



Heart Surgery *i* Patient's Handbook



- ◆ BEFORE YOUR ADMISSION TO HOSPITAL
- ◆ YOUR RETURN HOME
- ◆ YOUR STAY IN HOSPITAL
- ◆ TYPES OF SURGERY



INSTITUT DE
CARDIOLOGIE
DE MONTRÉAL

Acknowledgements

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FOREWORD

You have recently found out that you need to undergo heart surgery. You might be worried and have a lot of questions you would like answered.

This handbook can be a good source of information for you and your family; it describes what you will need to undergo from day one through to your convalescence.

This handbook is divided into four sections:



1 *Suggestions and recommended preparations prior to admission to hospital*

2 *Follow-through and care during your stay in hospital*

3 *Information to guide you when you return home*

4 *Types of surgery*

Keep this manual close at hand so you can quickly consult the sections which interest you or just read it through over and over again. Please refer to the table of contents (on the next page) for detailed information concerning each section.

We hope this handbook will prove useful to you. Should you have any questions for which you cannot find answers in the manual, please do not hesitate to contact us. We will do our very best to answer them for you.

Happy reading!

The Surgical Team

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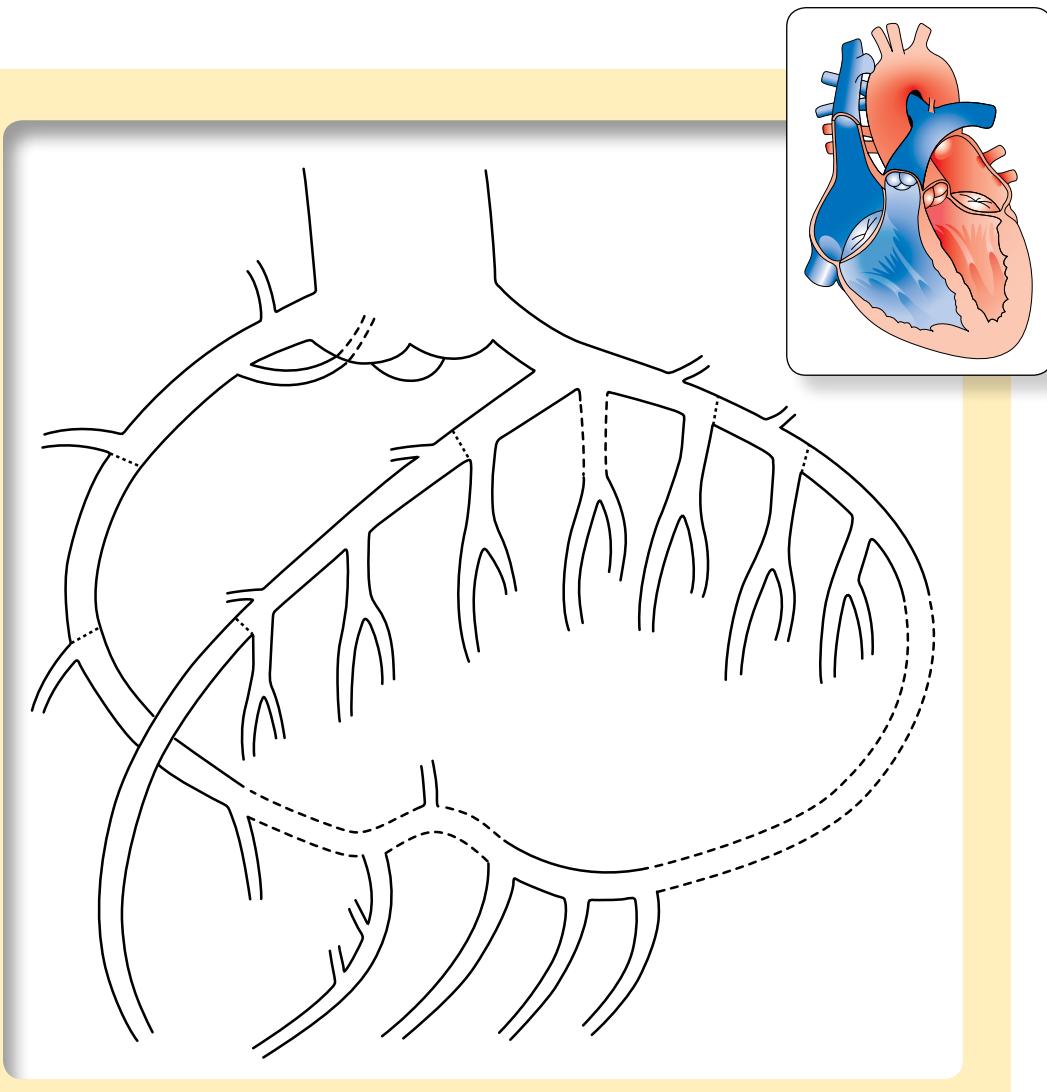
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PERSONAL PAGE

> **This handbook belongs to:** _____

Surgeon's Name: _____

Type of surgery: _____



IMPORTANT TELEPHONE NUMBERS

Montreal Heart Institute (MHI)

514 376-3330

Nurse working with your surgeon

Monday to Friday, from 7:30 am to 3:30 pm

Extension 4062

Surgical Unit

Extension 3323

Physiotherapy Department

Extension 3441

Nutrition Department

Extension 3909

Social Services Department

Extension 2571

Pharmacy Department

Extension 3510



- > **Health Information Service at your CLSC:** _____
- > **Emergency Service nearest to your home:** _____
- > **Family Practitioner (name):** _____

1- BEFORE YOUR ADMISSION TO HOSPITAL



SUGGESTIONS TO PREPARE FOR YOUR SURGERY



Adopt good eating habits: In order to promote good recovery after surgery your body requires food from a healthy and well-balanced diet every day. For more information, please refer to the section on nutrition (page 32).

Join the ranks of the non-smokers:

You will run much less risk of suffering from respiratory complications if you are a non-smoker at the time of surgery. Quitting smoking not only helps increase the percentage of oxygen in your blood, it also helps cut down on the build-up of secretions in your lungs. For more information, please refer to the section on smoking (page 56).



**There are many Smoking Cessation Centres in Quebec.
Call: 1 888-853-6666 for information.**

Practise the respiratory exercises described on page 19:

Once your surgery is over, you will be asked to practise a few respiratory exercises on a regular basis in order to ensure proper air entry into your lungs and to expel any secretions that might build up. Practising the exercises before surgery can make it much easier for you to do them after surgery.

Comply faithfully with your treatment and take medication as prescribed by your doctor.



If you suffer from diabetes, maintain your blood sugar levels within normal parameters. This will promote better healing of your surgical wounds.

Specific recommendations if you have a valve disease or an aortic disease:

Within the year preceding your surgery, you should see a dentist to have your teeth thoroughly examined and cleaned because you run a greater risk of developing a heart infection called endocarditis. While there, inform the dentist of your health situation. Please note that special precautions will need to be taken after your surgery. See page 77 for additional information.

For most people, any type of surgery can prove stressful and worrying:

Practising relaxation techniques can help you better control your anxiety and stress levels. Several methods exist; one of them, called deep breathing, is effective and very easy to do. It is an exercise which can be done anywhere and at any time. Deep breathing exercises increase oxygen levels in the blood and encourage the release of endorphins (natural hormones which promote relaxation).

How to do deep breathing:

1. Inhale slowly through your nose expanding your abdomen and filling your lungs with air;
2. Exhale slowly through your mouth, voiding all the air from your lungs while pursing your lips as though to blow out a candle.

Repeat this exercise for two to three minutes every time you feel nervous or tense.

Talking things over with family and friends can help reduce emotional burdens that weigh you down. Do not hesitate to express your fears and emotions with loved ones as often they need to express their feelings as well. If you find it difficult to broach any subject with them or simply feel overwhelmed by it all,



You can get help from the MHI's Social Services Department. Just call: 514 376-3330, extension 2571.



PRE-ADMISSION INFORMATION MEETING

If you are awaiting your surgery at home, you will be contacted there by telephone to schedule a pre-admission meeting.

During this three-hour meeting:

- > Various members of the healthcare team (a nurse, respiratory therapist, nutritionist, physiotherapist and social worker) will advise you on how best to prepare for your surgery and inform you as to the care relating to it;
- > Examinations will be carried out as needed (blood and urine analyses, a chest X-ray and a pulmonary function test);

N.B.: We strongly suggest that you be accompanied by a family member during this meeting. You will be part of a group of 8 to 10 people.



You might be unable to attend this meeting. Do not worry; most of the pertinent information relating to your surgery is contained in the present handbook. However, should you be at home and have any specific worries, **please do not hesitate to call the nurse working with your surgeon at 514 376-3330, extension 4062.**



> *The pre-admission information meetings are in French only, usual language of the institution*

REASONS FOR CONSULTING BEFORE SURGERY

While you are awaiting your surgery, certain symptoms may change and you may need to consult a health professional.



Major signs and symptoms:

- > More pronounced or more frequent anginal pains;
- > Anginal pain occurring at rest;
- > Anginal pain not relieved by rest or by taking medication or nitroglycerin;
- > Unusual pain in the chest (impression of having indigestion);
- > Weakness or dizziness;
- > Greater fatigue;
- > Greater breathlessness;
- > Faster heart rate;
- > More swelling of the legs;
- > Stress more difficult to control.



Whom should you consult?

- > First of all, the nurse working with your surgeon at the MHI, at: 514 376-3330, ext. 4062
- > Health Information Services at your CLSC;
- > Your family practitioner;
- > The emergency service at the MHI or the one nearest to your home.



ITEMS TO BRING WITH YOU TO THE HOSPITAL

- A toiletry kit containing your personal grooming effects (soap, toothbrush, toothpaste, shampoo, razor, etc);
- A pyjama which buttons up the front, a bathrobe or dressing gown;
- Underwear; a comfortable bra in order to avoid tension or pulling on the wound after surgery;
- If need be, your CPAP;
- For your security, non-skid closed-toe slippers and any other accessory you may need to walk comfortably such as special shoes, orthotics, etc;
- A container for your dentures;
- A case for your reading glasses; tissues; money for newspapers;
- Your medications, natural health products and vitamins (with a list or in their original containers);
- Your favourite reading matter; this handbook.



It is not advisable to bring jewellery or valuables with you.
However, should you do so, a safety deposit box can be made available to you in the MHI's Accounting Department.

TELEPHONE CALL ADMITTING YOU TO HOSPITAL



We have your welfare at heart and will do everything in our power to ensure your comfort.

It is difficult to determine with any degree of certainty exactly when your surgery will take place. A call will be made to you at home, usually in the morning of the day before your surgery, confirming your admission to hospital.

PLANNING YOUR RETURN HOME



We encourage you to plan for your return home as quickly as possible after surgery. With this in mind, here are answers to some of the most frequently asked questions.

When can you expect to be discharged from hospital?

- > You will normally be discharged on the 5th day following coronary bypass surgery and on the 6th day following valve surgery;
- > You are asked to vacate the room before 11 am;
- > Please advise your family so they can ensure your transport back to your home or to the convalescent centre;
- > Should your condition necessitate services from a CLSC, the nurse working with your surgeon will make arrangements with the CLSC in your area before you are discharged from hospital.

What kind of help will I need when I return home?

- > When you are discharged from hospital you are able to ensure your own health care; you can dress yourself and will be able to move about your home, etc;
- > As to other household tasks, you will be able to take them on gradually;
- > Most people who have undergone surgery report that it is useful to:
 - have made meals in advance and frozen them for when you return home;
 - have someone to run errands for you and to do household chores such as cleaning, laundry and preparing meals;

Is going to a convalescent centre necessary?

- > It is preferable to return to your own home. You will be able to eat foods prepared the way you like them, will sleep better in your own bed and will minimize any risk of infection. All this contributes to a quicker recovery;
- > Should the MHI's healthcare team consider it necessary for you to stay at a convalescent centre for a time, one of the MHI's social workers will help you find a private or public facility suitable to your needs.



Should preparing meals be a chore for you, there are specialised catering services available to you which can supply, at reasonable prices, complete and healthy meals prepared with limited amounts of salt and fats and quick frozen for your convenience. **For additional information concerning these specialised catering services, please call the Nutrition Department at the MHI at 514 376-3330, extension 3909.**



2- YOUR HOSPITAL STAY



FOR YOUR OWN HEALTHCARE

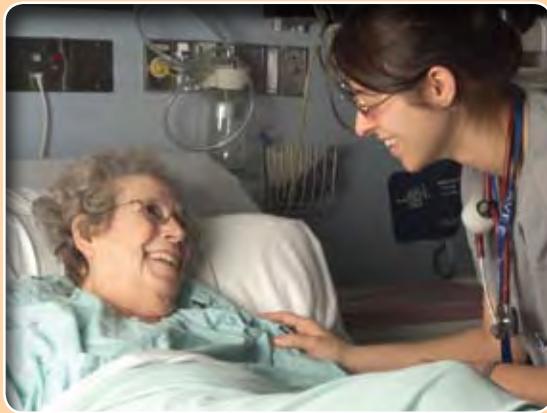
You will be asked to wash your hands often. Please make sure that your visitors and all your caregivers wash their hands often too. This is the best way to avoid spreading germs to others.

CARE DURING YOUR HOSPITAL STAY

During your stay in hospital, nurses will care for you 24 hours a day. Do not hesitate to talk with them and express any concerns or fears. Ask them as many questions as you like and they will do their best to answer. In order to meet all your needs, other health professionals (such as a nutritionist, physiotherapist, respiratory therapist, social worker or pharmacist) may come visit you. Also, a doctor will see you every day during your stay in hospital.

BEFORE SURGERY

Upon your arrival in the surgical unit: You will be met by a nurse who will explain what will happen next and answer any questions you may have. Additional tests may be necessary in order to complete your file before surgery. You will also meet with the surgeon who will be performing the operation as well as the anaesthetist who will attend. If you are a smoker, a nurse from the smoking cessation programme will also go meet with you.



Visit from a volunteer-sponsor: at the MHI there exists a programme which involves people called volunteer-sponsors. These people have all undergone cardiac surgery (either coronary bypass or valve surgery) and offer their understanding, support and reassurance to patients; one will visit you. The volunteer-sponsor will visit you the day before your surgery and again before you are discharged from hospital.

SURGERY DAY

- > You will be required to be completely fasting as from midnight the day before;
- > A staff member (one of your caregivers) will shave the surgical field;
- > Once the surgical field has been shaved, you will be asked to wash the area with a disinfectant soap and will be given a clean hospital gown to wear;
- > The nurse will give you your regular medication plus extra medication to help you relax. She will fit you with a nasal cannula for oxygen;
- > You will be taken to the operating theatre by a stretcher-bearer.



During your surgery, your family members have the choice of waiting at home or in the visitors' lounge on the 3rd floor.

Pager service available: In order for your family members to have more freedom of movement during this waiting period, a pager can be made available to them on surgery day. It can be picked up from the surgical intensive care unit on the morning of surgery day. When the pager beeps, it means that the surgery is over and that the surgeon will soon be heading to the visitors' lounge to speak to family members.

When your surgery is over the surgeon or surgeon's assistant will meet with family members in the visitors' lounge to let them know how things went during the course of surgery.

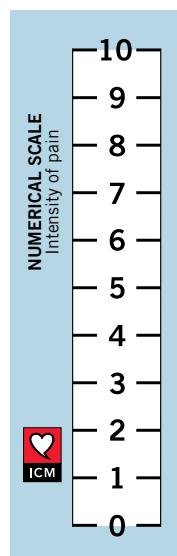


AFTER SURGERY

Intensive care and return to surgical unit

After your operation, you will be taken to the intensive care unit where you will gradually regain consciousness. This is a brightly lit area where activity is constant; you will hear people talking as well as alarms and beeps from various medical devices. You will realise that wires and tubes with which you were fitted in the operating theatre (one tube in your throat notably) are still attached; they are connected to nearby machines. You will be aware of people moving around you but you will have lost all notion of time. Someone will tell you that your operation is over. Nurses will be there at all times to care for you, working closely with other members of the healthcare team. Most of the tubes and fittings still attached to you will be removed either that same day or the day after your surgery.

Generally, patients are transferred out of the intensive care unit into the surgical unit the day after their operation.



Pain relief

After your surgery, you will be given regular doses of pain medication (analgesics) so you can rest comfortably. This will also allow you to move more and do the exercises which have been recommended, as well as sleep more soundly and recuperate more quickly. Nurses will often ask you to describe the intensity of your pain on a scale of 0 to 10. The zero indicates a total absence of pain while the 10 indicates the worst pain you have ever felt. This monitoring allows them to know if you are getting the relief you need and to adjust your medication as required. Nurses will also ask you if you are experiencing any side effects to the pain medication such as nausea, headache or drowsiness. If you are, other very effective medications will be administered to you to counteract these side effects. Please inform your nurses of any increase in pain or onset of side effects you may experience.

Remember: you must be well relieved and comfortable at all times.

Care of surgical wounds

A nurse will clean your wound for the first two days with a disinfectant solution. After the third day, no dressing will be applied to the wound unless there is discharge. It is recommended that women resume wearing a bra within the first few days after surgery.

Respiratory exercises

During the first few days after surgery, respiration (breathing) is often less effective. Inhalations are shallow and lungs inflate less; secretions can build up in your lungs. This is why it is essential that you cough and practice the recommended respiratory exercises (deep breathing and use of the spirometer) as soon as possible the day after your surgery as well as each and every hour of the day thereafter. We will remind you of this often.

Deep breathing techniques

You can practice deep breathing from many positions: from flat on your back, on your side, sitting up or even standing. Practice the breathing technique with which you are the most comfortable.

Diaphragmatic respiration or belly breathing

- > Place both hands on your abdomen (belly);
- > Inhale deeply through your nose while expanding your abdomen;
- > Hold your breath for 2 to 3 seconds;
- > Exhale slowly through your mouth, pursing our lips as though to blow out a candle;
- > Repeat 10 times and then rest to avoid getting dizzy.



Thoracic respiration or chest breathing

- > Place your hands on each side of your rib cage;
- > Inhale deeply through your nose, causing your hands to lift and follow the movements of your ribs;
- > Hold your breath for 2 to 3 seconds;
- > Exhale slowly through your mouth, pursing your lips as though to blow out a candle;
- > Repeat 10 times and then rest to avoid getting dizzy.



Spirometer

A spirometer is a device comprised of a tube connected to an air chamber in which there is a small ball (see photo). Using the spirometer will help you inflate your lungs more fully.

Using the spirometer:

- > Put the tube in your mouth;
- > Inhale slowly through your mouth and maintain the inhalation so as to lift the ball and keep it as high as possible in the air chamber;
- > Repeat 10 times every hour.

You can use the spirometer while lying on your back or on your side, while sitting up or even standing. Just make sure that the device remains in an upright position during the exercise.



How to cough



After doing the breathing exercises, you will be asked to cough to rid your lungs of any secretions that may have built up there.

You will be given a cushion made up of two towels rolled tightly together and commonly referred to as "the baby". This cushion serves to protect your chest and reduce pain whenever you cough or laugh.

- > Before coughing, hold the cushion firmly to your chest by crossing your arms overtop while squeezing your elbows with your hands;
- > Then cough as needed to expel any secretions and release the cushion to avoid muscle tension;
- > If the cushion is not within your reach, cross your arms over your chest while squeezing your elbows with your hands; this will achieve almost the same effect.
- > To alleviate pain, you can expel secretions by using the muscles of your stomach. You will be taught this technique during the pre-admission meeting.

If your respiratory status warrants it, a physiotherapist will assess your condition and assist you.

Regaining your mobility

During the first few days after surgery, you will need some help getting up and starting to walk again. Most patients are helped up the morning after surgery day and will begin walking again (with assistance) during the two days following surgery. We recommend that you start or continue practising the exercises for your legs as soon as you return to the surgical unit.

- > Study the poster in your room which illustrates the recommended exercises;
- > Do the exercises twice a day;
- > Gradually increase the distance you travel when you walk in the hallway.



Walking, practising light-stretching and relaxation techniques and resuming your daily activities will help you regain your strength gradually while preventing both respiratory and circulatory complications.

Should your medical status warrant it (if you have difficulty getting up or walking), a physiotherapist will assess your condition and assist you.

Before being discharged from hospital you will receive additional information on the benefits of walking and on how to gradually resume your activities. Early on in your convalescence you will also be invited to participate in an information class on medications, nutrition and on how to go about resuming your normal activities (see page 66).



Nutrition

- > The day after your surgery, often at breakfast time, you will resume eating and drinking again. You will be served light meals to begin with and then gradually more complete meals;
- > Getting back to normal eating habits is very important after surgery in order to regain your strength, promote healing of your surgical wounds and stimulate your immune system;



Being less hungry after surgery is very common. To stimulate your appetite, it is important to eat at least a few bites at every meal. Should you not be eating enough, a nutritionist will assess your needs and adapt your diet accordingly so that you can recuperate more quickly.



MENU

**To get the menu,
dial 7777.**

**To make any changes to
your menu,
dial 3438.**

Leave your message on
the voicemail.

If you wish to get the menu or make any changes to it, you can dial the number at the left. This information is posted in every room.

Should you desire further information on food or on eating healthy, you can also meet with a nutritionist. Ask your nurse to set up a meeting for you.

Being discharged

- > Your surgeon will authorise your discharge from hospital either the day before, or on the actual morning of departure;
- > You will be discharged when your general condition warrants it;
- > Wear loose-fitting clothing and comfortable shoes;
- > Leaving hospital will be very tiring for you, so rest as soon as you get home;
- > Should your condition necessitate services from a CLSC, the nurse working with your surgeon will make arrangements with the one nearest to your home.

Medical follow-up after your return home

As soon as you get home, make an appointment with your family physician and your cardiologist (if you have one) to let them know that you have had heart surgery.

N.B.: Not every surgery patient has an appointment with the cardiac surgeon. Those who do will have received a paper from the nurse confirming this appointment with the surgeon as they were being discharged from hospital.



The physician who referred you to the MHI will receive a letter from the surgeon informing him of your medical condition, describing what occurred during your stay in the surgical unit and detailing which medications were prescribed to you upon your discharge.



For those patients who need to be seen again by their surgeon, please call the following number: 514 593-2556 and leave a message on the voicemail. A secretary will contact you about a week prior to the date of your appointment.



3- YOUR RETURN HOME



In this section you will find a lot of useful information to guide you during your convalescence.

Convalescence is the transition period between when you have your operation and when you return to work and to other normal activities. It generally lasts from six weeks to three months.



RESUMING PHYSICAL ACTIVITIES

From the moment you get back home:

- > Gradually resume your normal daily activities;
- > Keep doing the exercises recommended in hospital;
- > Walk outside every day (weather permitting).

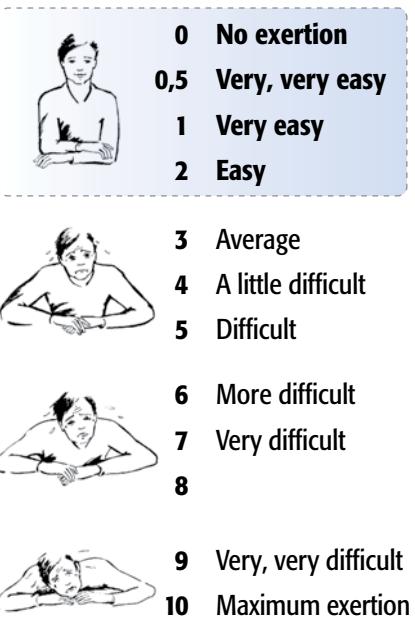
All this allows you to acquire a sense of well-being both mentally and physically. In addition, regular physical activity such as walking helps prevent cardiovascular disease.



The MHI team of physiotherapists recommends that you resume your normal activities and begin a walking programme based on:

1. Your perception of the degree of difficulty associated with the task at hand according to the scale of perceived exertion seen on the following page;
2. The signs of intolerance to physical exertion as described on the following page.

1- Scale of perceived exertion



© Jean Jobin, 1993, Revised 1998, Adapted from: Borg G.A.V. Psychophysical basis of perceived exertion. Med & Science in Sport Exercise. 1982; volume14 (5): 337-881. Hôpital Laval

The scale serves to quantify your perception of the degree of difficulty associated with the activity at any given moment during the activity or, in other words, how difficult or strenuous you deem it to be. The scale ranges from 0 (no exertion) to 10 (maximum degree of difficulty perceived during the activity).

Upon your return home after surgery, the level of exertion you perceive during any given activity should reach no higher than level 2 on the scale as there is no training objective in mind. Everything you do must seem easy. **You should feel absolutely no fatigue when you stop.**

It is recommended that you assess the level of exertion you perceive during whichever activity you are involved in on a regular basis.

2- The signs of intolerance to physical exertion:

- > Heart rate greater than 120 beats per minute, five minutes after discontinuing a given activity;
- > Long-lasting fatigue;
- > Intense joint pain;
- > Anginal pain;
- > Dizziness;
- > Nausea and vomiting;
- > Profuse sweating (cold sweats).

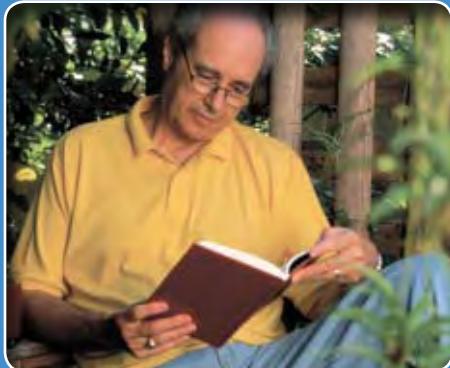
Should you experience any of the above signs of intolerance while engaged in any activity, desist immediately. Once the signs have subsided, you may resume the activity but at a lesser pace. If any of the signs occur frequently, whether upon exertion or at rest, please notify your doctor.

RESUMING DAILY ACTIVITIES



Here are some tips to help you get back to as normal a way of life as possible when you return home:

- > Get up and get dressed every morning;
- > Eat three meals a day;
- > Avoid engaging in any physical activity for one hour after eating as your heart is already working harder to help your stomach digest your meal;
- > Divide your time and spread activities throughout your day. Do not try to do everything at once;
- > Plan your day so that you can do whatever you want to do without becoming worried or tense;
- > Ask for help if and when you need it;
- > Plan for at least two additional (not including the hour after meals) rest periods of twenty to thirty minutes each in your day. You do not have to lie down, but it is important for you to rest quietly.
- > Try to devote the same number of hours to sleep than before your operation. If you have plans for a late night, take a nap in the afternoon;
- > You can use the stairs if you must, but do so slowly and carefully. Should you be tired or out of breath, stop and rest before going on;
- > Place any items you may need close by;
- > Protect your sternum when you cough by crossing your arms over your chest while squeezing your elbows with your hands.



WALKING PROGRAMME

Walking is one of the easiest ways there is to improve your physical health gradually. Everyone should walk every day, outside if possible. To get the most out of this activity, here are a few suggestions:

- > Wear loose-fitting clothing and comfortable shoes;
- > Wait one hour after eating before going out for a walk;
- > Go walking when you are rested (after a rest period) or after engaging in an activity which did not tire you;
- > Start off with a period of stretching and limbering up or with a period of low-intensity walking;
- > Maintain a regular pace;
- > When you first start a walking programme, make sure the terrain you cover is level and flat;
- > In the summertime, it is preferable to walk in the mornings or evenings when it is cooler. Heat, wind and humidity can increase the level of exertion you experience: reduce your pace accordingly;
- > In the wintertime, take your walk around midday as that is the warmest time of the day. If cold and windy weather impairs your breathing, cover your nose and mouth with a scarf to warm the air before it reaches your lungs;
- > It is preferable to walk outside if at all possible, although walking in a shopping mall is considered good too;
- > Decrease your pace towards the end of your walk so you have time to cool down;
- > Sit down and rest for about twenty minutes after your walk so you can recover completely.



Should you desire any additional information, call the Physiotherapy Department at the MHI: 514 376-3330, extension 3441.



N.B.: You must maintain your level of physical exertion between 0 and 2 on the scale of perceived exertion (page 27).

It is time to proceed to the next stage in your walking programme when you feel that your level of physical exertion has decreased. Start by increasing the distance you can cover comfortably within 10 to 15 minutes and then gradually increase your pace.

STAGES OF CONVALESCENCE

One month after surgery

You are feeling better and your physical condition is improving. Keep doing your daily exercises and stick with your walking programme. It is still not advisable to do intense work-outs or training in order to get back into shape. Maintain your levels of perceived exertion between 0 and 2 on the scale (see page 27). Pay close attention to the appearance of any signs of intolerance to physical effort (see page 27). You may perform light housework. For anything more strenuous, for example washing floors, mowing the lawn or vacuuming, please follow your doctor's advice. Increase your level of exercise gradually.

6 to 8 weeks after surgery

Your sternum has had time to heal. You can undertake activities which require you to draw increasingly on the strength of your arms. Take it slow and easy!

Three months after surgery

Your lifestyle should be back to normal. You can resume your usual sports and leisure activities. You may undertake a "get-back-into-shape" physical work-out programme but make sure you consult your doctor before you begin.

Things to avoid during the first six weeks after surgery:

- > Any activity which would put undue strain on your sternum as it requires a minimum of 6 weeks to heal properly;
- > Movements which require the muscles of your body to contract such as:
 - Straining when you void your bowels;
 - Lifting little children or heavy objects such as full grocery bags or suitcases:
do not lift any objects heavier than 2.5 kilograms (5 pounds);
 - Trying to open a window which has stuck to the frame or a jar with a tight-fitting lid.
- > Pushing or pulling heavy objects;
- > Keeping your arms above your head for any length of time (for example: washing windows, hanging clothes outside to dry, etc). as this puts strain on your heart.

Return to work

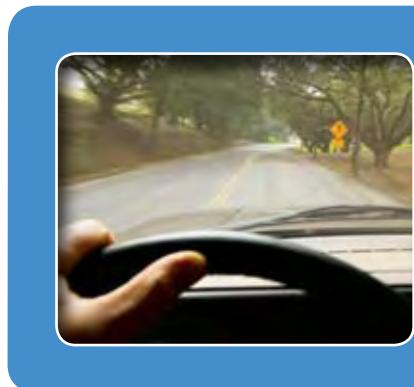
Your surgeon or family physician will authorise your return to work; as a rule, most people are physically ready to return to work three months after surgery. Consult your doctors about this during your first appointment with them after surgery.

Travelling

Travelling is usually permitted approximately three months after surgery; speak to your doctors beforehand.

Driving your car:

- > After coronary bypass surgery, the SAAQ (Société de l'assurance automobile du Québec) recommends that you wait approximately 30 days before driving your passenger vehicle. As to other classes of vehicles, the recommended wait is 90 days.
- > If you have undergone valve surgery, driving is usually permitted again about six weeks after your operation. Your doctor may recommend that you wait eight weeks, depending on certain aspects of your health condition;
- > Insurance companies have specific guidelines to comply with concerning driving after major surgery. Ask your company for details;
- > It is recommended that you wear your seat belt when you drive; however, if you feel it rubbing against your wound, use a small towel as a cushion between your chest and the belt.

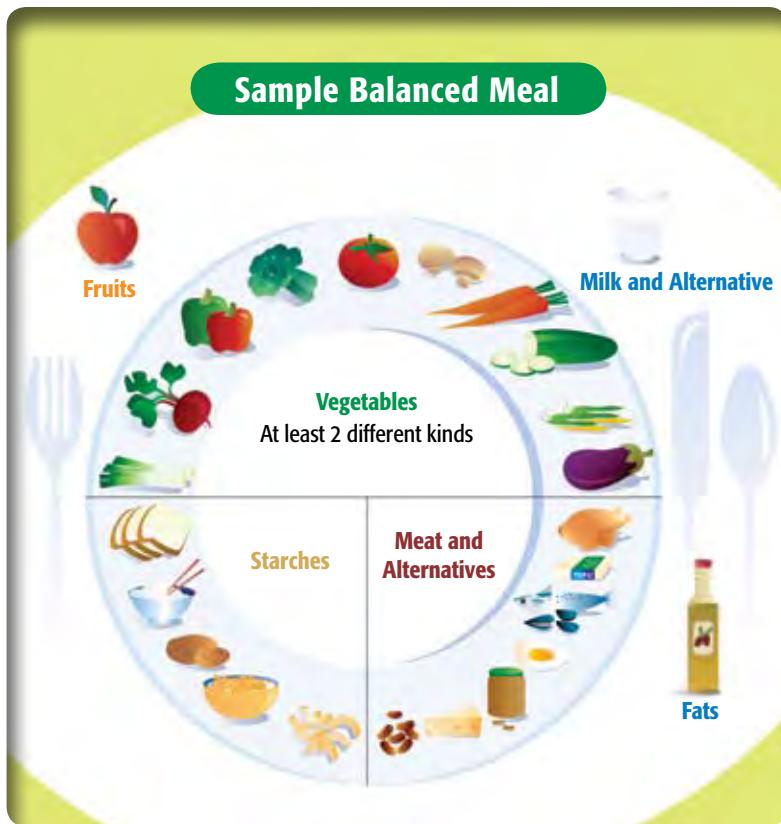


Sexual activity

Sexual activity is considered a physical activity like any other so you may resume sexual activity whenever you feel ready for it. Avoid carrying the weight of your body on your arms however and remember to protect your sternum. In addition, as for any other physical activity, it is recommended that you wait at least one hour after meals before engaging in sexual activity. Please consult your physician before taking or even considering taking any medication for erectile dysfunction.

NUTRITION

Knowledge relating to cardiovascular health and good nutrition has evolved significantly in recent years. Numerous studies have shown that nutrition plays a significant role in the prevention and management of risk factors for cardiovascular disease. High blood pressure, obesity, diabetes and high cholesterol levels may all be controlled by simply making a few small adjustments in lifestyle such as changing some of the foods you eat.

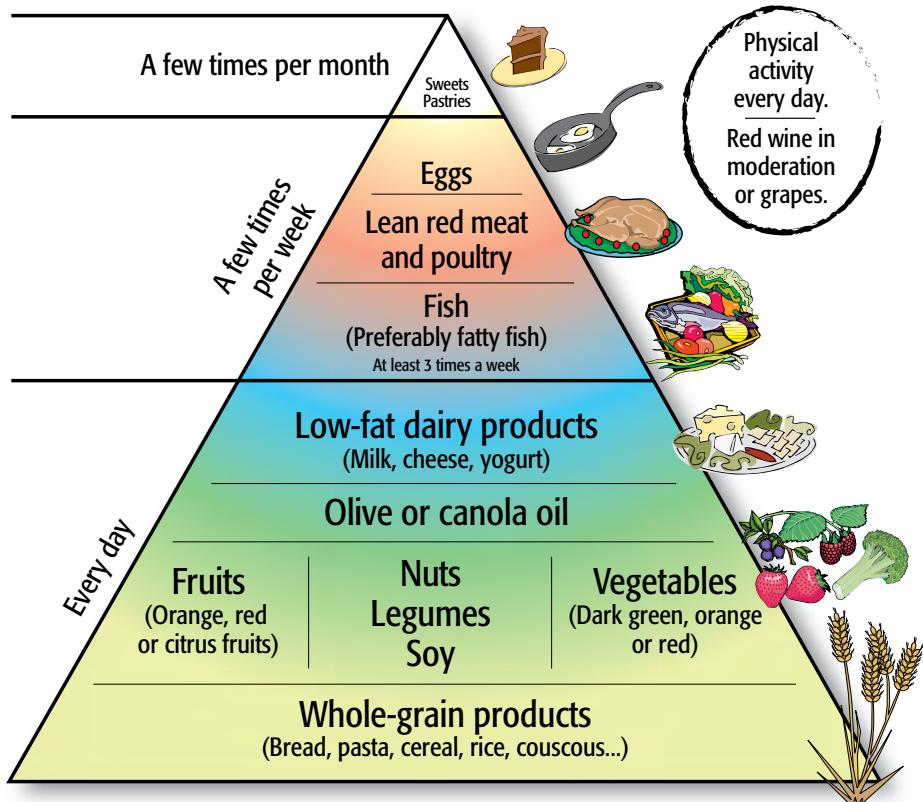


Such as quoted in "Meal planning for people with diabetes", MSSS, 2008.



The nutritionists at the Montreal Heart Institute recommend a different style of food plan based on a comprehensive approach to a variety of foods and to the joys of healthy eating. It is the Quebec version of the Mediterranean-style food plan which is presented here in the shape of a pyramid (see following page).

Mediterranean-style Food Plan



The food items found at the base of the pyramid should be consumed daily whereas the food items found at the top of the pyramid should be eaten only occasionally and in smaller quantities.

The Mediterranean-style food plan recommends: choosing high quality fats in your diet such as monounsaturated fatty acids and omega-3s



Great importance is accorded to the kinds of fats we consume. Monounsaturated fatty acids contribute to the reduction of bad (LDL) serum cholesterol. Omega-3 fatty acids assist in the reduction of serum triglyceride levels and reduce the risk of blood clots; they also help maintain stable blood pressure levels and have a positive effect on the anti-inflammatory system.

They can be found in:



Monounsaturated fatty acids

- > Olive and canola oils;
- > Nuts (peanuts, pecans, pistachios, almonds and hazelnuts);
- > Avocados and olives.

Omega-3 fatty acids

- > Fatty fish (salmon, trout, mackerel, sardines, etc);
- > Walnuts and ground flaxseeds;
- > Soybeans and soy derivatives (tofu, soybean milk, roasted soybeans);
- > Canola oil.

A limited intake of saturated fats, dietary cholesterol and trans fats in our diet.

The consumption of saturated fats, dietary cholesterol and trans fats elevates LDL (bad) cholesterol levels in the bloodstream. In addition, trans fats also contribute to the lowering of HDL (good) cholesterol levels.

Saturated fats and cholesterol	Trans fats
<ul style="list-style-type: none">> Milk and yogurt with more than 2 % MF;> Cheeses with more than 20 % MF;> Fatty meats;> Poultry with skin on;> Butter and eggs;> Tropical oils (coconut, palm, palm kernel and cottonseed oils; saturated fats only).	<ul style="list-style-type: none">> Commercial bakery products (muffins, croissants, cakes, pies, etc.);> Fried foods, breaded foods;> Chips of all kinds, crackers;> Fast food products;> Partially hydrogenated oils;> Hydrogenated margarine;> Vegetable oil shortening;

A limited intake of sodium

A high sodium (salt) intake in our diet contributes to an increase in blood pressure. To enhance the flavour of foods, the Mediterranean-style food plan recommends using herbs and spices instead of salt (avoid salt, sea salt, vegetable salt, etc, as much as possible). Moreover, since most store-bought prepared and packaged foods contain high quantities of sodium, we should all show a decided preference for homemade foods.

A limited intake of sugar

It is best to limit our intake of sweet foods to very moderate amounts. If you are overweight, diabetic or exhibit high triglyceride levels (high levels of fats in your blood), you should be even more careful about limiting your intake of sweets and sugary foods including all sugars (white and brown sugar, honey, syrup, molasses, jams and jellies, candy, cakes, pies, cookies, sweetened fruit juices, fruit-flavoured drinks and beverages, regular soft drinks, etc.).

Alcohol

It is true that red wine is good for your heart, but alcohol, including wine, should always be limited to two drinks per day for men and one drink per day for women.

A high intake of dietary fibre and antioxidants

Dietary fibre, more particularly soluble dietary fibre, helps lower levels of LDL (bad) serum cholesterol; helps provide better control of blood sugar levels for people with diabetes; aids in lowering our daily energy requirements (calorie intake) and contributes to the maintenance of a healthy body weight. Dietary fibre also promotes normal bowel function.

Antioxidants protect the lining of the arteries and prevent atherosclerosis. One type of antioxidants called phytoestrogens is said to have an added beneficial effect in preventing cardiovascular diseases. Phytoestrogens are found in soybeans and soy derivatives, in ground flaxseeds and in berries such as blueberries, cranberries, strawberries, etc, as well as in almonds and canola oil.

Dietary fibre

- > Whole grains;
- > Fruits and vegetables;
- > Legumes and nuts.



Soluble fibre

- > Psyllium or cereals with added psyllium;
- > Ground flaxseeds;
- > Oat bran, oatmeal, barley, legumes such as chickpeas and pectin-rich fruits such as tomatoes, apples, oranges, pears, strawberries, etc.



Antioxidants

- > Brightly-coloured fruits and vegetables (green, orange or red);
- > Red wine, grapes;
- > Tea;
- > Legumes (chickpeas, red beans, lentils, etc);
- > Soy and its derivatives;
- > Nuts and seeds.



A winning combination for a healthy heart!!!

CARING FOR SURGICAL WOUNDS AND PERSONAL HYGIENE

Here are a few tips to help you care for your surgical wounds and promote good healing:

- > Cleanse your surgical wounds every day with a mild, unscented soap;
- > Rinse well with warm water;
- > Pat dry with a clean towel;
- > Wash your hands properly both before and after touching your surgical wounds;
- > **Do not apply scented creams or powders on surgical wounds nor any vitamin-based preparations;**
- > If there are small scabs on the surgical wounds they can be buffed gently to remove them, however avoid pulling them off.
- > Avoid swimming pools and public saunas until the surgical wounds are completely and properly healed (no more scabbing).

If there is discharge whether clear or slightly blood-tinged:

- > Continue to shower on a daily basis;
- > Cleanse your surgical wounds with water and a mild, unscented soap;
- > Apply a clean dry compress to absorb any discharge;
- > Change the compress twice a day or more often, as required.

Consult a health professional if you notice:

- > A slightly thicker yellowish or greenish malodorous discharge;
- > A more abundant discharge with redness, heat, swelling and greater sensitivity close to the wounds.

A few tips for proper personal hygiene:

- > Take showers rather than baths until your surgical wounds heal. It is normal for wounds to be tender to the touch or itchy as they heal. Any swelling in the upper portion of the chest wound should disappear within a few weeks;
- > Ladies, please wear your bra to avoid any tension or pulling on your surgical wound;
- > Any small adhesive bandages should generally peel off on their own within a few days (5 to 7 days). If they have not fallen off by that time, you may gently remove them.

SOLUTIONS TO THE MOST COMMON PROBLEMS

Once you have returned home, you may encounter a few situations where you will wonder what it is best to do. In this section you will find solutions to common situations and problems which can occur after surgery as well as some of the signs and symptoms to watch for which warn you that you should seek the help of a health professional.

The professional to consult may be:



- > **The nurse working with your surgeon:** she will assess the problem with you and advise you or, if need be, will recommend the professional whose help you should seek;
- > Your pharmacist;
- > The Health Information Line (Info-Santé) at your CLSC;
- > The Montreal Heart Institute emergency room or the one nearest to your home.

1- PAIN

Each person has his or her own threshold for pain. After heart surgery, some people feel very little pain whereas others find it difficult to deal with. Whatever pain or discomfort there is will fade with time; however, it is quite possible that you continue to feel some pain or discomfort until your surgical wounds and sternum are properly healed which normally takes about two months.

You could also suffer from muscular pain in your neck and shoulders which is generally due to the position you were in during the operation. Anxiety can also cause muscle tension and pain. The daily practice of relaxation techniques and light stretching exercises can help lessen muscular tension and ease your pain. Therapeutic massage is also a good option as it can be very effective.

If the surgeon used your mammary artery for your bypass, you may feel pain or a burning or tingling sensation or numbness in your chest for a few months. You may also experience some swelling on the side where the mammary artery was harvested (mammary or thoracic arteries are situated in the chest). Do not worry; these sensations will gradually fade away and disappear entirely.



Did you know that there is absolutely no risk of developing a dependency to your pain medication? Take it as needed as pain can delay healing.

A few tips to properly relieve pain:

- > In the very beginning of your convalescence, take your pain medication regularly as prescribed. In addition, should you wake during the night because of pain, do not hesitate to take more medication as prescribed. You will have less trouble managing your pain when the level of medication in your bloodstream remains constant;
- > When your prescription for pain medication runs out, you can take acetaminophen to relieve your pain (Tylenol® or other brands) or ibuprofen (Motrin®, Advil®, or other brands) which are all available as over the counter drugs in pharmacies. Speak to your pharmacist to make sure it is compatible with your actual medication. Do not forget, the goal is to be well relieved at all times;
- > Whenever you cough, sneeze or simply have the urge to laugh, protect your sternum by crossing your arms over your chest and squeezing your elbows in your palms;
- > Make sure you are as comfortable as can be at all times.

Consult a health professional when:

- > Pain becomes intense in the chest area, back or shoulders, particularly if it is accentuated when you take a deep breath;
- > Muscular or joint pain persists for more than two to three months and restricts your activities;
- > You experience the same sort of symptoms you had before surgery.



It is essential for you to be well relieved at all times. Take your pain medication as soon as pain sets in.

2- SLEEP DISORDERS

Many people have reported having trouble sleeping once they returned home after surgery. This problem usually resolves itself after a few days.

To promote relaxation and sleep and to minimize muscular tension:

- > Opt for a peaceful environment and enjoy your favourite soothing music;
- > Indulge in a restful activity or practise relaxation techniques;
- > Assume your usual sleeping position, the one in which you feel the most comfortable using pillows if need be to prop yourself up.

Consult a health professional when:

- > Sleep disorders persist for more than a week.

Opt for a peaceful environment and indulge in a restful activity.



3- SWELLING OF THE ARM OR LEG



There may be some swelling in the arm or leg from which the vein was harvested for the bypass surgery. This swelling may persist for as long as 8 to 10 weeks. If the area is bruised, any discolouration should disappear within 3 to 4 weeks.

A few tips to restore proper blood circulation and reduce swelling in the operated leg:

- > Take up walking and other forms of exercise to promote good blood circulation;
- > Avoid standing relatively motionless or sitting with your legs dangling (no support for the feet) for a prolonged period of time;
- > Avoid crossing your legs;
- > Use a pillow to elevate your legs when you are in bed;
- > Raise your legs to hip height when you are sitting;
- > Wear loose-fitting clothing so blood circulation is not impaired: your socks should not leave marks on your legs.

A few tips to restore proper blood circulation and reduce swelling in the operated arm:

- > Avoid leaving your arms dangling alongside your body for a prolonged period of time;
- > Avoid crossing your arms;
- > Use a pillow to elevate your arm when you are sitting;
- > Rest your arm on a pillow when you are in bed.

Consult a health professional when:

- > Swelling in the arm or leg increases, particularly if this is accompanied by a weight gain of 2 to 3 kilograms (4 to 5 pounds) in one week;
- > Swelling persists for more than 8 weeks.

4- FEVER

Should your body temperature exceed 38.0°C (100.4°F):

- > Take two 325 mg tablets of Tylenol® (650 mg in total);
- > Air out the room;
- > Cover up lightly;
- > Take a cool shower;
- > Drink lots of fluids (respect recommended restrictions);
- > Rest;
- > Check your temperature every 4 hours

Consult a health professional when:

- > Fever persists for more than 24 hours.

5- CONSTIPATION



Constipation is a common occurrence after surgery. It is due primarily to the effects of the anaesthesia or of certain medications, to a change in food and to a lack of exercise. Consume greater amounts of dietary fibre and drink lots of fluids to remedy the situation.

Here are a few tips to reduce constipation:

- > Gradually increase your intake of dietary fibre;
- > Main sources of dietary fibre:
 - Whole grains: wheat bread, whole grain cereals such as All Bran and Bran Flakes, brown rice, whole wheat pasta, oatmeal, wheat bran, oat bran and flaxseeds;
 - Fresh fruit;
 - Fresh or frozen vegetables;
 - Legumes: lentils, chickpeas, etc.
- > Add oat bran or wheat bran (2 to 3 tbsp or 30 to 45 mL) or ground flaxseeds (1 tbsp or 15 mL) per day to your cereal, fruit purées, yogurt, etc;
- > Eating prunes or drinking prune juice may also be beneficial for a time, but the effect will wear off as your system adapts;
- > Drink fluids; at least 6 to 8 glasses of fluids per day, two of which should be water, unless you have been told to limit your intake of fluids;

- > Use your usual methods or techniques to help with bowel movements;
- > Increase your physical activity as previously recommended;
- > N.B.: Certain pain medications (analgesics) such as Empracet® and Dilaudid® can sometimes cause constipation; ask your pharmacist for more informations.

Speak with your pharmacist if constipation persists. Several alternative solutions (glycerine suppositories, psyllium fibre, etc) are available to you, whose use needs to be tailored to each person's specific condition.

Consult a health professional when:

- > You go five consecutive days without a bowel movement.

6- LOSS OF APPETITE

Your loss of appetite may still persist after your return home.

Here are some suggestions to help you regain your appetite and satisfy your nutritional needs:

- > Have 4 or 5 small meals per day rather than 3 larger ones; this will help you eat more and satisfy your nutritional needs while, at the same time, aiding with your digestion;
- > Drink more nutritious beverages such as milk or flavoured milk beverages, fruit juices, nutritional drink supplements, etc, instead of tea, coffee or herbal tea;
- > Add pieces of meat, chicken or fish to soups, pastas and rice;
- > Add 30 to 60 mL (2 to 4 tbsp) of skim milk powder to soups, yogurts, milk-based desserts, fruit purées and cereals;
- > If need be, you can boost your dietary intake with nutritional supplements which can be found in liquid and solid forms as well as puddings and bars. Some supplements have been specifically adapted for people with diabetes and for those suffering from renal failure.



For any additional information, you can speak with a Montreal Heart Institute nutritionist by dialling: **514 376-3330, extension 3909**.

EMOTIONAL CHANGES

You could experience some ups and downs during your convalescence; all the relief you first felt at finally having had your operation may be followed by negative feelings characterised by mood swings, irritability or loss of energy. These feelings, which are perfectly normal in any recovery process, may be triggered by the anaesthetics or the different medications that were used, by a lack of sleep or simply by the stress of the operation.

During this period, you may experience:

- > Emotional changes such as sadness or mood swings, etc;
- > Anxiety;
- > Feelings of fatigue, exhaustion or depression;
- > A lack of concentration;
- > Memory loss;
- > Restless sleep (nightmares, insomnia);
- > A loss of appetite.

These effects are considered normal and should disappear on their own approximately 1 month after surgery. Try not to be discouraged. Focus on the progress you make and remember that your recovery is constituted of a whole series of little ups and downs.

A few tips to help reduce anxiety and stress:

- > Talk about how you feel with your family and friends;
- > Remain active; physical activity is very useful and necessary to your well-being and will promote healing (most activities are allowed, see page 26);
- > Let those around you know that being active is good for you. You should probably discourage them from overprotecting you and instead encourage them to consult your handbook or other reading matter on the subject. They will learn that what you really need is their attentiveness, their support and their understanding.

Do not hesitate to consult a health professional when:

- > You cannot seem to pull through or rally and feel that the simplest task or activity is difficult and tiring;
- > Any negative feelings persist beyond several weeks.

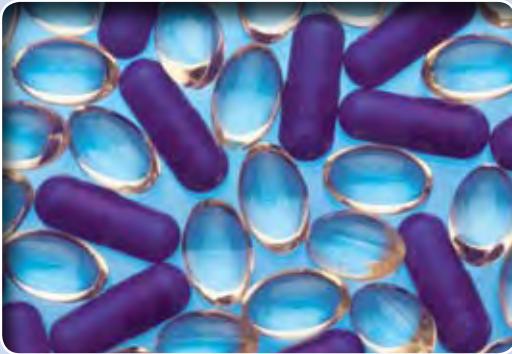
You can call:

- > **The team of social workers at the MHI (514 376-3330, extension 2571);**
- > A social worker can provide timely or long-term assistance according to your needs and those of your family;
- > Your family physician or any other health professional.

MEDICATION

Heart surgery has improved your condition. However, diseases such as hypertension, diabetes or hypercholesterolemia may remain and still need to be treated. **You must not stop taking your medication without first discussing it with your physician.** On the contrary, medication plays a key role in the prevention and treatment of cardiovascular disease.

Your surgeon reviewed the medication you were taking before your heart surgery and issued a new prescription for you when you returned home. Certain medications may have been discontinued, others maintained and possibly new ones prescribed. Please do not hesitate to speak with your pharmacist if you have any questions concerning your medications.



Medication plays a key role in the prevention and treatment of cardiovascular disease.

Some advice on taking medications

- > Take all medications as prescribed by your surgeon until you see your family physician;
- > Always keep a list on hand of all the medications you take, indicating the name of each medication, its dosage, the time at which you take it and the reason you take it;
- > Do not stop taking a medication or modify its dosage without first discussing it with your doctor or pharmacist;
- > Always speak to your pharmacist before taking any over the counter drugs, natural health products or vitamins;
- > Always go to the same pharmacy; this will ensure that your pharmacist has a complete history of your prescriptions and can, if need be, contact your physician.



Please note that the following information is but a brief overview of the indications and adverse reactions of the medications most commonly prescribed after heart surgery. Neither precautions nor methods of administration are mentioned. You can gain further information by reading the drug information leaflets that were given to you when you were discharged from the MHI or by speaking to a pharmacist.

1. BLOOD-THINNING MEDICATIONS

ASPIRIN®

(Also known as Entrophen®, Novasen® and Rivasa®.) These tablets are enteric-coated to lessen stomach irritation.

Effects and indications:

- > Thins the blood to prevent the formation of blood clots.

If you have had coronary bypass surgery, you will need to take Aspirin® for the rest of your life in order to reduce the risk of myocardial infarction (heart attack) and of stroke.

Adverse reactions:

- > Heartburn;
- > More frequent or unusual bleeding such as nosebleeds, bleeding gums, blood in the urine or increased bruising.

Should you notice such adverse reactions, contact your doctor or pharmacist.

COUMADIN®

Effects and indications:

- > Prevents the formation of blood clots;
- > The duration of treatment with Coumadin® depends on your medical condition:
 - For those people experiencing arrhythmias as a result of surgery or for those who have had a cardiac valve repaired (as opposed to a complete valve replacement by a biological or mechanical valve), Coumadin® can be prescribed for a few months only;
 - For those people suffering from chronic arrhythmias or for those who have had a mechanical or biological valve implant, the duration of the treatment is indefinite.

Adverse reactions:

- > Unusual bleeding such as nosebleeds, bleeding gums, bloody urine, bloody stools, greater menstrual flow or increased bruising.

Should you notice such adverse reactions, contact your doctor or pharmacist.

Follow-up:

- > A blood test to determine the degree of "thinning" of the blood (INR) should be done periodically to adjust the dose of Coumadin®;
- > A blood sample is required 1 to 2 times per week for the first 2 to 3 weeks of treatment. When the results of the blood sampling are stable, blood tests can be performed about once per month;
- > These blood samples are essential as they determine whether your blood is "too thick" which increases the risk of venous thrombosis and stroke, or "too thin" which increases the risk of excessive bleeding.

Patients who will be required to take Coumadin® (anticoagulant) will be given a detailed brochure on its effects while they are in hospital. In point of fact, all people taking Coumadin® should be made aware of various precautions and recommendations concerning possible food and drug interactions, etc.



2. MEDICATIONS TO CONTROL CHOLESTEROL

(Examples: Zocor®, Pravachol®, Lipitor®, etc.)

Effects and indications:

- > Control the high levels of LDL (bad) cholesterol in the bloodstream, preventing its accumulation in the arteries;
- > Control or stabilise the development of cholesterol plaque in the arteries of the heart.
N.B.: Following coronary bypass surgery, a build-up of plaque in the arteries must be avoided as it could cause a blockage in the bypass and/or induce a heart attack.

Adverse reactions:

- > Although these medications are generally well tolerated, in rare cases they can cause serious muscle aches, pain and stiffness, especially in the arms and legs. If these symptoms occur, contact your doctor or pharmacist as soon as possible.

Follow-up:

- > Blood tests need to be done a few times a year in order to verify the levels of good and bad cholesterol in your bloodstream as well as the condition of your liver, as these medications are eliminated by the liver. Your family physician will arrange for these tests.

3. MEDICATIONS TO REDUCE THE WORKLOAD OF THE HEART

BETA-BLOCKERS

(Examples: Lopresor®, Tenormin®, etc.)

Effects and indications:

- > Slow the frequency of heartbeats which reduces the heart's workload;
- > Reduce the recurrence of angina, reduce the risk of cardiac arrhythmias and lower blood pressure;
- > Usually contra-indicated for people with asthma, but can be administered to those with emphysema or chronic bronchitis.

Adverse reactions:

- > At the beginning of treatment, some people may experience fatigue and a lack of energy. These adverse reactions are usually temporary and disappear quickly.

ACE (Angiotensin-Converting Enzyme) Inhibitors

(Examples: Altace[®], Vasotec[®], Coversyl[®], etc.)

Effects and indications:

- > Dilate blood vessels decreasing the heart's workload and diminishing its demands for oxygen;
- > Control blood pressure, reduce heart failure, prevent diabetes-induced renal problems and strengthen the heart;
- > These beneficial effects are even more manifest in people with a history of stroke or suffering from diabetes, high blood pressure or other conditions.

Adverse reactions:

- > Dry cough, dizziness, metallic taste.

Follow-up:

- > At the beginning of treatment, blood tests are necessary to monitor renal function and potassium levels. Make an appointment with your family physician.

4. MEDICATIONS TO ELIMINATE EXCESS FLUIDS IN THE BODY

DIURETICS

(Example: Lasix[®])

Effects and indications:

- > Eliminate excess fluid (swelling); heart surgery can sometimes cause swelling due to an accumulation of fluids in the body;
- > Decrease the heart's workload.

Adverse reactions:

- > Increased micturition (passing of urine) and increased thirst;
- > A potassium supplement is prescribed to some patients to replace the potassium lost during increased urination brought on by the diuretics;
- > Skin more sensitive to sunlight; use an adequate sunscreen.

5. MEDICATIONS TO REGULATE HEARTBEAT

ANTI-ARRHYTHMICS

(Example: Cordarone ®)

Effects and indications:

- > As a result of heart surgery, some patients develop irregular heartbeats. The most common of these post-operative irregular heartbeats is atrial fibrillation. Elderly patients, patients with a history of arrhythmias and those who have undergone mitral valve surgery are more likely to experience this type of problem. An anti-arrhythmic medication is then prescribed.
- > Help the heart beat more regularly;
- > Anti-arrhythmic medication is usually prescribed for a relatively short period of time (from 1 to 3 months). For people with a history of arrhythmias, the duration of treatment may be longer.

Adverse reactions:

- > At the beginning of treatment, anti-arrhythmic medication can sometimes cause nausea and vomiting as well as an increased sensitivity of the skin to sunlight;
- > During prolonged use, anti-arrhythmic medication may cause an increase in liver enzymes as well as a thyroid imbalance in certain predisposed people. Your family physician will monitor your liver and thyroid functions on a regular basis.

6. PAIN MEDICATIONS

(Examples: anti-inflammatory medications, codeine / acetaminophen)

Indications:

- > It is normal for you to feel some degree of pain as a result of surgery. Proper pain monitoring and control allows you to recover more quickly and to resume your normal activities. This is why you have been prescribed pain medication. Take your medication as soon as you feel pain; do not wait until the pain is severe as relief will then be more difficult to achieve. Always take your medication at regular intervals.

Adverse reactions:

- > Heartburn (anti-inflammatory medication);
- > Risk of kidney problems and bleeding (anti-inflammatory medication);
- > Drowsiness, constipation and nausea (acetaminophen with codeine).

RISK FACTORS FOR CARDIOVASCULAR DISEASE

After coronary bypass surgery, it is essential that cardiovascular disease risk factors be well controlled in order to prevent any future blockages. In actual fact, this recommendation holds true for everyone as prevention should be on everyone's mind; after all... **an ounce of prevention is worth a pound of cure.**



Take a few moments to identify your own risk factors

Non-modifiable risk factors

- Age:** The risk of cardiovascular disease increases with age.
- Sex:** Men are more likely to develop cardiovascular disease (angina or heart attack) than women. However, after menopause, the risks become the same.
- Heredity:** If your parents or brothers and sisters have been diagnosed with cardiovascular disease (angina or heart attack), your risks of developing a cardiovascular disease increase.

Modifiable risk factors

- | | |
|--|---|
| <input type="checkbox"/> Dyslipidemia
High LDL (bad) cholesterol,
low HDL (good) cholesterol. | <input type="checkbox"/> Smoking |
| <input type="checkbox"/> High blood pressure | <input type="checkbox"/> Excess body weight |
| <input type="checkbox"/> Diabetes | <input type="checkbox"/> Sedentary lifestyle |
| | <input type="checkbox"/> Stress |

Please note that these risk factors have not been listed in order of importance; they all have a major impact on your arteries. You must also be aware that **risk factors do not simply add up, but rather multiply** your chances of developing cardiovascular disease. Alternatively, when a risk factor is eliminated, it is the chances of your arteries remaining healthy which increase significantly, hence the importance of managing your risk factors. Additional information on each of these risk factors can be found in the following section.

DYSLIPIDEMIA

The word dyslipidemia means abnormal levels of cholesterol in the blood. Dyslipidemia occurs when:

- > Bad cholesterol (LDL) levels are too high or
- > Good cholesterol (HDL) levels are too low or
- > Triglyceride levels are too high.

Dyslipidemia is a major risk factor for cardiovascular disease.

What is cholesterol?

Cholesterol is a fatty substance essential to the human body as it contributes to the manufacture of cells, hormones and bile. The liver produces most of the cholesterol in our body while a small percentage is supplied by the animal-based foods we eat (dairy products, eggs, meat, etc).

Good and bad cholesterol

To circulate in our bloodstream, cholesterol must be bound to carriers (lipoproteins) because, just as oil does not mix with water, cholesterol does not mix with blood. The two **main carriers of cholesterol** in our bloodstream are called **HDL** (high-density lipoproteins) and **LDL** (low-density lipoproteins). Therefore, when we speak of good and bad cholesterol, we are referring to the **cholesterol carriers** in the blood rather than to the cholesterol which is found in food.

LDL (low-density lipoproteins) carry into the arteries the cholesterol that sticks to the linings of the arteries and forms plaque. This leads to a progressive blockage of the arteries and, in this manner, increases the risk of cardiovascular disease.

HDL (high-density lipoproteins) promote the elimination of excess cholesterol in the blood and help clean the arteries. Therefore, the higher the levels of HDL in your bloodstream, the better it is for your arteries and for your heart.

Triglycerides

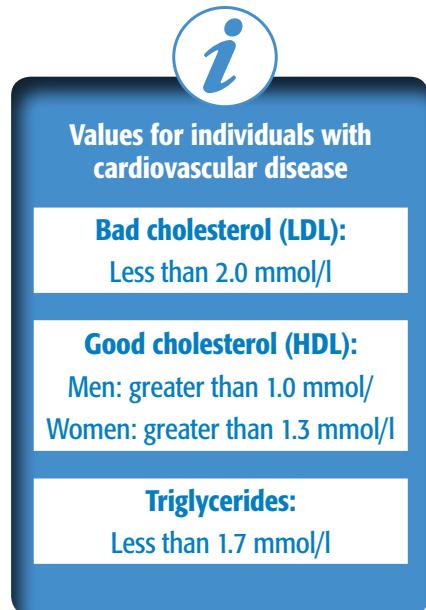
Triglycerides are another type of fat in your bloodstream. They are made up of excess sugars found in your body.

What to do if your LDL (bad) cholesterol levels are too high?

- > Reduce your dietary intake of saturated and trans fats*;
- > Increase your intake of soluble fibre*;
- > Aim for a healthy weight and keep track of your waist size**;
- > Take part in regular physical activities***;
- > Take any medication prescribed to you to reduce bad cholesterol on a regular basis.

What to do if your HDL (good) cholesterol levels are too low?

- > Choose the right dietary fats*;
- > Aim for a healthy weight and keep track of your waist size**;
- > Increase your levels of physical activity***;
- > Stop smoking.



What to do if your triglyceride levels are too high?

- > Decrease your intake of sugars such as white sugar, honey, soft drinks, sugary desserts, etc*;
- > Increase your regular intake of polyunsaturated omega-3 fats*;
- > Aim for a healthy weight and keep track of your waist size**;
- > Limit your alcohol intake (a maximum of 2 glasses per day for men and 1 glass per day for women);
- > Increase your levels of physical activity***.

For additional information, see:

* The section on nutrition, pages 32-36 ** The section on excess body weight, pages 60-61

*** The section on resuming physical activities, pages 26-29

ARTERIAL HYPERTENSION (high blood pressure)

Arterial hypertension, also known as high blood pressure, is the abnormal increase of blood pressure in the arteries. It is a very insidious disease as, in most individuals, it causes no apparent symptoms. Arterial hypertension promotes cardiovascular disease; it also damages other parts of the body such as the brain and the heart as well as the eyes and the kidneys.



The only way to know if your blood pressure is normal or not is to have it checked by a health professional at least once every two years. Many pharmacies offer this service also.

There are several ways to prevent or control hypertension:

- > Avoid eating very salty foods such as cold cuts (delicatessen meats), chips and snack foods, preserved foods, store-bought ready-to-eat foods, etc;
- > Banish the salt shaker from your table;
- > Adopt a Mediterranean-style food plan (please refer to the section on nutrition);
- > Limit your intake of alcohol (a maximum of 1 glass per day for women and 2 glasses per day for men);
- > Aim for a healthy weight and keep track of your waist size;
- > Stop smoking;
- > Plan for periods of relaxation during your day;
- > Manage your stress levels;
- > Exercise regularly;
- > Take your medication regularly as prescribed.
- > For additional information, visit the www.hypertension.qc.ca website



Normal blood pressure values:
below 140/90

With diabetes or kidney disease:
below 130/80



You can control your blood pressure by simply modifying your lifestyle.

DIABETES

Diabetes is characterised by a high level of sugar (glucose) in the blood (blood glucose > 7.0). A high blood glucose level can damage the linings of the arteries. Diabetes is considered a major risk factor for cardiovascular disease.

People with diabetes are 2 to 4 times at greater risk of developing cardiovascular disease. In the long run, diabetes can cause major health complications such as damage to your kidneys, to your eyes and to your nerves. It is a known fact that people with diabetes are more likely to develop high blood pressure too as well as problems with their cholesterol.



If you have diabetes, you can reduce your risk of cardiovascular disease by controlling and maintaining proper blood sugar levels.

Five essentials for good control of diabetes:

- 1.** Follow the dietary recommendations for diabetes (Mediterranean-style food plan);
- 2.** Exercise regularly;
- 3.** Aim for a healthy weight and keep track of your waist size;
- 4.** Manage stress;
- 5.** Take prescribed medication.

People at risk of developing diabetes are those who:

- > have a family member who is a diabetic;**
- > are overweight;**
- > do not exercise (sedentary lifestyle).**

SMOKING

Smoking is a major risk factor for cardiovascular disease... It is therefore vital to your health that you quit!



Becoming smoke-free is one of the best treatments you can give yourself to begin improving your cardiovascular health and prevent further relapses.

Smoking has many harmful effects on your heart:

- > Smoking causes inflammation of the arteries which can trigger the appearance of lesions;
- > Smoking causes the arteries to spasm, making them constrict and restricting blood flow;
- > Smoking raises blood pressure;
- > Smoking reduces HDL (good cholesterol) levels;
- > Smoking increases the risk of blood clotting.

You should also know that...

- > A smoker is 2 to 3 times more at risk of developing cardiovascular disease than a non-smoker;
- > Smoking is the leading cause of cancer-related deaths in Canada;
- > Smoking increases the risk of chronic lung disease which can seriously affect your quality of life;
- > Non-smokers who live or work with smokers are also at increased risk of developing cardiovascular disease;
- > For women, smoking while taking birth-control pills greatly increases the risk of developing cardiovascular disease, particularly after the age of 35.



Nicotine is **highly** addictive; nicotine is a **drug!** This is why it is never easy to “butt out”.

There are various methods available to help you quit smoking. Talk to your cardiologist, your nurse, your family physician or your pharmacist to find the one that is right for you.

Amongst them:

- > Nicotine replacement therapy: patches, inhaler or gum;
- > Oral medication without nicotine: Zyban®, Champix®;
- > Specialised clinics (at your CLSC for example);
- > Support groups for smokers who decide to quit.

First of all, you must identify your reasons for smoking. Smoking for you is:

- | | |
|--|---|
| <input type="checkbox"/> A bad habit | <input type="checkbox"/> A way to calm down or relax |
| <input type="checkbox"/> A need or physical dependence | <input type="checkbox"/> A means of self-identification |
| <input type="checkbox"/> A way to cope with emotions | <input type="checkbox"/> A social behaviour |

This brief exercise can help you better understand your smoking habits; you need to alter the mechanisms behind your ritualistic "lighting up":

- > Go for walk during your coffee breaks or after mealtimes;
- > Drink a lot of water every time you feel like smoking (so long as your fluid intake has not been restricted);
- > Do not linger at table after mealtimes;
- > Avoid smoking areas or situations that make you want to smoke;
- > Splurge on something nice with money you save.

But remember:

- > There is no miracle cure. There is no miracle medication either;
- > You will need a lot of willpower, motivation and determination;
- > You must set goals for yourself and persevere;
- > Help is close at hand whenever you need it.

Becoming smoke-free is the best thing you could ever do for yourself.

When you quit smoking, significant health benefits immediately become apparent

After 20 minutes

- > Blood pressure returns to normal;
- > Pulse rate returns to normal;
- > Temperature of hands and feet returns to normal.

After 8 hours

- > Carbon monoxide levels in your blood decrease and oxygen levels rise and return to normal.

After 48 hours

- > Your risk of having a heart attack decreases;
- > Your sense of taste and smell begin to improve.

After 72 hours

- > Your breathing has improved;
- > Your lung capacity has increased.

From 2 weeks to 3 months

- > Your blood circulation has improved.

After 6 months

- > You cough less; have less fatigue and sinus congestion and fewer breathing problems.

After 1 year

- > The risk of heart attack associated with smoking has decreased by 50%.

And also

- > The risk of stroke has decreased;
- > HDL (good) cholesterol levels have increased.

EXCESS BODY WEIGHT

Excess body fat makes the heart work harder. Excess weight, especially in the belly area (abdominal obesity), is a major risk factor for cardiovascular disease because it may bring about an increase in blood pressure as well as a lowering of good cholesterol, an increase in the risk of diabetes, etc.

To determine the cardiovascular risk associated with excess weight, we use body mass index (BMI) and waist size.



Increased risk of disease if your waist size is:

Men:
Greater than 102 cm (40 inches)

Women:
Greater than 88 cm (35 inches)

Body mass index (BMI)

The greater the BMI, the greater the risks of developing health problems.

BMI is measured by height and weight.

$$\text{BMI} = \frac{\text{Weight (in kg)}}{\text{Height (in m}^2\text{)}}$$

You can check your BMI by using the grid on the following page.

Waist size

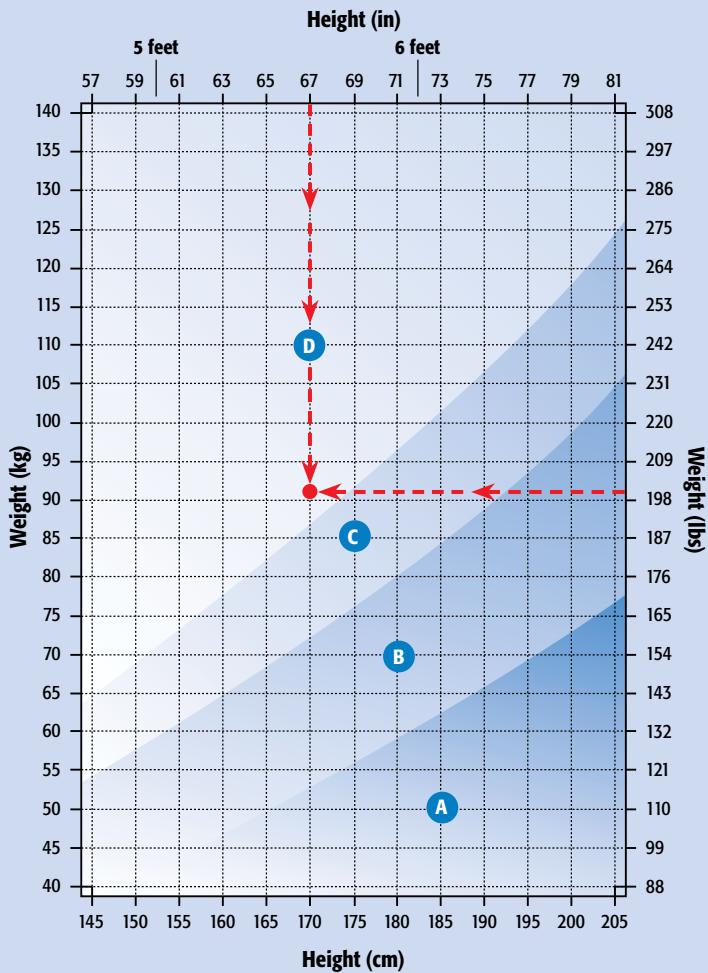
Waist size allows us to estimate whether or not there is abdominal obesity and to determine the risk for cardiovascular disease.

As a rule, the closer the waist size comes to matching or exceeding the values indicated in the grid, the greater the risk for cardiovascular disease.

Measuring your waist size

- > Use a flexible tape measure.
- > Stand up.
- > Measure your waist size by placing the tape around your waist just above your hip bones.
- > Breathe normally and then release your belly.
- > Measure your waist by holding the tape firmly but without squeezing your belly in.

Body Mass Index (BMI)



For example, to discover the BMI of a person who measures 5 feet 7 inches (67 inches) and weighs 200 pounds:

1. Locate the height in inches (67 in.) on the grid;
2. Locate the weight in pounds (200 lbs);
3. The intersection or meeting point of these two lines indicates the BMI zone (Zone D);
4. Read the meaning of "D" as described at the bottom of the grid. In this example, BMI is greater than 30 which corresponds to obesity.

Body Mass Index (BMI)	Classification	Health Risk as compared to a "healthy 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 extremely high risk of developing health problems

For people 65 years of age and over, the interval for "normal" BMI may extend from 20 to 29.9.

Losing weight

If you have a weight problem, you can improve your heart health by gradually losing some of your excess weight. A realistic goal resulting in significant health benefits corresponds to a loss of **5 to 10% of your initial weight within 6 months**. For example, the recommended weight loss for a person who weighs 200 pounds and is overweight is 10 to 20 pounds (5 to 10%) within 6 months. **Weight loss should be gradual.**

A healthy diet and regular physical activity are key factors to good weight management. To help you achieve your weight management objectives, you may, if you wish, meet with a nutritionist who will assess your eating behaviours and guide you in any necessary changes to be made to your food plan.

SEDENTARY LIFESTYLE

A sedentary lifestyle, or absence of physical activity, increases the risk of cardiovascular disease. It could even be said that people who do not exercise at all are just as much at risk of developing cardiovascular disease as people who smoke.

The benefits of physical activity are numerous for both body and mind:



- > Decreased risk of developing certain diseases such as osteoporosis, hypertension, colon cancer, obesity, diabetes and cardiovascular disease;
- > Proper management of weight and blood pressure;
- > Increase of good cholesterol and decrease of triglycerides;
- > Stronger muscles;
- > Improved digestion;
- > Boosted self-esteem;
- > Decreased anxiety;
- > Better quality of sleep;
- > Etc.

When you are in good health, it is recommended that you fit 30 minutes of physical activity into your routine most every day of the week. The 30 minutes need not be consecutive; you just need to total 150 minutes of physical activity per week. It is the regular adding up of all those minutes of daily exercise which makes an active person of you.

First, set aside a time each day which will be reserved strictly for exercise. Then, find an activity which interests you. The important thing is to have fun. You can also sign up at a fitness centre, specialised or not in cardiac rehabilitation, such as the ÉPIC centre (you will find details on this centre and others like it at the end of the handbook).

***Here are some tips to help keep
you active:***

- > Walk to the convenience store;
- > Take the stairs instead of the elevator;
- > Go outside with your children;
- > Walk the dog;
- > Do some gardening;
- > Go biking, skating or swimming; go golfing without the cart; go snowshoeing, skiing or dancing;
- > Join a walking club.



The Fédération québécoise de la marche (the Quebec Walking Federation: details at the end of this handbook), organises walking activities in every corner of the province as well as in many neighbourhoods in Montreal. You simply need to get in touch with the Federation for details of events in your area. Just remember that, after heart surgery, there are a few rules you need to observe as you resume your physical activities (see page 28).

STRESS



Everyone talks about stress, but everyone has his or her own definition of the word. In actual fact, stress is determined by a person's ability to adapt to an outside event. Stress can be insidious and originate from any number of situations related to workplace or family, to health, poverty, prejudices or violence and have many other sources as well. When stress becomes chronic, it can lead to major health problems.

***Stress is increasingly recognised as a trigger for cardiovascular disease.
High levels of prolonged stress can be associated with:***

- > An increase of LDL (bad) cholesterol;
- > An increase in blood pressure;
- > An increase in blood coagulability;
- > An increase in blood glucose (sugar) levels (glycaemia);
- > Poor eating habits;
- > Smoking.

To cope with severe stress, it is important to have support from your loved ones. Talking with friends and family can help relieve emotional burdens which weigh a person down. If you find it difficult to open up and talk to your loved ones, do not hesitate to talk to your doctor or to contact your CLSC for help.

Here are some ways to manage stress in your daily life:

- > Reserve some time strictly to yourself;
- > Do things that you really enjoy;
- > Use relaxation techniques such as meditation and deep breathing;
- > Go for massages;
- > Do not try to be perfect;
- > Do not be too competitive;
- > Make some changes to your routines;
- > Get sufficient rest and sleep;
- > Have some fun!

CHANGING YOUR LIFESTYLE

Once you have identified your risk factors for cardiovascular disease, you may have to make some changes to your lifestyle to help reduce or eliminate them. Take things slowly... change takes time and patience.

To achieve your goals

- > Be realistic in your goal-setting. Do not try to do everything at once as this will invariably lead to discouragement and failure. Remember that every little adjustment you make is a victory in itself as well as a step closer to achieving heart health.
- > Start by determining whatever it is you want to change first of all, then set your priorities and concentrate on achieving them one at the time.
- > Determine how and when; prepare a step by step plan;
- > If you encounter obstacles, do not give up... find ways to get round them and persevere with your lifestyle changes;
- > Celebrate your achievements!

Brainstorming exercise

Set your goals and priorities. You may write them down here.



For additional information on managing risk factors for cardiovascular disease, you may talk to staff at the Montreal Heart Institute or call the **Montreal Heart Institute's Prevention Clinic at the following number: 514 374-6730.**

PROGRAMMES AVAILABLE TO YOU DURING YOUR CONVALESCENCE



Two free programmes are available to you during your convalescence. They allow you to supplement the information you received in hospital, to obtain answers to additional questions you may have since your return home and to talk with other people who might have the same concerns as you do.

1. The post-operative teaching class

In the beginning of your convalescence, you and your loved ones will be invited to attend a meeting called the "After Surgery" class.

This meeting lasts two hours during which the following topics will be open for discussion:

- > Resuming your activities, including a stretching exercise programme;
- > The Mediterranean-style food plan;
- > Taking medication safely and which combinations to avoid.

This information will help you during your convalescence.

> These programmes are done in French only, usual language of the institution

2. Cardiovascular Prevention Programme at the ÉPIC Centre

A few weeks after your surgery, you will be invited to join a programme called the Cardiovascular Prevention Programme. This programme encourages you to adopt and maintain new lifestyle routines which promote heart health.

This programme includes:

- > One-on-one meetings with various health professionals;
- > Group meetings where various topics such as nutrition, physical activity, meditation, stress management and the controlling of risk factors for cardiovascular disease will be discussed;
- > A group training programme in the gym, twice a week for 8 weeks (optional).

Other programmes

Many more programmes specifically designed to reduce cardiovascular risk factors are available in different areas of Quebec. Get additional information from the CLSC or hospital in your area.



4- TYPES OF SURGERY AND ANAESTHESIA



In this section, you will find a brief overview of how the heart functions as well as a few details on the major surgeries which can be undergone to correct heart problems. Read the section or sections which apply specifically to your case; the type of surgery you will have or have had may, however, not be described here given the constant advancement of surgical techniques.

THE HEART AND ITS FUNCTIONS (ANATOMIE DU CŒUR)

- > The heart is a muscle which works like a pump; it distributes blood to all parts of the body.
The heart is the size of a fist;
- > The heart consists of 4 chambers (2 atria and 2 ventricles);
- > Four valves are located between the cardiac chambers. They act as gates in the heart.
These valves open and close during each heartbeat to circulate blood in the proper direction.
- > The coronary arteries lie on the surface of the heart. They feed the heart muscle with oxygen and nutrients, allowing it to contract.

The four valves are called:

- The aortic valve (1);
- The mitral valve (2);
- The pulmonary valve (3);
- The tricuspid valve (4).

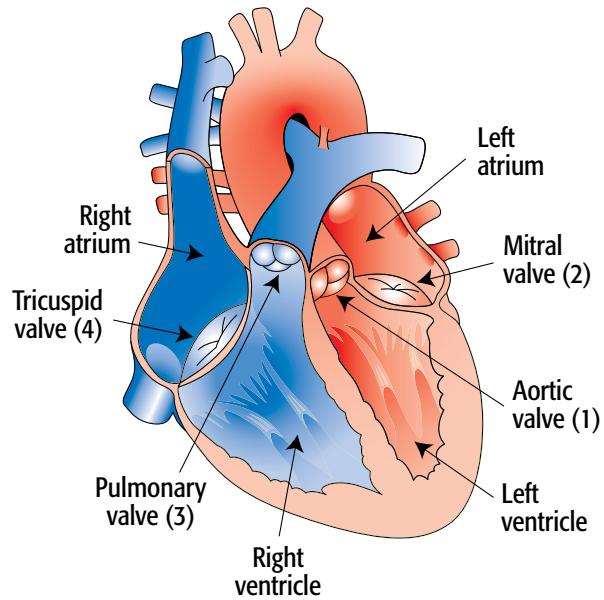
(See illustration on next page)

The main coronary arteries are called:

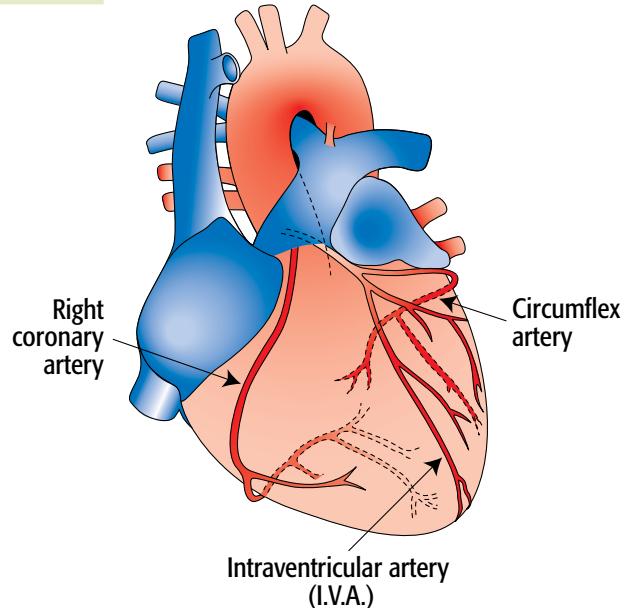
- The right coronary artery;
- The intraventricular artery or I.V.A.;
- The circumflex artery.

(See illustration on next page)

Valves and chambers of the heart



Main coronary arteries



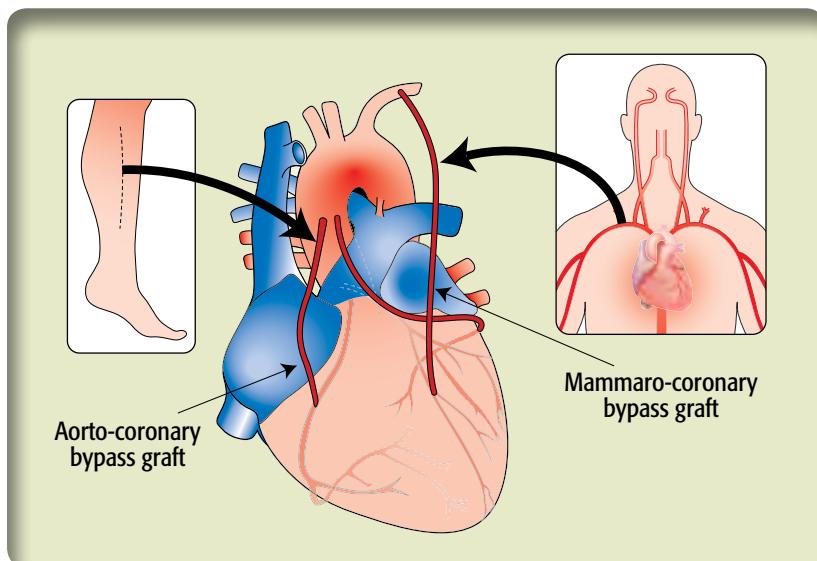
CORONARY BYPASS SURGERY



Coronary bypass surgery is required when one or more of the arteries of the heart, which provide oxygenated blood to the various regions of the heart that need it, are blocked. The operation consists in making a "bridge" (a deviation) which bypasses the blocked section of the artery. A healthy blood vessel is used to make the bridge, commonly called the bypass. One or more bypasses may be done during one same operation.

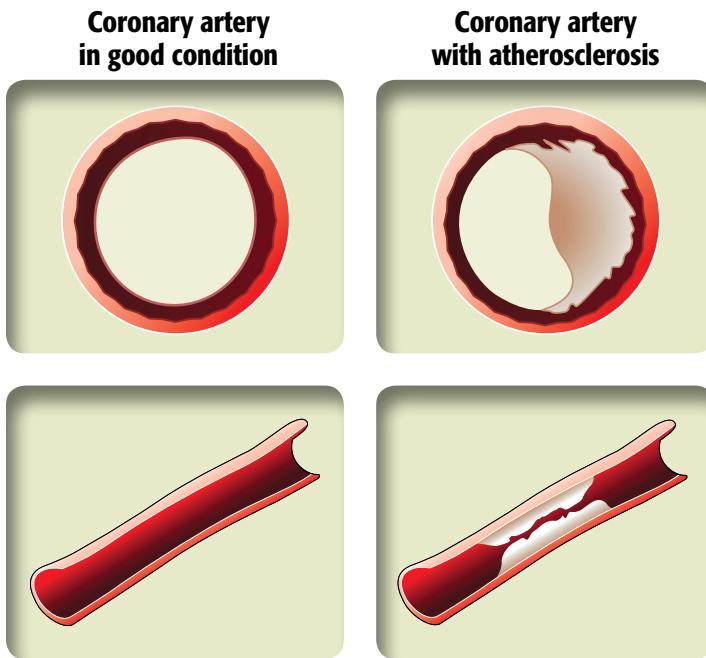
Different blood vessels may be used during coronary bypass surgery.

- › **Aorto-coronary bypass graft:** this is when a segment of the saphenous vein (vein on the inside of the leg) is used to bridge the gap between the aorta and the coronary artery. In some cases, the radial artery (artery at the inside of the forearm) can be used for bypass surgery;
- › **Mammaro-coronary bypass graft:** this is when a mammary artery (artery in the chest) is diverted and used as a bridge over the blocked section.



Atherosclerosis

- > Atherosclerosis is a disease caused by an accumulation of fatty deposits and other substances on the inner linings of the arteries.
- > Over the years, accumulation of these deposits causes plaque to form which hardens the arteries, restricts blood flow and reduces the oxygen supply to various parts of the body.
- > Atherosclerosis can occur in all the arteries of the body including the arteries of the heart (coronary arteries).
- > To reduce or prevent progression of the disease, it is essential to control the risk factors for cardiovascular disease (see page 51).



The progressive decrease in the flow of blood to the coronary arteries can cause angina pectoris and myocardial infarction.

- > **Angina** generally manifests as a pain in the chest (a tightness, heaviness or pressure) or as shortness of breath, a pain in the throat, in the left arm or back. Angina is a warning signal to let us know that the heart is overworked and not getting sufficient oxygen. Symptoms usually disappear once we have rested.
- > **Infarction**, also known as a heart attack, occurs when an artery becomes completely blocked by a clot and blood flow is totally interrupted. Infarction manifests as a sharp intense pain. It is essential that we consult a doctor promptly if this should occur.

VALVE SURGERY



- › To facilitate the work of the heart and restore normal circulation of the blood, the faulty valve, which is either narrowed or constricted (1) or insufficient (2), is repaired or replaced.
- › A defective valve affects one's state of health, causes fatigue, difficulty in breathing and sometimes dizziness and weakness.
- › One or more valves may be defective (aortic valve, mitral valve, pulmonary valve, tricuspid valve; see diagramme on page 71).

(1) Valve stenosis: (Also known as a valvular stenosis). This is when the valve has become so narrowed or constricted that it cannot dilate fully. This causes resistance and requires the heart to work harder to provide blood to all parts of the body.

(2) Valve insufficiency: (Also known as valvular insufficiency). This is when a valve does not close completely and allows blood to pass in the direction opposite to normal flow. This leak in the atrium or ventricle increases the work of the heart.

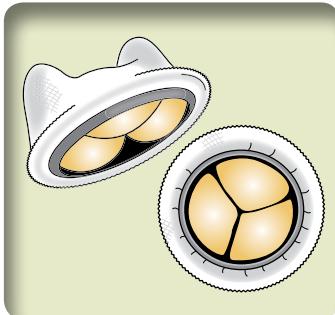
Valve repair or plasty

This type of surgery is used to correct the valve stenosis or insufficiency. Several surgical techniques exist. Your surgeon will explain which procedure is appropriate for you.

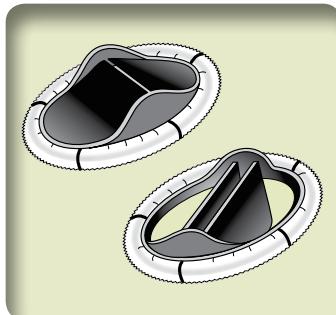
Valve replacement

This type of surgery is to replace the defective valve when it is impossible to repair it. There are two types of valves, the biological valve and the mechanical valve (also known as biological or mechanical prosthesis). Your surgeon will let you know which type of valve will be implanted, as this depends upon your medical condition.

Biological valves



Mechanical valves



SURGICAL CORRECTION OF COMMUNICATIONS (APERTURES)



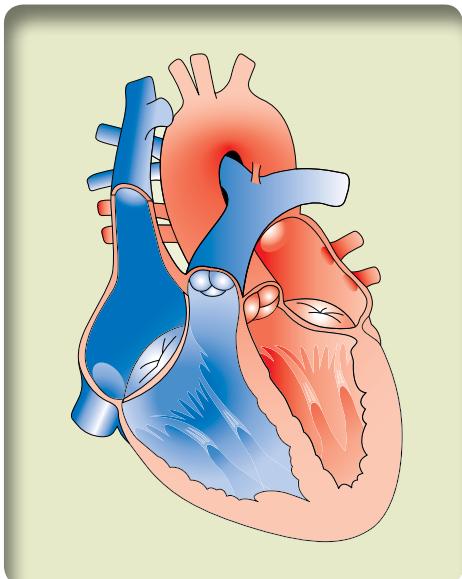
To restore normal circulation of the blood, an interatrial (1) or intraventricular (2) communication is blocked by a piece of flexible synthetic fabric or simply closed by stitches.

- (1) **The interatrial communication** is an opening between the two upper chambers of the heart (the atria).
- (2) **The intraventricular communication** is an opening between the two lower chambers of the heart (the ventricles).

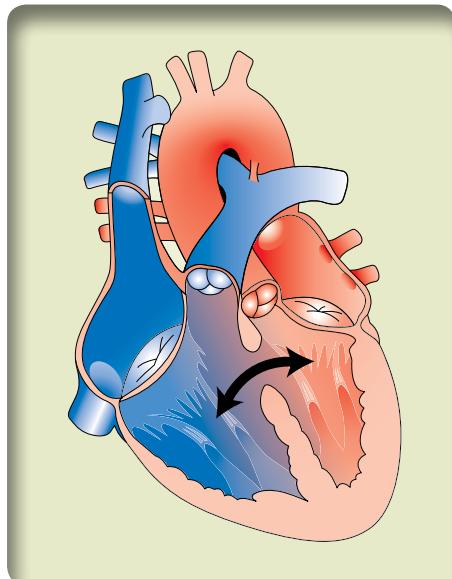
Cardiac Malformations

- > Communications (also called apertures) between the atria or between the ventricles are heart defects which may have developed before birth (congenital malformation) or be due to heart disease.
- > These defects result in abnormal blood flow between the chambers of the heart which can lead to poor tolerance to effort, shortness of breath, fatigue, etc.

Healthy heart



Heart with an intraventricular communication



SURGICAL CORRECTION OF AORTIC DISEASES

Correction of a coarctation (narrowing) of the aorta

This type of surgery consists in repairing the aorta by removing first the narrowing and then suturing together the two free segments of the aorta. A synthetic graft is sometimes used.

Correction of an aneurysm (increased diameter) of the aorta

The aneurysm may be located in the ascending aorta, the thoracic aorta or the abdominal aorta.

Correction of an aneurysm of the ascending aorta

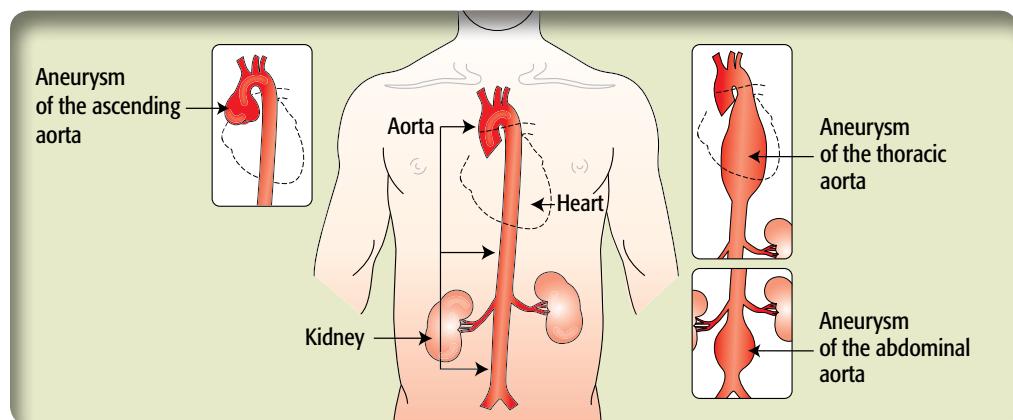
This type of surgery consists in replacing the portion of the aorta which is dilated, sometimes calcified, with a synthetic tube (Dacron tube).

Correction of an aneurysm of the ascending aorta associated with a breach of the aortic valve

This type of surgery consists in implanting a graft containing a mechanical valve directly onto the ring of the aortic valve and suturing the other end of the graft to the natural aorta. In certain cases, the coronary arteries must be implanted on the new graft. In some cases, certain conditions allow the natural valve to be preserved.

Correction of an aneurysm of the thoracic or abdominal aorta

This type of surgery consists in the introduction of a prosthetic device called a stent into the thoracic or abdominal aorta. This stent reduces the pressure in the aneurysm, thereby preventing its expansion, and also decreases the risk of sending into the bloodstream any clots that may have developed in the aneurysm. Depending on the condition of the aorta (the degree to which it has been compromised) the stent may be introduced through an incision in the abdomen or through the femoral artery in the groin. When the stent is introduced through the femoral artery, it is deployed at the site of the aneurysm and attaches itself spontaneously to the wall of the aorta.



PREVENTION OF ENDOCARDITIS

This section is addressed to those people who have undergone valve surgery or aortic surgery

If you have had this type of surgery, you are at greater risk of developing an infection of the heart called endocarditis in the future.

To prevent this occurrence, we recommend the following measures:

Maintain good oral hygiene.

- > Brush your teeth every day.

Use a soft-bristled brush and floss of your choice. Poor dental hygiene or poor condition of your gums increases the risk of germs (bacteria) entering the bloodstream when you brush your teeth or chew.

- > See your dentist once or twice a year.

This is important even if you wear dentures. Healthy gums do not bleed even during vigorous brushing or when using dental floss.

Tell all doctors and dentists you see that you are at risk of developing endocarditis; antibiotics will be prescribed:

- > For any dental treatment that may cause bleeding in the mouth (teeth cleaning, extraction, root canal treatment, some dental fillings, etc);
- > Before most surgical procedures as well as before certain treatments and examinations.

ANAESTHESIA



Anaesthesiologists are doctors who specialise in anaesthesia. They are responsible for many procedures or courses of action taken for your care both before and after surgery.

Before surgery:

- > An anaesthesiologist will visit you before your surgery to assess your condition and ensure that the anaesthesia will be adapted to your needs. You will therefore have the opportunity to ask him or her any questions relative to your anaesthesia.

During surgery:

- > Your anaesthesiologist will work with an assistant, the respiratory therapist, to care for you during surgery. He or she will also be in constant communication with the surgeon, the perfusionist and the nurses in order to ensure that you receive the best of care.
- > Your anaesthesiologist ensures that you are completely sedated before surgery so you will feel no pain. He or she will monitor your heart, your blood pressure, your breathing, etc, thus ensuring your safety.

After surgery:

- > An anaesthesiologist is responsible for your breathing while you are on the ventilator (breathing machine) in the intensive care unit. He or she is also responsible for managing your pain. You will recover gradually from the effects of the anaesthesia.

Over the past thirty years, the field of anaesthesia has greatly evolved. Important developments have been made both in drugs used and in the monitoring that follows. Although complications related to anaesthesia are still possible, serious events are nowadays very rare. You may rest assured that the anaesthesia team will be on hand throughout your stay in hospital to ensure both your comfort and your safety!



RESOURCES

ÉPIC Centre

The Montreal Heart Institute's
Centre for preventative medicine
and physical activity

5055 St-Zotique Street East

514 374-1480

The Fédération Québécoise de la marche

(Quebec Walking Federation)

514 252-3157 or 1-866 252-2065

www.fqmarche.qc.ca

Quebec Diabetes Association

514 259-3422 or 1-800 361-3504

www.diabete.qc.ca

J'arrête !

Information and support for smoking cessation

1-888-853-6666

www.jarrete.qc.ca

Heart and Stroke Foundation of Canada

514 871-1551 (Quebec Division)

1-800 567-8563

www.fmcoeur.qc.ca

Dietitians of Canada (nutrition)

www.dietitians.ca

Kino-Québec (physical activity)

www.kino-quebec.qc.ca

Quebec Society of Arterial Hypertension

www.hypertension.qc.ca

Canadian Health Network (General Health)

www.reseau-canadien-sante.ca

SUGGESTED READING

> ***Eat Well, Live Well***

The Canadian Dietetic Association
Macmillan Canada, 1990

> ***New Light Cooking***

Anne Lindsay
Random House Canada, 1999

> ***Lighthearted Everyday Cooking:***

Fabulous Recipes for a Healthy Heart
Anne Lindsay
Macmillan Canada, 2002

> ***Light Kitchen: Easy and Delicious Meals for a Healthy Weight***

Anne Lindsay
John Wiley & Sons Canada, 2002

> ***Smart Cooking***

Anne Lindsay
Macmillan Canada, 2002

NOTES

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