a mental health specialist.

What should you do if you think you or someone close to you is suffering from depression or anxiety?

If symptoms of depression continue for more than two weeks or if you feel anxiety that keeps you from completing your daily activities, talk with your family doctor or healthcare team right away. They will figure out the problem and may treat your depression or anxiety with medication, and/or send you to a mental-health professional.

> If you or someone you know is feeling like they might kill themself, go to your local hospital emergency department immediately or call 9-1-1 or your local emergency number.

Sleep problems

Good sleep is necessary for good health. Experts say we need seven to nine hours of good quality sleep each night to stay in good health. Not getting enough sleep can stress the body in many different ways. Over time, it can:

- Increase your risk of high blood pressure, diabetes and coronary artery disease
- Increase your risk of heart attack, stroke and death from cardiovascular disease
- Change the hormones that control your eating behaviour, possibly causing you to gain weight
- Increase tiredness: This makes you too tired to make healthy lifestyle changes, and causes unhealthy lifestyle choices. It makes you less able to cope well with the normal challenges of life
- Increase stress, anxiety and depression

Recognizing sleep problems

Many things can make you unable to get enough sleep. These include medical conditions and medications, pain, depression and anxiety, caffeine, alcohol, life stresses, environmental factors (like light and noise), shift work and even aging.

It can be helpful to think about the quality of your sleep on a regular basis. Many people have trouble sleeping once in a while. It is nothing to worry about. In fact, worrying about being unable to sleep only makes sleep problems worse. But if you often have trouble sleeping, you might be helped by keeping a sleep diary for a few weeks. If you write down how many hours you spend in bed, how many times you were awake, what woke you (e.g., pain, noise) and the overall quality of your sleep, this will help you figure out if you might be helped by changing your sleep habits or getting specialized sleep treatment.

Learn about sleep problems at **sleepfoundation.org**

Sleep hygiene: How to get a better sleep

Set up a sleep schedule

- Plan to sleep seven to nine hours every night.
- Have a regular bedtime and get up at the same time every day.
- If you have trouble sleeping at night, do not make up for it with naps or sleeping in.

Control your sleep environment

- Keep your bedroom dark and silent.
- Make sure that the temperature, bed and bedding (sheets and blankets) are comfortable.
- Use your bedroom only for sleep and sex (no work, TV or video games).

Set up a sleep routine (the things you do every night to get ready for bed)

- Have a calming routine before you go to bed.
- Do things that relax you at least one hour before bedtime, outside of your bedroom. These may be meditation, relaxation, yoga, reading or a calm conversation.
- Go to bed only once you are sleepy. Get up if you do not fall asleep within 20 minutes and do something that calms you in another room until you are ready to sleep.

Do not use substances or do anything in the evening that can damage your sleep

- No food or drinks with caffeine: it is a drug that keeps people awake. It can take four to six hours before it is out of your blood stream.
- No smoking (nicotine).
- No alcohol or drugs: they damage the quality of your sleep and make you wake up before you are rested.
- No physical activity for a few hours before sleep: it can wake you up.
- Be around natural light during the day. Don't look at the computer, television or electronic tablet screens a few hours before going to bed. The type of light they use stops our natural sleep hormone (melatonin) from working properly.

Try not to think about stressful things around bedtime

- Do not worry if you can't sleep well for one or two nights. This can happen to everyone! You will still be OK the next day. Stressful thoughts about sleep problems can make them worse. Learn to let them go!

Some people still struggle with sleep even when they try all of these suggestions. Talk with your healthcare team if:

- You continue to have trouble sleeping
- You are very sleepy in the day or if you have trouble concentrating on things you have to do
- You snore or if your partner notices that you stop breathing during the night (see Sleep apnea, page 14)
- You have trouble doing things where you need to concentrate or pay attention, like driving
- Your legs are uncomfortable or twitching and keep you from sleeping.

Talking about your sleep problems with your healthcare team can help you find out if you should visit a sleep clinic to learn if you have a sleep disorder.

Staying connected: Family, friends and intimacy

The company of other people

Although you might want to be alone, it is better for you to get the help and comfort of others while you go through your recovery. The support of family and friends after a heart attack or heart surgery can help you in many ways:

- Shorten the time you need in the hospital and improve recovery
- Help you take medication properly and make healthy lifestyle changes
- Help you remember what your cardiologist or other healthcare providers have told you.
- Get you using cardiac rehabilitation programs
- Reduce damage that stress can cause
- Reduce symptoms of depression
- Improve your quality of life.

Building, using and caring for social support networks

You need a social support network. That is the group of people you can count on to keep you on track. It can be your family and the friends you already have, or you can find new people. If you already have a good group ready to get involved, make sure you take care of your relationships. If you do not have many strong relationships, it is never too late to build them. Figure out the type of support you need for your recovery. You may decide you need some new people in your network who also have heart disease so they really understand what you are going through, or that give you more emotional support. Here are some suggestions for taking care of your social support network:

- Meet new people. You meet more people if you try new activities and if you introduce yourself to strangers.
- Join groups or clubs that interest you. Try a walking club, bridge club, meditation centre, book club, cooking class or anything else that fits your interests. See what is available at your local community centre.
- Join your local cardiac rehab program. Talking to other people with coronary artery disease, who have gone through some of the same things as you, can be a big help.
- Take part in your community. Get involved in something that has meaning for you. Think about becoming a volunteer. It feels great to help someone else.
- Try support or self-help networks and/or spiritual or religious groups. These may be in-person or online groups. The Heart and Stroke Foundation and the American Heart Association publish blogs where you can share your experience of coronary artery disease and hear about experiences people like you have gone through.
- Let go of unhealthy relationships. Don't be afraid to say "no" to a request that you think will cause you anxiety, stress or take up too much of your time. Problems with control, dependence, unreliability, manipulation, lies and lack of trust can cause pain and harm. Talk to a mental health professional if you need help to walk away from bad relationships.
- Be patient! Building trust and closeness may take time. You may have to meet several new people to make only one friend!
- Take the time to care for your relationships. It takes work to build and keep strong and caring relationships. Offer in return the same emotional support you expect in the relationship.
- Do not pay so much attention to your work that you ignore your friends and family. Use your time wisely.
- Ask for the help you need from your healthcare team and your social support network. Be specific when you ask for help to ensure you get the right kind of support.

Returning to sexual intimacy

Many people have anxiety or fears about having sex after a heart attack or heart surgery. They are scared that sex will be too much for their heart. Keep in mind that sexual activity (full intercourse) only uses the same amount of energy as climbing two flights of stairs (15 steps). The effects on the heart of masturbation or manual/oral stimulation are similar to that of intercourse.

Talk to your cardiologist about when you can safely have sex again. For most people, that is two to eight weeks after your heart attack or heart surgery. People with persistent unstable angina, shortness of breath or tiredness after climbing two sets of stairs should wait until they are doing better. In the meantime, work on your intimacy by having physical contact with your partner such as cuddling or holding hands.

Typical barriers to returning to sexual intimacy

Some people may be less active, develop temporary problems with their interest in sex or erectile dysfunction (problems getting or keeping an erection) while they learn to live with their new coronary artery disease. These difficulties can be caused by medical conditions (coronary artery disease, type 2 diabetes, prostate problems, hypertension), medication side effects, mental health conditions (depression, anxiety) or problems in the couple relationship.

A healthy sex life has many benefits. It can lower stress, make you feel better about yourself and deepen your relationship with your partner. Here are some tips for getting your sex life back:

- Understand that things will not be perfect at first. You might need to lower your expectations. Go slowly — at your own pace.
- Share your fears, needs, desires and wishes with your partner about having sex again. A lot of patients feel the closeness they have with their partner after their heart disease helps to improve the quality of their relationship and their sex life.
- Set up a healthy routine for eating, resting, sleeping, exercising and managing stress. This helps you feel good about your body, builds your confidence and looks after your heart health.
- Give quality time to your relationship with your partner.
- Plan to have sex when you are rested and not under stress. Choose a relaxing place where you will not be interrupted. Foreplay in a relaxed setting lets your heart rate and blood pressure increase gradually.
- Do not have sex in a very hot or cold place, after a heavy meal and after drinking a lot of alcohol. Sex in these situations can cause more stress for your heart. Wait two to three hours after eating before you have sex.
- Take your time. Stop if you have chest pain. Contact your cardiologist or family doctor as soon as possible.

Erectile Dysfunction

Some medications used to treat coronary artery disease or hypertension can cause a drop in your sex drive and difficulty with erections or orgasms. **Never stop taking your cardiac medication because you have side effects that affect your sex life.** Talk to your cardiologist to find out if your medication can be changed.

Medication that treats erectile dysfunction: e.g., Sildenafil (Viagra), Tadalafil (Cialis), Vardenafil (Levitra) can cause dangerous drops in blood pressure if taken within 48 hours of any form of nitrates (e.g., nitroglycerine tablets (ISMN or Imdur), patches or sprays). If you have cardiac symptoms for which you would normally use nitrates and you used medication to treat erectile dysfunction within 48 hours, do not take your nitrates and go immediately to the emergency room of your local hospital to get treatment. Talk to your healthcare team about any worries you may have about this.

Do not take herbal medications to treat erectile dysfunction, as they may affect your heart medication.

Talk with your healthcare team about any problems you have about the return to your sex life. They will be able to tell you the causes of your difficulties, and might be able to offer you treatments or send you to appropriate medical specialists, psychological or sexology services.

Dealing with heart disease as a family

Having a heart attack in the family can turn everyone's world upside down! The physical and emotional changes will also affect the people close to you and can mean big changes in your family routine.

Sources of stress

Image: Ontario Regional Chief Isadore Day

Intellectual

- Learning new information on coronary artery disease and its treatments.

Practical

- Changing how housework is done
- Adapting to lifestyle changes (diet, exercise, etc.)
- Keeping up your family, professional and social life while taking care of your heart disease

Interpersonal

- Getting used to changes in your family's needs and its social support network; for example, some friends may pull away, while others may become closer

Physical

- Dealing with tiredness

Psychological

- Feeling distress, uncertainty about the future, fear of change and death.

Just like you, family members may feel an emotional shock, fear, anxiety, anger, sadness, powerlessness or guilt to name a few common feelings. Ignoring these emotions may make things worse. You and your family must deal with these while you switch to heart-healthy behaviours and habits, to improve your heart health and to get back a good quality home life. Here are some tips to help you and your family cope:

- Ask your family members to learn about coronary artery disease and its treatment. You can all learn from your healthcare team, books, official medical internet sites and associations, community organizations, and mental health professionals.
- Talk openly about how your coronary artery disease is affecting your family. Talk about how hard it is getting used to it and making changes.
- Ask for help from your family, friends, community and healthcare team. The bigger your social support network, the easier it is to cope.
- Keep things at home as normal as possible. Keep up with the things you used to do with friends and family and on your own.
- Make sure you talk about something other than heart disease each day. Keep up with the news in the outside world, as well as with your interests and leisure activities.
- Understand that the feelings you and your family have about adapting to heart disease are normal, not bad.
- Share and listen to each other's feelings. Respect each family member's feelings and opinions. Sharing can bring you closer together and reduce stress. When talking about feelings, be calm, do not shout, blame or interrupt.
- Take good care of yourself, always before you try to take care of others. Remember, everyone is responsible for their own needs, well-being, emotions and reactions.

When to ask for psychological help

Talk to your healthcare team about any psychological problems you might have. They can help to get you the right mental health services. Asking for help is not a sign of weakness — it is a sign of courage!

You might want to ask for psychological help in the following situations:

- You have trouble dealing with your condition of coronary artery disease, your treatments, your limits and your grief or sadness.
- You find it hard to do what your healthcare team has told you (e.g., to take your medication as prescribed, to change your lifestyle).
- You are afraid of dying and that is damaging your quality of life, making it hard to do the normal things you did before.
- You feel depressed or anxious most days.
- You feel too much stress.
- You aren't sleeping well.
- You are drinking too much alcohol or taking too many drugs.
- You can't control your anger.
- You are having problems in your marriage, with sex or your relationships.
- You are having trouble going back to work.
- You are having trouble talking with your healthcare team.
- You feel the need!

Visit the Canadian Psychological Association at **cpa.ca** or your provincial psychological association to find a psychologist in your province.

Worksheet: Preparing for a doctor's appointment

It is normal to have questions and worries about your health. It is also normal to have trouble remembering your questions or all the things the doctor tells you. Preparing in advance can help to make the most of your appointment.

What is the reason for your visit? What do you need from your doctor?

_____

_____

Find out (before the appointment) if there is anything you shouldn't eat or drink before a blood test.

_____

_____

Write a list of all your questions to make sure you get all the answers you need.

Here are a few examples:

- What caused my coronary artery disease? Why and how did it happen?
- What is causing the symptoms I am having now?
- What tests do I take? How often?
- What is the best treatment for my condition?
- How can I take care of my other health problems while I look after my heart disease?
- What are the side effects of my medications and what should I do about them?

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

Make a list of any physical changes you have noticed (all your symptoms) so that you can tell your doctor.

Always carry a list of all your medications. Update the list if your doctor changes a prescription or prescribes a new medication.

Bring a note pad and pen to make notes that you can refer to later.

Bring a family member or a friend for support and to help you remember important information. If you are alone, ask the doctor's permission to record your conversation on your cell phone.

Notes

Notes

Research Breakthroughs

Life-saving advances made possible by you.

1965
Diagnosing heart disease becomes easier thanks to ECG telemetry, which allows doctors to monitor patients' hearts remotely while they go about daily activities.

1968
One of the first heart transplant surgeries in Canada is performed.

1976
Dr. Henry Barnett conducts first clinical trial using Aspirin to prevent strokes.

1987
A new surgical technique helps treat irregular heartbeats.

1987
Researchers pioneer the use of the clot-busting drug tPA for heart attacks.

1990
First genetic link to premature heart disease is discovered.

2000
Dr. Lori West discovers that, unlike adults, newborns are able to accept hearts from incompatible donors.

2006
Researchers identify important gender differences in the development of high blood pressure.

2009
World's first in-utero surgery to correct congenital heart defects is performed in Canada.

2015
ESCAPE Trial Treating major strokes by removing blood clots through blood vessels cuts deaths by 50% and significantly reduces disability in survivors.

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