LiveWell

Optimizing Chronic Disease Management

Cardiac Program

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Saskatoon Health Region
Revised: January 2017
Hello

The information included in this manual is intended to help you and your spouse/family recover from your "heart event".

You will find information about making "heart healthy" lifestyle choices. Following a "heart event" such as angina, heart attack, angioplasty/stent, or bypass surgery, most people have questions on how to prevent this from happening again. You may also wonder where to begin. In the information provided you will learn how to get started and where to go for help.

The help you need is available from a team of health professionals in the LiveWell™ Cardiac Rehabilitation Program or a Heart to Heart Program in your rural area. While in hospital you may have been visited by a nurse who works with this program. Others who work on the Cardiac Rehabilitation team are a dietitian, pharmacist, and exercise therapists. By attending the program you will learn how to control the risk factors that may have contributed to your "heart event". The cardiac rehabilitation team will assist you to make gradual and permanent adjustments in your lifestyle to reduce your risk of future events. Through the sharing of information, group discussion, a supervised exercise program and the support of others you will gain ideas to help you adjust to living a heart healthy lifestyle.

Please call for more information about the Cardiac Rehabilitation Education classes and Exercise Program. For those who live outside of Saskatoon, there may be a Heart to Heart Program available to you in your area. Please see the next page for a program near you. We welcome your phone call.

Saskatoon Cardiac Rehabilitation Program
Phone: (306) 655-LIVE (655-5483)
Fax: (306) 655-6758
Email: heart@saskatoonhealthregion.ca
# Your LiveWell Health Care Contacts

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<tr>
<td>Cardiac Exercise Therapists, Saskatoon</td>
<td>655-1859</td>
</tr>
<tr>
<td></td>
<td>655-4595</td>
</tr>
<tr>
<td>Dietitian</td>
<td>655-2140</td>
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Your Recovery - Join us! We can help!

Joining a Cardiac Rehab Program can help you feel better and reduce your risk of future heart problems. Your heart doctor (cardiologist) expects you will attend a Cardiac Rehab Program to improve your heart health. The program can teach you about lifestyle changes and how to become more active. **We know this can lead to a stronger heart and better health.**

What happens in Cardiac Rehab?

You will learn how to:
- Manage your heart problem and other conditions you may have like high blood pressure
- Exercise safely
- Take medicine correctly and safely
- Eat a healthy diet
- Quit smoking
- Reduce stress, anxiety and depression. Let you know you are not alone.
- Get back to work sooner and safely

Saskatoon Health Region Cardiac Program Contact Numbers

*Please call us if you have questions.*

**Saskatoon and area:** 306-655-2136
**Toll free:** 1-877-548-3898

**Humboldt and Area:** 306-682-8153
**Toll free:** 1-855-250-7070

**Other communities outside Saskatoon Health Region:** refer to the list on the other side of this page. We encourage you to call your local program to learn about program/supports available. If you would like to attend the program in Saskatoon, please contact us: 306-655-2136.
### Other communities outside Saskatoon Health Region:

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<td>Stony Rapids, Uranium City, Fond du Lac, Black Lake, Wollaston Lake</td>
<td>306-439-2200</td>
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<td>Cypress Health Region</td>
<td>Leader, Cabri, Swift Current, Maple Creek, Shaunavon</td>
<td>306-778-5118</td>
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<td>Five Hills Health Region</td>
<td>Moose Jaw, Gravelbourg, Assiniboia, Central Butte</td>
<td>306-694-0230</td>
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<td>Rosetown, Wilkie, Biggar, Kindersley, Outlook, Unity, Kerrobert</td>
<td>306-882-2672 extension 2208</td>
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<tr>
<td>Keewatin Yathé Health Region</td>
<td>La Loche and Turner Lake</td>
<td>306-822-3200</td>
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<td>Buffalo Narrows, Ile a la Crosse, Beauval</td>
<td>306-833-2016</td>
</tr>
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<td>Kelsey Trail Health Region</td>
<td>Melfort, Tisdale, Nipawin, Hudson Bay</td>
<td>306-862-7266</td>
</tr>
<tr>
<td>Mamawetan Churchill River Health Region</td>
<td>Pinehouse Lake, LaRonge, Southend, Stanley Mission</td>
<td>306-425-4825</td>
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<tr>
<td></td>
<td>Creighton, Denare Beach and Flin Flon</td>
<td>204-687-1354</td>
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<td>Prairie North Health Region</td>
<td>North Battleford and area</td>
<td>306-446-6404</td>
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<tr>
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<td>Meadow Lake and area</td>
<td>306-236-1579</td>
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<tr>
<td></td>
<td>Lloydminster</td>
<td>306-820-6262</td>
</tr>
<tr>
<td></td>
<td>Surrounding area</td>
<td>306-893-2622 ext 7105</td>
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<tr>
<td>Prince Albert Parkland Health Region</td>
<td>Prince Albert, Big River, Spiritwood, Shellbrook</td>
<td>306-765-6590</td>
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<tr>
<td>Regina Qu’Appelle Health Region</td>
<td>Regina and area</td>
<td>306-766-3843</td>
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<tr>
<td>Sun Country Health Region</td>
<td>Kipling, Weyburn, Coronach, Estevan</td>
<td>306-842-8366</td>
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<tr>
<td>Sunrise Health Region</td>
<td>Yorkton, Melville, Esterhazy, Preeceville, Canora, Kamsack</td>
<td>306-786-0768</td>
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Acknowledgements

The staff of the LiveWell Cardiac Program would like to thank the people who have experienced a heart event and their families who have contributed their experiences to the making of this manual.

Our thanks also to the physicians, nurses, dietitians, social workers, exercise therapists, pharmacists and Coronary Artery Rehabilitation Group (CARG).

Because they shared their ideas, knowledge and experience with us, we have been able to produce a manual with practical guidelines for living a “heart smart” lifestyle.

The glossary and some illustrations are courtesy of the Mayo Clinic.
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Steps to Recovery

The road to success is always under construction …
Steps to Recovery

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Psychological Adjustments

The LiveWell Cardiac Manual is for individuals and their families who have experienced a heart event. The term “heart event” includes any one of the following: heart attack, angina, angioplasty / stent, and bypass surgery. In this manual we will use “heart event” to refer to these conditions and procedures.

As a family member or support person, the information contained in this manual may help you to prevent a heart event. For those recovering from a recent heart event it is a “road map” to recovery. Following the guidelines outlined in the manual may help to prevent another heart attack or ongoing problems related to your heart. The answers to many of your questions can be found in this manual. As you read through the information you will begin to feel more in control of your recovery. Misconceptions may be cleared up, and your attention will be directed to what you can do to help yourself. The Cardiac Manual is available from the nurses in the hospital or from any member of the Cardiac Team of the LiveWell Cardiac Program.

“A heart attack!!”
“Bypass Surgery!!”
“Angina, what is angina?”
“Me ... No! ... It would never happen to me!”
“I’m healthy.”
“I’m too young.”
“I’m never sick ... It’s just not possible.”
“I’ve never had high cholesterol.”
“There must be a mistake.”
“I just had a bit of indigestion ... and tightness ... It wasn’t pain.”
“I’m sure it’s from the awful restaurant meal I ate last night.”
“I have no time for this.”
Similar thoughts may be racing through your mind since your heart event. All these responses are normal.

It is normal:

- to wonder if the doctor has made a mistake.
- to think you may have received someone else’s test results.
- to worry you won’t recover.
- to wonder if you will be able to do the same things you did before your heart event.

No one plans to have a heart attack, angioplasty/stent or bypass surgery. A heart event presents a number of challenges. A major illness, such as this, can result in feelings of fear, anxiety, anger, denial, irritability, uncertainty and frustration. All these feelings are normal. A heart event affects the entire family. Spouses, family members and friends (young or old) will need time to adjust to the changes in their own way. One of the most important things everyone involved can do to speed recovery is to accept what has happened. Try to approach recovery with a positive attitude – even though it feels like this is easier said than done!

For you, your spouse and family, it is important to:

- Communicate openly and honestly with your spouse and family by sharing your thoughts and feelings.
- Attend one of the LiveWell Cardiac Programs held monthly in Saskatoon.
- If a *Heart to Heart Program* is available in your hometown, make the effort to contact the coordinator. They can be a great source of information and support. (See list in front of book)
- Read this manual more than once. It is hard to remember everything you have read the first time you go through it.
Personal Adjustments Following a Heart Event

Your length of hospital stay will be from a few days to a couple of weeks. This time varies from person to person. It will depend, on your situation, tests ordered by your doctor, and medication adjustments. One important tip to keep in mind –

Never Compare Yourself To Someone Else!

Recovery from a heart event takes time. It is normal to feel tired, to have emotional ups and downs, and to have good days and bad days in the hospital and at home. If you think about it, you probably had these ‘up-and-down days’ before your heart attack or heart surgery.

It has been said the process of healing the heart involves physical, emotional, mental, social and spiritual aspects. You are on the road to recovery if you are looking at all of these areas. Physical recovery has been described as nature taking its course. Psychological recovery requires more purposeful action and thinking on your part. Because we are all so different, this will require different actions and different thinking.

This section will focus on the emotional aspects of recovery. It is up to you to decide what steps to take to help yourself deal with these emotional adjustments. Your past experiences may help you decide the best choices for you. It can be helpful to seek advice from trained professionals such as doctors, nurses, counselors and clergy.

During your hospital stay and throughout the next few months you may notice a variety of emotions. This period of recovery can be stressful time. If you recognize and acknowledge your feelings as normal, this can help to speed your recovery. If you notice feelings of sadness, anger, frustration, fear, confusion and depression, you are normal.

You may wonder if you will have another heart attack. You may wonder when, or even if, you will be able to work. You may be asking yourself, “Why me?”.

Many patients and family members will notice these feelings and thoughts after a heart event. Sometimes, feelings just appear without much warning. You may not always be able to control them or explain why they are happening. Try not to
smother or ignore your feelings. It can take weeks and even months to get over feeling this way. Everyone is different and it will be important to allow yourself the time you need to adjust.

Any change or threat to one’s identity can bring about similar feelings. When unexpected or unexplained changes happen, we need time to get used to the change. Our feelings remind us we are adjusting to a new situation. If this is your first experience with an unexpected change, you may feel quite overwhelmed. You may feel at times like you are on an *emotional roller coaster ride.*

Past experiences often help us to deal with present experiences. Perhaps you will remember how you dealt with changes in the past. What did you do that helped? Do you know someone who has had a heart event? What helped them?

It will take time for you to adjust to your new lifestyle. As you regain confidence and begin to feel more comfortable with the changes, you will notice these feelings less often. With information, counseling, encouragement and support you will regain control of your life. You can join the thousands of individuals and families who make a *full* recovery following a heart event. Who knows, you may even feel so good you will begin to see this as a ‘blessing in disguise’.

Your family may also notice some of these emotions. However, they may be experiencing them at different times than you. For example, after you are home and ready to begin to look at new ways to live, your spouse may seem depressed or more sensitive. When you were in hospital they may not have allowed themselves to feel sad or angry or depressed, so it is coming to the surface now. Be patient with your loved ones. They, too, are trying their best to make adjustments in their roles, schedules and routines. Some patients will openly admit, “This is probably harder on my family than me.”
At this point you may not be thinking about yourself, but, if you are ready to stop and think about YOU, read on …

The following thoughts and feelings represent the shared knowledge of other spouses and family who have experienced a heart event. Perhaps you will see yourself in the comments. It is very important you understand these responses are normal. Your emotions are your own expressions of how you are feeling as you adjust to your new situation. Feelings are an expression or a signal of the changes you are going through as a person, as a couple and as a family.

If this is your first experience with such a stressful event, you may be unsure of what you are feeling. You might describe yourself as numb or in shock. When people ask “How are you doing?”, you don’t know how to respond.

At times, you may think this is too much information and I can’t understand most of the jargon. When you are told about lifestyle changes, your whole world seems to be crumbling. You are probably thinking, ‘How can I help my partner make all these changes?’

In the critical hours, you may have thought, “What if he dies? Who will plan the funeral? Where does he want to be buried?”

Everyone is different, but you may find yourself acting like a machine or ‘jumping into gear’ to deal with the heart event and take care of the situation. Some will crumble under the pressure, while others will try to be a ‘super spouse’.

You may find yourself trying to put on a good front, as if everything is just fine. At times, you surprise yourself because you didn’t know what a good actor you could be. Inside, your stomach is churning and in knots. You can’t eat. You need to lose weight, but this isn’t the way you wanted to do it.
Quite often, everything happens at once and you may be feeling overwhelmed with this hospital experience. If you are from out of town, everything may be new to you. It may be difficult for you to drive in the city and you may be feeling you are imposing on others to get you to the hospital. Sleeping in a strange bed can be difficult and your sleep is often disturbed as you sleep lightly, waiting for the phone to ring with news from the hospital.

In the past, the decision making may have been the role of your spouse and now you are placed in the position of being in charge of *Everything!*

Your spouse may not understand why you are worried because you have not had the heart attack or surgery. You may be thinking it is selfish to think about your needs when your loved one is laying in the cardiac or intensive care unit. From other ‘*Heartmates*’ (partners of those who had the heart event) who have shared their experiences, we know it is common for you to go through the same emotions as your loved one – *sadness, anger, fear, anxiety, depression and confusion.*

At times, your thoughts will drift to the past. You may notice feelings of anger surfacing. Statements such as “You fool, why didn’t you listen to me about changing your diet and quitting smoking?” “If only he had listened he wouldn’t be in this mess.” “If you die on me now …”

You may be thinking, “My whole life will need to change.” This can lead to feeling overwhelmed and frustrated.

You may experience fear as the time of discharge approaches. Many questions are racing through your head. “Will I be able to get the medications right?” “Will I be able to handle the added responsibilities?” “Will I have to stay up at night to check on him?” “Will I know if he is having problems again?” “Will she tell me she is having chest discomfort again?”

You will find yourself trying to stay on an adult level, but you may notice you treat your spouse like a child at times. You are concerned and somewhat unsure of your new role.
It is difficult to know how much to push, what to say or do for your loved one, now they are home and recovering. You are walking on new ground and every day is a new experience.

For younger spouses, if you are dealing with a growing family, work and aging parents, you may be thinking “This is much more stress than I can handle right now. We are too young for this to be happening. A heart attack is for older, retired people”

At times, your partner will be angry when you seem overprotective; and at other times, they will seem to need your support. It isn’t easy to know what approach will be best to assist your loved one recover. You will find yourself walking a tight rope. Too much one way or the other might spell disaster.

You may become the ‘sounding board’ and you may have trouble coping with this behavior, particularly when your spouse can be so cheerful with friends and other family members.

In time, you may find yourself growing tired of hearing the story of your spouse’s heart event. “If I hear that story one more time, I’m going to …!!”

If you have experienced some or all of the above thoughts and feelings, guess what?

**You are normal.**

**You are not going crazy.**

**You are dealing with a difficult and scary situation.**

There is help available. You can ask the nurses to arrange for you to talk to another spouse who has been through this experience.

There are volunteers who will talk with other spouses or family. A good resource book is *Heartmates, Rachael Freed.* It is available through the cardiac program, public library or at the bookstore.
Family Adjustments

The real work of family adjustment to illness begins after discharge from the hospital, after the shock of the initial crisis has settled. Now you will have time to think. What does all of this mean? What does the future hold for us?

It is normal to experience periods of distress and family tension as you struggle to adjust to illness and the demands of recovery. No family copes smoothly, partly because change is awkward. For most people, rehabilitation means changing a lot about the way they are living.

Even when the change seems positive; it’s still a new way of living and the adjustments are always changing. If you are learning a new dance step, even though it’s fun, it’s still awkward until you know how to do it. Then you and your partner have to get together on the new dance step and change your old ways of dancing together. Learning to work together to create a ‘new normal’ lifestyle can be a lot like learning a new dance step. In time, the new and improved dance can be a lot better, as can your new and improved lifestyle. You may even notice relationships with family and friends have improved.

Here are a few ideas to help you adjust roles and rules, to make room for rehabilitation in your lifestyle.

- Try not to over-react to these struggles – they are normal.
- Flexibility, openness, accurate understanding and acceptance of the situation can help.
- As a family, you can work together to make sure your loved one remains an active participant in the rehabilitation, rather than a spectator.
- Look at making lifestyle changes a challenge and try to develop a realistic understanding of the medical and lifestyle implications.
- Discuss openly these implications as you grow into the ‘new normal’ lifestyle.
Be Aware of the signs of unhealthy families. You will notice the following if your family is having difficulty making the adjustment. If this is your situation, talk with your family doctor, nurse or one of the staff on the rehabilitation team. You may need to think about getting help from a counselor or clergy.

**Signs of Unhealthy Family Adjustment**
- Depression
- Failure to accept the diagnosis
- Denial of symptoms
- Lack of interest in information related to heart disease
- Jumping into activities too soon to avoid the situation
- Persistent anger and hostility
- Changes in behavior
- Children acting out
- Old problems getting worse

**Healthy Family Adjustment:**
- flexible as they adjust family roles and rules
- allow for increased openness and honesty
- seek accurate information about recovery and rehabilitation
- find peace with themselves and each other

**Helping Children and Grandchildren to Adjust**

1. Talk about the illness. Begin by talking with your children about how you are reacting to your own fears and frustration. Giving them a glimpse of how you are thinking, feeling and coping with this illness will help children feel more normal and will model for them how they, too, might cope.

2. Ask if they have questions. Find out if they are worrying about what is happening or what will happen now, as your family copes with your illness.

3. If they have no questions, give them information anyway. Children often listen more than they let you know. Give them information appropriate to their age and convey hope and confidence your family will endure this chapter of your life.
4. It’s okay to admit you don’t know all the answers. Pretending to know answers to questions which boggle anyone’s thinking only serves to confuse children. Sometimes, the best answer is “That’s a good question. But, none of us knows the answer for sure.”

5. At the same time, offer reassurance. It is especially important to reassure your children you are receiving good medical care and you will continue to do all you can to recover. A good way to do this is to arrange for them to see you going through your rehabilitation routine. Just seeing how strong and hardy you are can soothe many of your children’s fears.

6. Give your children permission to talk with others about their fears. Teenagers, especially, sometimes find brief counseling helpful in coping with their concerns. If you have only recently had surgery or a medical crisis, inform school guidance counselors to be especially attentive to your children.

7. Emphasize to your children they had nothing to do with your illness. Children are self-centered in their insecurities and they need explicit reassurance their behavior did not cause the illness.

8. Keep communicating! As you progress, talk openly and frequently about heart rehabilitation being a family affair. In these conversations, be sure to point out what you notice and appreciate about each other.

*Based on “Thriving with Heart Disease” by Dr. Wayne M. Sotile, 1996*
After a heart event, the word … *CHANGE* … may be mentioned several times. Doctors and nurses will make various suggestions. Your cardiac rehabilitation team will provide encouragement, support, information, ideas and options for change. This team of doctors, nurses, social workers, exercise therapists, dietitians, pharmacists and counselors want to help you to make informed choices. Keep in mind you are the captain of your own ship. You are in charge and your health care team is here to provide guidance and help direct the sails.

Lifestyle changes do not happen overnight. However, working on one change at a time is usually the easiest. After all, “Rome wasn’t built in a day.” Family, friends, neighbors can offer support and encouragement. Ultimately, you are in charge of your lifestyle choices. The changes you make are up to you.

“CHOICES ARE FREEDOM IN ACTION”

*Few people will generate all our choices for us; only we have the power to truly know our choices.*
Physical Adjustments

Recovery can be a challenge as there are many physical adjustments.

- an increased awareness of sensations in the chest area
- chest discomfort (may or may not be heart related)
- disturbed sleep
- tiredness
- decreased sexual function
- limitations in physical activity
- loss or reduction of leisure activities
- increased use of medicine and their effects
- increased visits to the doctor / medical system
- role changes

If you have been trying to cope with some or all of these changes, you are not alone. As many as 70% reported these challenges following a heart event. Information, support and positive attitude will be your best allies as you recover.

Read on ...
Common Questions

While in the hospital you, your spouse and family will have many questions. We want you to know as much as possible about your heart condition and how to take care of yourself. Questions you may wish to discuss with your doctor and nurses before going home are …

About Your Heart

✧ How much damage has been done to my heart?
✧ Where on my heart has the damage happened?
✧ What are the chances of having another heart attack?
✧ What can I do to avoid another heart attack?

Medications

✧ How long will I need to take my pills?
✧ How do I use Nitroglycerin tablets / spray?
✧ What are the side effects I should report to my doctor?

Self-Help

✧ How fast will I get better?
✧ How long will I be in the hospital?
✧ Is it normal to feel tired?
✧ Is it normal to have mood changes, feel anxious, depressed?
✧ When will I fully recover?
✧ Do I need Home Care?
✧ How will I know when to contact my doctor?
✧ Where can I get more information on diet, exercise and stress management?
✧ When can I attend the Cardiac Program?

Activity Level

✧ What can I do when I get home?
✧ When can I go back to work?
✧ When can I have sex?
✧ When can I drive?
Meal Planning

Do I have to be on a special diet?
What food(s) do I have to change?
How can I eat in a restaurant again?
Do I need to lose weight?

Write out any questions you want to ask your doctor or nurse before you go home.

-_______________________________________________________
-_______________________________________________________
-_______________________________________________________
-_______________________________________________________
-_______________________________________________________
-_______________________________________________________
-_______________________________________________________
-_______________________________________________________
If it’s going to be, it’s up to me.

An inside Look at Your Heart
An Inside Look at Your Heart

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General Information About the Heart

The heart is a strong, hollow muscle with four chambers or rooms. It is about the size of your fist. It weighs less than a pound. It is found in the centre of your chest.

The heart pumps blood to your lungs and to all body parts. The body carries oxygen and food to your organs and tissues through vessels, called **ARTERIES**. Blood is carried from the tissues back to the heart through vessels called **VEINS**. In review, the blood flows from the heart to large arteries, to smaller arteries, to capillaries, to tiny veins, into larger veins and back to the heart.

The heart is a pump. It contracts (squeezes) and then relaxes about 60-100 times per minute, for the average adult. Each squeezing motion of the heart’s muscle wall is a heartbeat or your pulse. The beating of your heart is even and regular. If you are excited or scared, your heart beats faster. If you exercise, your heart beats faster to bring more blood and oxygen to your working muscles. When you are at rest or sleeping, your heart beats slower.
Vessels extend through the heart muscle to supply all layers of the muscle.

Diagram shows the exchange of oxygen for carbon dioxide.
Circulation of Blood in the Heart

A thick band of muscle tissue, called the SEPTUM, divides the heart into two sides – the right and the left. Each side has two chambers or rooms. The two chambers in the upper part of the heart are called the ATRIA and the two bottom chambers are called the VENTRICLES. The right side of the heart receives blood from the organs of the body. The upper chamber of the right side, the RIGHT ATRIUM, receives blood from the body. The RIGHT VENTRICLE, or the lower chamber of the right side, then pumps the blood to the lungs where it gets a fresh supply of oxygen and gets rid of waste products like carbon dioxide, which you breathe out. The blood then returns to the upper chamber of the left side of the heart, the LEFT ATRIUM. The blood is pumped to the LEFT VENTRICLE, and then out of the heart through the AORTA (main artery) to all parts of the body. The LEFT VENTRICLE is the thickest and strongest part of the heart since it must pump blood to the feet as well as to the head and neck.
Heart’s Own Blood Supply

Three main coronary arteries and many smaller ones carry blood to the heart muscle. (Dotted lines indicate vessels on the back of the heart.)
**What is Angina?**

Angina, or angina pectoris, is not a heart attack. It is temporary discomfort caused by the narrowing of a coronary artery of the heart. The discomfort or pain is a warning or signal that an area of the heart muscle is not getting enough blood and oxygen. You may have angina during physical exertion, emotional situations, exposure to very cold or hot weather, or after a heavy meal. During these times, the heart is working harder and needs more oxygen than at normal resting conditions. Angina may also occur when you are resting, or sleeping. It may also be caused by a spasm of the artery (tightening) or narrowing of the artery.

---

**Symptoms of Angina**

Many people describe their symptoms as:

- a tightness, heaviness, squeezing or pressure in the chest area
- not pain, but discomfort
- indigestion
- a burning sensation in the chest or throat
- an ache in the neck, jaw, throat, shoulder, arms or back
- shortness of breath
- weakness or tiredness
- sweating
- denial
IF YOU HAVE ANGINA -

- **STOP** what you are doing and **SIT DOWN**.
- Take Nitroglycerin – place one *Nitroglycerin* tablet or spray (one dose) under your tongue.
- If discomfort subsides, relax until you feel ready to return to your activity.
- If discomfort does not subside, put a 2nd nitro tablet under your tongue or spray. Wait 2-3 minutes. If discomfort continues, *call ‘911’ or go to the nearest EMERGENCY Department without delay.*
Symptoms for Women – Are They Different?

Women are different than men! We know this, but how does this relate to the heart? The biggest health problem facing women is heart disease and stroke. Most women fear breast cancer. Heart disease and stroke kills eight times as many Canadian women as breast cancer. Women may experience different symptoms. They may respond to tests used to diagnose their heart condition differently than men. They may also have different results from the treatments or procedures.

A woman’s heart is smaller therefore, they have smaller arteries. Women tend to have a heart event about 15 years later than their male counterparts (65 years instead of 50). Researchers have found female hormones give women protection from heart disease at an earlier age.

Conditions, such as menopause, arthritis and various diseases of aging, can mask the symptoms of heart disease. Diabetes increases the risk of a heart attack more in women than in men. Women with diabetes who smoke erase the protection of hormones at any age. Another point to think about is the role women play in society. Most women are the caregivers, not the care receivers. This can play a factor in how quickly women seek medical attention for their symptoms.

What does all this tell us? There is not a simple answer to some of the questions we have about women and their hearts. Some women will experience symptoms similar to men. For other women, just as for some men, the symptoms are less obvious. Both men and women can experience feelings of general malaise or tiredness, shortness of breath, general aches and pains. These symptoms seem to occur more often in women than men and are easy to miss. Denial is also a symptom and this can further delay you from seeking treatment. The bottom line is …

Be aware and discuss any symptoms with your doctor!
Heart Disease (Coronary Artery Disease)

The cross-section of the artery seen below shows three layers. The inner lining \textit{(ENDOTHELium)} is important in the health of the artery. Anything which damages this lining starts the build up of deposits. Risk factors affect the health of this lining.

A \textit{HEART ATTACK} seems to happen suddenly, but most times it is the end result of a slow, lifelong build-up of cholesterol, calcium deposits, saturated fats and blood particles, along the inside lining of the coronary arteries. This material builds up over the years as does the deposits you would find in the water pipes in your home. This build up is called \textit{ATHEROSCLEROSIS} or \textit{HARDENING OF THE ARTERIES}. It is a normal part of the aging process. Hardening of the arteries in the heart is called \textit{CORONARY ARTERY DISEASE} or \textit{HEART DISEASE}. Coronary artery disease can cause a heart attack.

A view of how heart arteries become blocked over time.
What Is a Heart Attack?

Damage to the heart muscle occurs when a narrowed coronary artery becomes blocked. If a coronary artery becomes narrowed with plaque, the buildup may crack or rupture and a clot forms to block the artery. The heart muscle beyond the clot does not receive blood and oxygen. Damage occurs to the heart muscle. Most heart attacks occur as a result of this process. Also, sudden spasm of a coronary artery can cause a decrease in the supply of blood and oxygen to the heart. This, as well, can cause damage to the heart muscle. In either case, if an area of the heart is without oxygen and blood, a part of the heart muscle can die. This is called a HEART ATTACK. Your doctor may have called your heart attack other names, such as MYOCARDIAL INFARCTION (MI), CORONARY, CORONARY THROMBOSIS, CORONARY OCCLUSION or MUSCLE DAMAGE. All of these terms mean heart attack.
### Difference Between Angina and A Heart Attack

How would you know whether the symptoms are Angina or Heart Attack? This comparison may help.

<table>
<thead>
<tr>
<th>Angina</th>
<th>Heart Attack</th>
</tr>
</thead>
<tbody>
<tr>
<td>♥ <strong>Temporary</strong> lack of oxygen-rich blood to the heart muscle.</td>
<td></td>
</tr>
<tr>
<td>♥ Length of <strong>pain</strong> or discomfort is usually <strong>less than five minutes</strong>.</td>
<td></td>
</tr>
<tr>
<td>♥ <strong>Symptoms are relieved</strong> by rest and / or Nitroglycerin.</td>
<td></td>
</tr>
<tr>
<td>♥ <strong>Caused by narrowing or spasm</strong> of a coronary artery.</td>
<td></td>
</tr>
<tr>
<td>♥ Brought on by events that increase the workload on the heart:</td>
<td></td>
</tr>
<tr>
<td>▪ physical exertion</td>
<td></td>
</tr>
<tr>
<td>▪ stress or emotional upsets</td>
<td></td>
</tr>
<tr>
<td>▪ eating</td>
<td></td>
</tr>
<tr>
<td>▪ exposure to hot / cold</td>
<td></td>
</tr>
<tr>
<td>♥ May happen at rest or leisure. This is usually called unstable angina and requires more help from your doctor.</td>
<td></td>
</tr>
<tr>
<td>♥ <strong>Prolonged</strong> lack of oxygen-rich blood to the heart muscle.</td>
<td></td>
</tr>
<tr>
<td>♥ <strong>Length of pain</strong> or discomfort is usually <strong>more than five minutes</strong>.</td>
<td></td>
</tr>
<tr>
<td>♥ <strong>Symptoms are not relieved</strong> by rest or Nitroglycerin. Requires a strong painkiller or ‘clot buster’ or intravenous drugs given by a doctor.</td>
<td></td>
</tr>
<tr>
<td>♥ <strong>Caused by complete blockage</strong> of a coronary artery, usually due to a blood clot.</td>
<td></td>
</tr>
<tr>
<td>♥ Sometimes brought on by extra workload on the heart</td>
<td></td>
</tr>
<tr>
<td>♥ <strong>Common to happen without warning, at rest or leisure.</strong></td>
<td></td>
</tr>
</tbody>
</table>
How Does Your Heart Heal?

Once you have had a heart attack, the healing process begins. The damaged heart muscle is replaced by strong scar tissue. *The scar takes about six to eight weeks to form.*

In addition to the scar tissue, changes in blood flow occur. New small branches of arteries near the damaged area of your heart start to open up and help bring blood to the heart muscle. These new vessels form branches to connect to other arteries. This is called *collateral circulation.* This process may take several months. During this time, you are encouraged to increase your activity slowly to avoid excessive demands on the heart. Both collateral circulation and scar tissue help the heart to mend itself. A balance of rest periods, proper diet and exercise is needed. (More information appears in the following sections.)
Other Heart Conditions

Sometimes, damage to the heart muscle can cause an uneven heart rhythm or beat. This may interfere with the pumping action of your heart. It usually passes after a couple of days of treatment. If it continues, your doctor may recommend medications to correct the uneven heart rhythm ARRHYTHMIA. Sometimes your doctor will recommend a pacemaker or an implantable cardiac defibrillator. Both of these devices help to pace the beating of the heart.

HEART FAILURE (HF) can happen when the heart fails to pump enough blood to meet the demands of the body. If the heart is not pumping well enough, the body retains water. Due to the decreased pumping action of the heart, you may notice sudden weight gain, shortness of breath, increased abdominal girth and swollen feet and ankles. Sometimes HF improves as the heart heals. For some, ongoing treatment and precautions are important for a lifetime. Heart failure is treated by rest, medication and proper diet (especially decreasing salt intake) and drugs. Rehabilitation is important if you have HF. Discuss with your doctor and the rehab team what exercise is appropriate for you. There are many good drugs your doctor can use to strengthen your heart’s pumping action and to remove the extra fluids from your body.

Some of the common drugs used to treat HF:

- **Digoxin (Lanoxin)**
- **Diuretics (Lasix)**
- **Blood Thinners (Warfarin)**
- **Ace Inhibitors**

CARDIOMYOPATHY

Cardiomyopathy is a disease of the heart muscle that reduces the pumping ability of the heart. Symptoms include shortness of breath, fatigue, swelling of the legs, and weight gain. Your doctor will order a variety of tests. This will help determine your type of cardiomyopathy. Then treatment can begin. If the cause of cardiomyopathy is excessive use of alcohol, part of the treatment plan will be to eliminate alcohol. If your cardiomyopathy is caused by coronary artery disease your doctor may suggest medications, surgery or angioplasty/stent. It will be important to follow the recommendations in this manual on risk factor modification.
VALVES
The heart is divided into four chambers. Valves are small flaps of tissue that keep the blood flowing in the right direction through the heart to the lungs and body. For the heart to pump well, valves must open and close freely. If valves leak or are held partly open a backup in the system is created. Valve defects can occur in the womb during development, with an infection or rheumatic fever. Following tests, your doctor may recommend surgery or medications to control your symptoms.

The information on Risk Factors applies to people with other heart conditions as well.

Read on ...
Tests and Procedures

Sometimes all a person needs is a hand to hold and a heart to understand.
Following a heart event, various tests may be ordered so your doctor will have more information about your heart. Tests are done to help your doctor decide if you have had a heart attack or will need further treatment such as bypass surgery, angioplasty or a stent.

This section explains the tests that may be ordered. The results of the tests will help your doctor decide on the best care and treatment for you.
**Diagnostic Tests - How is a Heart Attack Diagnosed?**

**History and Physical:** This is the first important step once you arrive at the hospital. The doctor and nurse will ask you many questions. It is important for you to try to be precise and relate as many details as possible. This can help your doctor make a diagnosis. Describe your symptoms the best you can remember. Keep in mind, there are other conditions that can cause similar symptoms. Simple tests your doctor will do at this time include: listening to your heart and lungs, taking your blood pressure and pulse, a chest x-ray and blood and urine tests and an E.C.G.

**E.C.G.:** (Electrocardiogram): An E.C.G. is a recording of electrical impulses, traveling through various areas of the heart muscle. Damage to the heart muscle can be detected by changes in the recording. Sometimes, several E.C.G.’s are needed, as the first may not show any change.

**Blood Tests:** Blood tests are used to look at your enzyme levels. Enzymes are certain chemicals or protein substances found in the heart muscle. When damage to the heart happens, these enzymes are released and enter the blood stream. Several blood tests are taken to watch the levels of each enzyme over the next few days. The most common enzyme tested is Troponin levels. Sometimes referred to as a cardiac marker.

**Chest X-Ray:** A chest x-ray may be done to look at the heart and lungs. Changes in overall size of your heart can be seen, as well as any fluid build up in the lungs. This x-ray does not show the amount of damage to the heart.
Diagnostic Tests

**PLEASE REMEMBER:** The following tests *may be ordered* by your doctor.
Not everyone requires further testing.

**Holter Monitor:** This is a special 24-hour, non-stop ECG. This test may be used to decide if there is any change in the rhythm of your heart. Electrodes are placed on the chest and attached to a small recorder worn around the waist or over the shoulder. A diary is given for you to write down your activities and symptoms (if any) during the test. Both the ECG record and your diary will help your doctor to see how your heart responds to physical activities and mental stress.

**ECHO (Echocardiogram):** This test uses the echoes of very high-pitched sound waves (ultrasound) to make a picture of the heart. These sound waves cannot be heard. It is like sonar, which was developed during World War II to detect submarines. It is now used widely in medicine, including examining a baby in the mother’s uterus. There are no known side effects from this test. A small amount of gel (water washable) will be placed on your chest over the heart to glide an object called a transducer lightly over the chest. A picture will appear on the screen and may be recorded on videotape or on a strip of paper. The test shows the size and shape of the chambers of the heart and how well they beat. It also shows the motion of the valves. Most people will have this test done following a heart event before leaving the hospital. It gives your doctor valuable information on your heart.

**Stress ECHO (Echocardiogram):** This test is exactly as above, but is done after you have been walking on the treadmill, so the doctor can see how exercise affects your heart. The test gives them information about your heart walls’ motion. This also helps to decide if changes in treatment are required, such as bypass / angioplasty / medications.

**Dobutamine Stress ECHO (Echocardiogram):** If you are unable to walk on the treadmill, the doctor can do the Stress ECHO after injecting a drug, called Dobutamine, which stimulates the heart. This test checks to see if there is still live heart muscle where the artery has narrowed. It helps the doctor determine the course of treatment. This test is rarely done.
**Exercise Tolerance Test (ETT):** The purpose of this test is to determine how effectively your heart is working. More simply put, “How your heart will react to resting and exercising conditions”. It may also be used to see if the medications you are taking are adequate or if a change in medication is required. This test can be done before you leave hospital or your physician may call you back in six to eight weeks time following your heart attack. The test involves walking slowly on a motor-driven treadmill (or belt) for several minutes. You will walk on this treadmill while your heart rate and blood pressure are monitored by a physician and trained exercise technician. You are asked to continue to walk on the treadmill until you are tired. The test will be stopped if you begin to have chest pain. The speed and elevation of the treadmill will be gradually increased to make you work harder and to increase your heart rate.

This test is an important indicator of how much exercise you can handle. These results can be helpful to develop a specific home program and / or supervised exercise program.

**Nuclear Scans:** These tests use a type of x-ray to examine how your heart works. The source of the x-rays is a tiny amount of radioactive material that can be injected into a vein to mix with the blood, instead of using an x-ray machine. The total dose of radiation is very small – like that received for a normal chest x-ray. Different types of nuclear heart scans give different information.

**Myocardial Perfusion Imaging with Cardiolite:** This test is sometimes referred to as the Mibi.

This scan may be ordered if more information is needed than what your Exercise Tolerance Test provided. It provides your doctor with information about the blood flow to the heart muscle (myocardium).

The first part of the scan involves injecting a very small amount of radioactive material into your vein. You will then have something to eat. At the Nuclear Medicine Department at Royal University Hospital a series of pictures of your heart will be taken after 2 hours by a camera which rotates around while you lie quietly. This will take approximately 20-25 minutes.
Later that day, the above will be repeated. A second injection of radioactive material along with a medication is given. The medication exercises your heart. You will then have something to eat. Pictures of your heart will be taken at the Nuclear Medicine Department 30 minutes to 1½ hours later.

This is a safe test. It is used frequently in many hospitals. The dose of radioactive material used is very small. It is of no danger to you or others.

There is still another test, using a drug, which simulates exercise that can be used instead. This drug-induced exercise is used when the legs get too tired to continue exercising before the heart rate is up high enough, to see how the heart responds.

**In all the tests just described the small dose of radioactive test substance is rapidly removed from the body in the urine.**

**Cardiac Catheterization or Coronary Angiogram:** This test is done to examine the arteries on the outside of your heart. It is done in a special room called a Catheterization Laboratory or “Cath Lab”.

Before the test, you may be given something to help you relax. The doctor will freeze or numb the area, with a local freezing, where the catheter is inserted. You may feel a hot, tingling sensation with the dye injection. Otherwise, you should be completely comfortable. You will be awake during the test and asked to hold your breath or cough at different times.
The doctor will insert a thin plastic tube, called a catheter, into a blood vessel (artery) in your groin or arm. This tube is smaller than your blood vessel and can be passed easily up to the heart. The catheter is guided with the help of an x-ray camera, which allows the doctor to see the catheter and guide it where he wants. When the catheter is in place, a dye will be injected. You will notice a "hot flash" when the dye is used. This feeling only lasts a few seconds. The doctor will be able to see any narrowing in your coronary arteries (arteries supplying blood to the heart). It is the best way to find out the amount of narrowing or blockage in your artery and to plan the treatment.

X-ray cameras will be used to take pictures as the dye is injected. These pictures will be studied in detail after the test is done.

During the procedure if you feel angina (discomfort) or other symptoms, tell the doctor. Nitroglycerin or other treatment will be given.

After the test, you will be on bed rest for at least 2 to 4 hours if the groin is used. You will be required to lie flat on your back and to not bend the leg. A nurse will check your pulse, blood pressure and groin dressing frequently. There may be a sandbag placed on the site. If the arm is used, you will be able to be up sooner.

Your doctor will explain the results of the test later that day or the next morning. There is a booklet which describes this test in more detail.


Clot Busters

It is important for you to go to your nearest emergency when symptoms are not relieved by rest or Nitro. Your doctor can give you a life-saving drug called a \textbf{CLOT BUSTER}. This drug will break up the blood clot blocking your coronary artery. The result is blood and oxygen can flow to your heart muscle. Your heart will have less damage. Less damage improves your chances of making a full recovery. The problem is many people don’t get to the hospital soon enough. The clot buster will work best if given within 6 hours of the start of your symptoms. Your doctor will ask several questions to decide if it is safe for you to receive this drug. Try to answer as accurately as you can to help your doctor make the decision.
A heart attack is usually caused by the formation of a blood clot in one of the arteries of the heart. As a result, blood-carrying oxygen cannot reach a part of the heart muscle. This portion of the heart muscle becomes damaged. Not all patients will be given this “clot busting” drug. The doctor will decide if this drug is right for you. If you have used 2 Nitroglycerin over 10 minutes with little relief from your chest discomfort, chew a non-coated aspirin. If no relief is in sight, go to the nearest Emergency or call 911 as quickly as possible. The earlier the treatment is given, the better the result. The quicker a "clot buster" is given, the more likely the success in dissolving the blood clot. This allows the return of blood flow to that part of the heart muscle again and reduces the amount of damage done to the heart.

PTCA / Stent (Percutaneous Transluminal Coronary Angioplasty / Stent): This is a procedure used to open up the artery on the heart without surgery. There is usually a narrowed, but not completely blocked, coronary artery, causing discomfort (angina). Enough blood is not getting through to the heart muscle. This may happen during periods of activity, rest or emotional stress.

With this treatment, the patient is taken to the Cath Lab. The procedure is similar to an angiogram - described on page 35. A catheter is inserted into the arm or groin artery and with the help of x-ray it is placed in the narrowed artery. The catheter has a tiny balloon around its tip. The balloon is flat as it is put in place. Once the catheter is in the narrowed part of the artery, the balloon is inflated. This compresses the blockage toward the outside, into the wall of the artery. After the treatment, you will stay in the hospital overnight. This procedure does have some risks which your doctor will discuss with you before the procedure. Not everyone with angina can be treated by this method.

In addition to angioplasty, it is common to have a STENT as well. This is a small mesh tube made of lightweight stainless steel which is placed in the narrowed area to support it and keep the artery open. The STENT is placed in the artery using the balloon and is embedded in the inside lining of the artery. Most people who have angioplasty now have a stent in the artery as well.

When you leave the hospital, you will be given a card that says that a stent(s) has been placed in your artery. There are no concerns about rejection as your body will heal over the stent. You may notice twinges over the first month. This is
normal. You will be given a prescription for a medicine called Plavix® before you leave the hospital. It is used to prevent blood from clotting around the stent. Generally following a stent procedure your doctor will ask you to take Plavix® for about a year. If you have questions, discuss them with your pharmacist, doctor or cardiac rehab team. **DO NOT** stop taking this medication on your own. If you notice side effects, see your family doctor right away.

A heart healthy diet, smoking cessation, exercise, weight loss and decreasing stress are important factors to change after a stent. Your cardiologist will encourage you to continue to make changes in your lifestyle. This will add to the successful outcome of your PTCA/Stent(s).
**Bypass Surgery:** After your doctor has the results from your tests (i.e. cardiac catheterization or angiogram), bypass surgery may be suggested. This surgery involves using a leg vein or a chest artery, or both, to bypass or detour the narrowed or blocked coronary arteries. For some, a valve replacement is done at the same time as the bypass procedure. Your doctor would discuss this with you when you give consent for surgery.

One end of the saphenous vein is attached to the base of the aorta (refer to the diagram) and the other end is attached beyond the blockage in the coronary artery. The internal mammary artery (found in the chest wall) may be used. It is detached at one end, then attached to the blocked artery below the area of blockage, similar to the vein. This should get rid of angina, but it does not cure the underlying cause of the build-up of cholesterol in the arteries.

Care must be taken of these new bypasses – as described in other parts of this manual. A heart healthy diet, smoking cessation, exercise, weight loss and decreasing stress are important factors to change after a bypass. Your heart surgeon will encourage you to continue to make changes in your lifestyle. This will add to the successful outcome of your bypass operation.
"What we have to understand is that the only life we can control is our own, and in almost all instances, we can choose to change."

William Glasser
Risk Factors

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What is a Risk Factor?

As discussed earlier (page 25), the health of the linings in your arteries will determine whether or not you develop heart disease.

Risk factors are habits or traits, which may increase your risk of heart disease. Considerable progress has been made to identify factors placing you at risk of developing heart disease. By learning more about how to control these risk factors, you can prevent, slow down and, in some cases, reverse the process of heart disease. Risk factors for heart disease are divided into those you can control or modify and those you cannot change or modify.

What is it about modern-day living that helps bring about heart disease? Many think heart disease is an end result of our lifestyle more than our genetics. As your pace of daily living hastens, your diet may change and you might tend to eat more processed and fast foods, high in animal fats, cholesterol and sugar. Cigarette smoking increases, often as a way of coping with this hurried lifestyle. Feeling tired at the end of a stressful day leads to inactivity, which often leads to a gain in weight.

Your risk for heart disease increases with each risk factor. If you are overweight, a smoker and inactive, your risk can be 8 times greater \((2 \times 2 \times 2 = 8)\) than someone who doesn’t have these risk factors. The addition of each risk factor has a synergistic effect. This means the addition of one risk factor onto another multiplies your risk many times. Remember, reducing your risk factors does the opposite and has a positive affect. Studies have shown cardiac rehabilitation efforts can reduce your risk of another heart event up to 25%. It may be possible to reduce your risk for developing heart disease up to 50%. First, identify your risk factors, then learn as much as you can about how to manage your risk factors.
Risk Factors You Can Control or Modify

Not everyone who has these risk factors will have a heart event. You do not need to have all of the risk factors to have a heart event. However, most people who experience a heart event have one or more risk factors. For most people, risk factors speed up the process of building up of cholesterol in the arteries. A Heart Health Survey done across Canada estimated 2/3 of the population aged 18-74 has at least one major risk factor for heart disease. If you change your lifestyle and reduce your number of risk factors, you are slowing down the process of buildup. You are then reducing your chance of another heart event.

“Health is not simply the absence of sickness.”
Hannah Green

By adopting a healthy lifestyle, you may feel better than you have in years. People tell us this all the time.
## LiveWell Cardiac Program

This worksheet is meant as a guide to help you assess your heart disease risk factor profile. Optimal levels depend on your health, medical conditions, treatment, and lifestyle and lifestyle choices.

### Your Heart Disease Risk Factor Profile
(✓ all that you are aware of)

<table>
<thead>
<tr>
<th>Date dd/mm/yy</th>
<th>Yours is...</th>
<th>* Target Level</th>
</tr>
</thead>
</table>

- □ Smoking (cigarette smoking)
  - □ never smoked
  - □ smoking
  - □ quit smoking
  - □ yes □ no
  - non-smoker
  - avoid second-hand smoke

- □ Exposure to second hand smoke

- □ High Blood Pressure
  - Blood Pressure / mmHg
  - <140/90 mmHg
  - < 130/80 mmHg
  - with diabetes or chronic kidney disease

- □ Dyslipidemia (abnormal blood cholesterol levels)
  - Lipid Profile
    - TC: mmol/L
    - Trigs: mmol/L
    - HDL: mmol/L
    - LDL: mmol/L
    - RR: risk ratio
    - < 4.0 mmol/L
    - < 1.5 mmol/L
    - > 1.0 mmol/L
    - < 2.0 mmol/L
    - < 4.0

- □ Physical Inactivity
  - Activity Level
  - 30 minutes, 7 days/week (minimum 5 days/week)

- □ Diabetes
  - □ Type 1
  - □ Type 2
  - Blood Sugar Level
    - Fasting:
    - 1-2 hr post meal:
    - HbA1C:
    - 4-7 mmol/L
    - 5-10 mmol/L (* 5-8)
    - <= 7.0 %

- □ Body Weight and Composition (excess weight around your waist)
  - Waist: cms
  - Males: < 102 cms (40 in)
  - Females: < 89 cms (35 in)
  - Asian
  - Males: < 90 cms (35.5 in)
  - Females: <80 cms (31.5 in)

- □ Stress
  - □ Depression
  - □ Anger
  - Cope in a positive way

- □ Family History (Male family member with heart disease <55 yrs. Female <65 yrs.)
  - □ Positive
  - □ Negative
  - Genetic Factor

- □ Age and Gender (with cardiac risk factors)
  - □ Male > 45 yrs
  - □ Female > 55 yrs
  - Genetic Factor

---


LiveWell Cardiac Program Manual
Risk Factors
What are Your Risk Factors?

Now it is time for you to do a personal inventory. Over a lifetime, many factors can add to your risk of developing heart disease. **Check and comment** on those risk factors you think may have contributed to your heart event.

*Non-Controllable Risks (risk factors you cannot change or modify)*

___ Male, over the age of 45  
___ Female, over the age of 55  
___ Immediate family history of heart disease; especially before the age of 55 for men or 65 for women

*Controllable Risks (risk factors you can change or modify)*

___ Smoking/Exposure to second-hand smoke  
___ High blood pressure  
___ Abnormal Blood Cholesterol levels  
___ Diabetes  
___ Inactive lifestyle  
___ Abdominal Obesity  
___ Psychosocial stress (Personality traits, depression, lack of social support)

**Comments:**
Non-controllable Risk Factors

Even though you cannot change these factors, you should be aware of them because they may increase your chances of heart disease. If you checked any of these, it is even more important to change the risk factors you can control or modify.

Family History

If you have parents, grandparents or siblings with heart disease or stroke, your risk of heart disease increases. Do you have a male family member who had a heart event or stroke before age 55? Do you have a female family member who had a heart event or stroke before age 65? If you answered yes to these questions, try to find out more information. Did they have other risk factors? Did they have high cholesterol or high blood pressure? This information is helpful as you assess your situation. Your children may now be prone to develop heart disease and should be aware of this. “An ounce of prevention is worth a pound of cure.”

Age

As you get older, the risk of having a heart event increases. There are always exceptions to the rule! Some young people may have heart disease while others in their 80’s and 90’s appear fine. However, for most, the older you get, the more age plays a role in the process of heart disease. Age is an important factor, but it cannot be singled out as the only factor.

Gender

Over a lifetime men and women have equal opportunities for developing coronary artery disease. The middle-age male (30-59) remains at greater risk than a woman the same age. However, it is thought hormones protect younger women from experiencing a heart event. After menopause, women have heart events at the same rate as men.
Controllable Risk Factors

Many of the risk factors for heart disease are within our control to change. For each of the risk factors you can control, information is provided to help you get started. Changing a habit such as smoking can be very difficult. Not just because of the physical addiction but also the habit and the social nature of smoking. Before we look at what you can do to help yourself deal with this complex habit, it is important you read what the research is showing on the effect of smoking on the body. With encouragement, support and some helpful tips, you too, can become a non-smoker. No better time than the present to get started!

Smoking
Do you know what you are smoking?

Nicotine
- one of the most addictive substances known to humans
- in its pure form, nicotine is a poison
- narrows the arteries to 2/3 their normal size
- damages the smooth lining of the arteries which leads to plaque build up
- lowers the HDL or good cholesterol
- causes the blood pressure and heart rate to increase, making the heart work harder
- can cause the heart muscle to become excited and extra beats can occur

Chemicals
- vinyl chloride, acetone (paint stripper), arsenic (a poison)
- hydrogen cyanide (poison used in gas chambers)
- ammonia (bleach)
- radionuclides, naphthalene (moth balls)
- pesticides (insect killers), lead, carbon monoxide (car exhaust)
**Dirt**

- tiny particles of dirt cause serious damage to the body’s natural defense mechanisms.
- dirt damages the tiny hairs which clean the air passages and causes the body to produce excessive amounts of mucous (smoker’s cough).

**Radioactive Lead**

Tobacco leaves contain very small hairs called trichomes which attract radioactive lead particles from the air and those accumulate in the lungs.

- This radiation is about ten times more potent than the radiation used in taking x-rays
- smoking 1½ packs per day exposes you to as much radioactive poison as 300 chest x-rays per year

**Carbon Monoxide**

- makes up about 4% of the smoke of the average cigarette
- circulates more freely in the blood than oxygen
- results in less oxygen available for the body
- promotes cholesterol deposits in the arteries

**Facts about Smoking**

You may say, “I’m feeling fit and healthy even though I smoke.” If you have been smoking for years, changes can sneak up on you. People who smoke have more than twice the risk of having a heart event or stroke as non-smokers. The Centers for Disease Control and Prevention estimate “every cigarette smoked steals seven minutes from a smoker’s life”. It is estimated 90% of lung cancers and other lung diseases, such as chronic bronchitis and emphysema are caused from smoking. More than 1,600 people in Saskatchewan die each year from tobacco-caused diseases. Smoking results in more frequent colds, wrinkles, bad breath, stained teeth and persistent cough. For men, smoking can block circulation and lead to impotence. For women on oral contraceptives, smoking greatly increases the chance of a stroke or heart event.

Sudden death is more common in smokers. Why? Smoking causes a decrease in oxygen to the heart. When the heart doesn’t get enough oxygen, it can start beating irregularly (ventricular fibrillation). If this occurs, the heart may need to be shocked back into normal rhythm to get the oxygen flowing again.
If you are reading this because you have had a heart event, you likely know you have a build up of plaque (atherosclerosis) in one or more arteries. Smoking will speed up the rate plaque collects in these arteries.

**Facts About Second Hand Smoke**

By now you have probably heard second-hand smoke can be as dangerous to your health as smoking. Well, guess what? … It’s true! Second-hand smoke is recognized by the scientific community as a toxic substance, containing over 50 cancer-causing chemicals. There are enough harmful compounds in exhaled cigarette smoke to cause an increase in the heart rate and blood pressure of those around you. Breathing second-hand smoke can lead to all the other risks mentioned before. If you are in an enclosed area, like a car, with someone who is smoking, you are likely smoking one cigarette for every four cigarettes smoked.

Because children breathe faster and weigh less than adults, the affect of second-hand smoke is much worse for them than for adults. They have more health problems than children who don’t breathe second-hand smoke. Adults who breathe second-hand smoke have a higher risk of heart attack, stroke, cancer and lung diseases like emphysema, asthma and bronchitis. And, don’t forget … pets count as innocent bystanders as well. They breathe in second-hand smoke along with the rest of the family.
**Tips for Kicking the Tobacco Habit**

You have probably had a few days to practice being a non-smoker. The worst physical symptoms will be over in just 72 hours and will cease in 7 to 10 days. Not everyone experiences withdrawal symptoms when quitting tobacco. Now, it is important to look at the cravings or psychological aspect of the habit. Many cigarettes are smoked automatically and unconsciously, without any physical craving. This is often the response to a trigger which sparks a desire for a cigarette. It is important to begin to identify your triggers. Then, you can make a plan to deal with them when you go home. The following information may help:

- ♡ Analyze your personal smoking habit.
- ♡ Make a list of your triggers for smoking (stress, a meal, coffee, talking on the telephone, boredom).
- ♡ Decide not to smoke “one day at a time”.
- ♡ Stop ‘cold turkey’ now that you have been smoke free for a few days.
- ♡ Cut down gradually if you think this works better.
- ♡ Join a stop smoking clinic or group.
- ♡ Get a friend or relative to quit smoking with you.
- ♡ Try leaving the table as soon as you are finished eating.
- ♡ Brush and floss your teeth or rinse with mouthwash after a meal (these don’t mix with cigarettes).
- ♡ Change your choice of beverage from coffee or tea to milk or water.
- ♡ Try a drink of cold water to distract your thinking away from a cigarette.
- ♡ Remove yourself from the situation that triggers a craving.
- ♡ Avoid triggers (such as “Smoking Areas”) as much as possible.
- ♡ Take a walk or stand up and stretch to take your mind off a cigarette.
- ♡ Ask your doctor or nurses about medicine to assist the above actions.
- ♡ Contact your local Lung Association or Heart and Stroke Foundation for more information on smoking cessation.

* Refers to tobacco in all forms: smoking cigarettes, pipes, cigars and using spit tobacco like snuff & chewing tobacco.
Make a list of the reasons you want to quit smoking:

- ____________________________________________
- ____________________________________________
- ____________________________________________
- ____________________________________________

*When Smokers Quit*

**1 Year**
- Risk of coronary heart disease is half that of a smoker

**20 Minutes**
- Blood pressure drops to normal
- Pulse rate drops to normal
- Temperature of hands and feet increase to normal

**1 to 9 Months**
- Coughing, sinus congestion, fatigue, shortness of breath decrease
- Cilia regrow in lungs, increasing ability to handle mucus, clean the lungs, reduce infection

**8 Hours**
- Carbon monoxide level in blood drops to normal
- Oxygen level in blood increases to normal

**24 Hours**
- Chance of heart attack decreases

**48 Hours**
- Nerve endings start regrowing
- Ability to smell and taste is enhanced
- Walking becomes easier
Common Questions About How to Quit Smoking

Below, you’ll find some answers to some of the questions most frequently asked by smokers who are considering stopping.

Q: Won’t I gain weight if I stop Smoking?

❤️ Not every person who stops smoking gains weight.
❤️ The average weight gain is less than 10 pounds (4.54 kg).
❤️ Don’t diet now – there will be time after you become a non-smoker.
❤️ Exercise is an effective way to cope with withdrawal and to avoid weight gain.
❤️ Avoid high-calorie snacks. Vegetables and fruits and sugar-free candies are good snacks.
❤️ The risks to health from smoking are far greater than the risks to health from a small weight gain.
❤️ A small increase in weight may not hurt your appearance. Smoking is unattractive, causing yellow teeth, bad breath, stale clothing odors and, possibly, wrinkled skin.

Q: If I smoke only low-tar / low-nicotine cigarettes, do I need to stop?

❤️ There is no such thing as a safe cigarette.
❤️ Many smokers who use these cigarettes inhale more often or more deeply to make up for the low nicotine levels. This smoking pattern may increase your risk of some form of lung disease.

Q: Is it better to stop “cold turkey” or over a long period of time?

❤️ There is no “best way”.
❤️ Most successful former smokers stop “cold turkey”.
❤️ Stopping over a long period of time can extend the symptoms of withdrawal.
❤️ Talk to your doctor about using nicotine replacement or non-nicotine medication to help deal with any withdrawal symptoms from stopping “cold turkey”.

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Risk Factors

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Q: What about insomnia?
Some smokers report having problems sleeping after they stop smoking. If these symptoms are related to nicotine dependence, they should disappear within 2-3 weeks.

Q: Why do I cough more now that I’ve stopped?
About 20 percent of former smokers report an increase in coughing after they stop smoking. This is a temporary response that may be caused by an increase in the lung’s ability to remove phlegm – so it actually represents a recovery of your lung’s defense mechanisms.

Q: If I stop, can I smoke a cigarette occasionally?
NO! Most former smokers quickly become re-addicted to nicotine. Don’t risk getting hooked again.

Q: Will my body recover from the effects of smoking?
Although some lung damage may be permanent, your body has an amazing ability to repair itself. Many of the negative health effects of smoking are reduced over time, as you stay smoke-free.

Q: Should I tell other people I’m trying to stop?
Yes. Enlist the support of family, friends and co-workers.

Q: What should I do when I get an urge or craving to smoke?
Some people relieve cravings by chewing gum, sucking on a cinnamon stick or mints, eating a carrot stick, deep breathing or concentrating on an activity that keeps their minds and hands occupied.

♡ Cravings for cigarettes are normal part of withdrawal.
♡ Most cravings last for only a few minutes and then subside.
♡ Cravings become less common over time.
♡ Talk to your physician to see if nicotine replacement can help.
Q. What other withdrawal symptoms will I have?

☐ Some smokers have few or no withdrawal symptoms.

☐ Other common symptoms include anxiety, irritability, depressed mood, mild headache and gastrointestinal symptoms such as constipation.

☐ Few smokers experience all these symptoms. Like other symptoms, they are only temporary.

Q. When I don’t smoke, I feel restless and can’t concentrate. Why?

☐ These are normal symptoms of nicotine withdrawal.

☐ These symptoms are most acute in the first 3 days after stopping.

☐ These symptoms will disappear after a few weeks.

Q. If I use nicotine replacement, will I become addicted to it?

☐ Most people are able to reduce the amount of nicotine replacement they use gradually, without discomfort, until they stop completely.

☐ A small percentage of people do use nicotine replacement for longer than the recommended 3 to 6 months.

☐ Nicotine replacement does not damage the lungs and nicotine itself is not known to cause cancer, so it is much less harmful than cigarettes.

Adapted from material developed by the National Cancer Institute (NCI)
**Tips for Tobacco Smoking Cessation**

**Forget the Past**
You may have attempted to quit smoking before, only to have started smoking again. This is normal. Studies show that many people attempt to quit smoking several times before they are successful; and that with each successive attempt the chances of remaining a non-smoker increase.

**Choose a Date Which Will be Your First Day As a Non-Smoker**
Everyone has his or her own best time to quit. Set yourself up to win by picking a time where you will not be coping with any “extra” difficult situations.

**Begin to Prepare For This Date**
- Advise those around you of the up-coming date and enlist their support.
- If possible, kick the habit with a friend or join a local smoking cessation group.
- Remove all items such as lighters, ashtrays and any cigarettes you may have left the day before you become a non-smoker. Don’t forget to clean out your car’s ashtray.
- Picture yourself successful as a non-smoker.
- Envision the situations when you used to smoke. Now, develop a plan and visualize how you will cope in these situations without cigarettes.
- Write down all the reasons why you would like to become a non-smoker.

**The Quit Date and Beyond**
- Avoid places and situations where you used to smoke … especially in the beginning.
- Keep yourself busy to avoid thinking about you-know-what.
- Develop new habits as substitutes for smoking.
- To prevent weight gain, avoid fast foods and sweets. Snack on healthy foods, drink plenty of water and begin an exercise program.
- Treat yourself. Take the money you are saving and do something special to celebrate your success.
If the Unthinkable Happens

♡ Even the strongest willed people suffer setbacks when attempting to overcome an addiction as powerful as cigarettes. Do not throw in the towel. You can still succeed!

♡ **STOP SMOKING IMMEDIATELY** and throw away any remaining cigarettes.

♡ Forgive yourself and focus on the future. You cannot change the past, but you can ensure that you do not slip again.

♡ Think hard about what led to your giving in to temptation then create and rehearse a plan to make sure that the next time you are in a similar situation you will remain strong.

Reap the Benefits of Being a Non-Smoker

♡ You will now be one of the 82% of Canadians who are non-smokers.

♡ You are likely to live longer and healthier than if you had continued to smoke.

♡ You are saving thousands of dollars in cigarette related expenses

♡ You are acting as a positive role for your family.

*Adapted from educational material developed by Boehringer Ingelheim*
**Hypertension (high blood pressure)**

High blood pressure is a very common problem and many people are not aware they have it. It is a major health concern because if you have high blood pressure, you are more likely to have a heart event or stroke, kidney and eye problems. High blood pressure affects the body by adding to the workload of your heart and arteries. High blood pressure speeds up the rate your arteries thicken or build up cholesterol. Your arteries may stiffen and this makes it harder for your heart to pump the blood. This can result in an enlarged heart. It becomes a vicious cycle. This is especially true for people who have blood pressure that is not controlled.

Blood pressure is a measurement of the pressure on the walls of the arteries as the heart pumps blood through them. It is highest when the heart contracts or squeezes, and the blood is pushed out into the arteries. This is the systolic or top number. When the heart relaxes between beats, pressure in the arteries goes down. This is the diastolic or bottom number. Measurement of these two pressures in the arteries gives us the blood pressure reading and is written like a fraction. 110/76 means the systolic pressure is 110 and the diastolic pressure is 76.

**GOAL:**

**Blood Pressure:**

- 140/90 or below
- With diabetes or chronic kidney disease 130/80 or below

**Ways to Control Blood Pressure**

- Reduce Your Weight
- Cut back or avoid alcohol
- Take medication as prescribed. Talk to your doctor before stopping your pills
- Quit smoking
- Be physically active every day
- Learn ways to deal with stressful life events
- Take time to relax
- Reduce salt in your diet
- Monitor your blood pressure regularly
Cholesterol & Triglycerides

Cholesterol is a type of fat that is made in the body by your liver. Some cholesterol is needed for cells, hormones and other uses in the body. However, too much cholesterol in the blood may contribute to heart disease. Cholesterol can add to the plaque build up in your arteries. This will narrow or block arteries affecting blood flow.

The body produces 80% of blood cholesterol – only 20% comes from the food we eat.

Most of your blood cholesterol is made by your liver. When you eat foods high in saturated fat your liver may make more cholesterol. This is why you should eat less saturated fat.

Foods that come from animals have cholesterol. This cholesterol has only a small effect on your blood cholesterol levels. Limit foods that are very high in cholesterol: egg yolks, organ meats, shrimp and squid.

HDL (High Density Lipoprotein) is often called the “good” cholesterol. The HDL or good cholesterol has the ability to remove the deposits of “bad” cholesterol from the arteries and take them back to the liver where they are broken down and stored or re-used.

LDL (Low Density Lipoprotein) is the “bad” cholesterol. It is the culprit (LDL) contributes to build-up called “hardening of the arteries” or “Plaque”. Therefore, the aim is to keep the LDL number as low as possible. You may wish to discuss your readings with your doctor, nurse or dietitian, or exercise therapist.

Your cholesterol levels are determined through a blood test. This test may be done while you are in hospital or it may be done by your family doctor at a later time. However, it is important for you to check with your doctor for your test results. You must fast 12 hours prior to this blood test.

<table>
<thead>
<tr>
<th>GOAL: Lipids</th>
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<tbody>
<tr>
<td>Total Cholesterol</td>
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<tr>
<td>&lt;4.0 mmol/L</td>
</tr>
<tr>
<td>Triglycerides</td>
</tr>
<tr>
<td>&lt;1.5 mmol/L</td>
</tr>
<tr>
<td>HDL Cholesterol</td>
</tr>
<tr>
<td>&gt;1.0 mmol/L</td>
</tr>
<tr>
<td>LDL Cholesterol</td>
</tr>
<tr>
<td>&lt;2.0 mmol/L</td>
</tr>
<tr>
<td>TCHL/HDL Ratio</td>
</tr>
<tr>
<td>&lt;4.0</td>
</tr>
</tbody>
</table>
**Triglycerides** are another type of fat in the body. We are unsure of its role in heart disease. Large amounts of fat, sugar or alcohol may raise triglycerides. You may also have high triglycerides if you are overweight, do not exercise regularly, or have poorly controlled diabetes.

**How You Can Control Abnormal Cholesterol & Triglycerides**

- If you have been diagnosed with coronary artery disease, you will start medication
- Losing weight, changing eating habits, increasing exercise and quitting smoking will also have an effect.

**Obesity**

Obesity is clearly associated with an increased risk of developing diabetes and heart disease. There is strong evidence weight loss reduces blood pressure, cholesterol and triglycerides and blood sugar levels. Weight loss can also increase your HDL or good cholesterol and reduce your LDL or bad cholesterol. It also matters where you store your excess fat. People who carry excess weight around their middle have a higher risk of having heart disease and diabetes than those who carry it around their hips. It is not always how much you weigh, but where you carry your weight.

You can reduce your risk of heart disease by maintaining a healthy lifestyle. Aim to eat heart healthy and be physically active on a daily basis. If you notice that you need one less notch on your belt, you have probably lost about ten pounds. This will help to lower your risk.

- 1 lb of body fat = 3500 calories
- Walking 2 miles/day (250 calories) x 365 days = 26 lbs lost/yr

There are psychological, sociological and cultural factors that affect the way we eat. It is important to consider why, where, when, how, and who we eat with to identify triggers or barriers to maintaining a heart healthy lifestyle.
Obesity is on the rise. More people than ever before are significantly over their target weight. Obesity can lead to diabetes, high cholesterol and high blood pressure. Physical inactivity can lead to obesity, high cholesterol, high blood pressure and diabetes. If you have a combination of these risk factors, you have an increased risk of developing heart disease. If you change habits that influence more than one risk factor, you are greatly reducing your risk of a heart event. Lifestyle habits can speed up or slow down the rate your arteries build up with plaque. In addition, your environment and family background will affect your risk of developing heart disease.

So . . . how do you measure up?

Your waist size is used to measure to see if you are at risk of developing heart disease, diabetes or hypertension. It is a simple and accurate way to tell if you are at an increased risk. If you are a **woman** and your waist measures more than 89 cm (35”), you have an increased risk. If you are a **man** and your waist measures more than 102 cm (40”), you have an increased risk.

Your waist measurement should be taken at your “belly button” not above or below. Don’t rely on your pant size for an accurate waist size.

See page 139 for Tips for Weight Control
**Diabetes**

Diabetes is a common disease and the incidence is growing. It is a disease in which your body cannot properly store and use fuel for energy. Diabetes can result from a lack of insulin or from the body not using the insulin available. Most people who develop diabetes when they are younger have **type 1 diabetes**. About 10% to 15% of people with diabetes have this form. The cause of this is not totally known and it usually develops quite rapidly. In type 1 diabetes the pancreas produces very little or no insulin. All people with type 1 diabetes require insulin to manage their diabetes.

The most common form of diabetes is called **type 2 diabetes**. About 90% of people with diabetes have this type. It is usually a gradual onset and begins with mild symptoms. In fact, some people diagnosed with type 2 never have any symptoms. They are often diagnosed during a routine physical examination or while in hospital for another reason.

Following your heart event, you may have been told you have diabetes. The stress of the heart event may have brought this to the surface. However, you likely had diabetes long before, but symptoms were not obvious. People with type 2 diabetes can manage their diabetes and keep healthy by:

- making healthy food choices and losing weight
- doing regular physical activity
- taking diabetes medication (including insulin) if prescribed

Some people are at an increased risk of developing type 2 diabetes. These people have an impaired fasting glucose (IFG) or impaired glucose tolerance (IGT). Both of the terms IFG and IGT mean **pre-diabetes**. In other words, their body is beginning to have difficulty getting glucose into the cells where it can be used for energy. These people do not usually have symptoms and can go on for years before a diagnosis of diabetes is made. However, the effect on the body begins when the body starts having difficulty using the glucose.

To diagnose IFG your doctor can do a simple blood test. If your blood test shows a blood sugar level of between 6.1 and 6.9, you have IFG. In the past this was sometimes referred to as ‘borderline diabetes’. This term is not used anymore. If you have IFG, the treatment is the same as for someone with diabetes. If you have diabetes in your
family, it would be good to have this blood test done. Other family members should be checked as well. If pre-diabetes is caught early enough, you may be able to prevent diabetes and the complications associated with it.

Insulin resistance and high insulin levels can cause type 2 diabetes. Excess levels of body fat can contribute to insulin resistance. Your pancreas is producing enough insulin, but it is not able to do its job. If you lose weight, your insulin will begin to do its job of lowering the sugar level in your blood. Most of this information refers to the control of type 2 diabetes.

Exercise can help decrease insulin resistance. If you exercise regularly, insulin can do its job better and reduce the glucose level. Very simply put, a combination of healthy food choices, weight loss, exercise and medication, when necessary, can bring your diabetes under control and reduce your risk of further heart events.

If you have type 2 diabetes, the main goals are:

- To achieve a balance among – food, exercise, weight and medication (pills or insulin).
- To reach and keep a healthy body weight.
- To prevent complications involving the heart, kidney, brain (stroke), eyes, nerves and circulation.
The Balance

Exercise + Insulin + Food = Balance

People with diabetes are encouraged to check their blood sugar. You should check your blood sugar regularly; (ie one day a week before meals and on another day of the week 2 hours after your meal). Record your results in the log book provided with your meter. If you do not have a blood meter machine, your pharmacist can assist you in getting started. It is important to keep a record of your blood sugar results in the log book provided.

Target blood sugar levels

<table>
<thead>
<tr>
<th>Level</th>
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<tbody>
<tr>
<td>4.0 – 7.0 mmol/L before a meal</td>
</tr>
<tr>
<td>5.0 – 10.0 mmol/L two hours after a meal</td>
</tr>
</tbody>
</table>

The goal is to get your blood sugar to target most of the time.

The more risk factors you have in addition to diabetes, the greater your risk of heart disease and stroke. You might be thinking “This is good information, but it’s coming too late.”

NOT SO … YOU CAN reduce your risk of further problems by looking at your controllable risk factors. By changing your lifestyle you are reducing the impact diabetes has on your major organs. As you make these changes and begin to feel better, the quality of your life will also improve. Information on other controllable risk factors is contained in this section.
**Take Note of This!**

*Regular exercise can help you keep your blood sugars in target.*

There are some things people with diabetes should know or do before they start to exercise on a regular basis.

Monitor your blood sugar levels before and after each exercise session. This is more important if you are starting new exercises, increasing the intensity or duration of exercise, or if your medications have changed. Test each time you exercise until you know your blood sugar is staying within a normal range during your exercise session.

Try to maintain your blood sugars in the range of **4.0 – 7.0 mmol/L before meals** and before your bedtime snack. Aim for a blood sugar **less than 10.0 two hours after meals**.

**Be aware of the signs and symptoms of low blood sugar:**

<table>
<thead>
<tr>
<th>► shakiness</th>
<th>► light headedness</th>
</tr>
</thead>
<tbody>
<tr>
<td>► trembling</td>
<td>► nervousness</td>
</tr>
<tr>
<td>► sweating</td>
<td>► palpitations</td>
</tr>
<tr>
<td>► weakness</td>
<td>► drowsiness</td>
</tr>
<tr>
<td>► hunger</td>
<td>► irritability</td>
</tr>
<tr>
<td>► headache</td>
<td>► confusion</td>
</tr>
<tr>
<td>► dizziness</td>
<td></td>
</tr>
</tbody>
</table>

**If your blood sugar drops below 4.0 mmol/L, take one of the following:**

<table>
<thead>
<tr>
<th>► 3/4 cup of unsweetened orange juice</th>
<th>► 3 sugar cubes</th>
</tr>
</thead>
<tbody>
<tr>
<td>► 3/4 cup of regular soft drink</td>
<td>► 6 Lifesavers</td>
</tr>
<tr>
<td>► 3 tsp of sugar</td>
<td>► 3 tsp of honey or corn syrup</td>
</tr>
</tbody>
</table>

A low blood sugar may occur as much as 4-6 hours after your exercise session.
To prevent a low blood sugar on a regular basis, it may be necessary to decrease your insulin on the days you are exercising. Check with your doctor or diabetes nurse educator to discuss the best way to do this.

When starting an exercise program, you should check your blood sugars just before exercise and immediately after exercise to find out the effect of exercise on your blood sugars.

**If you are on insulin or pills:** If your exercise session is planned and regular, you may need to adjust your insulin/pills to compensate for the expected drop in blood sugar.

Avoid injecting your insulin into body areas that will be moving during exercise. Try injecting into your tummy. Avoid exercise at peak insulin action time. You will need to learn at what time your insulin is working.

After each exercise session, check your feet. If you notice any red spots, it may mean your shoes are not fitting properly. It may be time for a new pair. Buy your running shoes at a store where the staff know how to provide you with a proper fit for your foot.

*Happy Feet = Happy You!!*

**Do not exercise if you are feeling unwell !!!**
As you can see, diabetes can be complicated. The good news is that any positive change in your lifestyle will likely result in a reduction in your overall risk of another heart event. Don’t delay … Get started!!!!

For more information, please contact your local Diabetes Education Program.

**Remaining Risk Factors**

Inactive lifestyle, nutrition, and psychosocial stress are the remaining controllable risk factors. They are discussed in detail in separate sections in the body of this manual. Please refer to the table of contents for information on Exercise, Heart Healthy Nutrition and Stress.

We have discussed risk factors we know about. There is ongoing research into what causes heart disease. Homocystein, C-Reactive proteins and infections have been investigated as markers for increased risk of heart disease. By identifying markers, doctors may be better able to calculate a person’s risk for heart disease and make treatment decisions more effectively. Further research is needed.
Are You Ready to Change Your Lifestyle?

"A mind that is stretched to a new idea never returns to its original dimension."

Oliver Wendell Holmes
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Are You Ready to Change Your Lifestyle?

Read these statements to help you decide what you are thinking about change. First, it is important to answer the questions by thinking about your lifestyle in a general way. Then, you may want to answer these questions by thinking about each lifestyle habit or risk factor (smoking, diet, exercise, stress management).

Check the statement that best describes how you are thinking.

1. ____ No, and I do not intend to change my lifestyle in the next 6 months.

2. ____ No, but I am thinking about changing my lifestyle in the next 6 months.

3. ____ No, but I intend to make a change in the next 30 days and have tried for at least 24 hours in the past year.

4. ____ Yes, I have made a change in my lifestyle, but for less than 6 months.

5. ____ Yes, I have made a change in my lifestyle and for more than 6 months.

You may have quit smoking many years ago. You would put a checkmark beside statement #5 (Yes, I have changed my lifestyle and for more than 6 months.). However, you may have been thinking about joining an exercise class, but just could not get yourself to register. You would put a checkmark beside statement #2 or #3. As you can see, your answer will change, based on your lifestyle habits.

If you answered ‘yes’ to statement #1, you are not ready to proceed. Give yourself some more time to think about the pros and cons for changing your lifestyle. When you are ready for change, return to this part of the manual. Remember, for each lifestyle habit, you may be at a different stage of readiness to change.

Try to think of changing your lifestyle one step at a time, instead of in one big chunk.

Try to separate the habits and lifestyle factors. It may be helpful to refer to the Risk Factor section of your manual to decide where to begin.

If you have checked statements #2, #3, #4 or #5, you will find the following information helpful.
Often there is a big gap between thinking about change and doing it. Understanding the nature of change can help you to bridge this gap. Change isn’t always hard and most of it comes naturally. We are always adapting to things around us by learning new skills, new information and new ways of living. When change is difficult, it is important to try NOT to wallow in self-criticism, blaming or judging. Instead, try to figure out what is getting in the way and then see what you can do about it.

**Think of change as neither good nor bad … just different.**

All of us are different; so there is no one way to change. Some people use a very structured approach to change. Some don’t plan at all. It will be important to find out the style of change that works for you.

Making big changes can happen through a series of small steps. For example, if you plan to quit smoking, you might begin by trying to figure out what triggers a craving for a cigarette. Then, you might try to change your triggers, which might include changing some things around you.

To avoid smoking as much, you might decide only to smoke outside your home or car. In preparing for this change, you may decide to remove all the ashtrays from your home and car.

If you are trying to add more walking into your lifestyle, you may park farther away from the grocery store. You may also take the stairs instead of the elevator. This may go on for years before you decide to enter a formal exercise program. It is still positive change.

Other changes come from a more radical shift in our hearts and mind. In other words, the old way of thinking and doing things won’t work any more. Since you have had a serious health change, this may be what you are thinking. We call this **BREAKTHROUGH CHANGE**. Many people who face a life-threatening illness, family crisis or natural disaster make huge changes in their lives. Often, old beliefs, old habits and old ways of thinking are changed. Sometimes radical changes are easier than step-by-step changes.
Ask Yourself:

*What do I need to work on changing?* (Be honest!)

*Do I really want to change?*
(Write out your thoughts about changing or not changing your lifestyle. List some pros and cons for changing. What excuses are you using for avoiding the change?)

*How ready am I to make the change?*
(Are you ready to hear information on the change or are you ready to do something now?)

*What are the best steps for me to take?*
(Write out what you think might help you as you try to change.)
How confident am I to make the change?
(On a scale of 0% to 100%, circle the number that best describes the rating you would give yourself on how confident you feel about changing.)

Not at all 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% Totally Confident

What would help me to succeed at making this change?
(List the things you think would help.)

What are the things that could stop me from making this change?
(List the barriers.)

Who are the people I can turn to for help and support?
(List those people and how they could help.)

It is MOST important that YOU decide what YOU want to change. Information is useful in helping you decide, but you are the one in charge of the change(s). Make a personal decision to change and you are more likely to find success. If you
decide to make the change because your doctor, nurse or family told you to, you may succeed for only a short while. If you change because YOU want to change, you will be more likely to succeed for the long haul.

**Tips for Managing Changes**

Changing your lifestyle is a lot of work for you and your family. It takes more than willpower. You may be thinking it is hard to know where to begin. It may be helpful for you to think of this as learning a new skill rather than simply getting motivated to change. You may wish to try some of the following ideas. Put a ✔ check beside the ones you think will be helpful as you get started.

1. **Monitor Your Behavior**
   
   Some of you may find this too much work or too much bother. However, if you are more aware of the things you are doing, you are more likely to follow through with the new patterns you are trying to learn. For example, if you keep a record of the food you are eating, you are more likely to limit the foods to avoid. You become more aware of what you are doing and you perform better. Several studies have shown monitoring behavior heightens awareness of the behavior(s) you are working to change.

2. **Modify Your Environment** - To change yourself, it’s important to:

   ![Change your Surroundings.](image)

   a. One of the founders of Weight Watchers showed overweight women could lose weight by changing their eating and also by changing their environment. They suggested the following examples to modify your environment:
   
   b. Try eating from a smaller plate.
   
   c. Keep fresh vegetables in the fridge to munch on when hunger strikes.
   
   d. Avoid grocery shopping when hungry.
   
   e. If feeling tired is a stimulus for eating, take a nap or go to bed earlier so you don’t feel the urge to eat a bedtime snack.
   
   f. Remove yourself from the environment where you are more likely to eat.
g. If watching TV is another stimulus for eating, find a hobby to keep you busy and away from the trigger.

3 **Make Commitments**

When you make a commitment to another person, you establish a built-in system for success. You will be rewarded if you do it and punished if you don’t. For example, if you plan to exercise with a friend and your plan falls through, you are letting yourself down, but you are also letting your friend down. If one day you don’t feel like exercising, but your friend does, this will be just the motivation you need to keep up with the program. Your friend may even get angry with you and this may be a reminder of the commitment you made to yourself to exercise. If you do manage to stick with the walking, you will feel good about being able to follow through with the plan and will be rewarded by your efforts. This increased sense of “I can do it” will be just the feeling you need to keep you exercising on a regular basis.

4 **Give Yourself a Gift of Time** - Apply the 21-day rule of changing behavior.

   a. It says you will need at least 21 consecutive days of practice to adopt a new behavior. In other words, it takes 21 days to establish a new habit.

   b. It takes approximately 21 days to get rid of an old habit.

5 **Be Persistent** - Learn from your mistakes. Rome wasn’t built in one day. Likely, you have had these habits for many years and change won’t happen over night. Try new ideas and redo your plans as you learn more about yourself.

   *Never Give Up!* 

![Bull](image.png)
6 **Focus on Small Changes** - Change is not an all or nothing process. More than 95% of people who successfully quit smoking do so only after a series of setbacks and relapses.

6 Try not to overwhelm yourself by biting off more than you can chew. Work on changing one habit and once you feel like you are doing well, begin to work on the next.

7 Build in success slowly, one step at a time. Change is more likely to become permanent if you work at it using this approach.

7 **One Day To Live** - If you had only one day to live or three months or 10 years, how would you like to live? Now that you have faced a life-threatening illness your thinking may be different.

a. Ask yourself, ‘How do I want to spend the remaining years of my life?’ You may be wishing you had started making some of these changes earlier. Guilt is a wonderful motivation for the short haul. Don’t use it to keep you motivated for a lifetime.

b. Turn your thoughts toward **desire**; in other words, **want power**, not **will power**.

8 **Manage Your Relapses** - Mark Twain said “ Quitting smoking is easy. I’ve done it a hundred times.”

Stay in control. The most common triggers for relapses are negative emotions. If you can learn to deal better with anger, depression, negative thoughts, stress in general, this will help you stay in control. Remind yourself … you must have made progress to be able to say you have had a relapse or lapse. Refer to the section on “Coping with Stress” for more help in this area.
9  **Set Up a Support System** - Change is much easier if friends or family support your effort.

a. Be sure to let them know how they can help you to succeed with the change(s).

b. Share your plans with those around you.

c. If you are more comfortable keeping your plans to yourself, be sure you are doing this for the right reasons. You may be holding back, robbing yourself of some very much needed support and encouragement.

d. Look back at how you achieved success in other areas of your life. Did you do it alone or with the support of those around you? The answer to this may help you to decide.

---

**LiveWell with Chronic Conditions Program**

The LiveWell with Chronic Conditions Program provides practical suggestions and support, which builds confidence and skills in coping with the everyday challenges of a chronic condition.

You will learn to take control of your chronic condition rather than the condition controlling you.

Two trained leaders meet with groups of up to 15 participants for 2 ½ hours, once a week for six consecutive weeks.

The classes are fun as well as practical with emphasis on building skills for managing your health and maintaining an active and fulfilling life.

If you would like to register for the LiveWell with Chronic Conditions program, please call 655-LIVE (655-5483).
Have you ever been in a situation where you were the novice and another was the master? The master had taught you all the techniques, instructed you in the method of the discipline, whatever it was, and enabled you to perform the discipline properly. But, when you performed the techniques and worked the method, the results fell far short of the master’s performance.

Take a simple example: the game of chess. If you play chess, at some point in your life, someone sat down and taught you the basic move of each piece, explained the theory of the game and enabled you to “play” a game of chess. As you began to play with others, you quickly discovered a vast difference between knowing how to make the moves and how to play the game. Playing the game requires a much broader perspective than knowing how to make the moves. The master understands how the moves work within a far deeper dimension.

When you are thinking about changing your lifestyle, you may consider the moral of this story is: “Look toward the master for your direction, but, you are the master of your own destiny.” Looking deep into yourself will provide you with the information. Looking to your masters, doctors, nurses and rehabilitation team will provide you with knowledge and wisdom to help you make the moves. You are always in charge of making those moves. Yes … you are going to make mistakes, just as in the game of chess. As you become more skilled at making choices, you will have more success with the lifestyle changes. Learn and grow from your lapses and move on.
Someday I’ll…

There is an Island Fantasy
A “Someday I’ll”, we’ll never see
When recession stops, inflation ceases
Our mortgage is paid, our pay increases
That Someday I’ll, where problems end
Where every piece of mail is from a friend
Where the children are sweet and already grown
Where all the other nations can go it alone
Where we all retire at forty-one
Playing backgammon in the island sun
Most unhappy people look to tomorrow
To erase this day’s hardship and sorrow
They put happiness on “lay away”
And struggle through a blue today
But happiness cannot be sought
It can’t be earned, it can’t be bought
Happiness is where you are right now
Pushing a pencil or pushing a plow
Going to school or standing in line
Watching and waiting, or tasting the wine
If you live in the future, you’re on Someday I’ll
The fear of results is procrastination
The joy of today is a celebration
You can save, you can slave, trudging mile after mile
But you’ll never set foot on your Someday I’ll
When you’ve paid all your dues and put in your time
Out of nowhere comes another Mt. Everest to climb
From this day forward make it your vow
Take Someday I’ll and make it your NOW!

Seeds of Greatness – Denis Waitley – 1983
**Exercise**

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About Exercise

This section will give you some guidelines about how much physical activity you can do once you are home from the hospital. It is important to start exercise gradually, and allow your heart to heal. How much exercise you will do depends on your medical condition, type of treatment you received (bypass surgery, angioplasty/stent, medications), your fitness level, and what types of physical activities you enjoy.

You may ask: "Will exercise really change anything in my body? Will it decrease my chances of having another heart attack?" Exercise alone may not prevent a second heart attack, but it will improve your recovery and reduce your risk for further health problems.

Regular exercise will increase the efficiency of your heart and lungs (cardiorespiratory fitness) at rest and during physical work. A fit heart is a more efficient pump. The benefits are:

- lower heart rate and blood pressure
- improved pumping ability of heart muscle
- a reduction of signs and symptoms during exercise (angina, shortness of breath, chest discomfort, fatigue)

The Good News is

You can reduce your risk of heart disease by maintaining a healthy lifestyle. Being physically active on a regular basis is a good way to lower your overall risk. Physical activity also reduces your risk because it has a positive effect on most of the other risk factors (lower blood pressure, improved cholesterol values, increased insulin sensitivity, etc…). The people that show the greatest improvement are those that go from being inactive to regularly active. If you are physically active on a regular basis, you are on the road to better health.

Being physically active on a regular basis, means participating in activities like: walking, cycling, swimming or dancing every day or at least three times per week. These activities should increase your heart rate, use large muscle groups, be rhythmic and continuous and last for 15 minutes or more. In order to start making positive changes in your risk for heart disease, try working towards being physically active every day. In other words, the more faithful you are to your program, the better the results will be. Using your body physically in various activities throughout the day help it to operate optimally.
Benefits of Exercise

- Lowers blood pressure
- Can reduce further plaque build up
- Improves cholesterol profile in your blood
- Assists with weight control
- Increases heart performance
- Helps prevent or manage diabetes
- Increases energy level
- Lowers heart rate
- Strengthens bones
- Decreases stress level
- Improves immune system
- Reduces angina symptoms
- Reduces insulin resistance
- Helps the lining in the arteries become healthier

In making healthy lifestyle choices, it is difficult to separate out the benefit of one healthy change versus another: following heart healthy eating guidelines; being physically active on a regular basis; maintaining a healthy body weight, not smoking etc. These healthy lifestyle choices act most effectively together. By working on all of these a little bit at a time, you can reduce your risk of heart disease and further health problems.

Start with the healthy lifestyle change that is most important to you, and build other changes in gradually.

Your exercise routine will change from day to day as you recover. This begins in the Cardiac Care Unit, and progresses to the hospital ward, home, a supervised cardiac rehabilitation program, or in your community.

Remember: You may need to adjust these guidelines based on how you feel.
**In-Hospital Activities**

While in-hospital, your physical activity level will increase daily. You may start with upper body stretching, self-care activities, and deep breathing.

Next, you may start easy walking for 3-5 minutes several times a day (taking a rest if needed). Before leaving the hospital you may try walking up a flight of stairs. All of these activities are meant to prepare you for discharge from the hospital, and for you to return to activities of daily living.

There should be a balance between exercise and rest so you don't over-exert yourself. It is more important to start out with several short sessions of easy walking with rests in between, and go a little longer as you feel stronger.

**Consult Your Physician About**

- return to work, part-time or full-time
- participating in sports and physical activities (bowling, golfing, dancing, curling)
- going on trips or vacations
- any health concerns that may come up as you recover

**Activities of Daily Living**

Activities of Daily Living refers to the physical tasks that we do in our day to day life.

Exercise is also a part of Activities of Daily Living. It refers to doing physical activity for the purpose of increasing our activity.
Components of Fitness

Being physically fit can be achieved though an active lifestyle and/or exercise training. Your fitness level is dependent on the different components of fitness described below. Each component of fitness requires a specific type of training or exercise in order to improve the level of fitness. Although all of the components of fitness are important, the focus of your time should be spent improving your cardiovascular endurance (fitness of your heart and lungs).

Flexibility
- the range of motion about the joints (involves ligaments, tendons, muscles, etc)
- increasing your flexibility helps reduce the risk of injuries
- increases your enjoyment of other activities
- helps make activities of daily living easier

Muscular Strength
- the force produced by a muscle during a contraction
- an example of an activity requiring muscular strength is weight-lifting. The more strength we possess, the easier it is for us to do activities in our daily life.

Muscular Endurance
- the ability to perform a strength exercise which requires stamina for many repetitions such as rowing or canoeing

Cardiovascular (aerobic) Endurance
- the ability of your heart and lungs to deliver oxygen to the working muscles during sustained repeated continuous activity such as brisk walking or cycling, and the efficiency of your muscles and other metabolically active tissues in utilizing this oxygen

Body Composition
- if the components mentioned above are maintained, body composition, in particular weight loss, is a matter of balancing what you eat and how active you are
- weight control is more difficult if you are inactive and you over-eat
  - in terms of fitness it is desirable to increase lean body weight (muscle, bone) and reduce fat weight
Starting out

- be active around the house
- assist in light duties around the house (washing and drying dishes, folding laundry)
- use the stairs and take a rest if needed
- limit your visitors to family and close friends for the first while (ask visitors to leave if you are tired)
- go for rides in the car, but **do not drive**
- generally, you can drive your car after four weeks of recovery from a heart attack, or bypass surgery (**Refer to your discharge instructions**)  
- continue resting after meals (quiet activities, read, watch TV, nap)
- enjoy sexual activity when you feel comfortable and are able to climb two flights of stairs – but not at the same time – keeping a sense of humour is good medicine too!
- attend to business needs within reason (start with 1-2 hours)
- if you have any questions or concerns about activity, talk to your doctor or Exercise Therapist

---

**A Special Note about Driving**

It is important to report your heart event to SGI. You may be required to have a medical form completed by your family doctor.
*Home Exercise Guidelines – For the First 6 weeks after heart attack or bypass surgery*

As you recover from your heart attack or bypass surgery, your body and heart will need time to heal. During this time, you should avoid heavy or more difficult activities. You can continue with moderate levels of activity in daily living. A *rough guideline is to work at your resting heart rate plus 20 beats* (e.g. if your resting heart rate is 60 beats a minute, then you would try to keep activity below 80 beats a minute). Moderately paced walking is advised. You will likely notice that you are more tired and play out fairly fast. Try to avoid becoming overtired.

**The following is a sample of how to progress with regular walking.**

**Stepping Out**

**Step 1**
- love try walking for 5-10 minutes 2-5 times daily, with rest breaks, as needed.
- love gradually increase the length of your walks
- love your heart rate while you walk should be no greater than your resting heart rate plus 20 beats per minute
- love you should feel comfortable while you walk, and be able to carry on a conversation
- love Walk with a family member or a friend if you can

**Step 2**
- love try to walk for 10-15 minutes, 2-3 times daily with rests as needed
- love use the stairs several times a day with a rest if needed
- love your heart rate should be your resting heart rate plus 20 beats per minute
Step 3

♡ try to walk for 15-20 minutes, 1-2 times daily with rests as needed
♡ try to walk for 15-20 minutes (3-8 blocks) 1 - 2 times daily for 1 week
♡ try stretching activities to keep muscles and joints supple (see page 108)
♡ you may also try to increase your walking speed as you feel stronger (should feel comfortable, symptom-free, and be able to talk)
♡ your heart rate should be your resting heart rate plus 20 beats per minute

Step 4

Becoming and staying healthy requires daily physical activity. There are many benefits from daily exercise.

**Cardiovascular (aerobic) endurance is defined as the ability of your heart and lungs to deliver oxygen to the working muscles during continuous activity such as brisk walking or cycling.**

Regular walking will improve your cardiovascular endurance, as well as lower your risk for heart disease, stroke, and other health problems.

Please take a couple of minutes to think about why exercise is important to you. Record your reasons for exercising regularly or being physically active.

1. 

2. 

3. 

**Goal:**

**Regular Activity**
Progress to 150-300 minutes per week
Reminders

❤  avoid constipation - take a mild stool softener if needed
❤  watch for signs of emotional distress (excess worry, fatigue, anger, irritability)
❤  talk to someone who can help (friend, physician, therapist)
❤  plan to walk on a even surface (avoid hills)
❤  when you begin to get tired rest for about 30 minutes
❤  be careful when going out in hot, cold or windy weather
❤  avoid walking or other activity right after eating (rest for about 30 minutes after meals)
❤  avoid heavy or strenuous activities such as lifting heavy objects, running for a bus, carrying groceries etc….
❤  More difficult household duties such as washing floors, lifting heavy laundry, vacuuming, ironing, heavy lifting or pushing, shoveling snow, carpentry, mechanics should be avoided for the first 4 to 6 weeks. Ask your doctor or cardiac rehab team before returning to these.
Home Exercise Guidelines – For 6 weeks or more after heart attack or bypass surgery

F.I.T.T. Principle for a Safe and Effective Exercise Program

**F**requency ..................... How Often?

**I**ntensity ......................... How Hard?

**T**ime .............................. How Long?

**T**ype .............................. What Kind?

**F** = Frequency: How often?
In order to get the most from regular physical activity you need to aim to exercise on a daily basis. If you are inactive or recovering from a heart attack or bypass surgery, it is important to build in more activity as you feel stronger. As you recover, you will gradually increase activity. Refer to the guidelines on the previous page for exercise tips during the first couple of weeks of recovery.

♥ daily physical activity
♥ start with a reasonable goal and build slowly
♥ make exercise a regular part of your schedule
♥ exercise with a friend = more likely to succeed
♥ best to increase frequency first, then duration, and finally intensity
Home Exercise Guidelines – For 6 weeks or more after heart attack or bypass surgery

I = Intensity: How hard?

It is important to learn how to gauge the intensity of your exercise in order to participate safely in an exercise program. Pay attention to how hard you feel you are working.

How you feel is a good way for you to know if your level of activity is appropriate. The Rating of Perceived Exertion Scale (RPE) described below helps you to monitor your exercise intensity.

<table>
<thead>
<tr>
<th>Borg Scale of Perceived Exertion</th>
<th>What you might feel</th>
</tr>
</thead>
<tbody>
<tr>
<td>0  Nothing at all</td>
<td></td>
</tr>
<tr>
<td>0.5 Very, very weak</td>
<td></td>
</tr>
<tr>
<td>1  Very weak</td>
<td>Can whistle or sing and walk</td>
</tr>
<tr>
<td>2  Weak</td>
<td>Lots of reserve left</td>
</tr>
<tr>
<td>3  Moderate</td>
<td>Can talk and exercise</td>
</tr>
<tr>
<td>4  Somewhat strong</td>
<td>Feels comfortable</td>
</tr>
<tr>
<td>5  Strong</td>
<td>At the upper exercise limit</td>
</tr>
<tr>
<td>6  Very Strong</td>
<td>Difficult to talk and exercise</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10 Very, very strong</td>
<td>Maximal</td>
</tr>
</tbody>
</table>

A comfortable exercise level for most people is 3 - 5/10 for overall effort while exercising. Working above that level does not increase the benefits of exercise. You may do more harm than good because it can increase the risk of muscle and joint injuries.

If you are very tired after exercising later in the day, or the next day, you’ve done too much. Don’t be discouraged. Just remember not to do as much next time. It takes time to build up your fitness level.
Home Exercise Guidelines – For 6 weeks or more after heart attack or bypass surgery continued

When you exercise keep the following in mind:

- You should be able to carry on a conversation (walk-talk test)
- You should exercise at a rating of perceived exertion at 3-5/10 (moderate to somewhat strong)
- You should not have any symptoms of angina, shortness of breath or fatigue during exercise
- You should feel at least as good, if not better after you exercise than before you started (should not be overly tired)
- Start slower (warm up) for 5 mins. And end slower (cool down) last 5 mins.
- It is more important and safer to exercise longer rather than harder

You should start out with a slow walk as a warm-up activity and increase your exercise intensity gradually to a comfortable level for you. After exercising use cool-down activities to return your body to a normal resting level.
Exercise Guidelines – For 6 weeks or more after heart attack or bypass surgery  

**T = Time: How Long?**

Once you are on the road to recovery from your heart event/surgery, a typical exercise session should last for 20-60 minutes. You also need to leave enough time for a proper warm-up and cool-down (5-10 minutes in length each). The length of time you are able to exercise in a safe and effective manner depends on how fit you are when you start.

- Generally, 20-60 minutes per session
- Depends on your starting fitness level
- Build slowly (add 5 minutes each week)
- You should feel at least as good, if not better after you exercise than before you started (should not be overly tired)
- Do a proper warm-up and cool-down before and after exercise

You can add on 5 minutes of activity per session every one to two weeks as you feel ready. Gradually build to a maximum of 60 minutes per session as you feel comfortable. For you to get the most benefit, the activity should be continuous, but it is also acceptable to stop and rest. See how you feel and then continue.
**Home Exercise Guidelines – For 6 weeks or more after heart attack or bypass surgery**  

**continued**

**Importance of Warm-ups**

**Warm-ups**

- (generally 5-10 minutes in length; start with large body movements and stretching)
- prepares the body to exercise, reduces injuries
- gradually increases heart rate and pumping demand on heart
- gradually increases breathing rate and blood supply to working muscles
- lubricates the joints
- easy walking, biking, etc

**Cool-down**

- (5-10 minutes in length; ie...slower walking)
- to safely and gradually returns cardiovascular (heart) and respiratory (lungs) system to resting level
- important to avoid blood pooling in legs which may cause dizziness, fainting or discomfort
- decreases heart rate and breathing rate
- decreases muscle soreness following exercise

**Stretching should be done in the cool down phase. Stretch muscles when they are warm.** Proper daily stretching helps to prevent injuries, promote flexibility and good posture. Muscles should be relaxed when you begin. As slowly as possible, stretch the target muscle group, until you begin to feel the muscle pull. Hold the position to a count of ten while breathing evenly. Then relax. **Never hold your breath or bounce to increase your range.**
Home Exercise Guidelines – For 6 weeks or more after heart attack or bypass surgery

How to Progress

This is only a guide

لوحات

take rests when needed
لوحات

plan your walking route – remember that you have to return home as well
لوحات

you may try other forms of exercise such as the use a stationary bike, but consult your doctor first, especially following surgery or PTCA/stent procedures
لوحات

aim for similar time for exercise
لوحات

always do a proper warm-up and cool-down (5 minutes each)

Sample Walking Chart

<table>
<thead>
<tr>
<th>Level Activity / Time</th>
<th>Times/Day</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting out – early recovery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 1 walk 5-10 minutes</td>
<td>2x/day</td>
<td></td>
</tr>
<tr>
<td>2 walk 10-15 minutes</td>
<td>2x/day</td>
<td></td>
</tr>
<tr>
<td>3 walk 15-20 minutes</td>
<td>2x/day</td>
<td></td>
</tr>
<tr>
<td>4 walk 15-20 minutes</td>
<td>2x/day</td>
<td></td>
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<tr>
<td>Stepping out – ready, set, walk</td>
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<tr>
<td>Week 5 walk 20 minutes</td>
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<tr>
<td>6 walk 25 minutes</td>
<td>1x/day</td>
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<tr>
<td>7 walk 30 minutes</td>
<td>1x/day</td>
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<tr>
<td>8 walk 35 minutes</td>
<td>1x/day</td>
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<tr>
<td>9 walk 40 minutes</td>
<td>1x/day</td>
<td></td>
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<tr>
<td>10 walk 45 minutes</td>
<td>1x/day</td>
<td></td>
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<tr>
<td>11 walk 50 minutes</td>
<td>1x/day</td>
<td></td>
</tr>
<tr>
<td>12 walk 55-60 minutes</td>
<td>1x/day</td>
<td></td>
</tr>
</tbody>
</table>
**Home Exercise Guidelines – For 6 weeks or more after heart attack or bypass surgery**

**T = Type: What Kind?**

Activities that require the body to deliver oxygen to large working muscles are the most important for improving your cardiovascular (heart and lung) fitness. These are called aerobic exercises.

The best physical activities for the heart include all four points below:

- Use large muscles (legs and arms)
- Are rhythmic and continuous
- Increase your heart rate or feel like work (3-5 on the R.P.E. chart page 96)
- Optimally it is done for 15 minutes or more.

Examples of aerobic activities are walking, jogging, swimming, cross-country skiing, cycling, skating, etc.

Leisure time activities such as golfing, gardening, bowling or curling are good as well. However, because you stop and start there is less benefit to your heart and fitness level.

It is important to choose activities that you enjoy. Try activities that work a variety of muscle groups in the body.
**A Typical Exercise Session**

![Graph showing the rate of perceived exertion (RPE) over time during a typical exercise session.](image)

**Sample Session:**

- **Warm-up** 5-10 minutes of slow walking
- **Cardiovascular fitness** 20-60 minutes of moderately paced walking
- **Cool-down** 5-10 minutes of slow walking
  Muscular strength activities

**Proper Walking Technique**

- ✩ With each step, your heel touches the ground first
- ✩ Roll over the ball of your foot onto your toes
- ✩ One foot bears all your weight until your other heel strikes the ground
- ✩ Swing arms naturally
- ✩ Avoid carrying arm weights or ankle weights due to increased risk of injury
- ✩ Walk with good posture
- ✩ Breathe comfortably (in 1-2 out 1-2)
A Checklist for Exercise Shoes (see diagram):

**Construction**
- Leather is best because it breathes and molds to fit your foot
- Soles should be strong and flexible with good grip
- Insoles should be cushioned to absorb forces
- Insoles should also have rigid shanks (mid-section)

**Fit**
- Must be comfortable, don’t wait for stretching
- Always buy for your biggest foot
- Shop later in the afternoon
- Toe box should be roomy so that you can wiggle your toes
- Your forefoot should not be wider than your shoe
- The heel should fit snuggly and the instep should not gape open
- If you can’t find shoes that fit, ask for advice
Important Points to Remember about Exercise

1. **Rest periods**
   Be sure to take adequate periods of rest between your exercise sessions. This is particularly important when you begin your exercise program. As a general rule, you should take equal periods of rest and exercise. As you become fitter the rest periods will be shorter and the exercise periods longer. This may be an opportunity to take a mental break and work on stress management.

2. **Eating Meals**
   Avoid exercising after a large meal.

3. **Intake of Fluids**
   It is indeed an old myth that you should never drink while exercising. As you exercise your cells lose water through breathing/evaporation and sweat. Maintain a reasonable daily fluid intake to avoid dehydration. If you are taking a water pill, check with your doctor about proper fluid intake.

4. **Do not drink alcohol before you exercise**

5. **Hot and Cold Weather**
   Both may tend to make your heart work harder. In cold weather especially when there is the added resistance of snow and wind, be sure to slow down your pace and dress warmly. Always wear something on your head. If you are troubled by angina pain in cold weather and you cannot avoid going outdoors, wear a scarf around your mouth and nose.

   Hot weather may also make your heart work harder and tire you more easily. Again slow your pace and dress appropriately. On a hot day avoid exercising in the heat of the day.
6. **Arm Activity**

The work you do with your arms can put more demands on your heart. Limit these activities while your heart is healing.

After open heart surgery care must be taken to make sure your chest bones have fully healed before you begin heavier resistance activities. See your doctor before you begin.

There are several points to keep in mind while doing arm activities such as mowing the lawn, snow shoveling, lifting, carpentry work, gardening, vacuuming, housework, etc.

**Take regular rest breaks doing activities that involve using your arms.** If you feel the need to hold your breath when lifting or moving an object you are probably doing too much.

While in hospital, should you have any further questions, talk to your doctor or nurse. The ability to do arm activities will vary from person to person.

**Important Points to Remember about Arm Activity**

- ♥ Check with your exercise therapist or doctor prior to starting.
- ♥ Don’t hold your breath when lifting or moving objects. This makes your heart work harder and increases your blood pressure and workload on your heart.
- ♥ Breathe out as you lift. If you feel the need to hold your breath when lifting or moving an object you are probably doing too much.
- ♥ Keep the activity at chest height (ironing, painting, washing walls, etc.).
- ♥ Limit the time and amount you work with your hands over your head.
- ♥ Keep it light when lifting or carrying objects. For example; when shoveling, use a small shovel.
- ♥ Break up large tasks (when watering the plants, use a smaller amount of water and make more trips rather than carrying a heavy pail).
- ♥ Don’t grip the object tightly when lifting as this increases your blood pressure which will result in a greater workload on the heart. (for example; raking, shoveling, and vacuuming).
- ♥ Keep the object as close to your body as possible to maintain optimal stability
- ♥ Pace yourself, work at a comfortable rhythm and take regular rest breaks.
**Action Plan**

To make changes, it helps to have a plan. Write down a couple of goals you would like to work toward.

<table>
<thead>
<tr>
<th>Goals and Action Steps</th>
<th>Time</th>
<th>Line</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal #1:</strong></td>
<td></td>
<td></td>
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<tr>
<td>Action Steps:</td>
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</tr>
<tr>
<td>1.</td>
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<td><strong>Goal #2:</strong></td>
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<tr>
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<td><strong>Goal #3:</strong></td>
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<tr>
<td>Action Steps:</td>
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<tr>
<td>2.</td>
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</table>

(Perceived exertion page 96)

**Home Exercise Log**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weekly Time</th>
<th>RPE (/10)</th>
<th>Distance</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>example:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>walking</td>
<td>105 min</td>
<td>4/10</td>
<td>36 blocks</td>
<td>felt good</td>
</tr>
</tbody>
</table>
Helpful Hints for Active Living:

❤ Be physically active every day
  . walk to work or on your lunch break
  . try a variety of activities

❤ Plan your exercise route
❤ how long? how far?

❤ Exercise with a friend

❤ Plan for adverse weather
  . indoor facility? exercise equipment?
  . dress in layers

❤ Wear comfortable walking shoes

❤ Keep a food and activity record
  . keep a calendar on your fridge to make it easy to record your minutes of physical activity and healthy eating habits (use stickers)

❤ Reward Yourself
  . plan to do things you enjoy such as
  . 30 minutes of walking = 30 minutes of reading

❤ Always warm-up and cool-down
  . 5-10 minutes in length for each with stretches

❤ Plan for lapses
  . remember, no one is perfect and it’s to be expected that you may slip up once and a while – plan for the future

❤ Talk to a health care professional for extra help

❤ Exercise should feel comfortable
### Stretching Activities

- Warm up 5 minutes before stretching
- Stretching should feel mild discomfort
- Maintain good posture
- Stretch after walking
- Breathe comfortably
- Hold stretches 10-30 secs
- Change positions slowly

#### 1. Hamstring Stretch

- Feet in stride
- Weight on hands
- Supported on back leg
- Front toe lifted upwards
- Bent slightly at waist
- Stretch one leg at a time
- Keep back straight

#### 2. Calf Stretch

- Feet in stride
- Weight / hands on front thigh
- Heel pressed down on back leg
- Keep back straight
- Stretch one leg at a time

#### 3. Hip Flexor Stretch

- Feet in stride
- Lift back heel upwards
- Shift weight forwards
- Tilt pelvis forward
- Stretch one leg at a time

#### 4. Quadriceps Stretch

- Use a chair or wall for support
- Grab pant leg or sock
- Keep knee pointed downwards below hip
- Knees stay side by side
- Stretch one leg at a time
**Strength Training**

Done regularly, strength training builds bone and muscle and helps to preserve or increase strength, independence and energy.

Strength training when done with regular aerobic exercise, can also have a major effect on a person’s mental and emotional health. Studies have shown that people who exercise regularly sleep better. Strength training should be a part of a regular exercise program. Discuss this with your Cardiac Program staff member for more information on strength training and a program specifically designed for you.

Both men and women begin to lose significant muscle mass in their 40’s and 50’s. Some of that is due to the aging process, but most is due to more sedentary living. Muscle loss makes our years show. Our bodies look and act older as we loose muscle mass and gain fat.

Remarkably, when it comes to shrinking muscles you can get a second chance. Just 2 months of strength building exercises can reverse 2 decades of muscle loss in a typical person.

The key to stopping muscle loss with exercise is to strengthen the big muscles around the thighs, arms, shoulders and back. Muscles get stronger when they’re challenged by having to lift or pull something.

After a cardiac event you will be advised to reduce or avoid heavy near maximal work. Heavy work has increased risk without increased benefit. The key here is that what is heavy is a relative measurement. In other words, the stronger you are the easier things become. Maintaining or increasing your strength makes tasks easier and safer.
**Strength Training**

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“Whatever it is that you do, for at least thirty minutes each day, you should try to do exactly what you want to do.”

- William Glasser
### Stress

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<th>Page</th>
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<td>Where Does Stress Come From?</td>
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<td>How Can I Determine My Stress Level?</td>
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<td>Life Skills: Module 6 – Learn to Pat Yourself on the Back</td>
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<td>Life Skills: Module 8 – Tense to Relax</td>
<td>122</td>
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<tr>
<td>Life Skills: Module 9 – Visualizing Success</td>
<td>123</td>
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<tr>
<td>Life Skills: Module 10 – You Can Always Say NO!</td>
<td>124</td>
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</tbody>
</table>
In our everyday life, each one of us is faced with STRESS. Questions often asked are:

- What effect does stress have on my body?
- Where does stress come from?
- Is all stress bad?
- How can I determine my stress level?
- ABC of Stress Management

In this section we will begin to answer these questions for you. If you think stress is one of your risk factors, there are many good books, websites and workshops available on stress management. Ask your nurse or doctor about helpful resources. The more you learn about stress, the more successful you will be in lessening its effects. It may be helpful to keep in mind that stress management is a process, not a destination. Let’s begin …

**What Effect Does Stress Have on My Body?**

Stress can be defined as *“the amount of wear and tear on the body”*. The body responds physically, as well as psychologically, to stress. First, let’s look at the physical response.

Have you ever been frightened by a vicious dog, felt the presence of an intruder in your house, or thought someone was following you home at night? Recall how your body responded? Those stress responses have been programmed in your body thousands of years ago. Your body reacts in **three stages**:

1. Alarm Reaction
2. Resistance or Adaptation
3. Exhaustion
Alarm Reaction

The body response is called “fight or flight”.

Physical changes you may notice:
♡ racing and pounding heart
♡ perspiring
♡ tight stomach
♡ tense muscles
♡ clenched jaw
♡ gritting of teeth
♡ your five senses become more acute

Emotional changes you may notice:
♡ racing thoughts
♡ changing emotions
♡ inability to concentrate
♡ difficulty making simple decisions
♡ loss of self confidence
♡ irritability or frequent anger
♡ worry or anxiety
♡ irrational fear or panic

Inside your body – changes you do not notice:
♡ constricted (tight) arteries
♡ increased production of cholesterol and triglyceride by the liver
♡ increase in blood clotting time
♡ increase in blood pressure level and heart rate
**Resistance or Adaptation**

When you notice the dog is your neighbor’s friendly poodle, or the intruder is your friend dropping over for a surprise visit, the immediate threat is removed or overcome. The sense of relief felt is the body returning to normal.

**Exhaustion**

If the stressor continues, you will remain in the alarm stage. As a result, there is no feeling or sense of relief from the stress. An example of this is the person who perceives his job to be stressful. This stress must be faced daily and unless some changes occur, this stress can contribute to:

**Physical Changes**

- high blood pressure
- atherosclerosis / heart attack.
- migraine headaches
- flare ups of rheumatoid arthritis or asthma

**Unhealthy Coping Behaviours**

- smoking
- increased use of alcohol
- increased / decreased eating
- increased / decreased sleeping
- increased use of medications
- accident proneness
- nervous ticks or mannerisms
Emotional Changes

- depression
- anxiety attacks
- irrational behavior
- breakdown in relationships at home and work

Where Does Stress Come From?

Stress can add spice to your life, but too little or too much spice can spoil the soup! You’ve heard the saying, “One person’s pleasure is another’s poison.” It is important for you to decide what your **pleasure** is and what your **poison** is. Only you can identify those situations you will want to avoid or change.

Most stress comes in the form of day-to-day irritants. A long lineup at the supermarket, a Sunday driver on Monday, the glass of spilled milk, a deadline at work or a strained relationship are all examples of stressors you may face daily. The amount of wear and tear these day-to-day pressures produce is influenced by your viewpoint and attitude. Most often, your perception of the event is at the source of the stress, not the actual event.

**TIP:** *Ask yourself, “Is it really going to matter one year from now?”*

Is All Stress Bad?

- Stress is universal.
- Stress is not all bad (remember your perception).
- We require some stress to be vibrant, lively and productive.
- **Too much stress can be harmful.**
- **We call that “distress.”**

Healthy stress levels vary from person to person and from day to day.
A key question is: “What’s the best level for you?” To answer this question, list the stress you are facing right now. Imagine a thermometer similar to the one on the next page and rate your stress accordingly.

**How Can I Determine My Stress Level?**

My present stress:

- Stop the world – I QUIT!
- Crisis
- Close to the edge
- Too High
- A little more than I’d like
- JUST RIGHT – Normal for me
- Life a little dull
- Too low
- Ho-hum – ZZZ

Is your current level of stress healthy or toxic?

**Is your stress level stable, rising or falling?**

You may already recognize that stress is a very individual matter. What is “bad stress” for one person, might in fact be “good stress” for another. This may be a good time to take stock of those stressors in your life. Talk to your doctor, nurses, a counselor and most importantly, your family. The following exercise will help get you started. Make a list of those stressors you are trying to deal with and divide them into good and bad.
### Good Stress | Bad Stress

| 1. ________________ | 1. ________________ |
| 2. ________________ | 2. ________________ |
| 3. ________________ | 3. ________________ |

**TIP:** When you recognize potentially stressful situations, you are 1/2 way there in dealing with stress.

---

**ABC’s of Stress Management**

Your stress management program cannot be designed to eliminate stress. Your planning should help you move toward the level of stress that is **manageable for YOU.** The following tips may be helpful as you get started.

- **Accept** what you can’t control and try to change what you can
- **Adjust** or alter the way you choose to think about a situation as this is often within your control.
- **Avoid** situations that cause stress (tension) throughout the day and decide if you can control these feelings or body responses. Certainly, no one can completely avoid stressful situations, yet it is possible for each of us to influence how these situations affect us.
- **Balance** work and relaxation by developing hobbies and learning relaxation techniques.
- **Build** resistance through regular exercise, healthy eating habits and proper rest.
- **Build** good social supports through contact with family, friends and community.
♥ Change personal characteristics that may be contributing to your level of stress and present heart problem (i.e.: negative attitude, hostile reactions and cynical feelings.
♥ Consult your doctor, social worker, cardiac rehabilitation nurse, for more information on stress management.
♥ Change personal behaviors that may be contributing to your level of stress.
♥ Changing lifelong habits, and perhaps beliefs, will take time
♥ Recognize there are many ways to release stress, such as yoga, exercises in visualization, meditation, listening to music, prayer.

*Take it one step at a time and one day at a time.*
Rome wasn’t built in a day.
Are you ready to turn your life around?

It sounds simple: eat heart smart, quit smoking, get more exercise, lose weight, drink less and take it easy. Are you thinking it’s too late? The latest research suggests it doesn’t really matter where you start and YES, it does make a difference, particularly in your quality of life. One positive change leads to another. For example, becoming more physically active reduces weight and can inspire people to eat healthier and feel more relaxed. Make enough changes and soon you will discover you’ve adopted a new way of life.

Adopting healthy habits won’t cure all that ails you. Doctors believe as much as 70% of all chronic diseases, such as diabetes, high blood pressure, heart disease and some forms of cancer can be warded off with some timely and sensible changes in lifestyle. Stick with a healthy lifestyle – it helps if you learn a whole new set of behaviors. You can begin by understanding more about yourself and the various reasons behind your lifestyle choices.
Life Skills: Module 1 – Relaxation Through Breathing

From Heart Disease on the Mend by Frederic Luskin, PhD. Revised 1/17/01 Stanford Centre for Research in Disease Prevention.

Purpose

💖 Relaxation and Stress management are critical components of heart disease risk reduction
💖 You have a remarkable body – a simple breathing exercise can balance your nervous system and help you relax

Belly Breathing

💖 Imagine that your belly is a big balloon and you are slowly filling it with air.
💖 Place your hands on your belly while you slowly breathe in and out.
💖 Watch your hands as they rise as you breathe in and falls as you breathe out.

Practice

Set aside at least 10 minutes every day to practice “Belly Breathing”

Tips

💖 Whenever you feel under stress, practice “Belly Breathing”
💖 You can practice anywhere and at different times:

✓ watching TV
✓ taking a bath
✓ standing in line at the grocery store
✓ stuck in traffic
✓ while cooking
✓ even during times of stress
✓ while you are walking
✓ when you want to relax
Purpose

❤️ Concentrating on the good in your life will give you a warm feeling inside.
❤️ That warm feeling will help you feel more peace and less stressed.
❤️ Thinking about positive things is enhanced when combined with belly breathing.

Creating a Warm and Positive Feeling

❤️ Focus your attention on someone you love for 15-30 seconds.
❤️ Think about a place you find beautiful for 15-30 seconds.
❤️ Think about a kindness someone did for you for 15-30 seconds.

Practice

Before you begin your day’s activities:

✔️ Write on a piece of paper or make a mental note of the things you need to get done during the day.
✔️ Include on your list or in your thoughts, two things you promise to appreciate throughout the day.

During a stressful time:

✔️ Take two slow deep belly breaths.
✔️ When inhaling for your third breath, think of one of the following:

- Someone you love
- A beautiful place
- An act of kindness towards you

Tips

❤️ When you think of a person you love, think of someone that you are still in a good relationship with.
❤️ When you think of a place, think about what makes this place special and beautiful.
❤️ When you think about a kind act, think clearly about what they did that was so nice.
❤️ Notice the good feelings that come from thinking about your life’s many blessings.
Life Skills: Module 3 – Learning to Slow Down

From Heart Disease on the Mend by Frederic Luskin, PhD. Revised 1/17/01 Stanford Centre for Research in Disease Prevention.

Purpose

💖 When you slow down you put less strain on your body.
💖 When you slow down you have more energy available to accomplish what you need to do.
💖 Your life has so many things to appreciate – do not rush by them.

Practice 1

Do something you often do quickly really slowly (for example: eating a raisin) so you can:

✔️ Really notice how good something smells.
✔️ Really notice how beautiful something looks.
✔️ Really notice what something feels like.
✔️ Really notice what something tastes like.

Practice 2

Take two deep, slow belly breaths.

Remind yourself:

... “I HAVE ALL THE TIME THAT I NEED!”

Repeat this exercise 3 times during the day.

Tips

💖 Remind yourself that you can’t go any faster than you are capable.
💖 Notice the change in your breathing and how you feel when you practice “slowing down”.
💖 Food often tastes better when eaten slowly.
💖 Family and friends feel better when you slow down to talk and listen to them.
Life Skills: Module 4 – Life Skills – Accepting What You Cannot Change

From Heart Disease on the Mend by Frederic Luskin, PhD. Revised 1/17/01 Stanford Centre for Research in Disease Prevention.

Purpose

- Learn to choose your battles wisely.
- Learn to practice serenity when needed.

Accept What You Can Not Change; Change What You Can

- Trying to change a situation that is not in your control leads to frustration.
- When you feel frustrated and do not stop, it gets worse: you feel helpless and angry.
- Your mind and body suffer when you feel helpless and angry.
- Feeling less frustration allows you to concentrate on the things you do that will make a difference.
- Observe how much better it feels to practice wisdom.

Guided Practice

When facing a difficulty, ask yourself:

Does this difficult situation HAVE to change OR do I just WANT it to change?
If it does not HAVE to change and I only WANT it to change . . .

PRACTISE SERENITY

1. Take two deep belly breaths.
2. Remind Myself…”I am OK and can handle this.”
3. Ask Myself, “What can I do that will help this situation?”
4. Remind yourself:
   “I have the serenity to accept the things I cannot change.

Summary

- Can you think of some situations where this exercise might be helpful?
- Practice these exercises when you find yourself getting frustrated with your friends, your family or other circumstances in your life.
Life Skills: Module 5 – Stop Doing What Doesn’t Work

From Heart Disease on the Mend by Frederic Luskin, PhD. Revised 1/17/01 Stanford Centre for Research in Disease Prevention.

Purpose

♡ Learn to recognize when your solution is not working.
♡ Learn how to try new strategies that may have better results.

Solutions that Don’t Work…

♡ Lead to greater stress and make you feel worse.
♡ Make problems seem more difficult than they really are.
♡ Leave you with two problems to solve instead of one.

Guided Practice

When faced with a challenge:

1. Shift your attention fully to your belly.
2. Take at least two full, slow, deep breaths into and out of your belly.
3. Then fill your mind with an image of someone you love.
4. Hold the positive feelings that emerge in the area around your heart.
5. Notice that you now feel calmer and have less of a problem.
6. As the calmer part of you for help.

Tips

♡ Feeling stressed is NOT THE PROBLEM…it is a solution that is not working.
♡ You will never know which solutions work if you keep trying ones that don’t.
♡ Stress is rarely helpful to your health and/or peace of mind.
♡ Felling stressed over and over makes you feel helpless.

Life Skill

When what you are doing is not working,
calm down and find a better solution.
Grant me the serenity to accept the things I cannot change,
the courage to change the things I can,
and the wisdom to know the difference.
Life Skills: Module 6 – Learn to Pat Yourself on the Back

From Heart Disease on the Mend by Frederic Luskin, PhD. Revised 1/17/01 Stanford Centre for Research in Disease Prevention.

Purpose

♥ Notice the many good things you do.
♥ Learn to appreciate yourself.
♥ Remind yourself you work hard and are worthy of praise.

Why is this so Hard?

♥ It is easy to forget how much good we do.
♥ We are often criticized for things we do wrong rather than praised for things we do right.
♥ It can be difficult to acknowledge that we do some things well.
♥ People confuse conceit with appreciation.

Guided Practice

Reflect back on your day:

1. Think of one or two things that you did that were helpful or that you did well.
2. Appreciate yourself for the things you do that help others.
3. Appreciate yourself for your talents and skills.
Purpose

♡ To reflect on the positive reasons you do certain things.
♡ To remind yourself that you care about people and show it

Why is this so hard?

♡ It’s easy to get caught up in our tasks and how mundane they are.
♡ We often forget the loving reason behind what we do, and so the tasks lose their meaning.

Guided Practice

*Reflect back on your day:*

1. Think of some tasks or chores that you do every day.
2. Ask yourself why you do these things.
3. When you do that task or chore, think about how much you care about the person you are doing this for.

Message:

*We forget that often we do things because we want to be of help.*

*We forget how much we care for the people around us.*

*We forget how much help we are to them.*

*We forget how what we do would be missed if we stopped.*
**Life Skills: Module 8 – Tense to Relax**

From Heart Disease on the Mend by Frederic Luskin, PhD. Revised 1/17/01 Stanford Centre for Research in Disease Prevention.

**Purpose**

- To understand the difference between tension and relaxation.
- To relax deeply and fully.

**Guided Practice**

1. Take 2 full slow and deep belly breaths.
2. On the 3rd inhalation, fully tighten your left arm from your shoulder to your hand.
3. Hold your breath and keep your arm tensed for 2-3 seconds.
4. As you exhale, RELAX fully and let your arm drop.
5. Repeat Steps 1-4 with your right arm. Legs (each one at a time) and then your entire body.
6. Repeat to yourself something positive such as …
   - “I have all the time in the world.”
   - “I am relaxed and at peace.”

**Tips**

- When you tense your muscles, really TENSE them; when you relax, really RELAX.
- When you inhale, fill your belly up with air.
- When you exhale, concentrate on your belly becoming soft.
- Remind yourself how calm and relaxed you are and that you are capable of this kind of relaxation at any time – pay attention to what it feels like to be relaxed.
- Think:

  **Slow**... **DEEP**... **FULL**... **Relaxed**
Life Skills: Module 9 – Visualizing Success
From Heart Disease on the Mend by Frederic Luskin, PhD. Revised 1/17/01 Stanford Centre for Research in Disease Prevention.

Purpose

❤️ To find better ways to achieve your goals.
❤️ To feel successful about the things you do.

Practice

1. Think of something at which you want to succeed.
2. Take 3 slow, deep full belly breaths.
3. Make a mental picture of yourself succeeding at your chosen activity.
4. After viewing your success, congratulate yourself for your accomplishment.

Tips

❤️ Use the belly breathing to help you relax and think in more productive ways.
❤️ Start with things that are easy to achieve and then gradually move on to bigger challenges.
❤️ Practice this exercise at least 3 times each week … more if what you are working on is important.

Research shows that when we picture ourselves being successful, accomplishing our goals is more likely.


**Life Skills: Module 10 – You Can Always Say NO!**

From Heart Disease on the Mend by Frederic Luskin, PhD. Revised 1/17/01 Stanford Centre for Research in Disease Prevention.

**Purpose**

- A reminder that you have choices including the one to say “no”.
- Knowing you can say “no” means your “yes” is important.

**Practice**

1. Take 2 full, slow and deep belly breaths.

2. Then, say: “I need a few moments to think about this. Can I get back to you in a little while?”

3. When you offer your response, choose one of the following:
   - “I have thought about this and, unfortunately, I’m not going to be able to help you out this time. I realize this may be disappointing to you, but this is what I have decided.”
   - “I’m not going to be able to help you out in the way you asked; maybe together we can come up with a solution that works for us both.”
He that takes medicine and neglects diet, wastes the skill of the physician.

- Chinese Proverb
## Heart Healthy Nutrition

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<td>146</td>
</tr>
<tr>
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<td>153</td>
</tr>
</tbody>
</table>
Heart Healthy Nutrition

Good nutrition for your heart includes:

- a variety of food from Canada’s Food Guide. Eating a variety of food provides a wide range of vitamins and minerals.
- less total fat and mainly less saturated and trans fat.
- soluble fibre from fruit, vegetables, whole grains and legumes.
- 2–3 servings of fatty fish each week.
- skim or low fat dairy products.
- small portions of lean meats and skinless poultry.
- less sugar, salt, caffeine and alcohol.
- being at a healthy body weight.
- making gradual changes that you can stick with.
Fats In Foods

Fat is an important part of our food choices. It provides some vitamins and essential fats which our bodies need but cannot make.

There are many different types of fat in foods:

- **Foods high in saturated and trans fats raise blood cholesterol levels more than anything else you eat.** You should choose foods with less of these fats as often as possible.
- Polyunsaturated and monounsaturated fats may **lower** cholesterol levels. Use these fats to replace saturated and trans fats whenever possible.
- Omega-3 fats are a type of polyunsaturated fat that are good for your heart. Fatty fish are the best source of this fat.

<table>
<thead>
<tr>
<th>Good Fats</th>
<th>Action</th>
<th>Food Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ Monounsaturated Fats</td>
<td>▪ lower LDL (bad) cholesterol</td>
<td>olive oil</td>
</tr>
<tr>
<td></td>
<td>▪ may raise HDL (good) cholesterol</td>
<td>canola oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>peanut oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>avocado</td>
</tr>
<tr>
<td></td>
<td></td>
<td>nuts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>peanut butter</td>
</tr>
<tr>
<td>Polyunsaturated Fats</td>
<td>▪ lower LDL (bad) cholesterol</td>
<td>corn oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sunflower oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soybean oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sesame oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>safflower oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cottonseed oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>walnuts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sunflower seeds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pumpkin seeds</td>
</tr>
<tr>
<td>✔️ Omega-3 Fats</td>
<td>Many heart benefits including:</td>
<td>mackerel</td>
</tr>
<tr>
<td></td>
<td>▪ lower triglycerides</td>
<td>herring</td>
</tr>
<tr>
<td></td>
<td>▪ lower blood pressure</td>
<td>salmon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sardines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>trout</td>
</tr>
<tr>
<td></td>
<td></td>
<td>halibut</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tuna</td>
</tr>
<tr>
<td></td>
<td></td>
<td>blue fish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pollock</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sturgeon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>whitefish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soybeans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>walnuts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soybean oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>canola oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>flaxseed oil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ground flaxseed</td>
</tr>
</tbody>
</table>

* Include these fish 2-3 times per week.

For an explanation of cholesterol, LDL, HDL & Triglycerides, please refer to the “Risk Factor” section (page 58)
More About Omega-3 Fats

There are three main types of omega-3 fats found naturally in foods. All three types of Omega-3 fats may help prevent heart disease.

**DHA** and **EPA** are found in fatty fish such as salmon, herring, sardines and trout.

**ALA** is found in plant-based foods such as canola, flax, soybeans and walnuts.

Omega-3 fats may also be added to foods such as milk, yogurt, breads and liquid egg products. Whole eggs with enhanced levels of omega-3 fats are also available.

How Much Omega-3 Fats Do We Need?

- It is recommended that people with known heart disease consume 1000 mg of DHA and EPA daily.
- Ideas to increase Omega-3 Fat Intake
- Eat fatty fish at least twice per week - see the list on the previous page
- Use canola or soybean oils.
- Use non-hydrogenated margarines made from canola or soybean oils.
- Add 1-2 tablespoons of ground flaxseed to foods such as cereals, yogurt, salads and smoothies.
- Lightly top your salads and vegetables with flaxseed oil (Do not cook with flaxseed oil)
- Snack on walnuts or sprinkle on a salad, vegetables, cereals and yogurt.
- Choose omega-3 enhanced eggs (but still limit the amount of yolks you eat).
- Discuss the use of an omega-3 supplement with your doctor.
### Bad Fats

<table>
<thead>
<tr>
<th>Saturated Fats</th>
<th>Action</th>
<th>Food Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>– solid at room temperature</td>
<td>• raise total cholesterol</td>
<td>dairy products, lard</td>
</tr>
<tr>
<td></td>
<td>• raise LDL (bad) cholesterol</td>
<td>butter</td>
</tr>
<tr>
<td></td>
<td>• lower HDL (good) cholesterol</td>
<td>fat on meat &amp; poultry</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trans Fats</th>
<th>Action</th>
<th>Food Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• raise LDL (bad) cholesterol</td>
<td>shortening, hydrogenated margarine</td>
</tr>
<tr>
<td></td>
<td>• lower HDL (good) cholesterol</td>
<td>commercial cakes, pies, cookies, snack foods and fast foods made with hydrogenated oil.</td>
</tr>
</tbody>
</table>

**Trans fats** are made when a vegetable oil is **hydrogenated** to make it into a more solid fat.
Small amounts of trans fat also occur naturally in animal fats. This type of trans fat does not affect your cholesterol levels.

**Fish Fillets:**

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per 2 fillets (160g)</td>
</tr>
<tr>
<td><strong>Amount</strong></td>
</tr>
<tr>
<td>Calories 440</td>
</tr>
<tr>
<td>Fat 24 g</td>
</tr>
<tr>
<td>Saturated Fat 8 g</td>
</tr>
<tr>
<td>+ Trans Fat 5 g</td>
</tr>
<tr>
<td>Cholesterol 40 mg</td>
</tr>
<tr>
<td>Sodium 800 mg</td>
</tr>
<tr>
<td>Carbohydrate 40 g</td>
</tr>
<tr>
<td>Fibre 0 g</td>
</tr>
<tr>
<td>Sugars 0 g</td>
</tr>
<tr>
<td>Protein 25 g</td>
</tr>
<tr>
<td>Vitamin A 0%</td>
</tr>
<tr>
<td>Calcium 4%</td>
</tr>
</tbody>
</table>
Fibre

Fibre is found in vegetables, fruit, grain products, legumes and nuts. There are two types of fibre found in these foods, each with its own health benefits.

**INSOLUBLE FIBRE** helps keep bowels regular. Good sources are wheat bran, whole grain breads, cereals, pasta and rice.

**SOLUBLE FIBRE** helps reduce cholesterol and blood sugar levels. It also slows stomach emptying which gives a feeling of being full longer which may help with weight control. Good sources are oats, barley, psyllium and legumes.

Vegetables and fruit contain both types of fibre.

**How to add more insoluble fibre to your diet**

- Choose cereals with at least 3 grams of fibre per serving.
  - Sprinkle a high fibre bran cereal (All Bran, Fibre 1, 100% Bran) over your favourite cereal.
- Choose breads, buns, bagels, wraps and pitas made with wholegrain flours.
- Try whole wheat pasta and brown rice.
- Make muffins using bran cereals.
- Replace all or part of the white flour in recipes with whole wheat flour.
- Add ground flax seed to cereal, pancakes, yogurt, salad, and into baking.
- Eat the peels on vegetables and fruit where appropriate.

**How to add more soluble fibre to your diet**

- Eat oatmeal or oat bran porridge, and oat-based cereals.
- Add oatmeal or oat bran to pancakes, muffins and breads.
- Mix oatmeal with ground beef to make meatloaf, meatballs and hamburger patties.
- Try All Bran Buds for a source of psyllium. Add to your favourite cereal and sprinkle into yogurt.
- Consider a psyllium fibre supplement such as Metamucil or Prodiem. * (Be sure to drink more water if you take these.)
- Add barley to soups, salads, casserole and cook as a side dish.
- Use barley and rye flour in baking.
❤ Try rye bread and rye crackers such as Ryvita.
❤ Enjoy legumes (dried beans, peas and lentils) in soups, chili, stews, salads, wraps and pastas. Make a pot of baked beans or use the convenience of canned baked beans. Try hummus (a dip or spread made from chick peas). Mix cooked lentils with lean ground beef to use in recipes.
❤ Eat plenty of vegetables and fruit.
  o try to have 2 vegetables at noon and supper
  o have fruit for dessert and snacks
  o root vegetables such as potatoes, yams, carrots, beets and parsnips are good sources of soluble fibre
  o apples, bananas and citrus fruit are also good sources
❤ Fibre intake should be increased slowly and spread throughout the day. Aim for 25 – 35 grams of fibre per day. You should also drink more water as you increase fibre...6-8 cups/day

*Read the Nutrition Facts on packaged foods for the fibre content*

---

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
<th>Valeur nutritive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving 1 cup (34 g)</td>
<td>Portion de 1 tasse (34 g)</td>
</tr>
<tr>
<td><strong>Amount per serving</strong></td>
<td><strong>Céréales</strong></td>
</tr>
<tr>
<td>Calories / Calories</td>
<td>110 / 170</td>
</tr>
<tr>
<td><strong>With 1/2 Cup 1% Milk / Avec 1/2 tasse lait 1 %</strong></td>
<td><strong>% Daily Value / % valeur quotidienne</strong></td>
</tr>
<tr>
<td>Fat / Lipides 0.5 g</td>
<td>1 % / 3 %</td>
</tr>
<tr>
<td>Saturated / saturés 0 g</td>
<td>0 % / 4 %</td>
</tr>
<tr>
<td>+ Trans / trans 0 g</td>
<td></td>
</tr>
<tr>
<td>Cholesterol / Cholestérol 0 mg</td>
<td>0 % / 2 %</td>
</tr>
<tr>
<td>Sodium / Sodium 200 mg</td>
<td>12 % / 15 %</td>
</tr>
<tr>
<td>Potassium / Potassium 180 mg</td>
<td>5 % / 11 %</td>
</tr>
<tr>
<td>Carbohydrate / Glucides 27 g</td>
<td>9 % /</td>
</tr>
<tr>
<td>Fibre / Fibres 5 g</td>
<td>20 % / 20 %</td>
</tr>
<tr>
<td>Sugars / Sucres 4 g</td>
<td></td>
</tr>
<tr>
<td>Starch / Armoir 17 g</td>
<td></td>
</tr>
<tr>
<td>Protein / Protéines</td>
<td></td>
</tr>
<tr>
<td>Vitamin A / Vitamine A</td>
<td>6 % / 8 %</td>
</tr>
<tr>
<td>Vitamin C / Vitamine C</td>
<td>0 % / 0 %</td>
</tr>
<tr>
<td>Calcium / Calcium</td>
<td>2 % / 15 %</td>
</tr>
</tbody>
</table>
**Beverages**

*Water, low fat milk and small amounts of 100% fruit juice* are the best drink choices.*

If making other choices, you may want to re-think your drink!

**High Sugar Beverages**

High sugar drinks are low in nutrients and add empty calories to your diet. Check out how much sugar is hiding in some common drinks.

<table>
<thead>
<tr>
<th>Amount of Sugar (in teaspoons) in 20 ounces/600ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>** Flavoured Milk</td>
</tr>
<tr>
<td>*** Sports Drink</td>
</tr>
<tr>
<td>Iced Tea</td>
</tr>
<tr>
<td>Lemonade</td>
</tr>
<tr>
<td>Hawaiian Punch</td>
</tr>
<tr>
<td>Diet Pop</td>
</tr>
<tr>
<td>Kool-Aid</td>
</tr>
<tr>
<td>Fruitopia</td>
</tr>
<tr>
<td>Coke Classic</td>
</tr>
<tr>
<td>Sunny Delight</td>
</tr>
<tr>
<td>Slush Drink</td>
</tr>
<tr>
<td>Cranberry Juice cocktail</td>
</tr>
<tr>
<td>Orange Crush</td>
</tr>
<tr>
<td>Iced Cappuccino</td>
</tr>
<tr>
<td>Hot Cappuccino</td>
</tr>
<tr>
<td>Hot Chocolate</td>
</tr>
</tbody>
</table>

* 100% fruit juice should be limited to 250 ml (8 ounces) per day as it is also a concentrated source of sugar (5 – 8 teaspoons per 250 ml).

** Flavoured milk has higher sugar content than plain milk, but still contains all of the same nutrients, so it can be a healthier choice.

*** Sports drinks such as Gatorade and PowerAde are only needed after an hour or more of intense activity.

---

* Adapted from Calgary Health Region “Rethink Your Drink” resource.
**Caffeine Containing Beverages**

Caffeine increases blood pressure as well as speeds up the heart and breathing rate. You should limit caffeine intake to 400 – 500mg per day or about 3 cups of coffee.

<table>
<thead>
<tr>
<th>Caffeine Beverages</th>
<th>Caffeine mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 oz (250 ml) regular coffee</td>
<td>135 - 180</td>
</tr>
<tr>
<td>8 oz (250 ml) instant coffee</td>
<td>76 – 106</td>
</tr>
<tr>
<td>1 oz (32 ml) espresso</td>
<td>65</td>
</tr>
<tr>
<td>8 oz (250 ml) regular tea</td>
<td>43 – 70</td>
</tr>
<tr>
<td>8 oz (250 ml) green tea</td>
<td>30</td>
</tr>
<tr>
<td>8 oz (250 ml) Red Bull Energy Drink</td>
<td>80</td>
</tr>
<tr>
<td>12 oz (375 ml) cola</td>
<td>34 – 40</td>
</tr>
<tr>
<td>8 oz (250 ml) hot chocolate</td>
<td>24</td>
</tr>
<tr>
<td>8 oz (250 ml) iced tea</td>
<td>8 – 16</td>
</tr>
<tr>
<td>8 oz (250 ml) chocolate milk</td>
<td>8</td>
</tr>
<tr>
<td>8 oz (250 ml) decaffeinated coffee</td>
<td>5</td>
</tr>
</tbody>
</table>

**Tips:**

- Whiten your coffee or tea with low-fat milk
- Sweeten with a small amount of sugar or artificial sweetener such as Splenda or Equal or Sugar Twin.
- Choose sugar-free soft drinks, iced tea and hot chocolate

If you enjoy “fancy” coffee drinks such as lattés, cappuccinos or frappuccinos, there is more to think about than just the caffeine in your coffee mug! These drinks can have a very high fat and sugar content.

**To Make Better Choices**

- Choose skim milk
- Skip the whipped cream
- Try sugar-free syrups or sweeten with a small amount of sugar or artificial sweetener such as Splenda or Equal or Sugar Twin.
Alcohol

You should consult your doctor about the use of alcohol. Alcohol may:

- Interfere with some medications
- Raise triglyceride levels
- Contribute to weight gain as it is very high in calories
- Replace other healthy foods and drinks
- Become addictive

If you do drink alcohol, keep your intake to no more than 1 drink per day for women and 2 drinks per day for men.

One drink = 12 ounces (355ml) beer (5% alcohol)
= 4 ounces wine (8-14% alcohol)
= 1 ½ ounces hard spirits (40% alcohol)
What about Sodium?

Sodium is a mineral found in table salt. Sodium is also added to foods during processing for many reasons. Too much sodium in your diet can increase blood pressure and risk of heart disease.

How much sodium do we need?
Health Canada suggests a maximum of 2300 mg sodium per day for adults. Most people use far more than this. We actually only “need” about half this amount.

1 tsp of salt = 2300 mg sodium

Where do we get sodium?

♡ 77% comes from processed foods (ham, bacon, canned foods, dry soups, packaged foods, snack foods, etc.) and restaurant meals.
♡ 11% from salt added at the table and in cooking.
♡ 12% occurs naturally in foods.
Suggestions for Reducing Sodium Intake

1. Try to make foods from scratch.
   - Make home made soups instead of canned or packaged soups. Make a large batch and freeze in plastic containers.
   - Cook plain pasta and rice and flavour with spices and low sodium ingredients instead of pre-packaged mixes with sauce or seasonings already included.
   - Try fresh or plain frozen meat, fish and poultry instead of processed, cured or smoked meats such as sausage, wieners, ham, bacon, pepperoni and smoked fish.
   - Choose fresh or frozen vegetables instead of canned, unless they are salt-free.
   - Rinse canned beans under running water to reduce sodium.

2. Season without salt.

<table>
<thead>
<tr>
<th>Seasonings with Salt</th>
<th>Try these instead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garlic salt</td>
<td>Garlic powder or fresh garlic</td>
</tr>
<tr>
<td>Onion salt</td>
<td>Onion powder or green onions</td>
</tr>
<tr>
<td>Seasoning salt</td>
<td>Mrs. Dash (several varieties) – homemade recipe next page</td>
</tr>
<tr>
<td>Lemon pepper</td>
<td>Pepper and lemon juice or McCormick’s Citrus &amp; Pepper</td>
</tr>
<tr>
<td>Soya sauce</td>
<td>Sodium reduced soya sauce and use less</td>
</tr>
<tr>
<td>Pickles</td>
<td>Cucumbers or beets in vinegar</td>
</tr>
</tbody>
</table>

Adding flavour without salt:
- Parsley - chopped in salads, on vegetables and fish or in soups and casseroles
- Basil – on fresh tomatoes, in tomato dishes
- Oregano, Italian Spices – try with hamburger and tomato sauces
- Flavoured vinegars – add to salads, marinades
- Onions, peppers, celery, mushrooms – sauté and add to foods
- Tabasco, chili powder, horseradish – add for more zing
- Lemon juice – add to fish, vegetables, salads & marinades
Homemade Seasoning Mixture

15 ml (1 tbsp) dried mustard
15 ml (1 tbsp) paprika
15 ml (1 tbsp) garlic powder
15 ml (1 tbsp) onion powder
7 ml (1 ½ tsp) black pepper
5 ml (1 tsp) basil
5 ml (1 tsp) thyme

Mix and store in a shaker. Vary the recipe by substituting different spices you like and by varying the proportions.

3. Read Labels for Sodium Content

♡ Ask yourself – Is this food a major part of a meal or just a snack or condiment?
♡ If it is the whole meal (such as a frozen dinner) or major part of the meal, you could use more of your daily salt allowance.
♡ Look at the sodium content on the “Nutrition Facts” part of the labels.
♡ Compare similar products and choose the one lower in sodium.

Serving size:

½ cup condensed or 1 cup diluted soup

850 mg sodium
(35% of your salt intake for the day)
Do you think that is a lot for 1 cup of soup?

Suggestion:
Try making your own soup
4. *Eat out less often*

- Fast food outlets and restaurants may offer low sugar and low fat choices but most of their foods are still high in sodium.
  - Ask to see the nutrition information for the menu items and choose those with the lowest sodium content.
  - Ask your server if menu items can be prepared without salt.
  - Ask for sauces and dressings to be served on the side.

---

**I Have Questions . . .**

**Q:** Should I use *sea salt* instead of table salt?

**A:** NO. Sea salt has the same sodium content as regular salt.

**Q:** *Food tastes flat.* How can I add flavour?

**A:** It takes 4 to 6 weeks for a person’s taste buds to adjust to less salt. Please be patient! See the previous page for suggestions.

**Q:** I have a *water softener.* What should I know?

**A:** Water softeners remove calcium and iron from water and replace it with sodium. Consider having the softener only on the hot water and don’t use this for drinking or cooking.

**Q:** What about over the counter *drugs* like laxatives, anti-acids, etc.?

**A:** Ask the pharmacist if the product is high in sodium.

**Q:** What about *salt substitutes* such as No Salt, Low Salt?

**A:** Salt substitutes replace sodium with potassium and are generally not recommended.
Being overweight is a risk factor for heart disease. Extra weight around your middle puts you at an even greater risk. A waist measurement larger than 35” (89cm) for women and 40” (102cm) for men is a strong risk factor for developing heart disease.

Lowering fat intake may help with weight loss as high fat foods are high in calories.

Other tips for weight control include:

- Write out a grocery list and stick to it.
- Avoid the grocery store when you are hungry.
- Buy foods from all four food groups of Canada’s Food Guide.
- Do NOT skip meals!!! This usually leads to overeating later on.
- Avoid nibbling while preparing meals or when cleaning up afterwards.
- If possible, refrigerate extra food before starting to eat your meal.
- Serve smaller portions on smaller plates.
- Set your fork down between bites.
- Eat slowly and chew food well.
- Eat in the same room all the time.
- Avoid other activities while eating such as watching TV.
- Regular physical activity helps achieve and maintain a healthy weight.
- If weighing yourself helps to “keep you on track”, weigh yourself regularly. If you are discouraged by the number on the scale, put the scale away and rely more on your waist size.

**Ideal weight loss** is 1 – 2 lbs (0.5–1 kg) per week. In the beginning, weight loss may occur at a faster rate as a result of water loss. If weight loss exceeds 2 lbs (1 kg) per week after the first couple of weeks, increase your intake of vegetables, fruit and grain products.
Portion Control

Controlling portion sizes can be the key to promoting weight loss and improving risk factors such as blood cholesterol, blood pressure and blood sugar levels. Here are some tips to help you keep your portion sizes in check:

- Try using a smaller dinner plate to help you reduce your portion size.
- Fill half your plate with vegetables as they are low in calories and loaded with nutrients.
- Include high fibre starch choices such as whole grain breads, cereals and pasta, brown rice or potatoes with skin.
- Keep your protein portion to the size of a deck of cards (about 3 oz.).
- Make lower fat protein choices such as fish, poultry with the skin removed, leaner meats or pulses (beans, peas and lentils).
- Added fats such as margarine, oils and salad dressings should be used in small amounts.
- Have portion sizes that will help you reach or maintain a healthy body weight.

* Adapted from Canadian Diabetes Association, Just the Basics
**Tips for Fast Foods and Eating Out**

Fast foods are typically high in fat, calories and sodium. Fast foods also tend to be low in fibre and important nutrients. If you eat out often keep these tips in mind:
- Keep your choices as simple and basic as possible
- Look for healthier, lower-fat choices offered at most fast food restaurants
- Beware of super-sized items as these large portions may be light on your wallet but they’re heavy in fat, calories and sodium

<table>
<thead>
<tr>
<th>Choose these more often:</th>
<th>Instead of….</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At the Coffee Shop:</strong></td>
<td></td>
</tr>
<tr>
<td>Low-fat whole grain muffin</td>
<td>… Danish, doughnut</td>
</tr>
<tr>
<td>Whole grain bagel with a small amount of light</td>
<td>… Bagel with cream cheese</td>
</tr>
<tr>
<td>cream cheese, peanut butter or lower-fat cheese</td>
<td></td>
</tr>
<tr>
<td>Poached egg or plain omelette with unbuttered</td>
<td>… Fried egg sandwich with sausage or bacon, cheese</td>
</tr>
<tr>
<td>whole grain toast</td>
<td>omelette, hash browns</td>
</tr>
<tr>
<td>Coffee or tea with milk</td>
<td>… Coffee or tea with cream</td>
</tr>
<tr>
<td><strong>At the Burger Place:</strong></td>
<td></td>
</tr>
<tr>
<td>Plain hamburger on whole grain bun</td>
<td>… Loaded burger with cheese</td>
</tr>
<tr>
<td>Grilled chicken sandwich</td>
<td>… Deep-fried chicken sandwich</td>
</tr>
<tr>
<td>Veggie burger</td>
<td></td>
</tr>
<tr>
<td>Baked potato with chili or low-fat sour cream</td>
<td>… French fries or baked potato with regular sour</td>
</tr>
<tr>
<td>“light” menu items</td>
<td>omeat</td>
</tr>
<tr>
<td>Frozen yogurt cones</td>
<td>… Ice cream, cookies, pies</td>
</tr>
<tr>
<td>Lower-fat milk</td>
<td>… Milkshake, soft drinks</td>
</tr>
<tr>
<td><strong>At the Pizza parlour:</strong></td>
<td></td>
</tr>
<tr>
<td>Whole wheat crust</td>
<td>… White crust</td>
</tr>
<tr>
<td>Vegetarian or Hawaiian</td>
<td>… Loaded pizza</td>
</tr>
<tr>
<td>Lower-fat toppings like ham, chicken, mushrooms,</td>
<td>… Higher fat toppings like bacon, sausage, salami,</td>
</tr>
<tr>
<td>peppers, tomatoes, lower-fat cheese</td>
<td>pepperoni, olives, extra cheese</td>
</tr>
</tbody>
</table>

*LiveWell Cardiac Program Manual*

*Heart Healthy Nutrition*
<table>
<thead>
<tr>
<th>Choose these more often:</th>
<th>Instead of….</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At the Sandwich counter:</strong></td>
<td></td>
</tr>
<tr>
<td>Whole grain bread or buns</td>
<td>… White bread, croissants</td>
</tr>
<tr>
<td>Lean meat such as ham, chicken, turkey, roast beef</td>
<td>… Higher-fat options such as salami, pepperoni, egg salad, tuna salad, meatballs</td>
</tr>
<tr>
<td>Green salad, fruit salad, bean salad</td>
<td>… Caesar salad, potato salad, macaroni salad</td>
</tr>
<tr>
<td><strong>At the Asian eatery:</strong></td>
<td></td>
</tr>
<tr>
<td>Fresh spring rolls</td>
<td>… Deep-fried egg rolls</td>
</tr>
<tr>
<td>Steamed rice, noodles in soup</td>
<td>… Fried rice, fried noodles, chow mein</td>
</tr>
<tr>
<td>Grilled steamed or stir-fried veggies</td>
<td>… Deep-fried chicken balls, sweet and sour pork</td>
</tr>
<tr>
<td>Steamed dumplings</td>
<td></td>
</tr>
<tr>
<td>Light soy sauce, no MSG</td>
<td>… Regular soy sauce</td>
</tr>
<tr>
<td><strong>At the Italian eatery:</strong></td>
<td></td>
</tr>
<tr>
<td>Pasta with vegetables in tomato sauce</td>
<td>… Lasagna, pasta in cream sauce</td>
</tr>
<tr>
<td>Broiled baked, grilled or poached fish, chicken or veal</td>
<td>… Breaded, fried or deep-fried fish, chicken or veal</td>
</tr>
<tr>
<td><strong>At the Chicken eatery:</strong></td>
<td></td>
</tr>
<tr>
<td>Barbecued, baked, grilled or stir-fried chicken with the skin removed</td>
<td>… Fried chicken pieces, chicken fingers and chicken nuggets</td>
</tr>
<tr>
<td>Grilled chicken sandwich</td>
<td>… Chicken salad sandwich</td>
</tr>
</tbody>
</table>

---

**Look for Clues to Healthy Eating…**

<table>
<thead>
<tr>
<th>When you see the words...</th>
<th>It means the food is probably...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baked, barbequed, broiled, charbroiled, grilled, poached, roasted, steamed, stir-fried</td>
<td>… Cooked with little or no added fat</td>
</tr>
<tr>
<td>Alfredo, au gratin or in a cheese sauce, battered, breaded, buttered, creamed, crispy, deep-fried, fried, hollandaise, pan-fried, pastry, prime, rich, sautéed, scalloped, with gravy, with mayonnaise, with thick sauce</td>
<td>… Higher in fat and calories</td>
</tr>
<tr>
<td>Pickled, smoked, soy sauce</td>
<td>… Higher in sodium</td>
</tr>
</tbody>
</table>

Adapted with the permission of the Heart and Stroke Foundation of Canada, 2006.  
www.heartandstroke.ca
**Recipe Makeover**

It is easy to change recipes that contain high fat ingredients. Lower fat foods can replace ingredients in many of your favorite recipes without changing the taste.

**When to Make Changes?**

1) **Is the recipe already low in fat?**

   If there is a small amount of fat used in the recipe, there is no need to change the amount of fat. Consider the type of fat used – use an oil or non-hydrogenated margarine whenever possible.

2) **Do you serve this food often?**

   You do not have to change recipes used once or twice a year. It is more important to decrease fat in a weekly tuna sandwich than to reduce the fat in a special birthday cake.

3) **What portion do you eat?**

   Eating smaller portions of food is an easy way to reduce total fat intake.

**Modifying Recipes**


2) Strategies:

   **Replace:** Use a similar fat-reduced product for the original product.
   **Reduce:** Use less of an ingredient.
   **Substitute:** Use another food item for the item called for in the recipe.
## Modifying Recipes

<table>
<thead>
<tr>
<th>For</th>
<th>Strategy</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milk Products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 cup (250 ml) whole or 2% milk</td>
<td>Replace</td>
<td>1 cup (250 ml) skim or 1% milk</td>
</tr>
<tr>
<td>1 cup (250 ml) sour cream</td>
<td>Replace/Substitute</td>
<td>1 cup (250 ml) low fat or fat-free yogurt or sour cream</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cup (250 ml) low fat cottage cheese blended with 1 Tbsp (15 ml) lemon juice</td>
</tr>
<tr>
<td>1 cup (250 ml) heavy cream</td>
<td>Substitute</td>
<td>1 cup (250 ml) evaporated skim or 1% milk</td>
</tr>
<tr>
<td>1 cup (250 ml) cheddar cheese</td>
<td>Replace</td>
<td>1 cup (250 ml) fat-reduced cheddar cheese</td>
</tr>
<tr>
<td>8 oz (250 g) cream cheese</td>
<td>Replace/Substitute</td>
<td>8 oz (250 g) fat-reduced cream cheese</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 oz (250 g) skim ricotta, quark or soft tofu</td>
</tr>
<tr>
<td><strong>Fats</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 cup (250 ml) oil</td>
<td>Reduce/Substitute</td>
<td>¼ cup (50 ml) oil + ¼ cup (175 ml) buttermilk &amp; ½ tsp (2.5 ml) baking powder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>¼ cup (50 ml) oil + ¼ cup (175 ml) applesauce or other fruit purée</td>
</tr>
<tr>
<td>1 cup (250 ml) margarine or butter</td>
<td>Replace</td>
<td>1 cup (250 ml) non-hydrogenated margarine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>¼ cup (175 ml) unsaturated oil</td>
</tr>
<tr>
<td><strong>Miscellaneous</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 whole egg</td>
<td>Replace</td>
<td>2 egg whites - fresh or frozen egg whites (see package for amount)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 tablespoon ground flax &amp; 3 tbsp water (mix in a bowl and let sit for a couple of minutes)</td>
</tr>
<tr>
<td>1 cup (250 ml) chocolate chips</td>
<td>Reduce/Substitute</td>
<td>½ cup (125 ml) – ¾ cup (175 ml) chocolate chips</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cup (250 ml) raisins or dried fruits</td>
</tr>
<tr>
<td>1 cup (250 ml) shredded coconut, nuts</td>
<td>Reduce/Substitute</td>
<td>½ cup (125 ml) shredded coconut, nuts</td>
</tr>
<tr>
<td>30g (1 oz) baking chocolate</td>
<td>Reduce/Substitute</td>
<td>45 ml cocoa plus 15 ml unsaturated oil, blended together</td>
</tr>
</tbody>
</table>
Nutrition Labelling

Nutrition labels can help you choose healthier foods and compare similar food products. Label reading can help you choose foods lower in total fat, saturated fat, trans fat, calories, sugar and salt. Labels can also help you choose foods higher in fibre.

**Nutrition information on labels includes:**

**Nutrition Facts** always includes the calorie content as well as the 13 nutrients shown.

The nutrient information is based on a specified amount of the food. This number is the actual amount of the nutrient in the specified serving size.

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Per 1 cup (264g)</strong></td>
<td></td>
</tr>
<tr>
<td>Amount</td>
<td>% Daily Value</td>
</tr>
<tr>
<td>Calories 260</td>
<td></td>
</tr>
<tr>
<td>Fat 13g</td>
<td>20%</td>
</tr>
<tr>
<td>Saturated Fat 3g</td>
<td>25%</td>
</tr>
<tr>
<td>Trans Fat 2g</td>
<td></td>
</tr>
<tr>
<td>Cholesterol 30mg</td>
<td></td>
</tr>
<tr>
<td>Sodium 660mg</td>
<td>28%</td>
</tr>
<tr>
<td>Carbohydrate 31g</td>
<td>10%</td>
</tr>
<tr>
<td>Fibre 0g</td>
<td>0%</td>
</tr>
<tr>
<td>Sugars 5g</td>
<td></td>
</tr>
<tr>
<td>Protein 5g</td>
<td></td>
</tr>
<tr>
<td>Vitamin A 4%</td>
<td></td>
</tr>
<tr>
<td>Vitamin C 2%</td>
<td></td>
</tr>
<tr>
<td>Calcium 15%</td>
<td></td>
</tr>
<tr>
<td>Iron 4%</td>
<td></td>
</tr>
</tbody>
</table>

The % Daily Value helps to tell you if there is a lot or a little of each nutrient in the specified amount.

**Nutrient Content Claims** may appear on a food label, such as “low fat” or “high source of dietary fibre”. To make these claims, the product must meet government regulations. These claims can help you choose healthier products.

**Diet Related Health Claims** may also appear on a food label. For example, “A healthy diet low in saturated and trans fat may reduce the risk of heart disease. This product is low in saturated and trans fat”. You should look at the Nutrition Facts box for more specific information about the product.
Eating Well with Canada’s Food Guide

Recommended Number of Food Guide Servings per Day

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>19-50 years</th>
<th>51 + years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>Vegetables and Fruit</td>
<td>7-8</td>
<td>8-10</td>
</tr>
<tr>
<td>Grain Products</td>
<td>6-7</td>
<td>8</td>
</tr>
<tr>
<td>Milk and Alternatives</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Meat and Alternatives</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

The chart above shows how many Food Guide Servings you need from each of the four food groups every day.

Having the amount and type of food recommended and following the tips in Canada’s Food Guide will help:

♡ Meet your needs for vitamins, minerals and other nutrients.
♡ Reduce your risk of obesity, type 2 diabetes, heart disease, certain types of cancer and osteoporosis.
♡ Contribute to your overall health and vitality.
What is one Food Guide Serving?
Look at the examples below.

<table>
<thead>
<tr>
<th>Vegetables and Fruit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh, frozen or canned vegetables 125 mL (½ cup)</td>
<td>Leafy vegetables 250 mL (1 cup)</td>
</tr>
<tr>
<td>Fresh, frozen or canned fruits 1 fruit or 125 mL (½ cup)</td>
<td>100% Juice 125 mL (½ cup)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grain Products</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bread - 1 slice (35 g)</td>
<td>Bagel - ½ bagel (45 g)</td>
</tr>
<tr>
<td>Flat breads ½ pita or ½ tortilla (35 g)</td>
<td>Cooked rice, bulgur or quinoa 125 mL (½ cup)</td>
</tr>
<tr>
<td>Cereal Cold: 30 g or Hot: 175 mL (¾ cup)</td>
<td>Cooked pasta or couscous 125 mL (½ cup)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Milk and Alternatives</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk or powered milk (reconstituted) 250 mL (1 cup)</td>
<td>Canned milk (evaporated) 125 mL (½ cup)</td>
</tr>
<tr>
<td>Fortified soy beverage - 250 mL (1 cup)</td>
<td>Yogurt - 175 g (¾ cup)</td>
</tr>
<tr>
<td>Cheese - 50 g (1 ½ oz.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meat and Alternatives</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooked legumes - 175 mL (3/4 cup)</td>
<td>Shelled nuts and seeds - 60 mL (¼ cup)</td>
</tr>
<tr>
<td>Eggs - 2 eggs</td>
<td>Tofu - 150 g or 175 mL (¾ cup)</td>
</tr>
<tr>
<td>Peanut or nut butters - 30 mL (2 Tbsp)</td>
<td></td>
</tr>
<tr>
<td>Cooked fish, shellfish, poultry, lean meat - 75 g (2 ½ oz.)/125 mL (½ cup)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oils and Fats</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Include a small amount – 30 to 45 mL (2 to 3 Tbsp) – of unsaturated fat each day. This includes oil used for cooking, salad dressings, margarine and mayonnaise.</td>
<td></td>
</tr>
</tbody>
</table>

★ Aim for 6 tsp of fat (2 tbsp) per day for women and up to 9 tsp of fat (3 tbsp) per
Each of the following contains 1 teaspoon of fat

- 1 tsp oil, margarine
- 2 tsp light margarine
- 1 tbsp nuts and seeds
- 1/6 avocado
- 10 olives
- ½ to 1 tbsp salad dressing
- 1 tsp regular mayonnaise
- 1 tbsp light mayonnaise or Miracle Whip

**CHECK YOUR FOOD LABELS**

4 grams of fat = 1 tsp of fat

---

**Vegetables and Fruit**

<table>
<thead>
<tr>
<th>Great Choices</th>
<th>Good choices</th>
<th>Choose rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vegetables</strong></td>
<td>Fresh or frozen vegetables</td>
<td>Vegetables prepared with butter, cream or sauces</td>
</tr>
<tr>
<td></td>
<td>Reduced sodium tomato or vegetable juices</td>
<td>Deep fried potatoes or other vegetables</td>
</tr>
<tr>
<td></td>
<td>Regular tomato or vegetable juices</td>
<td>Pickled vegetables</td>
</tr>
<tr>
<td><strong>Fruit</strong></td>
<td>Fresh or frozen fruit</td>
<td>Fruit drinks with added sugars</td>
</tr>
<tr>
<td></td>
<td>Unsweetened fruit juice (maximum 8 oz/day)</td>
<td>Canned or frozen fruit in syrup</td>
</tr>
<tr>
<td></td>
<td>Canned fruit in its own juice</td>
<td>Coconut</td>
</tr>
<tr>
<td></td>
<td>Dried fruit</td>
<td></td>
</tr>
</tbody>
</table>
### Grain Products

<table>
<thead>
<tr>
<th>Great Choices</th>
<th>Good choices</th>
<th>Choose rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breads &amp; other grain products</strong>&lt;br&gt;(buns, pitas, bagels, wraps)</td>
<td>100% whole grain breads</td>
<td>Enriched refined grain breads</td>
</tr>
<tr>
<td><strong>Cereals hot or cold</strong></td>
<td>Whole grain and a high source of fibre (at least 4 grams of fibre per 30 gram serving) May also include wheat bran, wheat germ, oat bran, oatmeal, ground flax seed as added fibre sources</td>
<td>Cereals with 2-4 grams of fibre per 30 gram serving</td>
</tr>
<tr>
<td><strong>Rice &amp; pasta</strong></td>
<td>Brown rice, wild rice, whole wheat pasta</td>
<td>White, basmati, parboiled, short or long grain rice, regular pasta, egg noodles, rice noodles</td>
</tr>
<tr>
<td><strong>Crackers, bread sticks, crisp breads, rice cakes</strong></td>
<td>Unsalted products made with whole grains and a source of at least 2 grams of dietary fibre per serving &amp; containing little or no saturated and trans fat</td>
<td>Unsalted products made with refined flour with little or no saturated and trans fat</td>
</tr>
<tr>
<td><strong>Muffins, cookies &amp; baked goods</strong></td>
<td>Homemade goods with whole grains and oils or non-hydrogenated margarine</td>
<td>Products made with refined flour and little or no saturated and trans fat</td>
</tr>
</tbody>
</table>
## Milk and Alternatives

<table>
<thead>
<tr>
<th></th>
<th>Great Choices</th>
<th>Good choices</th>
<th>Choose rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milk, buttermilk, yogurt, cottage cheese</strong></td>
<td>Skim or 1% milk fat (M.F.)</td>
<td>2% milk fat (M.F.)</td>
<td>&gt; 2% milk fat (M.F.)</td>
</tr>
<tr>
<td></td>
<td>Dry curd/low sodium cottage cheese</td>
<td>Creamed cottage cheese</td>
<td></td>
</tr>
<tr>
<td><strong>Fortified soy products</strong></td>
<td>Low fat (≤ 3g fat per serving) fortified soy beverages</td>
<td>Regular fortified soy beverage</td>
<td></td>
</tr>
<tr>
<td><strong>Cheese/soy cheese</strong></td>
<td>≤ 15% M.F.</td>
<td>15-20% M.F.</td>
<td>≥ 20% M.F.</td>
</tr>
<tr>
<td><strong>Desserts</strong></td>
<td>Ice milk or frozen yogurt</td>
<td>Low fat ice cream</td>
<td>Regular ice cream</td>
</tr>
</tbody>
</table>
# Meat and Alternatives

<table>
<thead>
<tr>
<th>Great Choices</th>
<th>Good choices</th>
<th>Choose rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meat</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-trimmed, lean cuts of beef, pork, veal, bison, wild meat, extra lean hamburger</td>
<td>Lean hamburger, lamb. Small amounts of low sodium lean ham &amp; back bacon</td>
<td>Fatty cuts of beef, pork, veal &amp; lamb, side bacon, side ribs, organ meats &amp; processed meats</td>
</tr>
<tr>
<td><strong>Poultry</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skinless turkey and chicken</td>
<td>Lean turkey or chicken breast lunch meats, ground chicken and turkey</td>
<td>Fried chicken, poultry with skin, chicken wings, duck, goose Breaded chicken fingers/nuggets</td>
</tr>
<tr>
<td><strong>Fish &amp; seafood</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh or frozen unbreaded fillets</td>
<td>Fish canned in broth or tomato juice/paste</td>
<td>Salted, smoked or pickled fish Fish canned in oil Fish or seafood coated in batter Shrimp and other shellfish, squid, clams, oysters, mussels</td>
</tr>
<tr>
<td>Fish canned in water</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Eggs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiled, poached, scrambled omega-3 enriched eggs Egg whites Egg substitutes</td>
<td>Boiled, poached, scrambled regular eggs Egg Salad with low fat mayonnaise</td>
<td>Pickled, fried, devilled eggs Egg salad with regular mayonnaise Eggs Benedict or Florentine</td>
</tr>
<tr>
<td>* Maximum 2 egg yolks per week</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Legumes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beans, peas, lentils – dried or canned (drained and rinsed) Hummus</td>
<td>Baked beans</td>
<td>Legume dishes prepared with coconut milk (e.g., curries)</td>
</tr>
<tr>
<td><strong>Soy products</strong></td>
<td>Tofu</td>
<td>Soy protein products and legume based “veggie patties”</td>
</tr>
<tr>
<td><strong>Peanut and nut butters</strong></td>
<td>All natural peanut and nut butters</td>
<td>Regular peanut and nut butters with added vegetable oils (eg. cashew nut butter with safflower oil)</td>
</tr>
</tbody>
</table>
### Oils and Fats

<table>
<thead>
<tr>
<th>Great Choices</th>
<th>Good choices</th>
<th>Choose rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canola, olive, peanut, flax, and walnut oils</td>
<td>Soy, safflower, sunflower, corn, and sesame oils</td>
<td>Hydrogenated margarines, butter, shortening, lard, beef tallow, coconut oil</td>
</tr>
<tr>
<td>Avocado</td>
<td>Non-hydrogenated soft margarine</td>
<td>Regular sour cream and cream cheese</td>
</tr>
<tr>
<td>All nuts and seeds</td>
<td>Light cream cheese</td>
<td>Commercial dips</td>
</tr>
<tr>
<td></td>
<td>Light sour cream</td>
<td>Creamy salad dressings</td>
</tr>
<tr>
<td></td>
<td>Fat reduced salad dressing</td>
<td>Gravy</td>
</tr>
<tr>
<td></td>
<td>Olives</td>
<td>Mayonnaise</td>
</tr>
</tbody>
</table>
**Internet Addresses:**

Saskatoon Health Region  
http://www.saskatoonhealthregion.ca

Dietitians of Canada  
http://www.dietitians.ca

American Dietetic Association  
http://www.eatright.org

Health Canada  
http://www.hc-sc.gc.ca/

Heart and Stroke Foundation  
http://ww2.heartandstroke.ca

Healthy Eating Is In Store For You™  
www.healthyeatingisinstore.ca

Some of the materials in this section have been adapted from:  
Canadian Diabetes Association’s *Just the Basics*  
Heart and Stroke Foundation’s *Eating Out, Peak Performance, Coping with Cholesterol*
Intimacy After a Heart Event

Love, not time, heals all wounds!
Intimacy After a Heart Event

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**What About Sex After A Heart Event?**

Patients recovering from a heart event have many questions about resuming their usual activities. One activity they’re often afraid to ask about is sex. Here are answers to sexual questions that most often worry patients after a heart attack. These questions will give you a place to start when you discuss your concerns with your nurse or physician.

**Sex and Your Heart**

To most people, sexual activity means sexual intercourse. But sex is much more than that. You can express your interest in sex in a lot of ways. You may just want your mate near you. Or you may like to touch and hold. While many heart patients are physically able to resume sexual intercourse, emotionally they may not be ready. Knowing the facts about how intercourse affects your body may help your understanding.

Several physical changes occur in your body during sex, and you may be more aware of them now. Rest assured that these too, are normal and can include:

- As you get aroused, your breathing slowly increases. Your skin also gets flushed. Your heart rate and blood pressure also become slightly elevated.
- As you get more excited, sexual tension builds. Both heart rate and blood pressure rise even more. (Your heart rate can increase anywhere from 90 to 145 beats per minute.) During orgasm, you release this pent-up tension and your heart rate, blood pressure and breathing return to resting levels.

**Will I Have Another Heart Attack If I Have Sex?**

Many heart patients and their partners may feel anxious about resuming their sex life after heart surgery or a heart attack. Those feelings are normal and if you’re recovering from a heart event, feelings of anxiety, depression or lack of desire may occur. The good news is many concerns about physical activity are unfounded. You can still enjoy sex while you’re a heart patient and after. Some people think that sexual activity can bring on a heart attack or stroke, but in reality, this is rare.

When you recover from a heart attack, you may be more aware of your heartbeat, breathing and muscle tightening or tension. This is normal, so don’t worry. Intercourse takes slightly more energy than other sexual activities, so your doctor may tell you to wait until you feel stronger before you have intercourse again. You can touch, hold and caress without the goal of orgasm. You and your partner can
feel loved and secure without demands to perform. As you get more confident, you will feel more at ease with yourself and your partner.

When Can I Resume Sexual Activities?

You can begin two to eight weeks after your heart attack. Research shows the energy used during sexual intercourse, including orgasm, is no more than the amount needed to climb two flights of stairs. Check with your doctor if you are uncertain.

Preparing for Sex

Developing a healthy lifestyle and emotional understanding is important for daily living. But you may find that the following suggestions can put you on the road to a healthy sex life as well:

- **Have a healthy daily balance** of diet, exercise, rest and medicine.
- **Exercise** boosts health and confidence. Aerobic exercises include walking, jogging, swimming, bicycling and dancing. These activities can decrease your chance of rapid heart rate, lack of breath or chest pain during sex.
- **If you smoke, stop.** See the chapter called *Risk Factors.*
- **Be patient.** Try to understand your emotions. You or your partner may feel vulnerable after a heart attack or surgery. Your emotions may change quickly from tears to laughter or from joy to anger. These sudden mood swings are generally temporary. So try to be patient with each other. A good sense of humour helps.
- **Adjust what you expect from each other** sexually. You may have had a good sex life before your heart problem. You may be afraid to resume sex, but don’t let it stop you from enjoying each other again.
- **Avoid rushing into sex** to prove things are “back to normal.” If you and your spouse have sex before you’re ready, it may only reinforce your fears. Finally, resuming sex often makes you closer to your partner. It lets you rekindle tenderness and romance. Sex after a heart attack or surgery may ease stress, and it can boost your self-esteem.
How Will I Know If I’m Straining My Heart?

The more physically fit you feel, the more apt you will be to engage in sexual intercourse. After physical conditioning, fewer people develop heart symptoms, such as:

- pain
- palpitation
- shortness of breath
- excessive tiredness

If you notice any of these symptoms lasting longer than 15 minutes following sexual intercourse, avoid further sexual activity until you talk with your doctor.

How Can I Protect My Heart During Sex?

- Try relaxing before you begin. Avoid feeling rushed.
- Sexual intercourse should be resumed in usual surroundings. Rest is beneficial before intercourse. Morning is the ideal time after a good night’s sleep.
- Extreme room temperatures or very hot or cold showers / baths add to heart stress.
- Foreplay is desirable. It is like the “warm-up” of your exercise program.
- Positions for intercourse should be comfortable, relaxing and permit unrestricted breathing. Be realistic. Old positions may not make sense.
- Postpone intercourse for three hours after eating a heavy meal, or consuming a few drinks.
- A water-soluble sterile lubricant may make penetration easier. Avoid petroleum jelly – it doesn’t dissolve in water and may cause vaginal infections. It may also break down latex condoms.
There’s more than one way to be sexual with your partner. Consider alternatives, such as hugging, kissing, caressing, massaging and touching. They can all be satisfying ways to show love and affection.

Talk with your doctor about whether you should take any preventative medication (e.g. nitroglycerin) before sexual relations. If you experience angina during intercourse, stop, rest and use your nitroglycerin. Never use nitroglycerin 24 hours before or after the use of Viagra® (sildenafil citrate).

What Should I Do If I Get Chest Discomfort?

If necessary, the medication Nitroglycerin may be used under the tongue before intercourse to prevent chest discomfort. If chest discomfort comes during or after sexual intercourse, take Nitroglycerin as prescribed. Try not to become discouraged. This may mean your mind is eager, but your body is not quite ready. It may be helpful to review the guidelines, and try again another day.

Will the Medication I’m Taking Interfere With My Ability To Have Sex?

Some medications do affect sexual function. These include certain drugs taken for high blood pressure, depression and sleeping. They may cause a decreased desire or impotence.

If you were taking Viagra® to improve your sexual relations before your heart event, check with your doctor before you start using it again. Taking Viagra® with heart medications such as nitroglycerine may be harmful.

If you think medication may be contributing to your problem, discuss this with your doctor. Often, medications can be changed or doses reduced. It’s worth a try!
**Can I Masturbate?**

Before you are ready to resume sexual activity with your usual partner, masturbation may serve as a sexual outlet. This is for those people whose moral position makes masturbation acceptable. Masturbation, even during the hospital stay, is not uncommon.

**Can I Have Anal Sex?**

Anal sex adds more stress to your heart. This activity stimulates the vagus nerve, slowing the heart rate and decreasing blood supply to the coronary arteries. Talk to your doctor before you resume anal sex.

**Is This Normal?**

*Since My Heart Event My Partner and I Don’t Have Any Interest In Sex.*

Yes. As your confidence returns, so will your desire for sex. Normally, sexual desire decreases with age. A reasonable goal would be to return to the level of sexual activity you enjoyed before your heart event.

The time this will take varies for each person. However, it may be several months before you feel like yourself again. Discuss any fears or concerns openly with your partner. If you or your partner become frustrated over your lack of interest, there are doctors, nurses and social workers trained to help you deal with sexual concerns. Ask your doctor or cardiac rehab nurse to refer you.

Many partners fear their spouse will have chest discomfort or another heart attack during intercourse. You have probably reduced some of the fear by reading through this information together. Now, it’s time to share your concerns openly with each other. Decide what each of you wants from your sexual relationship. Communication is the foundation for a good marital / sexual relationship.
An Ounce of Prevention is worth a pound of cure.
Pill Talk - Medications

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What are Medications?

Medications (drugs, medicines or pills) are substances that can help fight an illness, prevent an unwanted symptom or even improve your chances of living a longer and healthier life.

Prescription drugs are medications which you may obtain only with a doctor’s prescription. Examples of prescription medications are heart pills, blood pressure pills, arthritis pills, etc. Non-prescription, or over-the-counter drugs, are medications you may purchase without a prescription. Examples of non-prescription medications are cold preparations, laxatives vitamins, antacids and herbs or natural products.

It is very important to make sure you get all the information you need to take drugs correctly and to know what to expect from them. Also, be sure to know the reason for taking each of your medications. If there is anything you don’t understand about your medications, be sure to ask your doctor, nurse or pharmacist.
What You Should Know About Your Medications

In order to use a drug properly and to get the most benefit from it, you should be able to answer the following questions for each drug you use:

1. **What** is the name of the medication?
2. **Why** am I taking it … what is it for? Will it increase the chance of living a longer life?
3. **How often and when** should I take it? For example, if it is to be taken once a day, should I take it in the morning or at bedtime?
4. **How long** will I need to be on this medication?
5. **How should I take it?** Should I take it before or after meals?
6. **Should I avoid any foods, drugs or alcoholic beverages** while I’m taking this medication?
7. **Should I avoid any activities** such as driving or operating machines while I’m using this medication?
8. Will **exercise and diet** help my medications work better?
9. Are there any **side effects that I should report** to the doctor immediately?
10. How should the medication be **stored**?
11. What should I do if I **forget to take** a dose?
12. How will I know if my medication is **working**?
13. What are the **risks** of not taking or stopping this medication?

Your doctor, pharmacist or nurse can give you answers to these questions. If you have not heard or do not understand what they have said about medications, ask them to repeat it or to explain it in simpler terms. It is a good idea to write down the answers to these questions so that you can refer to them later. It may help to have a relative or friend present when your doctor, pharmacist or nurse is giving you this information.
Ask Your Pharmacist

Your pharmacist can give you valuable information about your prescription medications, as well as non-prescription (over-the-counter) drugs.

If at all possible, try to use the same drugstore for all of your drug needs. This way, your pharmacist can keep a complete record of all the medications you are using and help you avoid any problems.

Some things to keep in mind when you have your prescription filled at the drugstore are:

1. Make sure you understand the directions for using your medication. Ask your pharmacist if you need more information to answer the list of questions on the previous page.

2. Ask your pharmacist to put your medication in an easy-to-open container if you have difficulty opening childproof containers.

3. Ask your pharmacist to give you a separate instruction sheet using large print if you have difficulty in reading the small print on your prescription label.

4. Ask your pharmacist to tell you how to store your medications. For example, some drugs may need to be refrigerated.

5. Ask your pharmacist to give you written information or take notes so that you can refer to them later.

6. You can phone your drugstore anytime if you have questions about your medications.
Taking Your Medications

_once your prescription is filled, it is important to take the medication exactly as your doctor has directed. For example, it is very important to continue taking heart medications even if you feel well because their protection can quickly wear off if you stop taking them. 

◇ If you do wish to stop taking a medication, ask your doctor first. Some conditions may become worse when medications are stopped abruptly. Medicine may need to be gradually reduced over time under the supervision of your doctor. 

◇ It is important that your doctor check your progress at regular visits to make sure that the medicine is working for you. 

◇ Make sure you have enough medicine on hand to last through weekends, holidays and vacations. 

◇ Be sure to inform all health care members, including your dentist, of any medications, vitamins, over the counter products, or natural products that you are taking. 

◇ It is easy to forget to take your medication or forget when you took your last dose, especially if you are taking more than one drug. Some people need to take several medications a day. Organizing a system for taking your drugs may help make it easier to take the right drug at the right time. Develop a system that works for you or try one of these: 

1. Set an alarm clock or your watch alarm to go off at the times you are to take your medication. 

2. At the beginning of every week, pills can be placed in a weekly organizer according to what time of day the medication is supposed to be taken. These organizers can be purchased at any pharmacy. Ask the pharmacist for instructions on how to use one. 

3. If asked, most pharmacies can package your medications in a monthly organizer. This makes it easy for you to take your medications, and you can see if you missed a dose. 

4. Keep a chart or calendar near your medications. On it, list all medications and the times they are to be taken. Each time you have taken your medication, check off that time on the chart. (See the chart on the next page for an example)
# Medication Chart

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dosage</th>
<th>Administration Times</th>
<th>Week of October 10-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Drug A</td>
<td>2 tablets, 4 times daily</td>
<td>8:00 am</td>
<td>✔️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12:00 Noon</td>
<td>✔️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5:00 pm</td>
<td>✔️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10:00 pm</td>
<td>✔️</td>
</tr>
<tr>
<td>Drug B</td>
<td>1 capsule, twice daily</td>
<td>8:00 am</td>
<td>✔️</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5:00 pm</td>
<td>✔️</td>
</tr>
<tr>
<td>Drug C</td>
<td>1 tablet, once daily</td>
<td>8:00 am</td>
<td>✔️</td>
</tr>
</tbody>
</table>

5. Also, remember the Home Care Nurse working in your area may be available to visit your home to discuss your medications and/or to help you develop a system for safe medication use.

6. Use the chart on the next page to help you make a list of the medications you are taking now. If you are not sure, ask your doctor, pharmacist or nurse to write them down.

7. Ask your pharmacist for other ideas.
<table>
<thead>
<tr>
<th>Drug</th>
<th>Dosage</th>
<th>Time to Take</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
What If You Forget to Take Your Medication?

If you forget to take a dose of medication, take it as soon as you remember. If it is almost time for your next usual dose, do not take the missed dose or double the dose. Just go back to your regular schedule. If you are taking the same pill 2 or 3 times a day, try to wait the same number of hours between each pill. Try to keep this the same from day to day.

Side Effects and What to Do About Them

Side effects are unwanted effects of medications and they are a concern for many people. Although many people think side effects are very common with prescription drugs, most people can take medications without having side effects at all.

If side effects do occur while taking a medication, they will often disappear as your body gets used to the drug. However, even if a side effect seems minor, it should be discussed with your doctor. Your doctor may prescribe an alternate medication or may change the dose to get rid of a side effect. Also, your doctor will often perform blood tests that may detect problems before they become serious.

Many pharmacists provide written information with a medication. However, it is important to remember that those written printouts list far more side effects than are likely to occur. They will often list rare side effects which require your doctor’s immediate attention. If you experience an unwanted effect from a medication, you should not stop taking a medication or change your dosage without first checking with a doctor.
Where to Store Your Medication

Medications should usually be kept in the original, labeled container, like it came from the pharmacist (unless it’s put into weekly or monthly organizers). The information on the label is necessary to properly identify the patient, the physician, the drug, the instructions for use and the date the prescription was filled. Do not put all of your medications into one container. Some may be similar in size and color and you may accidentally take the wrong drug.

Store medications in a cool, dry place away from sunlight (unless otherwise directed). A kitchen cupboard is a good place. Remember that the medicine cabinet in the bathroom often becomes hot and steamy and is not a good place to store medicines.

Keep medicines in a safe place away from the reach and sight of small children.

Sharing Medications Can Be Dangerous

Never use medication that belongs to someone else. It has been prescribed for someone else’s personal medical problems. Their medications could be harmful to you for the following reasons:

- You could be allergic to it.
- It might be too strong.
- It might not help your medical problem.
- It could interact with another medicine you are already taking.
- For the same reason you should never give your medication to anyone else. If you feel you have a medical problem that needs treatment, see your doctor.
Old Medication – Throw Old Drugs Away!

Get rid of old drugs that you are no longer using by returning them to your pharmacy for safe disposal.

Many prescription drugs, as well as over-the-counter drugs, have “expiry dates” on their labels. After the date shown, the drug is no longer safe. Some drugs lose their effectiveness, or go through a change after they are out-dated, that may cause harmful effects.

Over-The-Counter Drugs

These are items which may be purchased without a prescription (for example, cough syrup, aspirin, antacids, laxatives and vitamins). Many people think that because these products are so easy to get that they must not be harmful. This is not necessarily true. It is important to remember that these products are real drugs. They can interact with some physical conditions and some prescription drugs. **Always check with your pharmacist** before you purchase any over-the-counter drugs to determine if the product is safe and appropriate for you to take. If you are using an over the counter drug that is safe for you, always follow the directions and never take more that the maximum amount.

Alternative / Complementary Therapies

Many people choose to take herbs, vitamins, or other natural products to help with their conditions. Some examples of herbal products include garlic, omega-3 fatty acids, and coenzyme Q10. In addition, some people may try traditional Chinese medicine, chiropractic medicine, acupuncture, acupressure, massage, biofeedback, reflexology and yoga to help their condition. Although many of these therapies can be safe and effective if used properly, some may be harmful on their own or interact with prescription medications to cause unwanted or dangerous effects. If you want to try a natural therapy, always check with your doctor and pharmacist first to be sure that it has not caused problems in other people with similar conditions as you. Usually, a small number of these therapies can be safely used with your usual medications. Be sure to tell the doctor or pharmacist before you start or stop any of these alternative therapies.
There are many options available to consumers who wish to try complementary medicine. Products can be purchased at health food stores, from TV commercials, through home sales and from the Internet. Currently, herbals are sold as foods in North America and, as such, are not subject to the same regulations for manufacturing or labeled ingredient amounts as drugs.

Remember, these are real drugs. Approximately 30% of the prescription drugs we have on the market today originated from a natural source.

The advantage of finding the active ingredient and manufacturing it into a tablet or capsule is that the dose can be controlled. Once a substance enters your body, your body doesn't care if it is being sold as a food or a drug, it will have the same actions.

- Some herbs are safe and effective.
- Some herbs are inactive.
- Some herbs are toxic.
- Herbal products are a huge business and generate lots of money. Some of these companies try to generate more sales with grand claims of health benefits.
- The most natural way to get healthy is to eat right and exercise.

Before trying any form of complementary medicine, consider the following:

1. See your doctor to ensure a correct diagnosis of the problem.
2. Any natural source product has the potential to cause side effects or produce an allergic response in a sensitive individual.
3. Do not change any prescription medications on your own.
4. Do your research on the topic.
5. Long term safety information may not be known on the product.
6. Discuss with your doctor prior to starting therapy to ensure it is documented in your chart and that your condition is being monitored.

Please check before taking any herbal or over the counter products as some may affect your heart medications and/or heart condition.
Many different medications are often used to treat patients with heart problems. The medicines are chosen by your doctor to meet the needs of each individual person. Most heart patients will be sent home from hospital with a prescription for a blood thinner, beta-blocker, ACE inhibitor, and a cholesterol lowering drug. Nitroglycerin tablets, patches, or spray are also commonly prescribed to patients with heart disease. Ask your pharmacist for information about other heart medications you may be taking. We will provide you with information on some of the more common drugs. Your doctor, pharmacist or nurse can provide you with information on the other medications you are taking.

- Nitroglycerin tablets, spray, and patches
- Acetylsalicylic Acid – ASA (Aspirin)
- Warfarin
- Beta-blockers
- ACE inhibitors
- Statins

The following information may or may not apply to all patients. Ask your pharmacist, doctor or nurse if you have any questions.

For additional information contact the Saskatchewan Drug Information Center: 1-800-665-Drug (3784) [Saskatchewan only] or 966-6378 [Saskatoon]. Trained pharmacists can answer you questions and this service is FREE.
Nitroglycerin (tablets or spray)

**How It Works:** Nitroglycerin belongs to a group of drugs called nitrates which relax blood vessels and increase the supply of blood and oxygen to the heart while reducing its work load. Nitroglycerin is used to relieve or prevent angina. (Symptoms of angina, see page 22)

**Tablets - How They Should Be Used:** As soon as you feel an angina attack starting, place a tablet under your tongue. Don't wait longer than 1 minute for the discomfort to go away by itself. The longer you wait, the less helpful the Nitro can be. Sit or lie down and let the tablet dissolve under your tongue. Do not chew or swallow the tablet.

**Spray - How it Should Be Used:** As soon as you feel an angina attack starting, sit down and remove the plastic cap from the container. **Do not shake** the container. With the container held upright and close to your mouth, press the button and spray medication under your tongue. **Do not inhale** the spray and avoid swallowing immediately after using the spray. Don't wait longer than 1 minute for the discomfort to go away **on its own.** The longer you wait, the less helpful the Nitro can be.

Pain relief should occur in 2-5 minutes. If there is not relief in that time, go to the hospital immediately or call 911.

Nitroglycerin sublingual tablets or spray may also be taken 5-10 minutes before an activity or emotional stress which has caused angina in the past. Effects of the medication should last for 20-30 minutes.

Always carry some of this medication with you.

If you use the tablets, keep them in the original, tightly-capped glass container **without** the cotton, and carry the bottle in an outside pocket or purse. This should help prevent rapid loss of tablet strength. Store Nitroglycerin tablets in a cool, dry place. Do not store in the bathroom or refrigerator. Do not store other medications in the same container as Nitroglycerin.

When properly stored, Nitroglycerin sublingual tablets retain their strength until the expiration date printed on the original label. However, because of patient usage, changing temperature and moisture, shaking and repeated bottle opening,
the tablets may be good for only 12 months and should be discarded at this time. The date you purchased the medication should be on the prescription label.

In the past, some people have tested the strength of their sublingual Nitroglycerin tablets by checking for a tingling or burning sensation, a feeling of warmth or flushing or a headache after a tablet has been dissolved under the tongue. However, newer tablets do not always cause these effects and some people are unable to detect them. Therefore, this method of testing tablet strength is not recommended.

If you have the spray, store the bottle away from heat and direct sunlight. Do not store in the bathroom or refrigerator. Do not freeze, puncture, break or burn the aerosol container. Nitroglycerin spray is in a small container, like a breath freshener. In this container the medicine remains more stable. It will last longer and require fewer replacements. There are 200 doses or sprays in one container. Many patients find this form of Nitroglycerin more convenient to use. Your Nitro spray should last as long as the expiry date on the container.

**Precautions While Using This Medication:**

Dizziness, light-headedness or a fainting feeling may occur. Drinking alcohol, standing for long periods of time, exercise and hot weather may make this worse. Sit or lie down while using this medication and stand up slowly afterwards.

**What Else May Happen:** Along with its desired effects, Nitroglycerin sometimes causes some unwanted effects. After taking this medication you may get a headache or notice your face becomes flushed or red. These are common effects and should become less noticeable after you have used the spray for a while.
**Nitroglycerin Patch**

The nitroglycerin patch is a little different than the tablet or spray, because the patch is not used to stop chest pain once it is started. This medication is used to **prevent** attacks or symptoms of angina (chest, arm, neck, jaw discomfort, shortness of breath, etc.). The skin patch releases a small amount of Nitroglycerin at a steady rate so that there is nitroglycerin in the body at all times that the patch is worn.

How It Should Be Used: The Nitroglycerin skin patch is designed as a complete unit. **DO NOT** cut the patch.

**Where to Apply:** Choose any area of the skin which is most comfortable for you, except the knees or elbows. Most patients prefer the chest. It is best if the area is hairless. The skin should not be irritated or broken since this may alter the amount of medication you get through the skin.

**Preparing the Skin:** In order for the patch to stick, the skin should be clean and dry without any creams, lotions, oils or powder on it.

The Nitroglycerin skin patch should be changed according to the schedule prescribed by your doctor. You will usually be instructed to wear the patch for only 12 hours at a time. If you forget to remove it at the scheduled time, just remove it as soon as possible and continue to follow your original schedule.

Contact with water (as in bathing, swimming, showering) or physical activity will not affect the patch. If the patch does fall off, discard it and put a new patch on a different area of the skin. Continue to follow your original schedule.

The Nitroglycerin skin patch should be stored below 25°C. Do not store it out of the individually sealed pouch.

Keep the patches out of the reach of children both before and after use.
Precautions While Using This Medication:
Dizziness, light-headedness or a fainting feeling may occur. Drinking alcohol, standing for long periods of time, exercise and hot weather may make this worse. When starting to use this medication, you may get a headache. This is a common effect and should become less noticeable after you have used the patches for a while. Mild itching and reddening of the skin may occur. This usually goes away within a few hours. It is important to apply each patch to a different area of the skin.

What Else May Happen: Along with its desired effects, Nitroglycerin skin patches may cause unwanted effects. Although these effects are rare, check with your doctor if any of the following should occur:

1. Angina (chest pain), particularly while the patch is off.
2. Persistent dizziness or fainting.
3. Persistent headache.
4. Shortness of breath.
5. Unusual tiredness or weakness.
6. Weak or unusually fast heart beat.
Acetylsalicylic Acid – ASA (Aspirin)

How It Works: ASA is used to prevent cells in the blood, called platelets, from sticking together to form clots. By preventing these clots in the blood, ASA can lower the risk of having a heart attack or stroke.

ASA also relieves pain, reduces swelling and redness and reduces fever in a number of medical conditions.

How It Should Be Used: ASA should be taken with food or meals. This helps prevent possible stomach upset. If your tablets are enteric coated (e.g. Ecotrin, Entrophen, Novasen), they are to be swallowed whole. Do not crush them or break them before taking.

Keep out of reach of children. ASA overdoses in children are very dangerous.

Beverages containing alcohol may increase the chance of stomach upset or bleeding while you are taking ASA. It is best to avoid alcohol while taking ASA, but one or two drinks containing one ounce of alcohol can usually be tolerated without causing this problem.

If You Forget A Dose: Take it as soon as you remember, then resume your regular dosing schedule.

Precautions While Using This Medication: Do not use ASA if it has a strong vinegar-like odor, since this means the medication is breaking down. Do not keep outdated medication.

Check the labels of all over-the-counter (OTC) and non-prescription medications before taking them to make sure they do not contain ASA, as too much can be harmful. Check with your pharmacist if you are unsure.
What Else May Happen: Along with its beneficial effects ASA may cause some unwanted effects. Some of these effects, such as heartburn, or indigestion usually disappear with continued therapy. However, if they continue or are bothersome, contact your doctor. Other unwanted effects do not happen often, but if any of the following occur, contact your doctor.

1. Persistent stomach upset, vomiting or stomach pain.
2. Blood or black tarry stools.
3. Ringing or buzzing in ears.
4. Shortness of breath, tightness in chest or wheezing.
5. Skin rash, hives or itching.
Warfarin

How It Works: Warfarin is an anticoagulant (often called a blood thinner). Anticoagulants decrease the ability of the blood to clot and so help to prevent harmful clots from forming in the blood vessels. This medication can help prevent heart attacks, strokes, as well as prevent other clots from causing harm to your health.

How Should It Be Used: Take Warfarin regularly, at about the same time every day and in the exact amount and way your doctor has prescribed for you.

People taking Warfarin are given frequent blood tests during treatment. The blood test used is called an “INR”. It measures how fast our blood is clotting. Your doctor may change your Warfarin dose from time to time depending on these tests. As long as you are on warfarin you MUST get your INR checked at the lab regularly (approximately once per month at least).

If You Forget A Dose: Take it as soon as you remember. If you do not remember until the next day, do not take the missed dose at all and do not double the next dose. Instead, go back to your regular dosing schedule. Tell your doctor about any missed doses when you get your “INR” blood test taken.

Note: If you miss two doses, call your doctor promptly.

Precautions While Using This Medication: Many drugs and herbs can interact with warfarin, which may increase the risk of bleeding or increase the risk of a blood clot. For this reason, do not start or stop taking any prescription or non-prescription medication without checking with your doctor or pharmacist first.

Should you need dental work or any type of emergency surgery, be sure to tell the dentist or doctor that you are taking Warfarin.
When taking Warfarin, you should wear a Medic Alert bracelet indicating that you are taking this medication. Drinking too much alcohol may change the way this medication affects your body. Avoid alcohol or limit yourself to 1-2 occasional drinks at any one time.

Avoid any unusual changes in your diet. **Abnormally large amounts** of green leafy vegetables, (asparagus, broccoli, lettuce, turnip greens, spinach, fiddle-heads and watercress) beef liver, fish and fish oils may alter the effect of Warfarin. However, lots of fruits and veggies as part of healthy eating will not cause problems with your warfarin.

**What Else May Happen:** Warfarin may also cause some unwanted effects. You should always watch for signs of unusual bleeding and if any of the following occur, contact your doctor:

- △ Unusual bleeding from nose, gums, cuts or wounds.
- △ Red or dark brown urine.
- △ Red or black tarry bowel movements.
- △ Unusual bleeding.
- △ Unusually prolonged or heavy menstrual period in women.
- △ Unusually severe or prolonged headaches or stomach pain.

The above information may or may not apply to all patients. Please ask your pharmacist, doctor or nurse if you have any questions.
Beta-Blockers

How They Work:
Beta blockers block the effects of certain hormones like adrenaline from causing harm to the heart. Adrenaline speeds up the heart and makes it pump harder. If this continues to happen, over time this can damage the heart and can make it play out. By using drugs like beta blockers, we can keep the heart from working too hard.

Beta blockers also lower blood pressure. In someone with heart disease, blood pressure should fall below 140/90 when they are resting. In someone with Diabetes or kidney disease, blood pressure should fall below 130/80 when they are resting. By keeping blood pressure below these levels, this will lower the risk of future heart attack and stroke.

Some Examples: atenolol, metoprolol, bisoprolol, carvedilol

How Should They Be Used: Beta blockers are meant to be used over the long term, and so should be used every day as prescribed. It is important not to stop using this type of drug abruptly. They can be taken with meals or on an empty stomach.

Precautions While Using This Medication:
Since beta-blockers work by slowing down the heart and decreasing blood pressure, some people might get a bit tired, dizzy or light headed when first taking this drug. That problem should go away quickly as your body gets used to the medication.

A few people can experience sexual problems with this type of medication. If this is the case, talk to your doctor, because there are options available to help.

There can be other drugs or herbal medications that can interact with beta-blockers, which can increase the risk of side effects or prevent the medication from working properly. Talk to your pharmacist about your medications to make sure there are no problems.
**ACE Inhibitors and ARBs**

**How They Work:** ACE inhibitors and ARBs work by opening up your blood vessels a little bit. When they do this, they can ease the pressure on the heart and prevent it from working too hard. By opening up your blood vessels, they also work to decrease your blood pressure.

**Some Examples:**
**ACE inhibitors** – benazepril (Lotensin®), captopril (many names), cilazepril (Inhibace®), enalapril (Vasotec®), fosinopril (Monopril®), Lisinopril (Zestril® or Prinivil®), Perindopril (Coversyl®), Quinapril (Accupril®), ramipril (Altace®), trandolapril (Mavik®)

**ARBS** – candesartan (Atacand®), eprosartan (Teveten®), irbesartan (Avapro®), losartan (Cozaar®), telmisartan (Micardis®), valsartan (Diovan®)

**How Should They Be Used:** ACE inhibitors and ARBs are meant to be used over the long term, and so should be used every day as prescribed. They can be taken with meals or on an empty stomach.

**Precautions While Using This Medication:**
Since ACE inhibitors and ARBs work by dilating your blood vessels and decreasing blood pressure, some people might get a bit tired, dizzy or light headed when first taking these drugs. That problem should go away quickly as your body gets used to the medication.

One problem with ACE inhibitors that does not happen with ARBs, is a cough. This cough is caused by a dry tickle at the back of the throat, and can happen in less than 1 out of 10 people. If this is happening to you and you cannot put up with it, talk to your doctor, as there are other options.

There can be other drugs or herbal medications that can interact with ACE inhibitors and ARBs. These interactions can increase the risk of side effects or prevent the medication from working properly. Talk to your pharmacist about your medications to make sure there are no problems.
“Statins”

**How They Work:** Statins work by decreasing the amount of LDL cholesterol that our body makes. This LDL cholesterol is the bad cholesterol that can build up in our blood vessels, and cause them to get blocked. So by lowering our LDL cholesterol, we can hopefully prevent that build up from getting worse. By being on a statin over the long term, you may be able to decrease your risk of a heart event by up to 40%.

**Cholesterol Levels:** There are certain types of cholesterol that your doctor looks at when he checks your cholesterol. These levels should be kept in a certain range. In someone with heart disease, the risk of heart attacks and other problems can be lowered greatly if:

- LDL (bad) cholesterol to be less than 2 mmol/L (refer to page 44)

By keeping the LDL cholesterol in this range we can help to keep our risk of heart attack to a minimum. Diet, and exercise, in addition to statins are important in controlling our cholesterol levels.

**Some Examples of Statins:** rosuvastatin (Crestor), atorvastatin (Lipitor), simvastatin (Zocor), and many others

**How Should They Be Used:** Statins are meant to be used over the long term, and so should be used every day as prescribed. They can be taken with food or on an empty stomach. Some statins work best when taken at bedtime. Ask your pharmacist when is the best time for you to take your statin.
**Precautions While Using This Medication:**

Many people will not experience any side effects from statins. However, a few people may have a bit of stomach upset or stomach cramps when they first take a statin. As the body gets used to this new medication, this problem should go away. Other people may report a bit of muscle stiffness, or muscle aches and pains.

If a very severe, unexplained muscle pain happens, it is best to go to the doctor right away and get checked out, as this could be a very rare problem from the medication.

There can be other drugs or herbal medications that can interact with a statin. These interactions can increase the risk of side effects or prevent the medication from working properly. One common drug interaction with some statins is grapefruit juice. By drinking grapefruit juice, the amount of statin in your body could increase very quickly leading to unwanted side effects. Talk to your pharmacist about your medications to make sure there are no problems or to find out if grapefruit juice interacts with your statin.
LiveWell Cardiac Program

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What Is Cardiac Rehabilitation?

The Canadian Association of Cardiac Rehabilitation has defined cardiac rehabilitation as
“… the enhancement and maintenance of cardiovascular health through individualized programs designed to optimize physical, psychological, social, vocational and emotional status. This process includes the facilitation and delivery of secondary prevention through risk factor identification and modification in an effort to prevent disease progression and recurrence of cardiac events.”

This definition includes specific reference to the provision of secondary disease prevention services within comprehensive cardiac rehabilitation programs.

CACR Guidelines 2009 3rd Edition

What Are Our Objectives?

Our overall objective is to help the participants in the program achieve the highest level of vocational, mental and physical activity their heart, mind, and body will allow. Family members are welcome and encouraged to attend the education and exercise components. For many people, what they achieve is often much more than they imagine. A few patients have even become successful marathon runners following their recovery from a heart event. Many participants believe they have improved their quality of life by attending the program. A common comment is “I feel better now, than I have in years.” As we have already mentioned, we hope to help you make informed choices as you strive to achieve a more “heart smart” lifestyle. Another benefit of attending a cardiac rehabilitation program is the reduced likelihood of further heart events.

Including your spouse or support will increase the chances of you succeeding with positive lifestyle changes. As many previous participants have found, spouses and family can benefit from the information, support, encouragement and fellowship of this program.
Benefits of Cardiac Rehabilitation

<table>
<thead>
<tr>
<th>Health</th>
<th>Fellowship</th>
<th>Fitness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fewer cardiac events</td>
<td>2. Less angina</td>
<td>3. Improved blood lipid levels</td>
</tr>
<tr>
<td>4. Improved well being and function</td>
<td>5. Less stress</td>
<td>6. Less cigarette smoking</td>
</tr>
<tr>
<td>7. Improved exercise tolerance</td>
<td>8. Improved strength with resistance training</td>
<td>9. Improved flexibility with stretching exercises</td>
</tr>
</tbody>
</table>

What Does Our Program Consist Of?

Self-Management education and exercise sessions are the major parts of the LiveWell Cardiac Program.

For Saskatoon participants:

Education Sessions

Each month, a new series of classes begin with a new group of people who have experienced a heart event along with spouses/family members. An invitation outlining dates and times is mailed out to you.

Exercise Sessions

Individualized and medically supervised exercise sessions are offered in a large group setting. Main activities include stretching exercises, muscle strengthening, walking, cycling, rowing and jogging (if you wish). Each participant receives an individually tailored program to suit his/her capability, needs and medical situation. For some participants a standard exercise tolerance test (stress test) is done before entry into the program to determine the proper starting place and to give you guidelines for activity.
You are encouraged to participate in both – education and exercise. Your spouse, family member, friend, are welcome to attend with you.

A multidisciplinary team of healthcare providers, including doctors, nurses, exercise therapists, pharmacists, dietitians and support group volunteers are trained to help with your recovery.

Equipment necessary for dealing with medical emergencies, although rarely used, is available.

**For Rural participants:**

Some rural communities offer a Heart to Heart.

Refer to the first few pages inside this manual. You will find a list of Heart to Heart programs offered in rural Saskatchewan. We encourage you to call the person in your area to learn about their program.

If you would like to attend the program in Saskatoon, please contact us at 655-2136.

For more information on what is offered in other centers, contact the *Heart and Stroke Foundation of Saskatchewan at 1-888-473-4636.*
Coronary Artery Rehabilitation Group (CARG)

CARG is a self-help group made up of people who have experienced a heart event bypass surgery, angioplasty or angina. Spouses and support people are welcomed in CARG as well. The group is a totally voluntary support group, which generates all of its funds through membership and exercise programs.

Objectives:

✧ Provide support to new patients with heart conditions, their spouses and families.

✧ Encourage new people to attend the Cardiac Program.

✧ Provide funds for purchase of exercise bikes, rowing machines, exercise mats and weights for use by all cardiac patients.

✧ Plan educational programs pertaining to the heart.

Trained Volunteers

✧ Visit, with the approval of the Cardiac Program staff, recovering patients and families in Saskatoon City Hospital, St. Paul’s Hospital and Royal University Hospital.

✧ Facilitate patient and family support sessions at the Field House.

✧ Provide support through four or five social events each year, three educational sessions each year.

✧ Offer exercise programs for graduates of the medically-supervised Cardiac Program exercise program.

✧ Publish and circulate a newsletter.

✧ The CARG exercise program (red shirts), in association with the LiveWell Cardiac Program (yellow shirts), has over 800 members exercising regularly to improve and maintain good health.
Web Sites

When choosing a website, look for a “url” that ends in .ca, .com, or .org.

“Surfer Beware” as some sites may provide inaccurate information. If what is being recommended seems too good to be true, check with your healthcare provider first.

American Heart Association ....................... http://www.americanheart.org

American Stroke Association ....................... http://www.strokeassociation.org

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

Canadian Heart and Stroke Foundation ........ http://www.heartandstroke.ca

Canadian Lung Association ......................... http://www.lung.ca

Canadian Mental Health .............................. http://www.cmha.ca

Dietitians of Canada .................................. http://www.dietitians.ca

Health Canada Online ................................. http://www.hc-sc.gc.ca

Heart and Stroke Foundation ...................... http://www.heartandstroke.ca/

Heart and Stroke Foundation - Food Information Program http://www.healthcheck.org

In Motion .................................................. http://www.in-motion.ca

Intelihealth ................................................ http://www.intelihealth.com

Medical News ............................................ http://www.medscape.com

Mayo Clinic Health Oasis ......................... http://www.mayohealth.org

Smoking Association ................................. http://www.gosmokefree.ca
Stress Management .................................. http://www.mindtools.com

Road to Well Being.................................. http://www.roadtowellbeing.ca

Tools for Coping with Life's Stressors .... http://www.coping.org

Tufts University
– Growing Stronger Program ................... http://www.coping.org

Tools for Coping with Life's Stressors .... http://www.coping.org

Women's Health Matters......................... http://www.womenshealthmatters.ca

Yahoo! ...................................................... http://health.yahoo.com

LiveWell Chronic Disease Management . http://www.saskatoonhealthregion.ca/LiveWell
“Grasp the subject, the WORDS will follow.”
- Cato the Elder, BC 234-149, Roman Statesman & Orator
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerobic exercise</td>
<td>Activity which requires continuous rhythmic muscle contraction of the legs and possibly the arms.</td>
</tr>
<tr>
<td>Allergy</td>
<td>Reaction to a substance or condition produced by the release of histamine or histamine-like substances in the body. Symptoms may include rashes, nasal congestion, asthma and occasionally shock.</td>
</tr>
<tr>
<td>Aneurysm</td>
<td>Ballooning-out of the wall of a vein, an artery, or the heart due to weakening by disease, injury, or a birth defect.</td>
</tr>
<tr>
<td>Angina pectoris</td>
<td>Episodes of pain in the chest or other symptoms which occur when the blood supply to the heart is less than the amount needed. May be caused by hardening of the arteries or atherosclerosis.</td>
</tr>
<tr>
<td>Angiogram</td>
<td>Test done by injecting contrast dye into a body organ to observe the heart or systemic circulation.</td>
</tr>
<tr>
<td>Antiarrhythmic</td>
<td>Medicine used to treat disorders of the heart rate and rhythm.</td>
</tr>
<tr>
<td>Anticoagulant</td>
<td>Medicine which delays clotting of the blood. If given when a clot blocks a blood vessel, it tends to prevent new clots from forming or the existing clot from enlarging, but does not dissolve an existing clot.</td>
</tr>
<tr>
<td>Antihypertensive</td>
<td>Medicine used to control high blood pressure (hypertension).</td>
</tr>
<tr>
<td>Aorta</td>
<td>Largest artery in the body. It carries blood from the heart's left ventricle and distributes it throughout the body. Also called the great artery.</td>
</tr>
<tr>
<td>Aortic valve</td>
<td>Valve located where the aorta, or great artery, meets the left ventricle of the heart. It allows the blood to flow from the heart into the aorta and prevents backflow.</td>
</tr>
<tr>
<td>Apex</td>
<td>Blunt rounded end of the heart normally directed downward, forward, and to the left.</td>
</tr>
<tr>
<td>Apical pulse</td>
<td>Pulse which can be heard with a stethoscope over the heart.</td>
</tr>
<tr>
<td>Arrhythmia</td>
<td>Irregular heartbeat.</td>
</tr>
<tr>
<td>Arteriosclerosis</td>
<td>Condition in which the walls of the arteries thicken and lose their elasticity, thus decreasing blood flow through them. May be due to a buildup of fibrous tissue lipids or minerals. Also called hardening of the arteries.</td>
</tr>
<tr>
<td>Artery</td>
<td>One of the blood vessels which carry blood to various parts of the body. Arteries usually carry oxygenated blood. However, the pulmonary artery carries unoxygenated blood from the heart to the lungs for oxygenation.</td>
</tr>
<tr>
<td>Atherosclerosis</td>
<td>Hardening of the arteries caused by a buildup of lipids and other substances in the blood vessels. This buildup may interfere with the flow of blood.</td>
</tr>
<tr>
<td>Atrial fibrillation</td>
<td>Very fast, chaotic contractions of the atria, causing an irregular heartbeat.</td>
</tr>
<tr>
<td><strong>Atrioventricular node</strong></td>
<td>A cluster of cells between the atria and ventricles that slows the electrical current of the heart rhythm as it passes through the ventricles. Also called A-V node.</td>
</tr>
<tr>
<td>--------------------------</td>
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</tr>
<tr>
<td><strong>Atrium (plural-atria)</strong></td>
<td>One of the two upper chambers of the heart.</td>
</tr>
<tr>
<td><strong>Behavior, Type A and Type B</strong></td>
<td>See personality, Type A and Type B</td>
</tr>
<tr>
<td><strong>Biofeedback</strong></td>
<td>Technique to provide information about which a person is not normally aware. May be used to teach a person to regulate heart rate, blood pressure, blood flow, skin temperature, and activity of the gastrointestinal tract.</td>
</tr>
<tr>
<td><strong>Blood pressure</strong></td>
<td>Force that flowing blood exerts against artery walls.</td>
</tr>
<tr>
<td><strong>Bradycardia</strong></td>
<td>Abnormally slow heart rate. Generally, any rate below 55 beats per minute.</td>
</tr>
<tr>
<td><strong>Bundle of His</strong></td>
<td>Bundle of specialized muscle fibers running from a small mass of muscular fibers (atrioventricular node) between the atria of the heart down to the ventricles. Conducts impulses for the heartbeat from the atrioventricular (A-V) node to the heart muscle. Also called atrioventricular bundle or A-V bundle.</td>
</tr>
<tr>
<td><strong>Calisthenics</strong></td>
<td>Systematic, rhythmic bodily exercises performed usually without equipment.</td>
</tr>
<tr>
<td><strong>Calorie</strong></td>
<td>Unit used to express food energy. Measures the amount of energy your body gets from protein, fat, and carbohydrates in foods you eat.</td>
</tr>
<tr>
<td><strong>Canola oil</strong></td>
<td>Oil taken from rapeseed. Canola oil is mostly a monounsaturated fat.</td>
</tr>
<tr>
<td><strong>Capillary</strong></td>
<td>Smallest of blood vessels through which oxygen and nutritive materials pass to the tissues, and carbon dioxide and waste products pass from the tissues into the bloodstream.</td>
</tr>
<tr>
<td><strong>Carbohydrates (CHO)</strong></td>
<td>Source of energy that consists of sugars or starches found primarily in breads, cereals, fruits and vegetables.</td>
</tr>
<tr>
<td><strong>Cardiac arrest</strong></td>
<td>Cessation of effective heartbeat. As a result, blood pressure drops abruptly and the circulation of the blood ceases.</td>
</tr>
<tr>
<td><strong>Cardiac catheterization</strong></td>
<td>Test done by introducing a small catheter into a blood vessel and guiding it into the heart to measure the mechanics of blood flow and determine the position and size of structural defects.</td>
</tr>
<tr>
<td><strong>Cardiac intermediate care area</strong></td>
<td>Area near the coronary care unit for patients with heart problems who require specialized but not intensive care.</td>
</tr>
<tr>
<td><strong>Cardiac surgery intensive care unit</strong></td>
<td>Area for patients who require intensive care after heart surgery.</td>
</tr>
<tr>
<td><strong>Cardiac surgical step-down area</strong></td>
<td>Area near the cardiac surgery intensive care unit for patients who require specialized but not intensive care after heart surgery.</td>
</tr>
<tr>
<td><strong>Cardiology</strong></td>
<td>Study of the heart and its functions in health and disease.</td>
</tr>
<tr>
<td><strong>Cardiomyopathy</strong></td>
<td>Disease of the heart muscle that reduces the ability of the heart to pump enough blood.</td>
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<td>--------------------</td>
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</tr>
<tr>
<td><strong>Cardiopulmonary bypass machine</strong></td>
<td>A machine through which blood is circulated during open-heart surgery. This machine does the work for your body pumping the blood and supplying it with oxygen. Also called heart-lung machine.</td>
</tr>
<tr>
<td><strong>Cardiopulmonary resuscitation (CPR)</strong></td>
<td>Emergency measure used by one or two people to try to revive a person whose heart and breathing has stopped. Also called basic life support.</td>
</tr>
<tr>
<td><strong>Cardiorespiratory</strong></td>
<td>Referring to the heart and lungs.</td>
</tr>
<tr>
<td><strong>Cardiovascular</strong></td>
<td>Pertaining to the heart and blood vessels.</td>
</tr>
<tr>
<td><strong>Cardioversion</strong></td>
<td>Use of low voltage electric shock to stop an abnormally fast heart rhythm through paddles placed on the chest surface.</td>
</tr>
<tr>
<td><strong>Carotid artery</strong></td>
<td>Main right and left arteries of the neck which carry blood to head and brain.</td>
</tr>
<tr>
<td><strong>Carotid pulse</strong></td>
<td>Pulse present in carotid arteries.</td>
</tr>
<tr>
<td><strong>Catheter</strong></td>
<td>Thin, flexible tube which can be guided into a body organ (for example, cardiac catheter is guided into the chambers of the heart; Foley catheter is guided into the bladder).</td>
</tr>
<tr>
<td><strong>Cerebral vascular accident (CVA)</strong></td>
<td>See stroke.</td>
</tr>
<tr>
<td><strong>Chambers</strong></td>
<td>Enclosed space or cavity (for example, chambers of the heart).</td>
</tr>
<tr>
<td><strong>Chest tube</strong></td>
<td>Tube inserted into the chest cavity to remove fluid, blood or air.</td>
</tr>
<tr>
<td><strong>Cholesterol</strong></td>
<td>Fat-like substance that performs necessary functions in the body. Cholesterol also makes up much of the fatty deposits that collect on the lining of the arteries in atherosclerosis. It is produced by the liver and is present in foods that come from animals or contain animal fat.</td>
</tr>
<tr>
<td><strong>Circulatory</strong></td>
<td>Pertaining to the heart, blood vessels and the circulation of the blood.</td>
</tr>
<tr>
<td><strong>Claudication</strong></td>
<td>Cramping of the calf muscles with exercise, produced by inadequate blood flow.</td>
</tr>
<tr>
<td><strong>Coagulation</strong></td>
<td>Process of clotting.</td>
</tr>
<tr>
<td><strong>Collateral circulation</strong></td>
<td>Circulation of the blood through nearby smaller vessels or new vessels when a main vessel has been blocked.</td>
</tr>
<tr>
<td><strong>Commissurotomy</strong></td>
<td>Operation to widen the opening in a heart valve which has become narrowed by scar tissue.</td>
</tr>
<tr>
<td><strong>Congestive heart failure</strong></td>
<td>Condition in which the heart is unable to pump enough blood. Loss of this pumping power can lead to weakened circulation and fluid collection in body organs and tissues.</td>
</tr>
<tr>
<td><strong>Constrict</strong></td>
<td>To make narrow by drawing together or squeezing.</td>
</tr>
<tr>
<td><strong>Coronary arteries</strong></td>
<td>Arteries arising from the base of the aorta which carry blood to the heart muscles.</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Coronary artery bypass surgery</strong></td>
<td>Surgery done to bypass narrowed or obstructed areas in coronary arteries to improve blood flow.</td>
</tr>
<tr>
<td><strong>Coronary care unit</strong></td>
<td>Intensive care unit for patients with heart problems.</td>
</tr>
<tr>
<td><strong>Coronary heart disease</strong></td>
<td>Condition caused by narrowing of the coronary arteries resulting in decreased blood supply to the heart (ischemia). Also called ischemic heart disease.</td>
</tr>
<tr>
<td><strong>Coronary insufficiency</strong></td>
<td>Condition which occurs whenever the coronary arteries do not provide enough oxygen to meet the needs of the pumping heart.</td>
</tr>
<tr>
<td><strong>Coronary occlusion</strong></td>
<td>Obstruction in a coronary artery which interrupts flow of blood to heart muscle. Also called a heart attack.</td>
</tr>
<tr>
<td><strong>Defibrillation</strong></td>
<td>Use of high voltage electric shock to stop an abnormally fast heart rhythm through paddles placed on the chest surface (external) or around the heart (internal).</td>
</tr>
<tr>
<td><strong>Deoxygenated</strong></td>
<td>Without oxygen.</td>
</tr>
<tr>
<td><strong>Depression</strong></td>
<td>Feeling of extreme sadness and discouragement. Symptoms also may include disruption of sleeping and eating patterns and lack of energy</td>
</tr>
<tr>
<td><strong>Diabetes Mellitus</strong></td>
<td>Disease characterized by high levels of glucose in the blood caused by a failure of the pancreas to produce enough insulin or by ineffective use of insulin in the body.</td>
</tr>
<tr>
<td><strong>Diastole</strong></td>
<td>Period during the heart cycle in which the muscle relaxes, followed by contraction (systole). In a blood pressure reading, the lower number is the diastolic measurement.</td>
</tr>
<tr>
<td><strong>Dilated cardiomyopathy</strong></td>
<td>Type of cardiomyopathy in which the systolic or pumping action of the heart is reduced leading to enlargement of the ventricles.</td>
</tr>
<tr>
<td><strong>Dilation</strong></td>
<td>Stretching or enlargement of the heart or blood vessels beyond the normal.</td>
</tr>
<tr>
<td><strong>Diuretics</strong></td>
<td>Medicines which increase the flow of urine. Often used to treat conditions involving excess body fluid, such as hypertension and congestive heart failure.</td>
</tr>
<tr>
<td><strong>Dual-chamber pacemaker</strong></td>
<td>Pacemaker consisting of two chambers.</td>
</tr>
<tr>
<td><strong>Dyspnea</strong></td>
<td>Shortness of breath.</td>
</tr>
<tr>
<td><strong>Echocardiogram</strong></td>
<td>Test in which pulses of sound are sent into the body, and the echoes returning from the surfaces of the heart produce images that are recorded.</td>
</tr>
<tr>
<td><strong>Edema</strong></td>
<td>Swelling that occurs when the body tissue contains more fluid than normal.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Electrical therapy</strong></td>
<td>Fast pacing pulses, a cardioversion shock or a defibrillation shock. Each therapy is programmed into the Internal Cardioverter Defibrillator (ICD), depending on specific patient needs and the device.</td>
</tr>
<tr>
<td><strong>Electrocardiogram (ECG)</strong></td>
<td>Graphic record of the electrical activity of the heart.</td>
</tr>
<tr>
<td><strong>Electrode</strong></td>
<td>Device placed on the body which is attached through wires to a monitor. Used to measure the body's electrical impulses.</td>
</tr>
<tr>
<td><strong>Electrolyte</strong></td>
<td>Chemicals such as sodium or potassium necessary to maintain some body functions.</td>
</tr>
<tr>
<td><strong>Electrophysiology (EP) study</strong></td>
<td>Test done to evaluate the heart's electrical conduction system by inserting small catheters into the heart and reproducing symptoms and rhythm disturbances in a controlled setting.</td>
</tr>
<tr>
<td><strong>Embolism</strong></td>
<td>Blocking of a blood vessel by a blood clot or other substance carried in the bloodstream.</td>
</tr>
<tr>
<td><strong>Embolus</strong></td>
<td>Blood clot (or other substance such as an air bubble, fat, or tumor) which drifts in the bloodstream and may become lodged in a vessel and obstruct circulation.</td>
</tr>
<tr>
<td><strong>Endocarditis</strong></td>
<td>Inflammation of the thin, inner membrane that lines the heart muscle. May be associated with acute rheumatic fever or infectious agents such as bacteria.</td>
</tr>
<tr>
<td><strong>Endocardium</strong></td>
<td>Thin inner membrane that lines the heart muscle.</td>
</tr>
<tr>
<td><strong>Endotracheal tube (ET tube)</strong></td>
<td>Synthetic tube placed into the trachea to assist with breathing.</td>
</tr>
<tr>
<td><strong>Enzymes, heart muscle</strong></td>
<td>Proteins in the heart muscle which are released into the bloodstream when the heart muscle is damaged. Blood levels of these proteins (LDH, CPK, and SGOT) may be checked daily for several days if a heart attack is suspected.</td>
</tr>
<tr>
<td><strong>Epicardium</strong></td>
<td>Thin exterior membrane that protects the heart muscle.</td>
</tr>
<tr>
<td><strong>Fats</strong></td>
<td>Major source of the body’s energy found mainly in oils, solid fats, and dairy and animal foods.</td>
</tr>
<tr>
<td><strong>Fibrillation</strong></td>
<td>Quivering or uncontrollable contraction of heart muscles causing an irregular heartbeat. See atrial fibrillation, ventricular fibrillation.</td>
</tr>
<tr>
<td><strong>Fluoroscopy</strong></td>
<td>Test in which X-rays are passed through the body onto a fluorescent screen where the shadows of the beating heart and other organs can be seen and studied.</td>
</tr>
<tr>
<td><strong>Grafts</strong></td>
<td>Artificial tubes or the patient’s own vessels used to bypass diseased areas in arteries.</td>
</tr>
<tr>
<td><strong>Hardening of the arteries</strong></td>
<td>See arteriosclerosis.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Healthcare team</td>
<td>Various people from many different backgrounds that work together to provide your medical, physical, surgical, spiritual, and psychosocial care.</td>
</tr>
<tr>
<td>Heart attack</td>
<td>See myocardial infarction.</td>
</tr>
<tr>
<td>Heart block</td>
<td>Condition which results in a block or a slowing of the electrical impulses which travel through the heart.</td>
</tr>
<tr>
<td>Heart failure</td>
<td>See congestive heart failure.</td>
</tr>
<tr>
<td>Heart rate</td>
<td>Number of contractions of the heart in one minute.</td>
</tr>
<tr>
<td>Heart sounds</td>
<td>Sounds heard on the surface of the chest caused by vibrations within the heart.</td>
</tr>
<tr>
<td>Heart-lung machine</td>
<td>See cardiopulmonary bypass.</td>
</tr>
<tr>
<td>Hemodynamics</td>
<td>Pertains to the pressures and flow of blood within the body.</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>Oxygen-carrying pigment of the red blood cells.</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>Profuse loss of blood or bleeding.</td>
</tr>
<tr>
<td>High density lipoprotein (HDL)</td>
<td>&quot;Good cholesterol&quot;; this type of cholesterol is thought to help protect against atherosclerosis.</td>
</tr>
<tr>
<td>His bundle</td>
<td>See Bundle of His.</td>
</tr>
<tr>
<td>Holter monitor</td>
<td>Device for monitoring heart rhythm during normal activity over an uninterrupted period of time.</td>
</tr>
<tr>
<td>Hydrogenation</td>
<td>Adding hydrogen to liquid fats to make the fats harder. This process creates a saturated fat, which tends to raise the level of cholesterol in the blood. Food manufacturers use hydrogenation to make products last longer or to give an appealing consistency to a product.</td>
</tr>
<tr>
<td>Hypercholesterolemia</td>
<td>Excess of cholesterol in the blood.</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>Excess of fats or lipids in the blood.</td>
</tr>
<tr>
<td>Hyperlipoproteinemia</td>
<td>Excess of lipoproteins, resulting in abnormal blood cholesterol, triglycerides, and certain kinds of proteins. May be associated with early development of atherosclerosis.</td>
</tr>
<tr>
<td>Hypertension</td>
<td>High blood pressure. An unstable or persistent elevation of blood pressure above the normal range.</td>
</tr>
<tr>
<td>Hypertrophic cardiomyopathy</td>
<td>Type of cardiomyopathy in which an abnormal growth of heart muscle causes thickening.</td>
</tr>
<tr>
<td>Hypertrophy</td>
<td>Enlargement of a tissue or organ due to increased cell size rather than tumor formation.</td>
</tr>
<tr>
<td>Hypotension</td>
<td>Low blood pressure. Blood pressure below the normal range as in shock or fainting.</td>
</tr>
</tbody>
</table>
Hypoxia  Decreased amount of oxygen in organs and tissues of the body.
Idiopathic cardiomyopathy  Type of cardiomyopathy in which the cause is unknown.
Implantable cardiac defibrillator (ICD)  Implanted device used to treat the life-threatening rhythms of ventricular tachycardia or ventricular fibrillation.
Incision  Surgical cut into soft tissue.
Infarct  Area of tissue which is damaged or dies because of a blocked blood supply.
Infarction  Occurrence of an infarct.
Infection  Condition in which the body or a part of it is invaded by germs.
Insufficiency, aortic  Leak in the valve between the aorta and the left ventricle of the heart, allowing backflow of blood into the left ventricle.
Insufficiency, mitral  Leak in the valve between the upper and lower chambers in the left side of the heart, allowing backflow of blood into the left atrium.
Intensity  In exercise, the workload needed to produce changes in the cardiovascular system to improve physical fitness.
Intermittent claudication  Cramping of the calf muscles which occurs at intervals during activity but not at rest; produced by inadequate blood flow.
Intravenous  Into a vein.
Irregular rhythm  Heartbeat that is unpredictable and without pattern.
Ischemia  Temporary deficiency of blood in a portion of the body, often caused by a blockage in the blood vessel supplying that part.
Ischemic cardiomyopathy  Type of dilated cardiomyopathy caused by hardening of the arteries.
Isometric  Work which involves straining or contracting muscles without movement of the muscle.
Isotonic  Muscular work which produces motion of a body part. Also referred to as dynamic work.
Lifestyle  Individual's typical way of life including diet, recreational activities, job, home, geographic location, and smoking, drinking and eating habits.
Life-threatening rhythms  Rhythms of the heart which, if untreated, result in death.
Lipid  Term for a fat or fat-like substance found in the blood, such as cholesterol.
Low density lipoprotein (LDL)  Type of cholesterol thought to contribute to higher risk of atherosclerosis; also called "bad cholesterol".
Magnetic field  Area that attracts objects containing iron or steel.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnetic resonance imaging (MRI)</td>
<td>Test done that involves the use of magnetic field.</td>
</tr>
<tr>
<td>Mammary artery</td>
<td>Artery in the chest which can be grafted onto the heart in coronary bypass surgery to provide adequate coronary circulation.</td>
</tr>
<tr>
<td>Metabolic problems</td>
<td>Problems involving physical and chemical changes within the body.</td>
</tr>
<tr>
<td>METS (metabolic equivalents)</td>
<td>Units of measurement of the energy required to perform a physical activity. One MET is the energy used by your body while sitting quietly in a comfortable chair.</td>
</tr>
<tr>
<td>Mitral valve</td>
<td>Valve of two triangular flaps of tissue located between the upper and lower chambers in the left side of the heart.</td>
</tr>
<tr>
<td>Monitor</td>
<td>Device used to record the electrical activity of the heart.</td>
</tr>
<tr>
<td>Monounsaturated fat</td>
<td>Fat that may have a slight lowering effect on blood cholesterol. Olive, peanut and canola oils are monounsaturated fats.</td>
</tr>
<tr>
<td>Murmur</td>
<td>Abnormal sound produced in the heart from turbulent blood flow.</td>
</tr>
<tr>
<td>Muscle</td>
<td>Tissue that produces movement of an organ or of a body part by its ability to contract.</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>Inadequate blood supply to the heart, causing death of a portion of heart muscle.</td>
</tr>
<tr>
<td>Myocarditis</td>
<td>Inflammation of the heart muscle.</td>
</tr>
<tr>
<td>Myocardium</td>
<td>Heart muscle. See also endocardium and epicardium.</td>
</tr>
<tr>
<td>Necrosis</td>
<td>Death of areas of tissue.</td>
</tr>
<tr>
<td>Nitrate</td>
<td>Medication which dilates blood vessels and lowers blood pressure.</td>
</tr>
<tr>
<td>Nonprescription drug</td>
<td>Medicine which can be purchased over-the-counter without the written or verbal order of a physician.</td>
</tr>
<tr>
<td>Nutrient</td>
<td>Substance supplied by food that provides the body with nourishment.</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Combination of processes by which the body uses food taken in for function, energy, growth and repair.</td>
</tr>
<tr>
<td>Obesity</td>
<td>Increase in body weight 20% beyond physical and bone structure requirements.</td>
</tr>
<tr>
<td>Occlusion</td>
<td>Closing or shutting off. A coronary occlusion is a closing off of a coronary artery which supplies the heart muscle with blood.</td>
</tr>
<tr>
<td>Omega-3 fats</td>
<td>Polyunsaturated fats found primarily in the oil of cold water fish, such as sardines, salmon, mackerel, tuna, herring and rainbow trout. May help prevent atherosclerosis by helping to keep blood clots from forming along the walls of the arteries.</td>
</tr>
<tr>
<td>Oxygen</td>
<td>Gas present in the air, vital for life.</td>
</tr>
<tr>
<td>Oxygenated</td>
<td>Combined or supplied with oxygen.</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Pacemaker</td>
<td>Small mass of specialized cells in the right atrium of the heart which initiates the electrical impulses that produce contractions of the heart. An implanted pacemaker is an electrical device which can control the beating of the heart by creating one or more rhythmic electrical impulses.</td>
</tr>
<tr>
<td>Palpitations</td>
<td>Sensation of fluttering of the heart.</td>
</tr>
<tr>
<td>Pericardium</td>
<td>Closed sac surrounding the heart.</td>
</tr>
<tr>
<td>Personality (Type A &amp; Type B)</td>
<td>Two kinds of behavior patterns based on emotional make-up and personality traits which may affect one's risk and response to heart disease.</td>
</tr>
<tr>
<td>Phlebitis</td>
<td>Inflammation of any vein, often in the leg.</td>
</tr>
<tr>
<td>Phonocardiogram</td>
<td>See echocardiogram.</td>
</tr>
<tr>
<td>Plaque</td>
<td>Deposit of fatty or other substances in the lining of the arterial walls. A plaque made up of fatty substances is called an atheroma.</td>
</tr>
<tr>
<td>Platelets</td>
<td>One of the components of blood that contributes to clotting. Also called thrombocytes.</td>
</tr>
<tr>
<td>Polyunsaturated fat</td>
<td>Fat that in small amounts tends to lower the level of cholesterol in the blood. Polyunsaturated fats are usually liquid at room temperature.</td>
</tr>
<tr>
<td>Potassium</td>
<td>Mineral found in all foods, especially fruits and vegetables, which are important for proper functioning of nerves and muscles.</td>
</tr>
<tr>
<td>Prosthesis</td>
<td>Artificial substitute for a body part, such as a leg, heart valve, or blood vessel.</td>
</tr>
<tr>
<td>Prothrombin</td>
<td>Chemical substance in the blood which is involved in the blood clotting process.</td>
</tr>
<tr>
<td>Psychosomatic</td>
<td>Pertaining to the influence of the mind, emotions and feelings on the functions of the body.</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Referring to the lungs.</td>
</tr>
<tr>
<td>Pulmonary artery</td>
<td>Artery that conveys blood needing oxygen from the heart to the lungs.</td>
</tr>
<tr>
<td>Pulmonary edema</td>
<td>Condition, usually acute (sudden and severe) but sometimes chronic, marked by an excess of fluid in the lungs.</td>
</tr>
<tr>
<td>Pulmonary embolism</td>
<td>Condition in which a clot or other substance lodges in the blood vessels of the lungs.</td>
</tr>
<tr>
<td>Pulmonary valve</td>
<td>Valve formed by three flaps of tissue located where the pulmonary artery meets the right ventricle.</td>
</tr>
<tr>
<td>Pulmonary vein</td>
<td>Vein that returns oxygen-rich blood from the lungs to the heart.</td>
</tr>
<tr>
<td>Pulse</td>
<td>Expansion and contraction of an artery as the heart beats. This may be felt with the finger at various points on the body.</td>
</tr>
<tr>
<td>Pulse generator</td>
<td>Power source for an artificial pacemaker or internal cardioverter defibrillator.</td>
</tr>
<tr>
<td>Radial pulse</td>
<td>Pulse felt at the wrist.</td>
</tr>
</tbody>
</table>
Radioisotopic scanning is a diagnostic technique involving the injection of radioisotopes to visualize the heart and great vessels.

Rehabilitation is treatment and education that leads to regaining function.

Respirator is a device or machine used to maintain breathing.

Restrictive cardiomyopathy is a type of cardiomyopathy in which the heart muscle becomes stiff and hard due to abnormal deposits within it.

Revascularization is the restoring of adequate blood flow to body parts when the arteries that supply them are narrowed or blocked by injury or disease. Such surgery can be done on the legs, kidneys, brain, or heart.

Rheumatic fever is a childhood disease which may be caused by a streptococcal infection and may result in scarring of the valves or weakening of the heart muscle.

Rheumatic heart disease is a condition in which the heart valves have been damaged by one or more attacks of rheumatic fever.

Right ventricular hypertrophy is an enlargement of the right ventricle.

Risk factor is a characteristic that has been shown to increase one's chances for developing a disease or making a disease worse.

Saphenous vein is a large vein in the leg which can be grafted onto the heart in coronary bypass surgery to provide adequate coronary circulation.

Saturated fat is fat that tends to raise the level of cholesterol in the blood. Usually solid and waxy at room temperature, it can be found in either animal or vegetable products.

Septum is a structure that normally divides the right and left sides of the heart (a dividing wall).

Sexuality is the self-concept of one's sexual role.

Shunt is a passage that diverts blood flow from one main source to another. Often constructed artificially.

Sinoatrial node is a cluster of specialized cells in the right atrium which initiates the electrical impulses that cause the heart to contract. Also called sinus node, S-A node or natural pacemaker.

Sinus rhythm is normal heart rhythm.

Sodium (Na) is a mineral that is essential in maintaining the fluid balance of the body. Affects fluid balance by attracting and holding water. Table salt (sodium chloride) is nearly half sodium.

Sphygmomanometer is a device for measuring blood pressure.

Stenosis, aortic is narrowing of the valve opening between the left ventricle and the aorta. May be the result of scar tissue forming after rheumatic fever, infection or other causes.
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stenosis, mitral</td>
<td>Narrowing of the valve between the upper and lower chambers in the left side of the heart. May be the result of scar tissue forming after a rheumatic fever infection.</td>
</tr>
<tr>
<td>Stent</td>
<td>A short narrow metal tube often in the form of a mesh that is inserted into a blood vessel to keep a previously blocked passageway open.</td>
</tr>
<tr>
<td>Stress</td>
<td>Physical, mental or behavioral response of the body to demands made on it by a stressor. This response is based on individual interpretation.</td>
</tr>
<tr>
<td>Stressor</td>
<td>Any change, event, or threat which may result in a stress response.</td>
</tr>
<tr>
<td>Stroke</td>
<td>Impeded blood supply to part of the brain. Sometimes called cerebrovascular accident, cerebral vascular accident or CVA.</td>
</tr>
<tr>
<td>Subendocardial</td>
<td>Heart attack that affects only the inner aspect of the myocardium, or heart muscle wall.</td>
</tr>
<tr>
<td>Swan-Ganz Line</td>
<td>Catheter placed inside the vein and into the heart with a balloon tip so that it may float in the bloodstream; used to measure pressures and blood flow within the heart and lungs.</td>
</tr>
<tr>
<td>Systole</td>
<td>Period during the heart cycle in which the muscle contracts, followed by relaxation (diastole). In measuring blood pressure, the upper or first number is the systole.</td>
</tr>
<tr>
<td>Tachycardia</td>
<td>Fast heart rate; generally, any rate above 100 beats per minute.</td>
</tr>
<tr>
<td>Thrombophlebitis</td>
<td>Inflammation and blood clotting in a vein.</td>
</tr>
<tr>
<td>Thrombosis</td>
<td>Formation of a blood clot (thrombus) inside a cavity of the heart or a blood vessel.</td>
</tr>
<tr>
<td>Thrombus</td>
<td>Blood clot inside a cavity of the heart or a blood vessel.</td>
</tr>
<tr>
<td>Tranquilizer</td>
<td>Medicine used to relieve tension and anxiety.</td>
</tr>
<tr>
<td>Transmural infarction</td>
<td>Heart attack that affects the entire thickness of the myocardium (heart muscle wall).</td>
</tr>
<tr>
<td>Tricuspid valve</td>
<td>A valve consisting of three flaps of tissue located between the upper and lower chambers in the right side of the heart.</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>Form of fat that the body makes from sugar, alcohol or excess calories. Normally found in all individuals. An elevated level of triglycerides in the blood may add to atherosclerosis.</td>
</tr>
<tr>
<td>Valve</td>
<td>Flap of tissue which prevents backflow of blood and keeps it moving through the heart and circulatory system in a forward direction.</td>
</tr>
<tr>
<td>Vascular</td>
<td>Pertaining to blood vessels.</td>
</tr>
<tr>
<td>Vasodilator</td>
<td>Medicine which causes the muscles of the small arteries and arterioles to relax.</td>
</tr>
<tr>
<td>Vein</td>
<td>One of the blood vessels which returns blood from various parts of the body to the heart. Usually carries deoxygenated blood. However, the pulmonary vein carries oxygenated blood from the lungs to the heart.</td>
</tr>
<tr>
<td><strong>Vena cava</strong></td>
<td>One of the two great veins which carries deoxygenated blood from the body to the right atrium of the heart. The superior vena cava beings blood from the upper part of the body (head, neck, and chest) while the inferior vena cava brings blood from the lower part of the body (legs and abdomen).</td>
</tr>
<tr>
<td><strong>Venous blood</strong></td>
<td>Deoxygenated blood.</td>
</tr>
<tr>
<td><strong>Ventilation</strong></td>
<td>Circulation and exchange of oxygen and carbon dioxide in the lungs.</td>
</tr>
<tr>
<td><strong>Ventricle</strong></td>
<td>One of the two main pumping chambers of the heart. The left ventricle pumps blood to the body, while the right ventrical pumps blood to the lungs.</td>
</tr>
<tr>
<td><strong>Ventricular fibrillation (VF)</strong></td>
<td>Very fast, chaotic heartbeat caused by abnormal impulses coming from several areas of the ventricles. The heart stops pumping, and quivers uncontrollably until reversed with an electrical shock or until death occurs.</td>
</tr>
<tr>
<td><strong>Ventricular tachycardia (VT)</strong></td>
<td>Fast heartbeat caused by impulses coming from a single area of the heart. May produce symptoms of fainting, dizziness, weakness, or shortness of breath and must be treated or it may lead to ventricular fibrillation.</td>
</tr>
<tr>
<td><strong>Vital signs</strong></td>
<td>Pulse rate, blood pressure, breathing rate, and temperature.</td>
</tr>
<tr>
<td><strong>Work simplification</strong></td>
<td>Change in the way tasks are done to reduce the energy used by the heart.</td>
</tr>
</tbody>
</table>
Cardiac Program Manual

…For yesterday is but a dream
And tomorrow is only a vision.
But today, well lived
Makes every yesterday a dream of happiness
And every tomorrow a vision of hope.
Look well, therefore, to this day.

Sanskrit Proverb