

Health Heart Autonomy



We wish to thank all the health professionals who collaborated directly or indirectly with the drafting, revision and production of this instruction booklet for patients.

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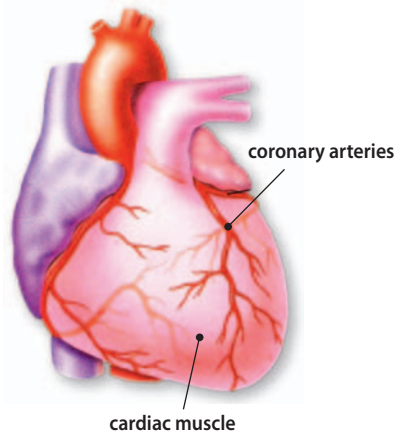
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YOU ARE PRESENTLY IN HOSPITAL BEING TREATED FOR ACUTE CORONARY SYNDROME. LEARNING THAT YOU HAVE CORONARY ARTERY DISEASE CAN BE VERY WORRISOME AND MAY RAISE MANY QUESTIONS IN YOUR MIND SUCH AS: CAN I GET MY LIFE BACK TO NORMAL? WHAT WILL HAPPEN WITH MY JOB?

MANY HEALTH PROFESSIONALS WILL VISIT YOU DURING YOUR STAY IN HOSPITAL. DO NOT HESITATE TO SPEAK TO THEM ABOUT WHATEVER IS WORRYING YOU. YOU MAY BE ASKED TO TAKE PART IN A RESEARCH PROJECT. NO MATTER WHAT YOU ANSWER TO THIS REQUEST, YOU MAY BE VERY SURE THAT IT WILL NOT ALTER THE QUALITY OF CARE YOU RECEIVE WHILE YOU ARE HERE.

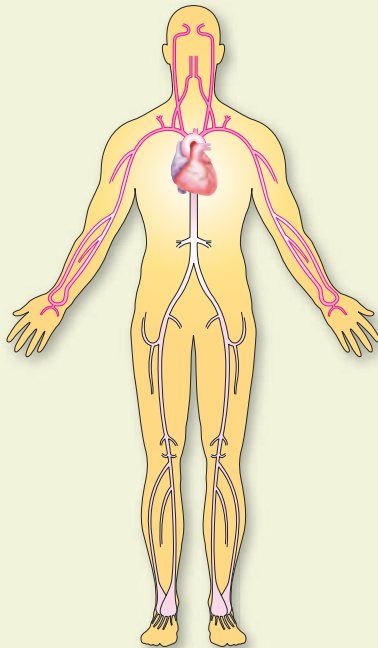
THIS GUIDE MAY HELP ANSWER SOME OF QUESTIONS YOU HAVE DURING YOUR STAY IN HOSPITAL BUT WILL ALSO SERVE WHEN YOU RETURN HOME. MOREOVER, ONCE YOU LEAVE HOSPITAL, YOU CAN TAKE PART IN A FREE REHABILITATION AND PREVENTION PROGRAMME AT THE ÉPIC CENTRE. FOR ADDITIONAL INFORMATION ON THIS PROGRAMME, PLEASE CONTACT THE PREVENTION CLINIC AT (514) 374-6730.



IT IS IMPERATIVE THAT CORONARY ARTERIES BE MAINTAINED IN GOOD CONDITION. THEIR ROLE IS TO CIRCULATE BLOOD TO THE HEART MUSCLE.

The heart is a muscle which works like a pump. Its role is to pump and circulate oxygenated blood to the organs. The heart muscle is called the Myocardium.

Role and **Function** of the heart

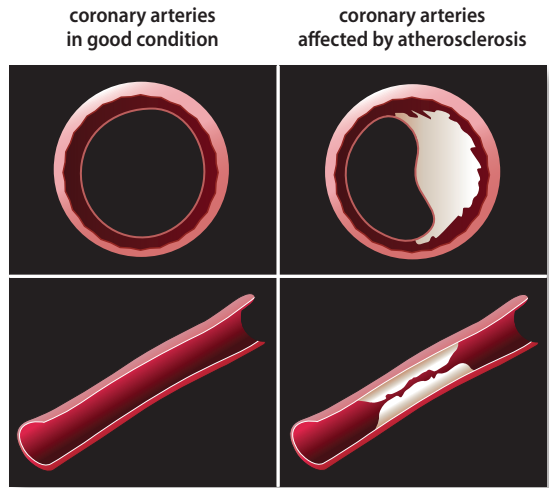


This muscular pump contracts approximately 70 times per minute when you are at rest. When you exert yourself or experience a strong emotional response to something, your heart beats faster in order to meet your body's additional oxygen requirements. To function properly, your heart needs to be supplied with oxygen-rich blood too. The harder and faster your heart beats, the more oxygenated blood it requires.

How does your heart get the oxygenated blood it needs?

Blood is pumped to your heart through a network of blood vessels known as Coronary Arteries. These blood vessels are like the branches of a tree, larger at their point of origin and dividing into smaller vessels throughout the body.

Coronary arteries are in poor condition when the presence of atherosclerosis is detected. This is a condition marked by the deposit and accumulation of cholesterol and other cells on the inner walls of arteries forming plaque. This causes a thickening and hardening of the arteries, impeding their ability to adequately circulate blood through to the heart muscle.



Atherosclerotic Coronary Disease

Atherosclerosis causes the progressive blocking of coronary arteries and so blood circulation to the heart muscle is diminished. The heart can no longer function adequately because it is no longer receiving sufficient oxygen. This condition is known as “Coronary Artery Disease”.

Various symptoms may arise:

- A pressure-like heaviness in the chest, or a burning sensation;
- Which can radiate to the left arm, or to both arms, to the neck, the jaw, the back and the shoulders;
- And which can be accompanied by nausea, sweating, dizziness and shortness of breath.

The intensity of the symptoms and subsequent danger to the heart muscle are dependent upon several factors such as the extent of the obstruction, where it is located as well as the type of plaque causing the obstruction. Angina is the term used when there is a partial blockage caused by plaque which remains a fixed obstruction.

Angina pain occurs most often after some form of physical exertion, after ingesting a heavy meal, or when coping with some strong emotional disturbance. Symptoms can be rapidly relieved (usually within 20 minutes) by simply resting or by taking nitroglycerin (Nitro). This condition is known as stable angina.

Atherosclerotic plaque may also become damaged or cracked, break up and release from the inner artery walls and form blood clots. These blood clots can seriously impair blood circulation within one or several coronary arteries and cause what is known as unstable angina.

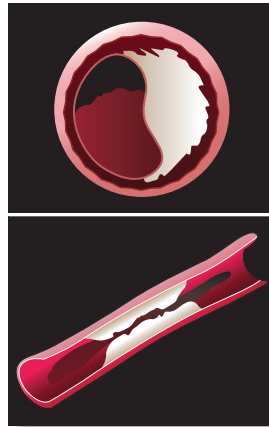
When these clots completely obstruct blood circulation, some of the heart cells die causing an infarction. Unstable angina and infarction are also known as Acute Coronary Syndrome.

YOUR HEART NEEDS TO REST WHILE YOU ARE IN HOSPITAL. THIS IS WHY WE ASK THAT YOU LIMIT THE NUMBER OF VISITORS YOU HAVE AS WELL AS THE LENGTH OF THEIR VISITS.

Acute Coronary Syndrome

Symptoms are generally fairly intense, frequent and unpredictable. They may occur after some physical exertion but also when you are at rest, sometimes even when you are asleep. They may last longer than 20 minutes and may or may not be relieved by resting and taking Nitro. This is when it becomes necessary for you to be hospitalised.

To treat acute coronary syndrome, various exams and treatments are indicated, such as blood pressure monitoring, cardiac monitoring, blood tests and the administration of medications. Your personal condition will determine which other more specific treatments and exams your cardiologist will prescribe. These various treatments and exams are explained on the following pages.



Coronary Angiography and Dilatation

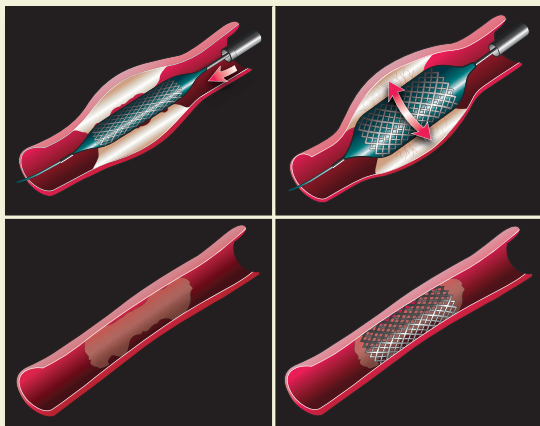
What is a Coronary Angiography?

This exam consists in verifying the severity of the obstruction in the coronary arteries, the “arteries to your heart”. To do this, an iodine-based dye is injected into your coronary arteries by means of a catheter inserted in your wrist or your groin. This procedure allows the medical team to visualise your coronary artery anatomy on a screen. Once the results are analysed, the physician is able to determine which treatment you require.

What is a Coronary Dilatation?

If the obstruction found in your arteries is large, the physician may decide to immediately “dilate” or unblock the artery or arteries during the former procedure (angiography). To do this, the physician inserts a small un-inflated balloon at the location of the obstruction by means of a catheter. He then inflates the balloon which dilates the artery by pushing the plaque and various deposits in the artery against its inner walls. The passageway is re-established and blood can once more flow freely throughout your body and to your heart.

Diagnostic Exams



What is a Stent?

To stop the artery from becoming blocked again once it has been dilated, the physician may decide to insert a “stent”. This small wire-mesh tube inserted at the site of the obstruction serves as a scaffold keeping the artery open. It remains in place permanently. Anyone who has undergone a coronary dilatation and insertion of a stent needs to take a medication known as Plavix. You will need to take Plavix for at least one month after insertion of the stent. The role of Plavix is to ensure that no blood clot forms on the stent; it is therefore essential that you take it as directed.



Preparing for Coronary Angiography and Dilatation

First of all, it is necessary to proceed to certain tests such as an electrocardiogram and blood tests. A physician will visit you and explain the procedure. He will ask you to sign a consent form. **Do not hesitate to ask him questions** or to speak with him of anything which is worrying you.

Please let us know if you are allergic to iodine or to seafood. This will not jeopardize the procedure in any way. Certain medications can be administered to you, enabling you to undergo the procedure without any problems. The day before the procedure, your wrists and/or groin area will be shaved. You will be given a disinfectant soap (hibitane) with which to wash.

It is very important that you have a good night's sleep and you may request a sleeping aid to calm your nerves should you feel the need. We ask that you abstain from eating from midnight on. Should your procedure be scheduled only for the afternoon, you may have a light breakfast at 6:30 in the morning.

On the morning of the procedure, you will be given certain medications and, if it has not already been done, an intravenous line will be inserted in your arm.

When the team is ready to begin, you will be fetched from your room on a gurney and taken to the procedure room. Please remove your undergarment and void your bladder before getting on the gurney so that you will feel comfortable during the procedure.

During the procedure

When you arrive in the procedure room, you will be installed on your back on a special table, with your arms either alongside your body or placed above your head. You will be covered with a large sterile sheet. It is very important that you remain perfectly still. If you feel the absolutely necessity to move, please ask one of the medical team about it before doing so. The site which has been chosen to insert the catheter (wrist or groin) is disinfected and the physician injects a local anesthetic. This can sometimes cause a slight pricking or a light burning sensation. When the catheter is inserted, you will feel no pain, only a slight pressure.



The physician then injects the dye so that your arterial anatomy can be visualised. You may feel a light heat sensation at that moment. The physician will proceed with a dilatation should this prove necessary. If a dilatation is done, you may feel some discomfort in your chest, somewhat similar to angina pains. Should this be the case, notify someone immediately so that medication can be administered to you to provide relief.

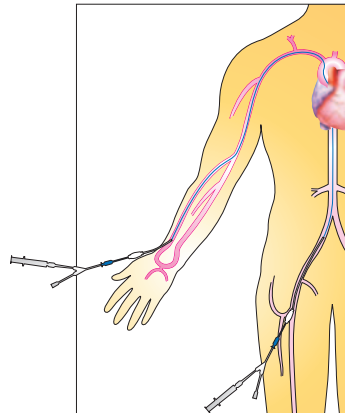
Once the procedure is finished, the physician will apply a compression bandage to your wrist, if the procedure was done from there, as soon as the catheter is removed. This bandage will be removed by the nurse a few hours later in your room.

If the procedure was done from the groin, the physician may remove the catheter immediately after the procedure or a few hours later in your room. When he removes the catheter, he will apply pressure to the site for approximately 15 to 20 minutes in order to prevent any bleeding. Should this cause you discomfort, please notify the physician. He will then apply a pressure dressing which will maintain moderate pressure in the area for several hours. This dressing will be removed the following morning at the latest.

Once back in your room

You will be brought back to your room on a gurney. You will be asked to **not bend your arm or your leg** depending on where the catheter was inserted, because this could cause bleeding. Wiggle your fingers or your toes every so often to prevent numbness. The nurse will come often to check the catheter insertion site, to monitor circulation in your arm or leg and to take your blood pressure.

You must stay in bed for several hours, maybe until the following morning. This will depend on several factors which the nurse will explain to you. She will also inform you of when you can turn over or eat. Let us know if you feel any discomfort.



**WE TAKE YOUR WELL-BEING TO HEART
AND WILL DO EVERYTHING WE POSSIBLY
CAN TO ENSURE YOUR COMFORT.**



The dye which was injected during the procedure will be eliminated along with your urine. You will also be administered lots of fluids. It is therefore very important that you relieve your bladder as often as necessary. Since you cannot get up to go to the washroom, you must use a bedpan or urinal. Please respect all instructions in order to avoid complications which might prolong your stay in hospital by several days. These constraints may prove awkward but they are essential and temporary.

Guidelines for your return home after coronary angiography or coronary dilatation:

- Avoid driving yourself back home;
- Avoid any sudden moves, any rigorous sports or any activity which could put strain on your arm or groin area such as skiing, hockey, running, tennis or cycling during your first week back home. Also avoid lifting any objects weighing more than five pounds;
- Climb stairs slowly for the first 3 days;
- After you have been home for 24 hours, you may leave the puncture site un-banded;
- Wash the puncture site daily with lukewarm water and a mild soap during your first 3 days back home;

- You may shower upon your return home, but avoid taking baths or going swimming for the first 2 days;
- Should you have a long drive home, make sure to stop every hour and get out of the car to walk around for a few minutes to stretch your legs before resuming your journey.

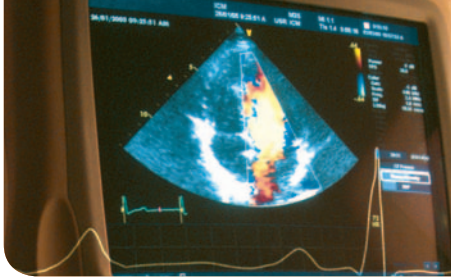
Call the patient care unit where you were hospitalised should you notice anything unusual at the puncture site such as:

A bump, any hardening, any discharge, any bleeding; or if you have any numbness or increasing numbness, or show any signs of fever.

514-376-3330 extension: 3565
(Coronary Unit, 5th floor)

Should significant bleeding occur:

- Call for help;
- Dial 911 and take an ambulance back to the hospital;
- Lie down on your back;
- Apply strong pressure to the area above the bleeding.



The Cardiac Ultrasound

This is a non-invasive technique (no needles, no catheter and no incision) which serves to:

- Visualise the motion of the heart muscle;
- Determine the state of the various structures of the heart (walls, valves, chambers);
- Assess the pumping efficiency of the heart.

The physician can adjust your treatment according to the findings of this test.

You will need to go to the radiology department for about 90 minutes. This test is done in a darkened room. The technician secures an ultrasound probe on your thorax by means of a jelly-like substance. He is then able to see images on a screen next to him and to make measurements. He may ask you to lie on your side. He may also need to apply firm pressure to your thorax. Should this cause you any discomfort, do not hesitate to let him know immediately.

The Electrocardiogram

Commonly referred to as the ECG, the electrocardiogram is used to examine how the heart works by measuring the changing electrical activity within it.

This test is done in a supine position (lying on your back), in your hospital room. A technician places surface electrodes on your thorax and limbs. He will ask you to breathe normally but to not move or talk. The test only takes a few minutes to perform.

Myocardial Scintigraphy

This test consists of two separate parts, one part stress test and one part rest test.

The objects of the test done at rest are to:

- Determine the flow of blood within the heart muscle;
- Determine the area or areas of the heart affected by myocardial infarction.

The objects of the stress test are to:

- Determine the areas of the heart affected by oxygen depletion;
- Assess whether a cardiac dilatation or other treatment has been effective.

The test is done in the department of nuclear medicine. The technician injects a dye into your bloodstream via the surgical intravenous tubing. This dye binds with the healthy heart cells but not with those which have been oxygen depleted. A few minutes later, images of your heart are taken at rest from different angles by a machine located above you which resembles an X-Ray machine. You simply lie on your back with your arms either along your sides or above your head. You return to your room afterwards.

That same day or the next, the same procedure is repeated under stress as you walk on a treadmill, or, should you be unable to perform the exercise for yourself, you might be injected with a substance which simulates effort without you feeling it.

Should you not feel well or experience any pain, please notify us immediately.

A specialist will analyse the images obtained and communicate his findings to your cardiologist so that he, in turn, can adjust your treatment.

IT IS IMPORTANT TO NOT DRINK COFFEE, TEA OR COLA, NOR TO EAT CHOCOLATE DURING THE 48 HOURS PRECEDING THIS TEST BECAUSE THE TEST COULD BE POSTPONED OR THE RESULTS MISLEADING.



***MEDICATION PLAYS AN ESSENTIAL ROLE
IN THE PREVENTION AND TREATMENT OF
HEART DISEASE.***

To minimize the risk of having another infarction or angina attack you will need to make some changes in your lifestyle and take some prescribed medications.

Taking medication

During your stay in hospital, you will receive several different medications. Do not hesitate to ask questions. When you leave the hospital, you will be given documentation on the medications you need to take. And pharmacies are able to provide pertinent information and advice when needed. Find out the names of the different medications you have been prescribed and the reasons you need to take them.

- **Always have an updated list of your medications to hand.** Should you want to buy an over-the-counter drug or organic product, show the pharmacist your list of medications first.
- Always take your medication as, and only as, directed. Do not modify your medication regime without first speaking to your doctor.
- Arrange to take your pills every day at the same time; coordinate taking them with one

of your daily activities so that you never forget. A pill organiser could be a very useful tool too.

- If the medication is causing you discomfort or side effects, the dosage may need to be adjusted. Speak to your doctor about this.
- Never lend your medication to others or take anyone else's medication.
- Should you forget to take your medication, do not double up on the dose the next time.
- Store your medication in a safe place, away from heat, humidity and children.
- Never put different pills together in one bottle; use a pill organiser instead.
- Heart medications (nitrates) should not be taken together with grapefruit juice or oral medications for the treatment of erectile dysfunction. Speak to your doctor or pharmacist for more information.

Taking Charge of your Coronary Artery Disease

You have been treated for an acute coronary syndrome brought on by your coronary artery disease. In other words, we were able to intervene and either remove or reduce one or several obstructions in your coronary arteries, but the heart disease remains. This is why your cardiologist has prescribed medications for you, which will help you manage the disease and prevent its progression. It will also be very important for you to identify and modify any risk factors you may have.

What to do if the symptoms come back?

Managing your disease is, in effect, an excellent way of reducing the chances of having another attack of either stable angina or of acute coronary syndrome (unstable angina or infarct). However, you must be aware that it could happen again.

Signs and symptoms to recognise:

Pain or discomfort in the chest which can:

- Radiate to one or both arms, to the back, neck, jaw or shoulders and which can be described as a tightening or crushing sensation, as a heaviness or pressure, or yet again as a burning sensation;
- Be accompanied by great fatigue, shortness of breath, nausea and vomiting, profuse sweating, pallor and loss of consciousness;
- Appear after you have exerted yourself physically, ingested a very rich and heavy meal, experienced an intense emotion of some kind, or yet again while you are resting or engaged in some light activity;
- Be relieved within 20 minutes by resting and taking nitroglycerin, or may last longer.

What to do if you experience such pain:

- Stop what you are doing and sit down and rest (close to a telephone if possible). If someone is with you, let them know what is happening;
- If you have a Nitro Spray, use it as indicated:
 - Do not shake the container;
 - Spray twice into the air;
 - Spray once, on or under the tongue. Do not inhale;
 - If the pain has not disappeared after 5 minutes, spray a second time;
 - If the pain has still not disappeared after another 5 minutes, spray a third time;
- If, after 20 minutes, you are still experiencing pain, (with or without the use of Nitro), have someone drive you as quickly as possible to the nearest hospital emergency department or call 911. Do not drive your own car or attempt to reach hospital on your own either on foot or by way of public transportation;
- If the pain has disappeared, rest a further 20 minutes or so and then slowly resume your daily activities. Should the pain come at more frequent intervals or become more intense, should you have difficulty getting back to your daily routine or experience unusual shortness of breath, please see a doctor as soon as possible.

Modifying certain aspects of your lifestyle and taking your medication on a regular basis will help you manage your heart disease.

Setting goals for yourself becomes a crucial part of any lifestyle change you wish to contemplate and implement. The goals you set must be realistic if you want to succeed. You may write your goals down here:

**TALKING ABOUT WHAT IS WORRYING YOU
IS THE FIRST STEP TO UNDERSTANDING
AND COPING WITH YOUR DISEASE.**



You have just experienced heart trouble. It is quite probable that you, your family and your friends are now feeling worried, anxious and concerned. **It is only normal.**

Psychological reactions associated with Acute Coronary Syndrome

Disease for most people is a truly destabilizing event which perturbs our equilibrium and triggers many various feelings and reactions such as stress, anger, revolt, powerlessness, solitude, demoralization, fear for the future, the fear of dying, etc. Other people may have a tendency to pretend that nothing whatever has happened or to minimize the importance of what has taken place.

Each person reacts in his or her own different way. **Talk to us!** Do not hesitate to ask us questions, to speak to us of how you feel, to express your fears out loud... This applies not only to you but to your family as well. Our nursing staff, social workers and cardiologists are there for you, to listen and reassure. This is an opportunity for you to consider and re-establish your priorities, to analyse your habits and to embark upon new ways to improve your quality of life.

When things are bad...

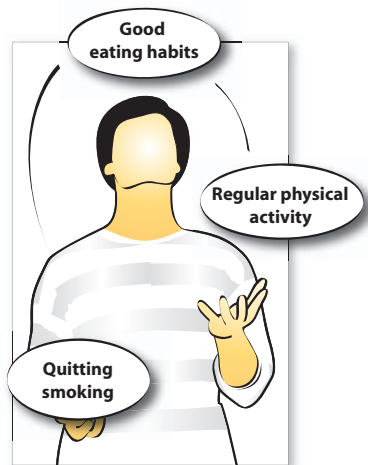
Some people and their families have great difficulty coping with disease. Disease may perhaps be just another burden added on to an already overburdened life.

If you have difficulty functioning or cannot seem able to get your life back in order again, you may need help and support. Don't wait, act now!

Call the Montreal Heart Institute's Social Services department (376-3330 extension 2571 or 3107), your Local Community Health Centre (CLSC) or the Employee Assistance Programme at your place of work to get the help you need. Sometimes, just a few sessions are enough for you to get things back into perspective and for you to regain your equilibrium...

You can do something about your heart disease. Some risk factors cannot be modified but others can be lessened or completely eliminated by making a few changes to your lifestyle.

It is important to know that while risk factors do not add up; the risk does **increase exponentially**. Conversely, when a risk factor is eliminated, the chance of maintaining healthy arteries increases.



Risk Factors for Coronary Artery Disease

Establish realistic goals for yourself. Wanting to change everything all at once often proves too difficult. Start by choosing one risk factor which can be modified and concentrate on doing that. Once you have attained that first goal, you can move on to the next and so on.

Non-modifiable Risk Factors

- **Age:** Risk increases with age.
- **Sex:** Men are more susceptible than women to coronary artery disease. After menopause however, women are as much at risk as men.

- **Heredity:** Your risk of developing a coronary artery disease increases if your parents or siblings have had heart trouble.

Modifiable Risk Factors

Luckily, there are risk factors that we can succeed in eliminating completely or, at the very least, in controlling more easily. Here is a detailed description for each of them. We have described the effects of each and propose various ways to help you modify them.

Smoking

Smoking has several harmful effects on your heart:

- Smoking causes inflammation of the arteries which can lead to the emergence of lesions;
- Smoking causes the arteries to spasm, inducing them to tighten up and thereby impede blood flow;
- Smoking increases blood pressure;
- Smoking reduces HDL levels (good cholesterol) in your bloodstream;
- Smoking increases blood coagulability which can lead to the formation of blood clots.

You should also know that...

- A smoker runs 2 to 3 times more risk of developing a cardiovascular disease than a non-smoker;
- Smoking is the number one cause of cancer mortality in Canada;
- Smoking increases your risk of developing a chronic pulmonary disease which could seriously jeopardize your quality of life;
- Non-smokers who live or work with smokers also have an increased risk of developing cardiovascular disease;
- For women, smoking and birth control pills in combination greatly increases the risk of developing a cardiovascular disease, especially after the age of 35.

***IS SMOKING REALLY MORE IMPORTANT
TO YOU THAN YOUR HEALTH?
QUITTING IS ABOUT THE BEST GIFT
YOU COULD EVER GIVE YOURSELF...***

When you stop smoking, the benefits are significant and immediate:

- Breathing improves (less shortness of breath);
- The risk of developing cardiovascular disease is reduced by 50% after one year;
- The risk of having a stroke is reduced;
- There is an increase in HDL cholesterol (good cholesterol) levels in your bloodstream.

It is never easy to quit smoking, but there are several different methods to help you. It is up to you to select the one best suited to your needs. You can choose from nicotine patches, nicotine gum or oral medications, or go to specialized clinics. You can discuss these different options with your cardiologist, your nurse, your family physician or your pharmacist. A nurse responsible for the Stop Smoking Support Programme at the Montreal Heart Institute is available to help you to quit.

There are also various support groups for smokers intent on quitting*. One call to “Info-Santé” or to your Local Community Health Centre (CLSC) will inform you of which resources are available in your area.

Before you begin, it is important to identify why smoking attracts you... Is it:

- A bad habit?
- A physical need or dependence?
- An emotional crutch?
- A way to calm down and relax?
- A part of your identity?
- A social behaviour?

The answers to these questions may help you to better understand your smoking habits. You need to change your routine so that it no longer revolves around smoking. For example, go for a walk during your coffee break or meal hour; get up from table as soon as you finish your meal so that you don't think about lingering over a cigarette; avoid smoking areas as well as any occasion which would incite you to light up. Do something nice for yourself with all the money you save from not smoking!

There is no miracle cure... You just have to set some goals for yourself, be patient and take things one day at the time.



Excess Body Weight

We have been using the Body Mass Index (BMI) to evaluate excess body weight for a number of years now (see *BMI chart on page 35*). This index is easy to calculate using the following formula:

$$\text{BMI} = \frac{\text{Weight in kilograms}}{(\text{Height in metres})^2}$$

Recently, several studies have shown that an accumulation of belly fat (abdominal obesity) is closely associated with the risk of developing cardiovascular disease, hypertension and diabetes. Therefore, not only should we calculate our Body Mass Index but we should also determine our body type by evaluating where our excess weight is located. The best way to assess abdominal obesity is to measure our waistline.

* You will find the names and addresses of these organisations at the end of this booklet.

Take out your measuring tapes ...

To measure your waistline, adjust your measuring tape in the area situated midway between your lowest rib and the upper portion of your hip (pelvic girdle).

At Risk Waist Measurements

Men: Greater than 102 cm (40 inches)

Women: Greater than 88 cm (35 inches)

Excess weight puts greater demands on the heart causing it to require a great deal more oxygen to function properly. It also increases blood pressure, decreases good cholesterol and increases the risk of developing diabetes. If you are overweight, it is recommended that you lose from 5 to 10% of your initial body weight within a six (6) month period. Weight maintenance can have a positive effect on risk factors such as diabetes, hypertension and dyslipidemia. It is not always necessary to reach your "Ideal Weight" according to the BMI chart. Any weight loss will ensure lasting benefits to your health, benefits which will endure so long as you do not regain the weight.

Regular physical exercise contributes to weight loss as do good eating habits. You may meet with a nutritionist who will help you assess your eating habits and behavioural patterns and advise you concerning any changes you could make which would prove beneficial.

Being Sedentary

Physical activity reduces the risk of developing certain ailments such as osteoporosis, high blood pressure, colon cancer, obesity, diabetes and heart disease. Moreover, exercise helps maintain weight, reduces blood pressure, increases HDL cholesterol levels (good cholesterol) and reduces triglyceride levels. It also strengthens muscles and assists digestion.

Physical activity benefits not only the body but the mind as well. It increases self-esteem, reduces anxiety and improves quality of sleep. When you are in good health, it is recommended that you perform some form of physical exercise for at least 30 minutes per day. It is not necessary that the 30 minutes be consecutive; you just need to accumulate at least 150 minutes of physical exercise per week. It is the adding up of all the little daily activities that will turn you into an active person.





THINK ABOUT IT!!!
STAY ACTIVE, EAT WELL AND MAINTAIN
A HEALTHY BODY WEIGHT!

Establish a time during the day which will be strictly reserved for exercise. Then find some form of physical activity which interests you. The important thing is that you have fun. Another option is to join a health club, such as the ÉPIC* centre, whether it promotes cardiovascular training or not.

Here are a few suggestions to get you moving:

- Walk to the convenience store;
- Use the stairs instead of taking the elevator;
- Go play outside with your children;
- Walk the dog;
- Do some gardening;
- Go cycling, skating or swimming; try golfing without a cart, cross-country skiing, snowshoeing or dancing;
- Join a walking club.

The Fédération québécoise de la marche* (Quebec Walking Federation) organises walks in every region of the province as well as in many communities in Montreal. All you have to do is contact them.

After experiencing heart trouble, there are a few rules you must abide by before resuming your every day activities. (*Please refer to page 30.*)

Diabetes

Diabetes is a complex health problem, characterised by high levels of glucose (sugar) in the blood (sugar > 7.0). Excess blood sugar levels damage artery walls.

It is a known fact that diabetics are from 2 to 4 times more likely to develop cardiovascular disease than non-diabetics. In the long term, diabetes can also cause kidney damage, bring on eye problems and trigger nerve damage as well. It is well known that diabetics are more prone to hypertension and to various cholesterol problems, conditions which increase the risk of developing cardiovascular disease. **Diabetes** is considered a **major risk factor**.

If you are diabetic, you can reduce the risk of developing further cardiovascular disease by controlling and maintaining your blood sugar levels adequately.

*You will find the names and addresses of these organisations at the end of the present booklet.

Here are five essential steps to controlling diabetes:

1. Follow healthy eating guidelines established for diabetics;
2. Exercise and stay active;
3. Maintain a healthy body weight;
4. Practise good stress management;
5. Remember to take your medicine.

If there is a history of diabetes in your family, if you are overweight and do not exercise, you run the risk of developing diabetes.

Hypertension

Hypertension or high blood pressure (blood pressure > 140/90) is commonly called the silent killer because, in most cases and for most people, there are no detectable symptoms. Hypertension is a condition in which abnormally high blood pressure is exerted on artery walls; this condition can cause damage to artery walls and increase vulnerability to coronary disease.

Hypertension also damages organs in your body such as the brain, the heart, the eyes and the kidneys. The only sure way to know if you suffer from hypertension is to measure your blood pressure several different times a day. You can also go to the pharmacy to have it checked.

There are several ways to reduce or prevent high blood pressure:

- Take your medication regularly, as indicated;
- Limit your alcohol intake;
- Maintain a healthy body weight;
- Stop smoking;
- Avoid salty foods and pre-packaged foods (too much sodium) and leave the salt shaker off the table;
- Include leisure periods in your daily routine;
- Manage your stress;
- Exercise regularly.

HYPERTENSION IS A DISEASE WHICH CAN BE CONTROLLED BY MAKING A FEW CHANGES IN YOUR LIFE STYLE.

REMEMBER THAT EVEN IF YOU CANNOT CHANGE WHATEVER IS CAUSING YOU STRESS, YOU CAN AT LEAST CHANGE THE WAY YOU PERCEIVE IT.

Stress

Everybody talks about stress but its actual meaning varies from person to person. Stress is determined by each person's ability to adapt to outside stimuli. Stress can be insidious and may stem from many different sources such as the work place, family matters, health concerns, poverty, prejudices and violence. Everything is determined by the way a person reacts to a new situation. When stress becomes a chronic problem, it can lead to anxiety.

Stress has become increasingly recognised as one of the triggers for heart disease.

Prolonged and elevated stress levels are associated with:

- Elevated cholesterol levels;
- Elevated blood pressure;
- A higher degree of blood coagulability (clotting);
- A glyceimic imbalance;
- Poor eating habits;
- Smoking.

In order to cope with intense stress, it is imperative to have good peer support. Talking things over with family or friends can help reduce an overly heavy emotional burden. Should you have difficulty opening up to your loved ones, there are other resources you can look into. Talk it over with your physician or call your Local Community Health Centre (CLSC); someone there will help you get the support you need.

Here are a few tips to help you manage your daily stress:

- Take time out, just for yourself;
- Get involved in activities which interest you;
- Use relaxation techniques such as meditation and breathing exercises;
- Go get a massage;
- Don't try to be perfect;
- Don't be too competitive;
- Change your routine;
- Rest and be sure to get enough sleep.

... Have some fun!

Night time can sometimes be a source of anxiety for you especially when insomnia sets in. It would be better for you to get up in such a case, instead of tossing and turning for hours. You can watch television, read a book or do something that you enjoy. Whatever tension has you in its grip will lessen without you even noticing. Even if you don't get back to sleep, you will feel rested and relaxed.

Here are a few tips to help you get to sleep:

- Indulge in restful and leisurely things in the evening;
- Drink a cup of warm milk before going to bed;
- Stop any exercising early on in the evening;
- Turn your bedroom lights down low to encourage relaxation and sleepiness. Air out your bedroom;
- Avoid caffeine: it is better to enjoy coffee, tea, cola and chocolate during the earlier parts of the day and to avoid it from late afternoon on.

One of the best ways to combat stress is to enjoy life to the fullest. Take the time to have fun and to do things you truly enjoy.

Cholesterol Problems (Dyslipidemia)

Cholesterol is an integral part of our body and is necessary to it for the production of certain hormones and bile. A portion of the cholesterol in our bodies comes directly from the food we ingest and the rest is produced by our liver. Therefore, serum cholesterol levels can be influenced by what we eat. **Cholesterol can cause a lot of damage to arteries when its levels in the bloodstream become too high.** Cholesterol deposits accumulate on artery walls and progressively create blockages within them. A simple blood test can determine cholesterol levels in your blood (both HDL and LDL cholesterols, commonly known as good and bad cholesterols, respectively) as well as your triglyceride levels (another fatty substance found in blood).

You may ask for the results of your blood cholesterol test and write them down here:

- Total cholesterol: _____
below 5.2
- Bad cholesterol (LDL): _____
below 2.5
- Good cholesterol (HDL): _____
over 1.0 for men and over 1.3 for women
- Triglyceride levels: _____
below 1.7

What to do if...

1. Your bad cholesterol (LDL) levels are too high: This type of cholesterol accumulates on artery walls, creating plaque and possible obstructions. The objective therefore is for you to reduce your levels of bad cholesterol and, in so doing, reduce your risk of having a blocked artery.

How? By reducing your dietary intake of saturated and trans fats (see following section on Nutrition and Cardiovascular Health). You should also increase your intake of soluble fibre by eating foods like barley, All Bran cereal and psyllium seed, oat bran, ground flaxseed and legumes, as well as pectin-rich fruits such as apples, pears, plums, strawberries and citrus fruits.

2. Your good cholesterol (HDL) levels are too low: This type of cholesterol exerts a protective effect on arteries because it stops bad cholesterol from adhering to artery walls. It is therefore important to increase its levels in your bloodstream.

How? By becoming more active, by breaking the smoking habit, by setting your sights on reaching a healthy body weight and by choosing the correct dietary fats (see following section on Nutrition and Cardiovascular Health).

3. Your triglyceride levels are too high: This type of fatty acid is produced by excess carbohydrates in your body.

Triglycerides have a tendency to adhere to artery walls, especially when HDL cholesterol levels are too low. So it is a good idea to keep triglycerides at a normal stable level.

How? By stepping up your level of physical activity, by reaching and maintaining a healthy body weight, by limiting your alcohol consumption to a moderate 1 to 2 drinks a day for men and to 1 drink a day for women and by reducing your intake of concentrated carbohydrates.

For those people with coronary artery disease, cardiologists will most usually prescribe medication (hypolipidemic) to help control serum cholesterol. This medication helps reduce the risk of recurring heart trouble. **But be warned! This medication does not replace physical activity or good eating habits.** It works as a complement to a healthy lifestyle.

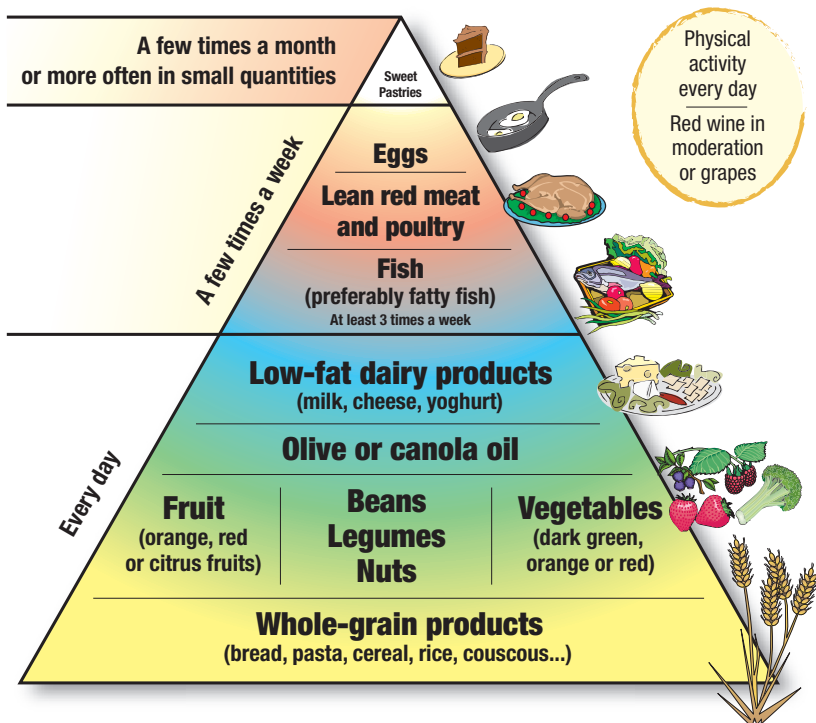
In actual fact, hypolipidemic medication is effective in reducing levels of bad LDL serum cholesterol, but no treatment has so far shown any effectiveness in increasing levels of good HDL serum cholesterol. The best ways we know of to improve HDL levels are to stop smoking and to exercise on a regular basis. Consult the section on Nutrition and Cardiovascular Health on the following page for more details on which foods to either add or cut from your regular daily nutritional regime.

Great advances have been made in the last few years in the field of nutrition and cardiovascular health. Many studies have now shown that nutrition plays a key role in the prevention and management of many of the risk factors for coronary artery disease. Hypertension, obesity, diabetes and high serum cholesterol levels can all be effectively managed by making a few changes to our lifestyle habits and behaviours, one of which being the way we eat.

The dieticians and nutritionists who work at the Montreal Heart Institute would like to propose a different style of nutritional regime based on a comprehensive approach to food, to variety and to the joys of eating.

It is the Quebec version of the Mediterranean Diet which is presented here in the shape of a pyramid.

Nutrition and cardiovascular health



The foods found at the base of the pyramid should be eaten daily, whereas the foods found at the tip of the pyramid should be eaten with much less regularity and in much smaller portions.



Here are some of the advantages to this type of diet:

Monounsaturated and omega-3 fatty acids, good fats for the body:

Monounsaturated fatty acids contribute to the reduction of bad (LDL) cholesterol in the blood. Omega-3 fatty acids assist in reducing triglyceride levels in the blood thereby reducing the risk of forming blood clots, help maintain stable blood pressure levels and have a positive effect on the anti-inflammatory system.

These fatty acids can be found in:

Monounsaturated fatty acids

- Olive oil;
- Canola oil;
- Nuts (peanuts, pecans, pistachios, almonds, hazelnuts and olives);
- Avocados.

Omega-3 fatty acids

- Fatty fish (salmon, trout, mackerel, sardines);
- Ground flaxseed, walnuts;
- Soybean and its derivatives (tofu, soybean milk, roasted soybeans);
- Canola oil.

A limited intake of saturated fats, dietary cholesterol and trans fats:

Saturated fats and dietary cholesterol raise (LDL) serum cholesterol. Trans fats have this same negative effect on LDL cholesterol and, what is more, they lower good HDL cholesterol levels in the bloodstream too.

They can be found in:

Saturated fats

- Milk and yoghurt with more than 2% M.F.;
- Cheese with more than 20% M.F.;
- Fatty meats;
- Poultry with skin on;
- Butter and eggs;
- Tropical oils (coconut, cottonseed and palm oils).

Trans fats

- Partly hydrogenated oils;
- Hydrogenated margarine;
- Shortening, vegetable oil;
- Prepared bakery products (muffins, croissants, cakes and pies);
- Fried foods, breaded foods;
- Potato chips, crackers;
- Fast foods.

A high intake of dietary fibre and antioxidants:

Dietary fibre procures several benefits to our bodies. It helps lower serum cholesterol levels, allows diabetics to better control their glycaemia, aids in lowering our daily energy intake and therefore helps in the maintenance of a healthy body weight. It also helps keep us regular. Antioxidants protect artery walls and prevent atherosclerosis. One type of antioxidant known as phytoestrogen is said to have an added beneficial effect in reducing serum cholesterol levels. It is also linked with the lowering of symptoms of menopause. It is found in soybeans and their derivatives as well as in ground flaxseeds.

Dietary fibre and antioxidants can be found in:

Dietary fibre

- Whole grain products;
- Nuts and flaxseed;
- Fruits and vegetables, legumes (chick peas, kidney beans, lentils ...);
- Oat bran, oat flakes, nuts and seeds (flaxseed, pumpkin and sunflower seeds);
- Barley and psyllium seed.

Antioxydants

- Brightly-coloured fruits and vegetables (green, orange and red);
- Red wine, grapes and tea;
- Legumes (chick peas, kidney beans, lentils...);
- Soybeans and its derivatives.

A moderate intake of sodium:

A high sodium (salt) intake contributes to the hardening of the arteries and to an increase in blood pressure.

To enhance the flavour of foods, the Mediterranean Diet recommends using herbs and spices rather than sodium (salt, sea salt, vegetable salt...). Moreover, since most prepared and packaged foods sold in stores contain high quantities of sodium, we should all show a preference for home-made foods.

What a winning combination for a healthy heart! You would like to speak with one of our dieticians or nutritionists for advice on good eating habits? You would like to obtain more information and have an assessment done of your personal nutritional habits? It can be done; just speak to your nurse.





You were hospitalised after your heart trouble, so you could be treated and get back your strength. As soon as you get back home, you will need to gradually get back to your normal **daily routine** and begin a **walking programme**. This will allow you to get back to a feeling of well-being, a “comfort zone” which will ensure that you enjoy a good quality of life, both physically and mentally. Don’t wait, start right now!

A pace must be set for your walking programme and your getting back to your normal routine. This can be done with the aid of the following guide:

- The Exertion Perception Scale (*see illustration below*).
- By recognising the signs of physical intolerance to the degree of exertion involved (*enumerated below*).

Return to normal physical activity

Exertion Perception Scale

	0	Nothing at all
	0.5	Very, very slight
	1	Very slight
	2	Slight
	3	Moderate
	4	Somewhat severe
	5	Severe
	6	More severe
	7	Very severe
	8	
	9	Very, very severe
	10	Maximum

© Jean Jobin, 1993, Revised 1998, Adapted from:
 Borg G.A.V. *Psycho-physical basis of perceived exertion.*
Med & Science in Sport Exercise. 1982; vol 14 (5):337-881.
 Hôpital Laval

If, when engaged in some type of activity, you feel one or more of the following symptoms coming on, stop immediately. When symptoms have disappeared, resume the activity but at a slower pace. If symptoms become more frequent, whether upon further exertion or at rest, please do not hesitate to notify your doctor.

Signs of physical intolerance:

- Shortness of breath for more than ten minutes after the end of the exercise, or at rest;
- Palpitations (irregular pulse) which occur or increase;
- Prolonged fatigue;
- Dizziness;
- Angina-like pain;
- Intense joint pain;
- Nausea and vomiting;
- Profuse sweating (cold sweats).

*IT IS IMPORTANT THAT YOU RETURN TO
YOUR NORMAL DAILY ACTIVITIES AS
QUICKLY AS POSSIBLE.*



Normal daily activities

Here are a few tips to get your life back to as normal a pace as possible:

- Get the same number of hours of sleep as usual;
- Get dressed every morning when you get up;
- Enjoy three meals a day;
- Avoid any physical activity for approximately one hour after each meal; your heart is already working hard enough helping your stomach digest your meal;
- Divide your tasks and activities throughout the day; do not try to do everything at once;
- Ask for help if you need to;
- Plan some rests periods during the day;
- Plan your day so that you can get everything done without getting uptight or tense; do not rush.

You may engage in as many recreational activities as you like, so long as you respect the Exertion Perception Scale (*see previous page*) and stay vigilant as to any signs of physical intolerance that could occur.

To get back to your normal routine, you must let yourself be guided by:

- Your perception of the level of exertion involved, which should fall **within the levels of 0 and 2** on the Exertion Perception Scale (*see illustration on previous page*);
- By recognising the signs of physical intolerance to exertion (*described on the previous page*).

Walking is one of the best ways to get into shape gradually. You should take a walk every single day, **outside** (if possible). Join a walking club in your area or encourage friends and relations to walk with you. Motivation is a big factor and it is always easier when you are not alone.



Walking Programme

Here are a few tips to get the most out of this kind of programme:

- Wear comfortable clothes and shoes;
- Wait one hour after meals before going out walking;
- Begin your walking session after a rest period or after a non-tiring activity period;
- Start with some stretching exercises or by walking at a very slow pace. You can pick up the pace when you are warmed up;
- Maintain a regular pace;
- Walk on the flat to begin with. You can tackle hills later;
- In the summertime, it is preferable to walk in the mornings or in the evenings when it is cooler; since heat and humidity can make walking more difficult, walk at a slower pace;
- In the winter, go walking in the late morning because that is generally when the weather is warmest. If the cold and wind impair your breathing, wear a scarf over your nose and mouth to warm the air you breathe;
- It is preferable to walk outside if possible, but you can also walk indoors, in a shopping mall;
- Wind makes walking more difficult, so reduce your pace;
- End your walking session by slowing your pace so that you can cool down and recuperate;
- Sit down and rest for about twenty minutes after your walk to complete the cool down process and recuperation period.

The intensity of your training programme will be established by your doctor according to the state of your health after your heart trouble. The main thing is to respect the limits he sets. Have fun!

Your training programme will be:

Programme 1

To carry out your walking programme, you must let yourself be guided by:

- Your perception of the level of exertion involved which should fall within the levels of 0 and 2 on the Exertion Perception Scale (see illustration on page 30).
- By recognising the signs of physical intolerance (described on page 30).

You may replace walking by any other non-demanding exercise, sport or recreational activity which can be easily managed such as using a stationary bicycle, bowling, lawn-bowling or bocce, etc.

Programme 2

To carry out your walking programme, you must let yourself be guided by:

- Your perception of the level of exertion involved which should fall within the levels of 3 and 5 on the Exertion Perception Scale (see illustration on page 30).
- By recognising the signs of physical intolerance (described on page 30).

You may replace walking by any other exercise, sport or recreational activity such as cycling, golfing without a cart, ice skating or rollerblading, swimming, etc.

You will progress from one programme to the other when the level of exertion involved in completing the exercise lessens and it becomes easier for you to perform the programme. Then you will be ready to go on to the next level. You begin by increasing your walking distance in order to achieve 15 to 20 minutes of continuous activity. Then you step up the pace by increasing your speed.

Going back to work

Your return to work will depend largely on the kind of work you do. Speak to your doctor about it; he will be able to determine a date for your probable return to work.

Return to work, **driving** and sexual activity



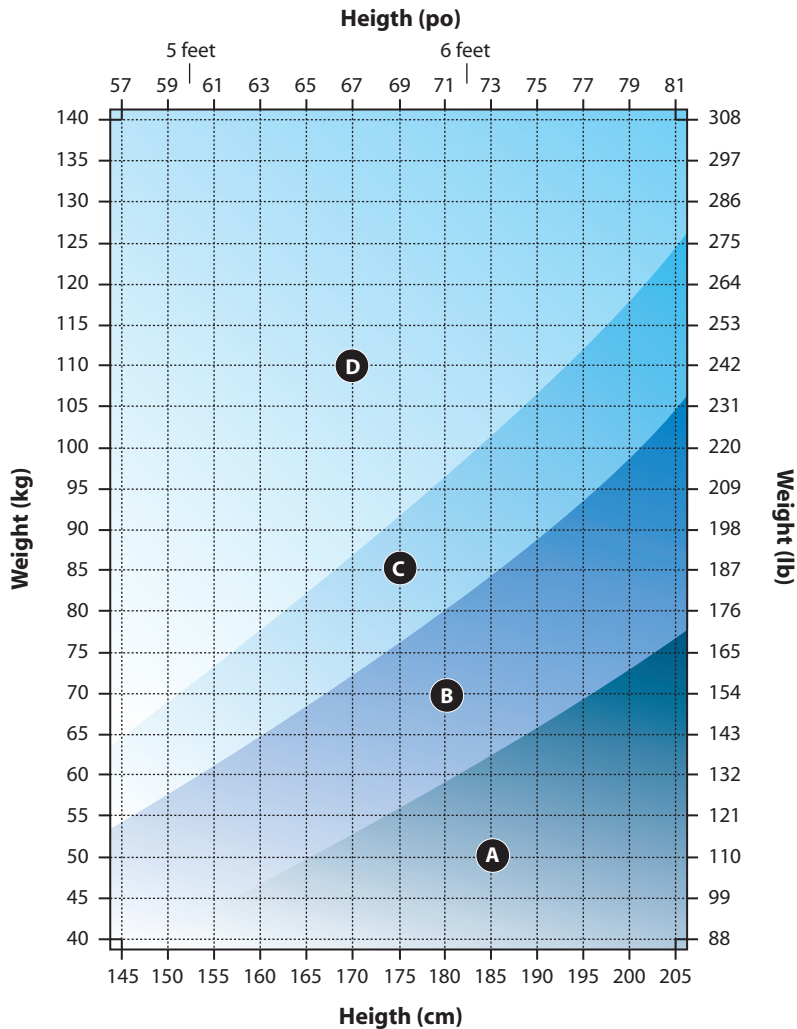
Driving

The proper time to go back to driving will depend on the state of your health post heart trouble and on the type of vehicle you drive (privately owned or commercial vehicle). It is important to discuss this with your doctor so that an appropriate time can be determined.

Sexual activity

Sexual activity is a physical activity just like any other. You may resume sexual relations just as soon as you feel ready to do so. If you are contemplating the use of any medication to treat erectile dysfunction, please speak to your physician beforehand.

Body Mass Index (BMI)



Body Mass Index (BMI)	Classification	Health Risk (as compared to a "normal weight")
A < 18,5	Insufficient weight	Increased risk of developing health problems
B 18,5 - 24,9	Normal weight	Lesser risk of developing health problems
C 25,0 - 29,9	Excess weight	Increased risk of developing health problems
D ≥ 30,0	Obesity	High to very high risk of developing health problems

In the case of people 65 years of age and over, the "normal" range of the BMI can extend from 20 to 29.9

WE HOPE THAT THIS BOOKLET HAS HELPED ANSWER YOUR QUESTIONS. IF ANY SPECIFIC THOUGHTS HAVE COME TO MIND WHILE YOU WERE READING IT, PLEASE FEEL FREE TO SHARE THEM WITH US.

WE HAVE TREATED YOUR ACUTE CORONARY SYNDROME, BUT YOU NOW KNOW THAT HEART DISEASE CANNOT BE COMPLETELY CURED. YOU CAN MANAGE YOUR HEART DISEASE BY MAKING CHANGES TO YOUR LIFESTYLE. YOU ARE THE ARCHITECT OF YOUR OWN REHABILITATION.

THE LOVE AND SUPPORT OF THOSE CLOSEST TO YOU WILL, OF COURSE, BE ESSENTIAL DURING THIS TIME. TELL YOURSELF THAT BY WORKING THROUGH THIS WHOLE SITUATION WITH THEM, YOU ARE HELPING TO IMPROVE THEIR HEALTH AND QUALITY OF LIFE TOO.

AND SO... WE WISH YOU ALL THE VERY BEST!

Resources

ÉPIC: The Centre of Preventive Medicine and Physical Fitness for the Montreal Heart Institute
5055, rue St-Zotique Est
(514) 374-1480

Fédération Québécoise de la marche
(514) 252-3157 ou 1 866 252-2065
www.fqmarche.qc.ca

J'arrête!
Information and support to help stop smoking
1 888 853-6666
www.jarrete.qc.ca

Association diabète Québec
(514) 259-3422 ou 1 800 361-3504
www.diabete.qc.ca

Heart and Stroke Foundation of Canada
(514) 871-1551 (Division Québec)
1 800 567-8563
www.heartandstroke.ca

Canadian Dietetic Association
Eat Well, Live Well
Les Éditions du Trécarré, 1990

Lindsay Anne
Au goût du cœur
The Heart and Stroke Foundation of Canada
Les Éditions du Trécarré, 2003

Lindsay Anne
Bonne table et bon cœur
The Heart and Stroke Foundation of Canada
Les éditions de l'homme, 1999

Lindsay Anne
Recettes de tous les jours au goût du cœur
Les Éditions du Trécarré, 1991

Robitaille Manon, Lavoie Daniel
Le dessert se fait léger
Les Éditons Santé à la carte, 2002

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**We take
your well-being
to heart.**

The Foundation wishes to thank you
for your generosity.

(514) 593-2525
www.fondationicm.org





Name: _____

In order to properly identify your risk factors, we suggest that you fill in the following questionnaire. Answering yes to at least one of these questions means that you have at least one modifiable risk factor. Consult the section entitled Risk Factors for Coronary Artery Disease on page 18 to learn how to better understand and control the identified risk factors and to prevent your coronary heart disease from progressing.

	YES	NO	DO NOT KNOW
1. Do you smoke?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Do you come into regular contact with cigarette smoke?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Are you overweight? <i>(Use the chart on page 35 to state your height and weight.)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Is your waist measurement equal or superior to: Women: 88 cm (35 in), Men: 102 cm (40 in)?	<input type="checkbox"/>	<input type="checkbox"/>	
5. Do you exercise for less than 30 minutes a day most days of the week?	<input type="checkbox"/>	<input type="checkbox"/>	
6. Do you eat fewer than 5 portions of fruits and vegetables per day?	<input type="checkbox"/>	<input type="checkbox"/>	
7. Do you have high levels of bad cholesterol?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Are you diabetic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Do you have high blood pressure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. In your day to day life, do you consider yourself to be stressed?	<input type="checkbox"/>	<input type="checkbox"/>	
11. On any given normal day, do you find that you have no time to rest and relax?	<input type="checkbox"/>	<input type="checkbox"/>	