



SIoux LOOKOUT
Meno Ya Win
HEALTH CENTRE

Cardiac Education & Rehabilitation Program

Patient Education Workbook

Revised 10-August-20

Disclaimer

The materials and information given in this booklet are meant for educational and informational purposes only. This information does not replace that of medical advice given by your health care provider(s).

SLMHC Mission, Vision, Values

Mission: Caring for People, Embracing Diversity, Respecting Different Pathways to Health

Vision: We will be a Centre of Excellence in First Nations and northern health care by working together to improve the health status of individuals, families and communities now and for generations to come.

We value compassion, respect, quality and teamwork.

Values Statement

Compassion: We promise to provide care that is compassionate and reflects humility, caring, dignity, empathy and love.

Respect: We promise to be respectful and embrace honesty, integrity, humility, engagement, accountability, responsiveness and truth.

Quality: We promise to provide high-quality, individualized care that is innovative, meets best practice standards and reflects our awareness of cultural safety.

Teamwork: We commit to working as a team and collaborating in a care planning that involves the patient. We value leadership, wisdom, and bravery.

Goals of the Cardiac Education & Rehabilitation Program

- Develop and assist the patient to implement a safe and effective exercise program into their lives.
- Provide appropriate supervision and monitoring to detect changes in clinical status.
- Provide ongoing support to the patient and their caregivers to enhance medical management.
- Assist patient in returning to vocational and recreational activities or assist in modifying activities based on clinical status.
- Provide patient and family education to optimize secondary prevention through lifestyle behavior and use of cardio-protective medications.

Resource: ACSM Guidelines, 10th Edition, 2017

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Session 1: Program Orientation

Cardiac Education & Rehabilitation Program

Welcome to Sioux Lookout Meno Ya Win Health Centre (SLMHC) Cardiac Education & Rehabilitation Program (Cardiac Rehab Program). You may be joining the program because you've suffered a heart event (i.e., heart attack, stroke) or you've had a heart procedure (e.g., stent, bypass surgery). You may also be here because you're at risk of experiencing a heart event in the future (e.g., chest pains).

What is the reason that you're joining the Cardiac Rehab Program?

Cardiac Rehab Program Goals

Our program is intended for you to make healthy lifestyle changes in order to reduce your risk of future heart events. By joining our program you may also improve your fitness, how you feel, how your body functions, and your chances of living a longer life.

Most importantly, the ultimate goal of the Cardiac Rehab Program is **self-management**:

While you're in the program, you'll be provided with an exercise program, coaching, education, and resources that guide you in making healthy lifestyle changes. But, in the end, you need to take responsibility, control, and become self-sufficient so that you'll maintain those healthy lifestyle changes long after the program is over.

Cardiac Rehab Team

When you begin the program you'll be joining a comprehensive team who will be working with you throughout the duration of the program. It's important to know who the members of your team are and what resources you'll have access to.

The following table will show you a breakdown of your Cardiac Rehab Team and their role within the program.

Cardiac Rehab Program Team

Team Member	Role
Referring Doctor	The doctor who referred you to the program. This person could be your family doctor, cardiologist, surgeon, nurse practitioner or other specialist.
Assessment Team <ul style="list-style-type: none"> • Doctor • Kinesiologist 	Your assessment team will be with you for the exercise stress test portion of the program.
Cardiac Rehab Program Supervisors <ul style="list-style-type: none"> • Kinesiologists 	Kinesiologists will be your Cardiac Rehab Program supervisors. They'll be your primary contacts throughout the program. Your Kinesiologist will design your exercise prescription based on your stress test results. They'll also make sure your exercise is safe, help to progress your exercise, and help to connect you with other resources.
Dietitians	Our Dietitians can work with you on healthy eating. If you'd like to see a Dietitian, speak to one of your supervising Kinesiologists.
Social Worker	Our Social Worker can work with you on improving your mental health. Specifically, you can talk to a Social Worker about issues related to stress, anxiety, and depression. If you'd like to see a Social Worker, speak to one of your supervising Kinesiologists.
Smoking Cessation Nurse	Our Smoking Cessation Nurse can work with you toward quitting smoking. If you'd like to see a Smoking Cessation Nurse, speak to one of your supervising Kinesiologists.
Thunder Bay Rehabilitation and Healthy Lifestyles Program	You'll have access to telemedicine sessions run by the Thunder Bay Rehabilitation and Healthy Lifestyles Program. Topics include recipes and meal planning, exercise as a lifestyle, and stress management techniques. The sessions may be done in either a group or individual setting. You're encouraged to bring your partner or close relative/friend with you. If you'd like to attend/set up a telemedicine session, speak to one of your supervising Kinesiologists.
Your Peers	You're encouraged to get to know your fellow Cardiac Rehab members. You may share your experiences, learn from each other, and help each other along the way.
You	You're an essential part of the Cardiac Rehab Program. Your role is to complete the exercise stress test, follow your exercise prescription, record your activity/effort, voice concerns, ask questions, and make suggestions. You're also encouraged to participate in the education and telemedicine sessions available in our program. *It's important to understand that your role does not end once you finish the program. You must continue to maintain your lifestyle changes after you've completed the program.

Programs Offered

To enter the Cardiac Rehab Program, you may be required to complete an exercise stress test. After which, you may begin at any time. There are currently three separate programs offered at SLMHC. There is a Three-Month In-Clinic Program, a Three-Month Home Program, and a Six-Month Northern Program.

In-Clinic Program

Home Program

Northern Program

The In-Clinic Program is a three-month program that is run five days per week. You have the choice between three days per week in the mornings or two days per week in the afternoons. On those days, you'll be attending exercise sessions at the Rehab Department gym facility. Morning sessions take place Mondays, Wednesdays, and Fridays from either 8:00 – 9:00am or 9:00 – 10:00am. The afternoon sessions take place Tuesdays and Thursdays from 2:00 – 3:30pm. You'll also be encouraged to exercise on the days that you don't come into the Rehab gym. Other services that you'll have access to include dietitian, social worker, smoking cessation, and telemedicine sessions offered through the Thunder Bay Rehabilitation and Healthy Lifestyles Program.

If you're unable to attend the exercise sessions, you may choose to complete a home program. The Home Program is also a three-month program. After an exercise orientation, you'll be provided with education and given a Home Program booklet that will include all of the necessary information, instructions, and tools that will help you to become successful at home. You may complete your exercise at any time that is convenient for you. You'll still have access to join any of the exercise sessions at the Rehab gym should you become available to do so. You'll also have access to other services, including dietitian, social worker, smoking cessation, and telemedicine sessions offered through the Thunder Bay Rehabilitation and Healthy Lifestyles Program.

If you're living in a Northern community, you'll have the option to complete a condensed one-week program. The overall length of the full program is actually six months; however, you'll be asked to join us at SLMHC for a one-week intake period. To begin the week, you'll be given a program orientation. After, you may be required to complete an exercise stress test. You'll then finish the week with exercise education, exercise sessions, and appointments with the program dietitian and social worker. Other services that you'll have access to include smoking cessation and telemedicine sessions offered through the Thunder Bay Rehabilitation and Healthy Lifestyles Program.

Session 1: What Have I Learned So Far?

1. What is the ultimate goal of the Cardiac Education & Rehabilitation Program?

2. Who are your primary contacts throughout the program?

3. What other services do you have access to while you're in the program?

4. What is your role in the program?

Session 2: Safe Exercise

Symptoms During Exercise

Symptoms are warning signs that tell you that you're working too hard during exercise. To make sure that you're exercising safely you need to pay attention to all of the following warning signs: **shortness of breath, dizziness, palpitations, angina, muscle or joint pain**. If you notice any of these symptoms while you're exercising, then **slow down or stop your exercise immediately**.



Look at the following table. If you notice any of the symptoms while you exercise, **slow down or stop your exercise immediately**.

Symptom	How it feels
Shortness of Breath	<ul style="list-style-type: none"> • Tightening in the chest • Difficulty breathing • Feeling like you can't get enough air
Dizziness	<ul style="list-style-type: none"> • Feeling confused, weak, or unsteady • Feeling like things around you are moving • Feeling like you might faint
Palpitations	<ul style="list-style-type: none"> • Your heart is skipping beats or flip flopping • Your heart feels like it's going too fast or too slow
Angina	<ul style="list-style-type: none"> • Pain, tightness, pressure, or heaviness in the chest, arms, back, neck, or jaw • Shortness of breath • Extreme tiredness • Nausea
Muscle or Joint Pain	<ul style="list-style-type: none"> • Feeling more pain than what is normal for you

How to Avoid Symptoms

Becoming physically active is an important step in your lifestyle change; you're encouraged to make the most out of each exercise session. You should do your best to avoid any symptoms that could cut your exercise sessions short.

The following table includes a list of ways that can help you to avoid symptoms during your exercise.

How to Avoid Symptoms	Suggestions
Follow your exercise prescription	<p>The exercise prescription that you've been given is personalized for you based on your exercise stress test results. Your prescription is designed to provide you with safe and comfortable parameters for you to work within.</p> <ul style="list-style-type: none"> If you feel that you can work harder than what your exercise prescription suggests, first speak with your Kinesiologist before progressing
Warm up	<p>Don't jump right into your aerobic or resistance exercise without a proper warm up.</p> <ul style="list-style-type: none"> 5 to 10 minutes of slower activity prepares your heart, lungs, muscles, and blood vessels for more strenuous activity. A warm up with some stretches helps to prevent muscle strain
Cool down	<p>Don't stop right away after completing your aerobic or resistance exercise. This causes pooling of blood in your legs and less blood flow to the heart and head, which can increase your chance of having symptoms.</p> <ul style="list-style-type: none"> 5 to 10 minutes of slower activity allows your heart rate, breathing, and blood pressure to return to rest gradually. Complete 5-10 minutes of stretching after your cool down
Stretch	<p>Stretching your muscles helps to improve your flexibility and reduce your chance of getting injured during your exercise.</p> <ul style="list-style-type: none"> You should stretch at the end of your exercise session, after your cool down, when your muscles are warm If you want to stretch on a day that you won't be doing either aerobic or resistance training, then warm up for 5-10 minutes before you begin stretching
Take your medications	<p>Continue taking your medications as prescribed by your doctor. If you don't, then you may get symptoms while you exercise.</p> <ul style="list-style-type: none"> If you begin to notice new or unusual symptoms as you progress through the program, then advise your Kinesiologist. You should make an appointment to see your doctor. Your Kinesiologist will provide you with a blood pressure and heart rate progress report to take with you. Your doctor may decide to adjust your medications accordingly

<p>Keep hydrated</p>	<p>Make sure to drink enough water unless your doctor has told you otherwise. So bring water with you to your exercise sessions.</p> <ul style="list-style-type: none"> You should be drinking 4 – 8 ounces of water (100 – 250ml) for every 10 – 25 minutes of exercise
<p>Eat at the right time</p>	<p>You must give your body enough time after eating to allow yourself to digest. If you eat too soon before exercise then your sessions may feel more difficult and you may experience symptoms such as tiredness, shortness of breath and even angina.</p> <ul style="list-style-type: none"> You should give yourself at least 2 hours after eating a large meal before doing exercise
<p>Avoid smoking, caffeine, and alcohol before exercise</p>	<p>Cigarette smoke, caffeine, and alcohol may increase your heart rate and blood pressure and can cause palpitations or angina. Caffeine and alcohol are diuretics, which mean that they cause your body to lose water (dehydration). Exercising soon after consuming caffeine or alcohol can make this dehydration worse because you sweat as your body temperature rises.</p> <ul style="list-style-type: none"> Don't smoke or consume caffeine or alcohol right before you exercise
<p>Avoid exercising when you're sick</p>	<p>Don't exercise when you're sick with a cold or flu. Your body needs time to rest and recover. It's harder for your body to fight the illness if you exercise during this time.</p>
<p>Dress comfortably</p>	<p>Wear loose, comfortable clothing such as sweat suits, shorts, T-shirt, and appropriate footwear (i.e., running shoes with proper support) to reduce your chance of getting injured during your exercise.</p>
<p>Track your pulse Refer to page 14 for instructions on how to track your pulse</p>	<p>Your pulse is your heart rate, or the number of times your heart beats in one minute. Your pulse is lower when you're at rest and increases when you exercise</p> <ul style="list-style-type: none"> Keep track of your pulse to make sure that you won't experience symptoms during exercise Keep track of your pulse to show if you're working within your prescribed target heart rate range You should take your pulse before, during, and after your exercise session
<p>Track your effort Refer to page 15 for instructions on how to track your effort</p>	<p>In order to track your effort, you'll be using the BORG Rate of Perceived Exertion (RPE) Scale and the METs Chart. These charts will help you to determine how hard you're working during exercise.</p>

*Adapted from the Cardiac College of the Toronto Rehabilitation Institute

Monitoring Exercise

While exercising, it's important that you continue to monitor your exertion and symptoms. The three most common ways to monitor how hard you're working are:

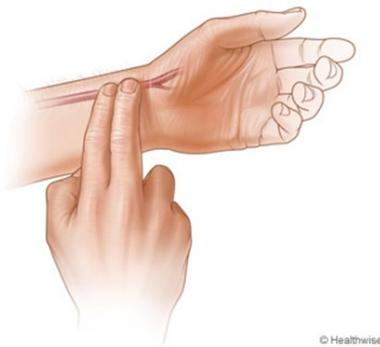
- Pulse/Heart Rate
 - Take your pulse during your exercise to determine if it falls within your prescribed heart rate range.
- RPE (Rating of Perceived Exertion)
 - Use the RPE scale to make sure you're working within your prescribed effort levels.
- METs (Metabolic Equivalent)
 - Review your METS chart to make sure that your activity matches your prescribed METs level.

Instructions for these monitoring techniques are on the following pages.

Continue to watch for any symptoms. You shouldn't notice symptoms if you're following your exercise prescription. If you notice any symptoms while you're exercising then slow down or stop your exercise immediately. See page 10 for more information.

How to Track Your Pulse

- 1) Place the tips of your index and middle, or middle and ring fingers on the palm side of your other wrist below the base of the thumb. Or, place the tips of two fingers on your lower neck on either side of your windpipe.
- 2) Press lightly with your fingers until you feel the blood pulsing beneath your fingers. You may need to move your fingers around slightly up or down until you feel the pulsing.
- 3) Use a watch with a second hand, or look at a clock with a second hand.
- 4) Count the beats you feel for 10 seconds. Multiply this number by six to get your heart rate (pulse) per minute.



© Healthwise.



Count your pulse: _____ beats in 10 seconds x 6 = _____ beats/minute

How to Track your Effort

In order to track your effort, you'll be using the BORG Rate of Perceived Exertion (RPE) Scale and the METs Chart. The RPE Scale and METs Chart will help you to determine how hard you're working during exercise.

How to use the RPE Scale

- 1) The RPE scale is listed from 6 – 20 according to the difficulty of the exercise you're currently completing (6 being the lightest and 20 being the hardest).
- 2) You'll notice that some of the numbers have descriptions beside them. Find the description that best matches how hard you think that you're working then look at the number that matches the description.

Example

- The RPE range that you'll be asked to work within will vary depending on your personalized exercise prescription. However, during aerobic exercise, you'll normally be asked to work between **11 – 16** (11 being your warm up & cool down)
- If you've rated yourself higher than **16**, you should slow down your exercise

BORG SCALE
RATE OF PERCEIVED EXERTION

6	
7	Very , very light
8	
9	Very light
10	
11	Fairly light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very hard
18	
19	Very, very hard
20	



MET LEVELS

METS measure an activity's workload on the heart and lungs. One MET is the amount of energy your body expends at rest. One MET is equivalent to 3.5 milliliters of oxygen used per kilogram of body weight per minute. MET level increases with use of arms, isometric exercise or psychological stress. MET level increases with change in terrain, wind resistance, current etc.

1 MET
Bedrest, Sitting, Watching TV, Eating, Reading, Sewing

1 to 2 METS
Dressing, Shaving, Brushing teeth, Making bed, Desk work, Driving car, Playing cards, Knitting
Walking 1 mph (1.6 km/hr)

2 to 3 METS
Tub bathing, Cooking, Waxing Floor, Riding power lawn mower, Playing piano, Walking 2 mph (3.2 km per hour)

3 to 4 METS
General housework, Cleaning windows, Light gardening, Pushing light power Mower, Sexual intercourse
Walking 3 mph (4.8 km per hour)
Bicycling 6 mph (9.7 km per hour)
Sailing, Golfing (pulling hand cart), Pitching horseshoes, Archery , Badminton (doubles), Horseback riding (slow trot), Fly-fishing
Assembly-line work, Driving large truck, Bricklaying, Plastering

5 to 6 METS
Sawing softwood, Digging garden, Shoveling light loads
Walking 4 mph (6.4 km per hour), Bicycling 10 mph (16.1 km per hour)
Skating, Fishing with waders, Hiking, Hunting, Square Dancing
Using heavy tools, Lifting 50 lb

6 to 7 METS
Shoveling Snow, Splitting wood, Mowing the lawn with hand mower
Walking or jogging 5 mph (8 km per hour),
Bicycling 11 mph (17.7 km per hour), Tennis (singles), Water-skiing, Light downhill skiing

7 to 8 METS
Sawing Hardwood
Paddleball, Touch football, Swimming (backstroke), Basketball, Ice Hockey
Digging ditches, Moving heavy furniture, Lifting 80 lb

8 to 9 METS
Running 5.5 mph (8.9 km per hour), Bicycling 13 mph (20.9 km per hour), Fencing, Cross-country skiing

10 or More METS
Running 6 mph (9.7 km per hour), Competitive Handball, Gymnastics, Contact Football

How to use the METs Chart

- 1) The METs Chart is listed from 1 – 10 or More according to the difficulty of the activity you're currently completing (1 being the lightest and 10 or more being the hardest).
- 2) You'll notice that there are examples of activities under each of the numbers. Find the activity that best matches what you're currently doing then look at the number that matches the activity.

Example

- The MET Level range that you'll be asked to work within will vary depending on your personalized exercise prescription. However, during aerobic exercise, you'll normally be asked to work between **3 – 7**
- If you've rated yourself higher than **7**, you should slow down your exercise

Session 2: What Have I Learned So Far?

1. What is a symptom?

2. What are the symptoms that tell you that you're working too hard during exercise?

3. What should you do if you notice any of these symptoms while you're exercising?

4. Name 6 ways that you can avoid symptoms while you exercise:

Session 3: Exercise Programming

Your Personalized Exercise Prescription

Your Kinesiologists personalize your exercise prescription for you so that you can achieve the most health benefits without harming your heart. Your exercise prescription will be based on a number of different factors, including:

1. Assessment & Medical History

- What your heart event and/or procedure was
- Any other health concerns or conditions that you have

2. Exercise Stress Test Results

- Your exercise tolerance level (amount of exercise that you can handle safely)
- Any symptoms that you may have noticed during the test
- Your heart rate and blood pressure before, during, and after the test
- Recommendations from the supervising physician

3. American College of Sports Medicine (ACSM) Guidelines for Exercise Testing and Prescription (10th edition)

- Your Kinesiologist will also be following recommendations from the most recent version of the ACSM Guidelines for cardiac rehabilitation

4. Preferred Type of Exercise

- Your Kinesiologist will work together with you to determine what types of exercise that you enjoy the most
- You'll also have to determine what your options are for participating in exercise and what equipment or resources you'll have available to you outside of the Rehab gym or in your home community
 - This is especially important when you've finished the program because you'll no longer have access to the Rehab gym



Your exercise prescription will be a specific plan of exercise and physical activities that will be structured using the **FITT Principle**.

FITT Principle

The FITT Principle is used as the foundation for your exercise prescription. It includes the Frequency (F), Intensity (I), Time (T), and Type (T) of exercise to be performed. All exercise prescriptions in the Cardiac Rehab Program are based on this framework. However, the exact makeup of each component of the FITT Principle will vary based on your individual characteristics. The table below outlines the definition of each component of the FITT Principle.

Table 1 – FITT Principle

Principle	Definition
Frequency	How often you exercise
Intensity	How hard you work during your exercise session
Time	The amount of time that your exercise is performed
Type	The type of exercise that you perform and/or the type of equipment that you use

**Adapted from American College of Sports Medicine Guidelines for Exercise Testing and Prescription (10th edition)*

Now, take a look at the Table below. Think about the Frequency, Intensity, Time, and Type of exercise that you were performing each week prior to entering Cardiac Rehab. As best you can, use this information to fill in the table.

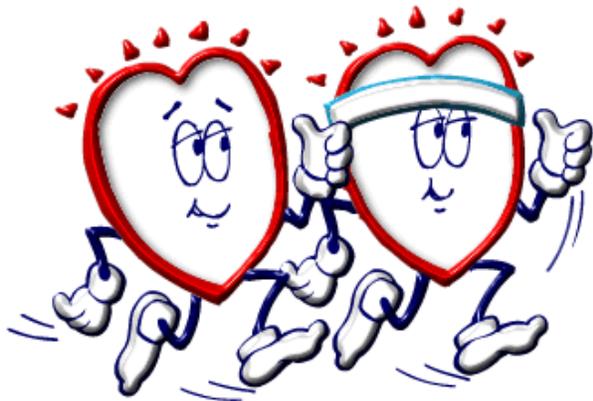
Table 1.1 – My FITT Principle Prior to Cardiac Rehab

Principle	Exercise
Frequency	
Intensity	
Time	
Type	

The Exercise Session

On the following pages, we will review how a proper exercise session should be structured. We will also review the Frequency, Intensity, Time, and Type of exercise that you should be performing in order to maintain and improve your health benefits.

Components of an Exercise Session



All exercise sessions should be structured to include the following four periods:

1. Warm-up
2. Training (FITT Principle)
 - a. Aerobic exercise
 - b. Resistance exercise
3. Cool-down
4. Flexibility/Stretching (FITT Principle)

1. Warm-up Period

Your exercise session will always begin with a warm-up. A warm-up helps your body to adjust and will prepare your heart, lungs, muscles, and blood vessels for more difficult activity. A warm-up also improves your range of motion (ROM), which may reduce the risk of injury during your exercise sessions.

- A warm-up should consist of 5-10 minutes of **fairly light** effort activity
 - That is an **11** on the **Borg Rate of Perceived Exertion (RPE) Scale** – See page 15 for instructions on how to track your effort
- An easy way to warm-up is to perform the same type of exercise that you'll be completing during your training period
 - Example: If you'll be walking on the treadmill during your training period, then warm-up by walking for 5-10 minutes at a slower pace than your prescribed exercise

2. Training Period

After your warm-up, you can progress to your training period at any time. During your training period, you'll be working within the heart rate range and effort level (RPE/METS) that has been prescribed for you. Your training period will include aerobic and/or resistance exercise. Performing a combination of both aerobic and resistance exercise can help you to achieve the most benefits toward your health and fitness. However, we typically focus on aerobic exercise for the first four weeks of the Cardiac Rehab Program before including resistance exercises.

a. Aerobic Exercise (Cardiorespiratory Fitness)

Aerobic exercise is the performance of an activity that you can sustain for a longer period of time. This helps to stimulate and strengthen your heart and lungs, which can make them work better over time. Regular aerobic exercise may also help you to manage your other cardiac risk factors by lowering your blood pressure, reducing your waist size, lowering your cholesterol, lowering your blood sugars, and improving your stress levels. The Table below outlines the recommendations for aerobic exercise, according to the FITT Principle, for maintaining/improving your health benefits.

Table 2 – FITT Principle for Aerobic Exercise

Principle	Aerobic Exercise
Frequency	At least 2-3 days per week as a minimum. We encourage you to try 5 days per week. More than 5 days per week could lead to injury if you're not well conditioned. Less than 5 days per week may not provide you with the same benefits to your health.
Intensity	Your Kinesiologist will show you how hard to work by providing you with a heart rate range and an effort level to work within. Sometimes it can be tricky to know if you're exercising at the right intensity. Refer to your exercise prescription and page 13 for monitoring instructions.
Time	We encourage you to accumulate 20-60 minutes of aerobic exercise per day. <ul style="list-style-type: none"> • This can be completed in bouts of at least 10 minute sessions • If your exercise capacity is limited, multiple shorter daily sessions (<10 minute) may be used as a starting point
Type	Cardiac Rehab gym equipment: <ul style="list-style-type: none"> • Treadmill, Nustep, upright and recumbent bikes, arm ergometer, stair stepper Home program and/or exercise outside of the Rehab gym: <ul style="list-style-type: none"> • Walking, biking, jogging, swimming, participating in sport/recreational activities, housework, gardening, splitting wood, mowing the lawn, exercise equipment available at home or at an accessible gym/recreation center, etc.

**Adapted from American College of Sports Medicine Guidelines for Exercise Testing and Prescription (10th edition)*

b. Resistance Exercise (Muscular Fitness)

Resistance exercise is any type of exercise that causes your skeletal muscles to contract. By doing so, you stimulate and strengthen your muscles, which makes them stronger and able to work longer. This can improve how well you perform activities of daily living like walking, stair climbing, and carrying groceries. As you get older you begin to lose muscle mass and strength. By consistently performing resistance exercise you can slow down that process, which can help you to take care of yourself, improve your quality of life, and live on your own for longer. Other benefits might include

improved balance, energy, sleep, and bone health as well as reduced muscle/joint pain, swelling, and fatigue. Resistance exercise may also help to manage your other cardiac risk factors by lowering your blood pressure, reducing your waist size, lowering your cholesterol, lowering your blood sugars, and improving your stress levels. The table below outlines the recommendations for resistance exercise, according to the FITT Principle, for maintaining/improving your health benefits.

Table 3. – FITT Principle for Resistance Exercise

Principle	Resistance Exercise
Frequency	2-3 days per week on nonconsecutive days (at least 48 hours between sessions). If your muscles feel sore then wait until you've recovered before performing your resistance exercises again.
Intensity	Your Kinesiologist will show you how hard to work by providing you with the amount of weight, number of repetitions, number of sets, and an effort level to work within. Sometimes it can be tricky to know if you're exercising at the right intensity. Refer to your exercise prescription and page 13 for monitoring instructions.
Time	In general, you'll be asked to perform 1-3 sets of 8-10 different exercises. <ul style="list-style-type: none"> • It may take you 30 minutes to complete your exercises
Type	Your Kinesiologist will help you determine what type of resistance exercises you'll perform (bodyweight, dumbbell, resistance bands) based on your characteristics. <ul style="list-style-type: none"> • You'll select equipment that is safe and comfortable to use • You'll use exercises that focus on all your major muscle groups

*Adapted from *American College of Sports Medicine Guidelines for Exercise Testing and Prescription* (10th edition)

3. Cool-down Period

You should always follow your training period with a cool-down. The purpose of a cool-down is to allow your heart rate, breathing, and blood pressure to return to rest level gradually. Skipping the cool-down period may also cause blood to pool in your legs and less blood flow to the heart and head, which can increase your chances of having symptoms such as dizziness.

- A cool-down should consist of 5-10 minutes of **fairly light** effort activity
 - That is an **11** on the **Borg Rate of Perceived Exertion (RPE) Scale** – See “Safe Exercise” for instructions on how to track your effort
- An easy way to cool-down is to perform the same type of exercise that you did during your training period
 - Example: If you walked on the treadmill during your training period then cool-down by walking for 5-10 minutes at a slower pace than your prescribed exercise

4. Flexibility/Stretching Period

Stretching is any type of exercise where you put your body into certain positions that lengthen your muscles or tendons. You should always stretch at the end of your exercise sessions, **after** your cool down, when your muscles are warm. If you want to stretch on a day that you won't be completing either aerobic or resistance exercise then make sure to warm up for 5-10 minutes before you begin stretching. Regularly stretching your muscles helps to improve your flexibility, increase your range of motion (ROM), and reduce your chance of getting injured during your exercise sessions. Stretching exercises can be placed into two separate categories called either **static** or **dynamic** stretches. Generally, static stretches are performed with no movement whereas dynamic stretches are performed with movement. Your Kinesiologist will provide you with a stretching exercise program to follow – See Appendix B: Program Stretches & Tracking Sheet. The table below outlines the recommendations for flexibility/stretching, according to the FITT Principle, for maintaining/improving your health benefits.

Table 4. FITT Principle for Flexibility/Stretching

Principle	Flexibility/Stretching
Frequency	At least 2-3 days per week. However, stretching every day is more beneficial.
Intensity	To the point of feeling tightness or slight discomfort, but no pain.
Time	It may take you 10 minutes to complete your stretches.
Type	Your Kinesiologist will provide you with stretching exercises. <ul style="list-style-type: none"> You'll perform both static and dynamic stretching exercises that focus on your major joints and limbs

**Adapted from American College of Sports Medicine Guidelines for Exercise Testing and Prescription (10th edition)*

How to Progress Your Exercise

Once you begin your program, your Kinesiologist will provide you with an Exercise Log Book. This book includes copies of each of the following:

- Your personalized Exercise Prescription Sheet
- Borg Rate of Perceived Exertion (RPE) Scale
- METs Chart
- Cardiac Rehab Stretches (See Appendix B: Program Stretches & Tracking Sheet)
- Exercise log sheets (See Appendix A: Blank Exercise Log Book Page)

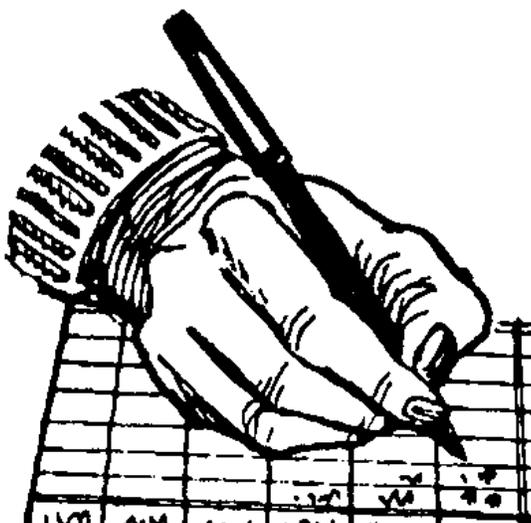


If you're interested in resistance exercise, then after the first 4 weeks your Kinesiologist will provide you with copies of:

- Your personalized resistance exercise program based on your goals and characteristics
- Exercise log sheets for resistance exercise

It's important to follow your personalized exercise prescription **AND** to record your workouts on the **exercise log sheets** provided. By recording your workouts, your Kinesiologist can safely progress your exercise by reviewing previous workouts and assessing your parameters (time, distance, heart rate, effort level, symptoms). Then, they can offer you suggestions or they may even decide to modify the components of the FITT principle on your Exercise Prescription Sheet and create a new copy for you. To ensure your safety, please speak to your Kinesiologist before progressing exercise on your own.

On the following pages, we will take a look at the components of the **exercise log sheets** and how to fill in your workouts. We will look at exercise log sheets for the In-Clinic Program, the Home Program, as well as an example of a resistance exercise log sheet.



How to Fill in Your Exercise Log Sheets

In-Clinic Program Logsheet

Each day that you come in to the Rehab gym you'll start by seeing your Kinesiologist so that they can record your **pre-exercise** parameters.

Once your pre-exercise parameters have been filled in, you can move into your exercise session. Your exercise session will always start with a **warm-up period**.

After your warm-up, you can begin your **training period** at any time. All of the equipment available to you in the Rehab gym is listed on your exercise log sheets. These include: Treadmill, Nustep, upright and recumbent bikes, arm ergometer, stair stepper. Be sure to record your workouts after you finish with each type of exercise.

Once you've completed your training period, you should finish with a **cool-down period** on the exercise equipment that you're currently using.

You can move into your **stretching/flexibility period** as soon as you feel comfortable to do so. Please follow the Cardiac Rehab stretches (Appendix B) provided for you.

Once you've completed your stretching/flexibility period, make sure to see your Kinesiologist before you leave so that they can record your **post-exercise** parameters.

Date: _____

PRE-EXERCISE MEASUREMENTS	
Resting HR: _____	BP: ____/____
WARM UP	
Time: _____	Type: _____
HR: _____	RPE: _____
TREADMILL	
Min: _____	MPH: _____ %Incline: _____
HR: _____	RPE: _____ Dist. _____
NUSTEP	
Min: _____	Level: _____ Dist: _____
HR: _____	RPE: _____ SPM: _____
UPRIGHT BIKE	
Min: _____	Level: _____
HR: _____	RPE: _____ RPM: _____
RECUMBENT BIKE	
Min: _____	Level: _____
HR: _____	RPE: _____ RPM: _____
ARM ERGOMETER	
Time: _____	Level: _____
HR: _____	RPE: _____
STAIR STEPPER	
Time: _____	Level: _____
HR: _____	RPE: _____
HALLWAY WALKING	
Dist: _____	Time: _____
HR: _____	RPE: _____
POST-EXERCISE MEASUREMENTS	
HR: _____	BP: ____/____
Comments: _____	

Home Program Logsheet

If you're unable to attend the In-Clinic Program or you've chosen to complete a Home Program then you may not have access to the Rehab gym equipment. Therefore, you'll be provided with Home Program exercise log sheets for aerobic exercise that you'll complete at your convenience. Do your best to record any exercise or physical activity that you complete at home or at work.

Example – Walking

Record the current week.

Record your effort level using the RPE Scale.

Describe how you felt during your exercise (e.g., felt good, tired, sore, etc.).

WEEK: Monday, December 31st - Sunday, January 6th

Date	Type of Exercise	Duration	10 Second Pulse			RPE (6 – 20)	How I felt	Comments
			Pre	During	Post			
January 1 st / 2019	- Brisk walk outside	- 30 min	10	20	10	13	- Felt good today	- No symptoms

Record the current date.

Record your exercise type.

Record the duration of your exercise in minutes and seconds.

Record the number of heart beats that you count in 10 seconds before, during, and after your exercise session.

Make note of any questions, concerns, or any symptoms that you noticed during your exercise.

Resistance Program

After the first 4 weeks of your Cardiac Rehab Program, you'll have the option to begin resistance exercises. Once you've been provided with a resistance program, you'll also be given log sheets for those specific resistance exercises. Do your best to fill in your log sheets. As soon as you complete a set, you should be recording your parameters into your resistance exercise log sheet.

Example – Bicep Curl

Jane has completed bicep curls as part of her resistance training program. She completed 10 repetitions in her first set using 8 lb dumbbells. In her second set, Jane was able to complete 12 repetitions. Jane didn't complete a third set. She filled in her tracking sheet as follows:

Record the current date.

	Date:		Date:		Date:		Date:		Date:		Date:		Date:	
	Rps	Wt												
Bicep Curl (Dumbbell)														
Sets: 1-3 Reps: 10-15 Frequency: every other day														
	Set 1	10	8 lbs											
		12	8 lbs											

The first row (Set 1) is where you'll record your first set under each date that you exercised. One set is equivalent to one round of reps of a particular exercise.

Under the reps (Rps) column, you'll record the number of repetitions that you completed. One rep is one complete movement of an exercise.

Under the weight (Wt) column, you'll record the amount of weight that you were able to use to complete your prescribed number of repetitions.

Session 3: What Have I Learned So Far?

1. What is the purpose of your exercise prescription?

2. What does the FITT Principle stand for?

3. What are the components of an exercise session?

4. What is the purpose of your exercise log sheets?

Session 4A: How Does the Heart Work?

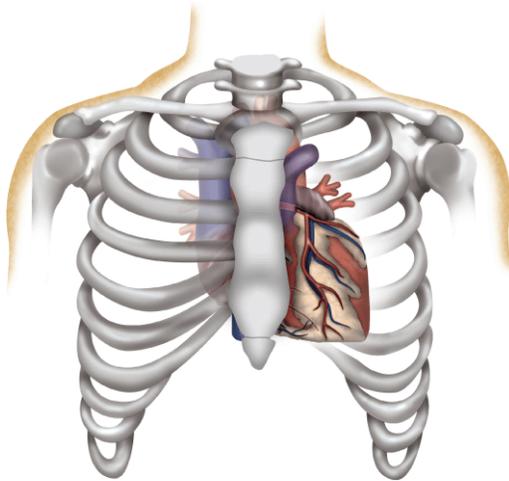


Figure 1: The heart within the chest cavity

Your heart

The heart is a hollow, muscular organ located between the lungs and underneath the breastbone. It sits slightly to the left, and is about the size of your fist. Your heart is a muscle that pumps more than 100,000 times per day, bringing oxygen-rich blood and nutrients to your entire body through arteries and veins. Blood also takes away waste products and carbon dioxide to be removed from the body.

Anatomy of the heart

Your heart is divided into four sections (or chambers):

- Two at the top
 - Called the left and right atria
 - The atria receive blood from veins
- Two at the bottom
 - Called the left and right ventricles
 - The right ventricle pumps blood from the heart to the lungs to pick up oxygen.
 - The left ventricle pumps the oxygen-rich blood through your entire body.

A muscular wall (the septum) separates the right side from the left.

The left and right chambers are connected by one-way valves that open and close with every heartbeat. Valves ensure blood is pumped through the heart in one direction.

The heart wall is made up of three layers. The outer layer is called the epicardium. The middle layer is the actual heart muscle and is called the myocardium. The inner layer of the heart is called the endocardium. The heart is contained within a sac called the pericardium.

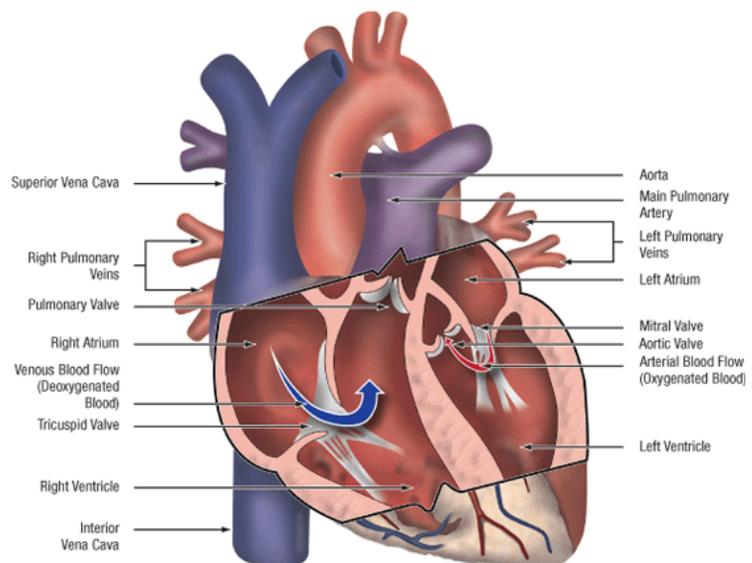


Figure 2: The Heart – Interior

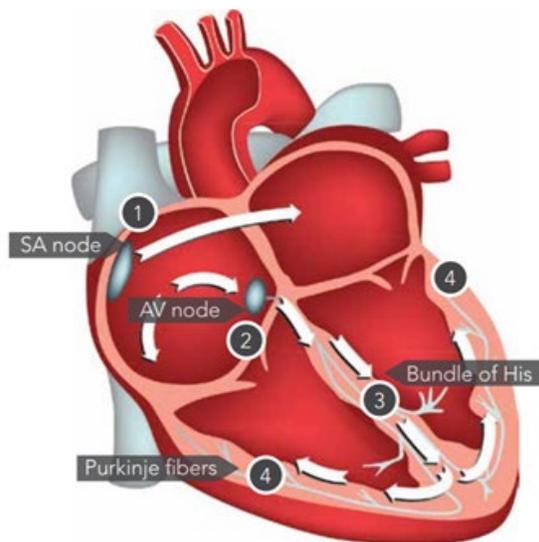
How it works

To pump blood throughout the body, your heart pumps in two-stages.

1. First it contracts.
2. Then it relaxes

This action is similar to clenching and unclenching your fist.

This motion is controlled by an electrical signal that starts in the right atrium, at the sinoatrial node (SA Node). This electrical signal passes throughout the heart, causing the different areas of the heart to contract or relax at just the right time. This creates a heartbeat with a regular rhythm. If the signal is too slow, fast, or erratic, the heart cannot beat properly. This is called arrhythmia. The electrical signal activity in various parts of the heart can be recorded on an electrocardiogram (ECG).



What happens when your heart beats?

1. Oxygen-poor blood flows from your body (muscles, organs, brain and heart) into the right atrium. When it's full, the atrium contracts.

2. When the atrium contracts, the tricuspid valve between the right atrium and the right ventricle opens. The blood flows into the right ventricle.

3. When the right ventricle is full it contracts and pumps the blood to the lungs.

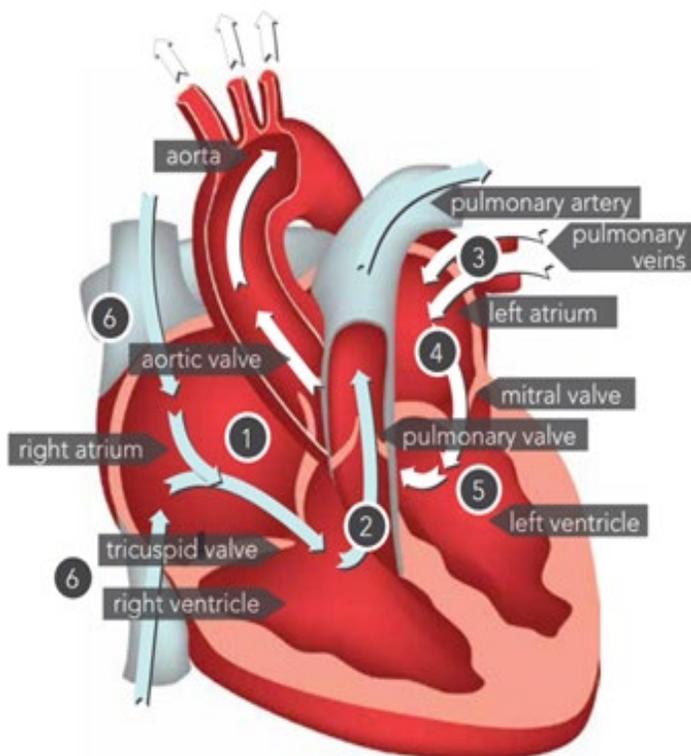
4. In the lungs, carbon dioxide is removed and fresh oxygen is added.

5. The blood then flows into the left atrium.

6. When the left atrium contracts, the mitral valve between the left atrium and left ventricle opens. The

blood flows into the left ventricle.

7. The left ventricle pumps the oxygen-rich blood through the aortic valve to the aorta, and out to the rest of your body.



The Heart's Blood Supply

The heart's job is to deliver blood filled with oxygen and nutrients to the entire body. The heart also supplies itself with oxygen-rich blood through the coronary arteries surrounding the heart. The coronary arteries are located on the surface of the heart.

There are four main arteries:

- Right coronary artery (RCA) on the right side of the heart, which supplies blood to the walls of the ventricles and the right atrium
- Left main coronary artery (LCA) on the left side of the heart, which splits into 2 branches:
 - Left anterior descending (LAD) artery, which supplies blood to the front of the heart, walls of the ventricles, and the left atrium
 - Circumflex artery, which supplies blood to the back of the heart, walls of the ventricles and left atrium

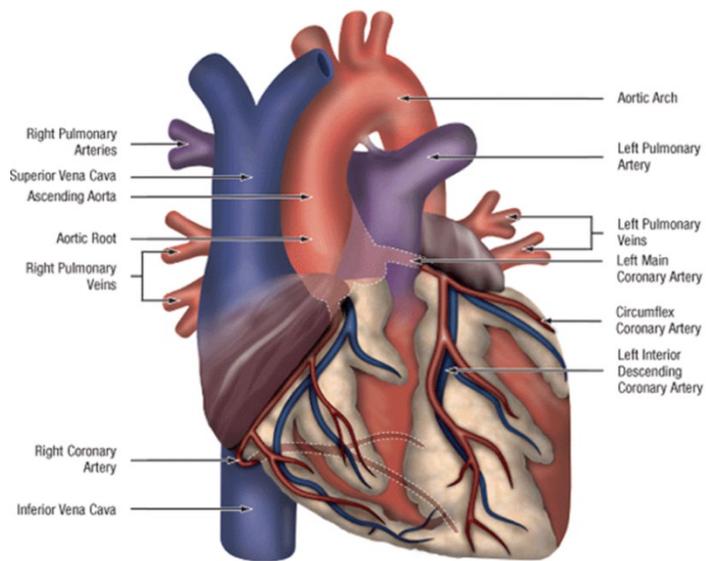


Figure 3: The Heart – Exterior

All the coronary artery branches send many tiny blood vessels deep into the heart muscle to supply oxygen rich blood to all layers of the heart. These arteries have an important role in maintaining the health and activity of your heart. When they become narrowed or blocked, the heart doesn't get enough oxygen to function effectively. This is Cardiovascular Disease (CVD).

Your Pulse

With each beat of your heart, blood is pushed through your arteries. This is what creates your pulse. Your heart rate (your pulse) is the number of times your heart beats per minute. Normal heart rate varies from person to person. Knowing your heart rate can help you spot health problems. A normal adult resting heart rate is usually about 60 to 100 beats per minute.

- Female hearts tend to beat faster than male hearts because they're slightly smaller
- During rest, your heartbeat will slow down
- With exercise, it can go faster

See page 13 for instructions on how to measure your pulse. In the program, you're encouraged to wear a heart rate monitor, which will track your heart rate for you.

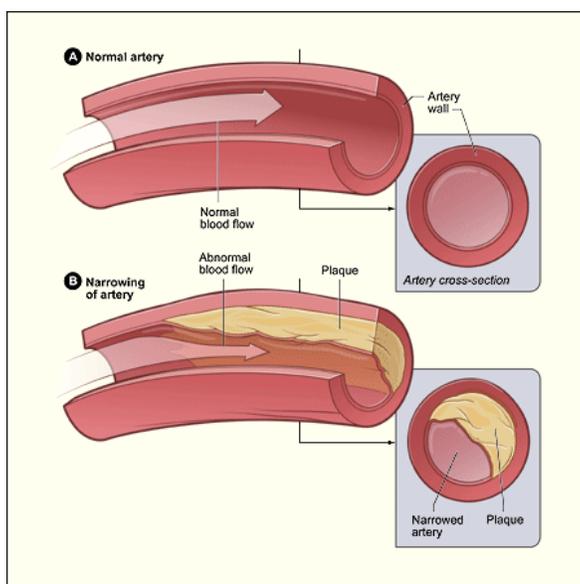
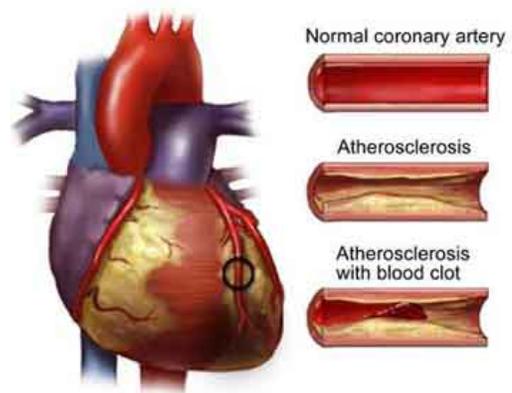
Common Cardiac Conditions

Atherosclerosis, coronary artery disease (CAD), heart disease

Like water through a hose, blood flows through your arteries, delivering oxygen and nutrients to your organs. Atherosclerosis occurs when your arteries become clogged with fatty deposits (known as plaque), causing them to lose their elasticity and narrow. This blocks or slows the smooth passage of blood through the arteries of the heart, preventing the heart from getting the oxygen and nutrients it needs. Atherosclerosis is a slow, progressive condition that may begin as early as childhood. It can occur anywhere in the body but usually affects large and medium-sized arteries.

Plaque is a sticky, yellow substance made up of fatty materials, such as cholesterol, calcium, and waste products from your cells. In some cases, bits of plaque can break loose and travel to other areas of the body, getting stuck in smaller blood vessels and completely blocking the flow of blood.

Atherosclerosis is related to coronary artery disease, stroke and other conditions. Depending on which artery is blocked, you may have: **coronary artery disease (CAD)**. If arteries supplying blood to your heart become narrow or blocked, blood flow to the heart can slow down or stop. **CAD** can cause **angina** or **heart attack**. These heart conditions caused by atherosclerosis can be described as acute coronary syndromes.



Carotid artery disease

If arteries in your neck become narrow or blocked, blood flow to the brain can slow down or stop. A blood clot can also travel through the arteries to the brain and block vessels in the brain. This may cause you to have a **stroke** or **mini-stroke (Transient Ischemic Attack)**.

Peripheral arterial disease (PAD)

This occurs if arteries in your pelvis, legs or arms become narrow or blocked, leading to cramping muscular pain while walking or during exercise. It can be the first sign of atherosclerosis elsewhere in the body.

Aneurysm

Atherosclerosis can cause an aneurysm, which is a bulge in a weakened area of your artery wall. The bulge can burst and cause internal bleeding in the brain. It can be fatal when an aneurysm in the largest artery (aorta) bursts.

Angina

Angina is the medical term for chest pain. When there isn't enough blood and oxygen getting to your heart muscle because of plaque in the coronary arteries, you may feel pain or discomfort described as a squeezing, tightness, pressure or heaviness. Pain may be felt in the chest, jaw, arms, upper back and/or throat.

This is a warning signal, your heart's way of telling you that it needs more oxygen. It's a warning that, without treatment, you're at risk of a heart attack. You need to take a break from what you're doing and/or take your medication.

Symptoms of Angina

Symptoms are different for every person and can be different between men and women. It's important to know your individual symptoms of angina and be able to answer the following questions:

- Where on your body do you feel it?
- When do you feel it? What are you doing when you feel it?
- How long does it last?
- What brings it on?
- What takes it away?
- How often do you feel it?
- Rate the severity of what you feel on a scale of 0-10 (with zero being no pain/discomfort at all, and 10 being maximal pain/discomfort).

Angina is usually a symptom of heart disease. It means you're at risk of having a heart attack. See your healthcare provider as soon as possible if you experience one or more of these symptoms, or if your pattern of angina symptoms changes.

Types of angina

There are several types of angina. The most common are stable and unstable.

Stable Angina	Unstable Angina
Occurs when there is a partially blocked artery to the heart	
Managed with medication & lifestyle changes	Harder to treat – needs urgent attention
Symptoms may include pain or discomfort in the chest, jaw, arms, upper back and/or throat as well as feeling shortness of breath or fatigue	
Triggered by physical activity, emotional stress, heavy meals, or extreme cold or heat	Often happens at rest, or at times you're not active at all. You may feel chest pain you did not have before
Stable angina is predictable, follows a pattern, and usually lasts 3-5 minutes, but no more than 15 minutes	Less predictable, and episodes can last up to 30 minutes
Relieved with rest or nitroglycerine	Not relieved with rest or nitroglycerine
What to do if you have chest pain / angina attack? <ul style="list-style-type: none"> • Track what triggers it • Time how long it lasts • Note what helped to ease the pain 	
	If you have chest pain that is new, worsening or constant, you're at greater risk of: <ul style="list-style-type: none"> • Heart Attack • Irregular Heartbeat (arrhythmia) • Sudden Death
SEE A DOCTOR AS SOON AS POSSIBLE OR CALL 911	

Heart Attack, Myocardial Infarction, STEMI, non-STEMI, nSTEMI

What is a heart attack?

A heart attack is when the flow of blood to a section of the heart becomes blocked and the heart cannot get oxygen. If blood flow isn't restored quickly, that section of the heart begins to die. The level of damage depends on how long blood supply is cut off. The result can be mild damage, or it could lead to severe, lifelong problems.

There are two types of heart attack:

ST-Elevation Myocardial Infarction (STEMI)

If the coronary artery gets completely blocked, blood flow stops entirely and the full thickness of heart muscle fed by that artery is damaged. This causes a characteristic change on an ECG called an *ST-segment elevation*.

Non-STEMI Heart Attack (NSTEMI)

If the coronary artery is severely narrowed by clots but not completely blocked, blood flow decreases but doesn't stop. Only part of the heart muscle is damaged and ST-segment elevation is not seen on the ECG.

STEMIs are larger heart attacks than NSTEMIs, and the larger the size of the heart attack, the greater the chance of complications down the road, such as heart failure.

Heart Attack
Occurs when there is a severely narrowed or completely blocked artery to the heart
Needs urgent attention
<p>You may experience some or all of the following symptoms:</p> <ul style="list-style-type: none"> • Pain or discomfort in the chest, jaw, arms, upper back and/or throat • Shortness of breath • Nausea or throwing up • Heart burn • Weakness • Sweating • Light-headedness <p>Heart attack symptoms may be similar to angina symptoms but more intense</p>
Symptoms generally last longer than 30 minutes.
<p>Early treatment for a heart attack can prevent or limit damage:</p> <ul style="list-style-type: none"> • Take an aspirin right away • Act fast by calling 9-1-1 at the first symptoms of a heart attack • Treatment can begin in the ambulance on the way to the hospital • Your healthcare provider may treat your condition with medication, surgery or other procedures, and lifestyle changes
<p>If you are experiencing symptoms that are not relieved with rest after 30 minutes or after 3 sprays of nitroglycerin, you may be having a heart attack</p> <p>Call 9-1-1 or your local emergency response number immediately</p>
<p>Women can experience angina symptoms differently than men. It may not include chest pain. See your doctor if you have:</p> <ul style="list-style-type: none"> • Vague pain in the center of the chest • Pain in the neck or tightness in the throat • The feeling of a panic attack, anxiety • The feeling of being tired all the time for no obvious reason • Fatigue or trouble getting through normal, everyday activities

Valve Disorders

Heart valve disorders occur when one or more of the valves in your heart do not work correctly. There are several different kinds of valve disorders, but all result from heart valves not closing properly or opening fully. Untreated, they may lead to dizzy spells, shortness of breath, faintness, irregular pulse, or serious complications. Fortunately, many valve disorders are treatable with medication, surgery or other medical techniques.

The heart has four valves, each located at the exit of one of the heart's four chambers. As the heartbeat pushes blood through the heart, the valves close after blood has entered the chamber to prevent it from leaking backward. When the valve doesn't open properly, the opening is too small, or the leaflets become stiff or stick together, the heart has to work harder to push a normal amount of blood through the body.

If the valve doesn't close completely, or bulges back into the previous chamber, blood leaks backward into the previous chamber, requiring the heart to work harder.

Types

Valve disorders can be categorized into the following types:

Stenosis (narrowing)

Sometimes age or disease can prevent heart valves from opening properly. When the opening narrows, the heart cannot push the required amount of blood through the valve. Because stenosis makes the heart work harder to pump the same volume of blood, it may also lead to an increase in the size of the heart muscle. Enlargement of the heart muscle may lead to serious complications.

Prolapse (slipping out of place)

In valve prolapse, the valve flaps don't close smoothly or evenly. Instead, they collapse backwards into the heart chamber they're supposed to be sealing off. This sometimes makes a clicking noise and allows a small amount of blood to leak backward through the valve.

Regurgitation (backward flow)

Another common problem occurs when a heart valve doesn't close securely. This is called regurgitation. This condition reduces the heart's pumping efficiency. When the heart contracts, blood is pumped forward in the proper direction and is also forced backwards through the damaged valve. This not only limits the heart's ability to supply the body with blood, but may also cause lung problems.

Cardiomyopathy

What is cardiomyopathy?

Cardiomyopathy means disease of the heart muscle. It affects the muscle of your heart and reduces its ability to pump blood to the rest of your body. There are different types of cardiomyopathy and different causes. The main goal of treatment is to reduce symptoms, often with medication and lifestyle changes. In some cases, surgery may be an option to reduce symptoms; however, cardiomyopathy isn't curable.

Types:

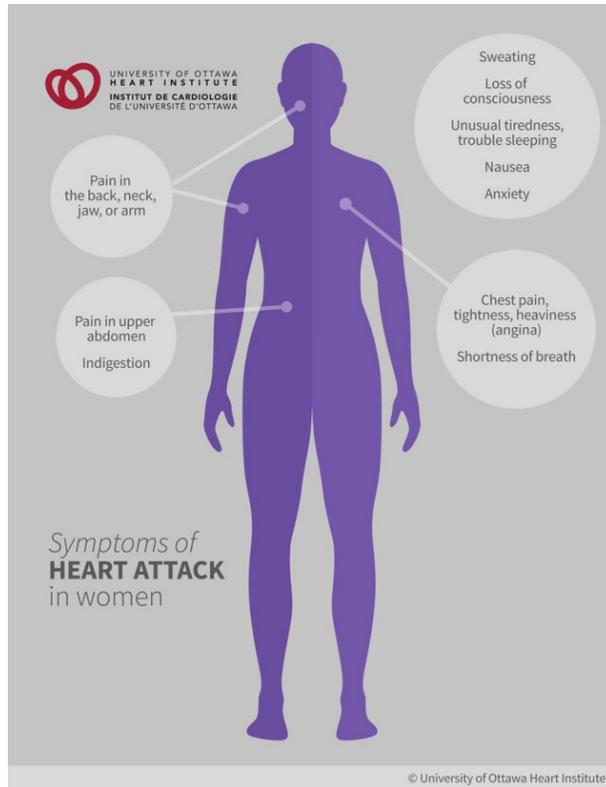
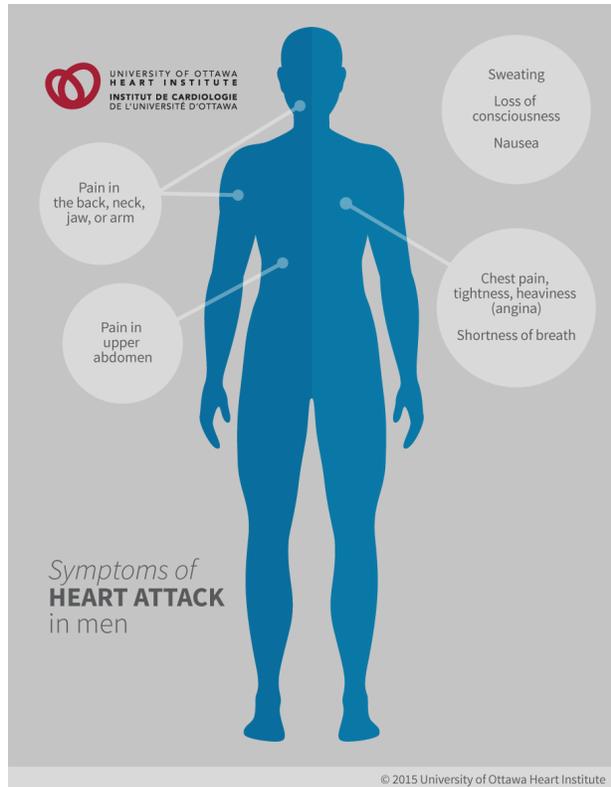
Ischemic cardiomyopathy

Cardiac ischemia is the most common form of cardiomyopathy. It occurs when an artery leading to your heart becomes narrowed or blocked for a short time and oxygen-rich blood cannot reach your heart. This blockage leads to ischemia – the loss or weakening of heart muscle tissue. The ischemia usually results from coronary artery disease and heart attacks.

Other types include:

- Dilated (congestive) cardiomyopathy
- Hypertrophic cardiomyopathy (HCM)
- Restrictive cardiomyopathy.

Heart Failure, Congestive Heart Failure



What is heart failure?

Heart failure (HF) is a condition that develops after the heart becomes damaged or weakened. HF occurs when the heart doesn't pump as strongly as it needs to, especially during increased activity or under stress. In addition, the heart muscle may not relax properly to accommodate the flow of blood back from the lungs to the heart. These abnormalities in heart function can cause fluid to back up in your lungs and in other parts of your body, such as your ankles. The congestion in your lungs and lack of oxygen may make you feel tired and short of breath. Heart failure also prevents the rest of your body from receiving the blood and oxygen it needs.

Heart failure is on the rise as more people survive heart attacks and other acute heart conditions. As people with damaged hearts are living longer, they become more susceptible to heart failure.

Heart failure is a serious condition. There is no cure. However, with lifestyle changes and treatment options, you can manage your condition very well. Many patients can lead a full and normal life. Learning about your heart failure is an important first step in managing your condition.

What causes heart failure?

Heart failure has many causes or underlying risk factors. The most common is damage to the heart muscle caused by a heart attack (myocardial infarction).

The second most common cause of heart failure is high blood pressure (hypertension). If left undiagnosed and untreated for a long period, hypertension can lead to heart failure. It's important to get your blood pressure checked at least once every two years or more often if your physician recommends you do so.

Less common causes include:

- Heart valves that aren't working properly by being too narrow or leaky (heart valve disease)
- Infection causing inflammation of the heart muscle (endocarditis or myocarditis)
- Excessive use of alcohol or drugs
- Diabetes
- Being obese or overweight
- High blood cholesterol
- Heart muscle disease of unknown causes
- Other medical conditions such as thyroid diseases or anemia

Living with heart failure

Currently there is no cure for heart failure, but early diagnosis, lifestyle changes, and appropriate drug treatments can help you lead a normal and active life, stay out of hospital, and live longer.



HEART FAILURE ZONES



EVERY DAY	<p>EVERY DAY</p> <ul style="list-style-type: none"> • Weigh yourself in the morning before breakfast. Write it down. Compare your weight today to your weight yesterday. • Keep the total amount of fluids you drink to only 6 to 8 glasses each day. (6-8 glasses equals 1500-2000 mL or 48-64 oz) • Take your medicine exactly how your doctor said. • Check for swelling in your feet, ankles, legs, and stomach. • Eat foods that are low in salt or salt-free. • Balance activity and rest periods. 	
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WHICH ZONE ARE YOU IN TODAY?

GREEN SAFE ZONE	<p>ALL CLEAR - This zone is your goal!</p> <p>Your symptoms are under control. You have:</p> <ul style="list-style-type: none"> • No shortness of breath. • No chest discomfort, pressure, or pain. • No swelling or increase in swelling of your feet, ankles, legs, or stomach. • No weight gain of more than 4 lbs (2 kg) over 2 days in a row or 5 lbs (2.5 kg) in 1 week. 	
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YELLOW CAUTION ZONE	<p>CAUTION - This zone is a warning</p> <p>Call your Health Care provider (eg. Doctor, nurse) if you have any of the following:</p> <ul style="list-style-type: none"> • You gain more than 4 lbs (2 kg) over 2 days in a row or 5 lbs (2.5 kg) in 1 week. • You have vomiting and/or diarrhea that lasts more than two days. • You feel more short of breath than usual. • You have increased swelling in your feet, ankles, legs, or stomach. • You have a dry hacking cough. • You feel more tired and don't have the energy to do daily activities. • You feel lightheaded or dizzy, and this is new for you. • You feel uneasy, like something does not feel right. • You find it harder for you to breathe when you are lying down. • You find it easier to sleep by adding pillows or sitting up in a chair. <p>Healthcare Provider: _____ Phone Number: _____</p>	
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RED DANGER ZONE	<p>EMERGENCY - This zone means act fast!</p> <p>Go to emergency room or call 9-1-1 if you have any of the following:</p> <ul style="list-style-type: none"> • You are struggling to breathe. • Your shortness of breath does not go away while sitting still. • You have a fast heartbeat that does not slow down when you rest. • You have chest pain that does not go away with rest or with medicine. • You are having trouble thinking clearly or are feeling confused. • You have fainted. 	
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The Heart and Stroke Foundation gratefully acknowledges Cardiac Services BC and the experts at British Columbia's Heart Failure Network as the original creators of this resource.

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Arrhythmia

Everyone has his or her own normal heart beat rhythm. Some are faster or slower than others. Usually, the heart beats between 60 and 80 times per minute. When you receive a diagnosis of arrhythmia, it's an abnormal heart rhythm for you. The pumping action of your heart is triggered by electrical impulses that begin in your heart's natural pacemaker, called the sinus node (also called sinoatrial or SA node). Arrhythmia may cause your heart to beat too slowly (bradycardia, less than 60 beats per minute) or too quickly (tachycardia, more than 100 beats per minute), or cause uncoordinated contractions (fibrillation).

Types of arrhythmia

Arrhythmias are defined by the speed of the heartbeats: slow and fast. They include bradycardia and tachycardia, with variations to each. Some common arrhythmias include:

Slow heartbeat – bradycardia (<60 bpm)

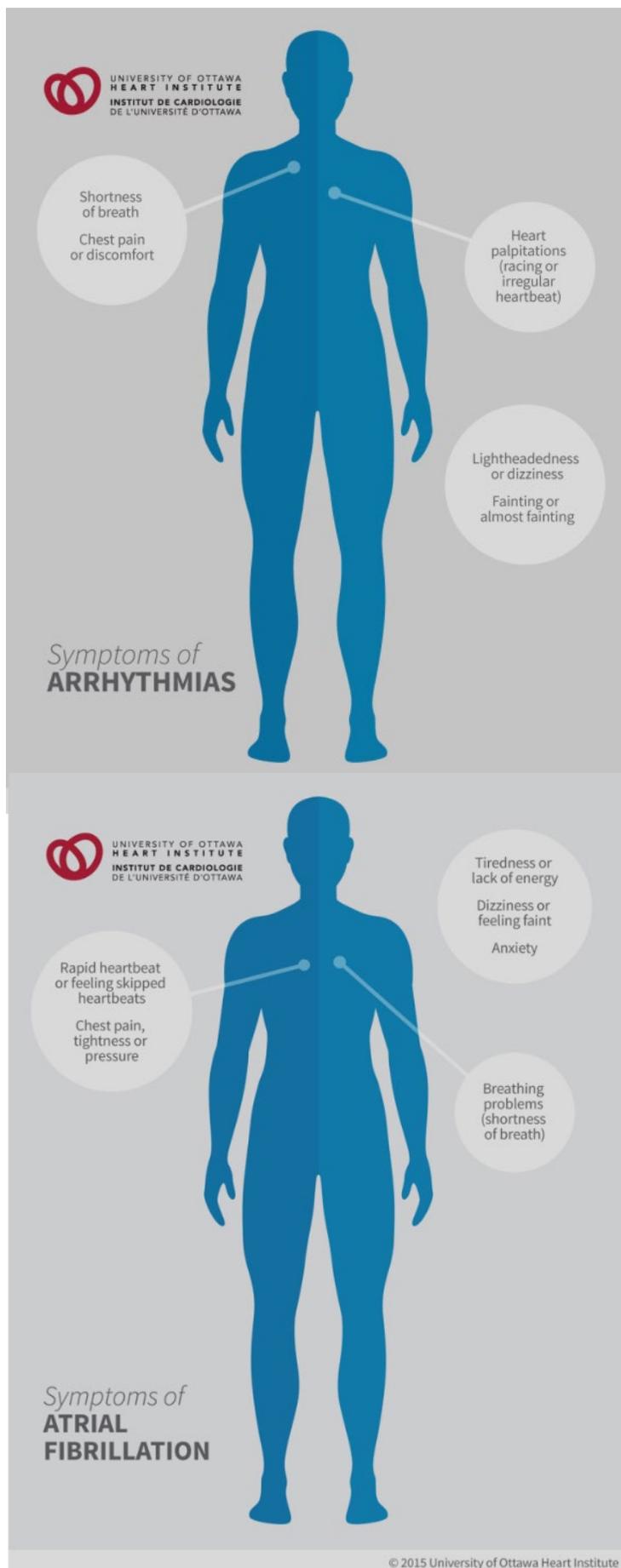
Bradycardia occurs when your heart beats so slowly that it cannot pump enough blood for your body's needs.

Rapid heartbeat – tachycardia (>100 bpm)

Tachycardia occurs when your heart beats too fast. There are two main types: tachycardia above a ventricle and tachycardia in a ventricle.

Atrial fibrillation

This occurs when the electrical activity in the atria is disorganized and very rapid, which causes a series of very rapid contractions of the heart's upper chambers, preventing them from pumping effectively.



Other Types of Arrhythmias

Ventricular fibrillation

Like atrial fibrillation, this happens when the electrical signal that normally triggers a heartbeat splits and goes off on random paths around the ventricles instead of following its normal route. This results in a series of rapid but ineffective contractions of the ventricles.

Postural orthostatic tachycardia syndrome (POTS)

People with Postural Orthostatic Tachycardia Syndrome (POTS) have difficulty successfully adjusting to an upright standing posture from a lying down position.

Cardiac Arrest

Cardiac arrest is a sudden loss of heart function, breathing, and consciousness, usually caused by disruptions to the normal electrical activity within the heart. It can strike without warning to people of any age or fitness level. **Cardiac arrest is a medical emergency that requires immediate attention to prevent death.**

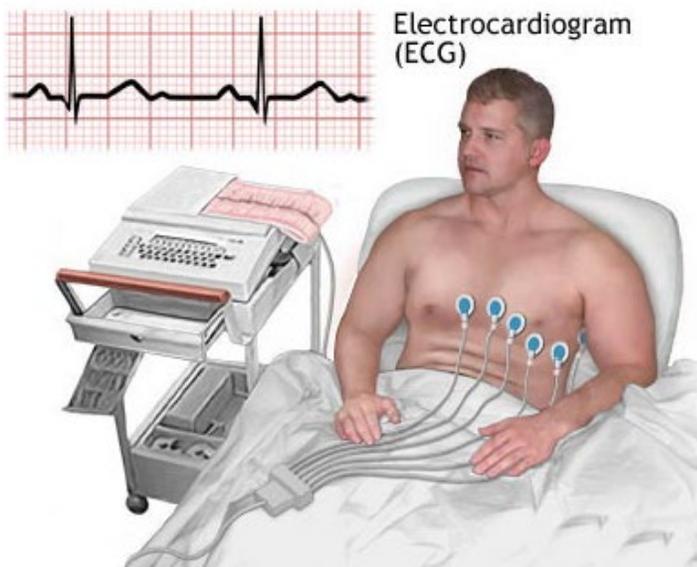
Cardiac Arrest	Heart Attack
“Electrical issue”	“Plumbing issue”
Usually caused by disruptions to the normal electrical activity within the heart; can also result from electrocution, drowning, choking, trauma, & recreational drug use	Caused by a lack of oxygen to the heart for a long time
Heart stops beating	Likely to cause damage to heart muscle
Can happen at any time	Can happen during rest or physical exertion
Happens suddenly, usually without warning	Symptoms often indicate pending heart attack
Can happen at any age, to people of all fitness levels.	Symptoms include chest pain, tightness, shortness of breath, sweating, weakness, nausea, etc.
Person collapses, they don’t respond to touch or sound. They may make gasping sounds, or stop breathing entirely.	Person will likely be conscious and breathing, but experiencing considerable discomfort.
Cardiac arrest is a medical emergency. The heart has stopped beating, oxygen-rich blood isn’t getting to the brain, heart, or organs. Brain death can begin in as little as 3 minutes. Early treatment is critical in minimizing damage. Call 9-1-1. Begin C-P-R and continue until Emergency Medical Services arrive. Use a defibrillator if available.	Early treatment for a heart attack can prevent or limit damage. Act fast by calling 9–1–1 at the first symptoms of a heart attack. Treatment can begin in the ambulance on the way to the hospital. Your healthcare provider may treat your condition with medication, surgery or other procedures, and lifestyle changes.

Diagnosing Cardiac Conditions

There are a number of different tests that your doctor can request to assess and monitor your heart. Some of the most common tests are explored below. As medical technology advances, more tests continue to become available with increasing accuracy.

Electrocardiogram (ECG/EKG)

An electrocardiogram (ECG) is a simple and painless test that measures and records the electrical activity of your heart at rest. It's used to assess abnormal heart rhythms, diagnose heart problems, and monitor the progression of heart disease.



The pumping of your heart is regulated by an electrical impulse that travels through your heart. An ECG measures and records this electrical activity. Up to 15 leads, or wires, are attached to various locations on your body, including your arms, legs, and chest. Sensors in the pads detect the electrical activity of the heart and send it to a machine. You'll be asked to lie still while the information is collected and recorded. You won't feel anything.

The results are reviewed by a cardiologist and a report is sent to your doctor. The entire ECG process takes about 10 minutes.

Echocardiogram, Cardiac Ultrasound

An echocardiogram is a painless procedure that uses ultrasound to create images of your heart. It's a diagnostic test that records information about the heart's shape, movement, chambers, and valves. An ultrasound probe is placed on your chest and high frequency sound waves are used to create the images and display them on a monitor. A technologist conducts the test, moving the ultrasound probe around to view the heart. The data is reviewed by a cardiologist. A report is sent to your doctor. This test typically takes 15-45 minutes.

Holter Monitor or Event/Loop Recorder

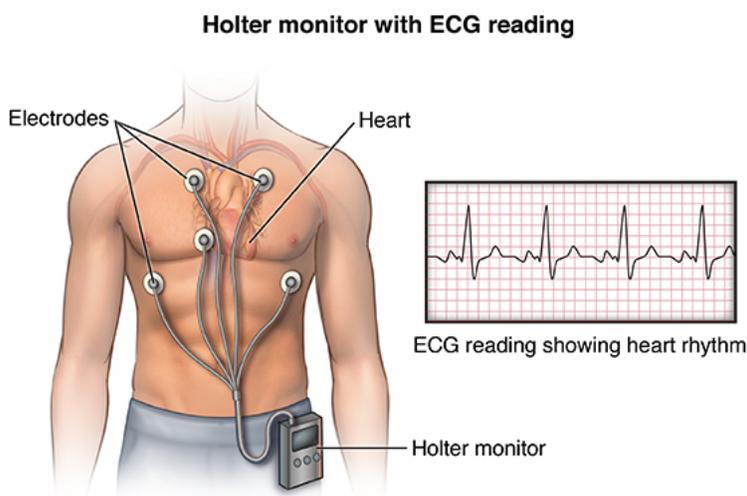
Portable heart monitors are often used to collect information about the heart across a longer period of time (hours to weeks). There are two types of monitors used most often, Holter monitors and Event or Loop recorders.

In either case, the monitor is connected to the body using stick-on electrodes that are placed on the chest. Wires connect the electrodes to a portable device. Holter monitors are typically worn for 24, 48, or 72 hours and record your heart's electrical activity continuously while you go about your daily activities.

Loop or Event recorders are typically worn for a longer period of time (up to weeks) and are used to record heart rhythm abnormalities that occur less frequently.

The recorder saves a recording of your heart rhythm when activated. When you feel symptoms, you're required to press a button on the recorder. With

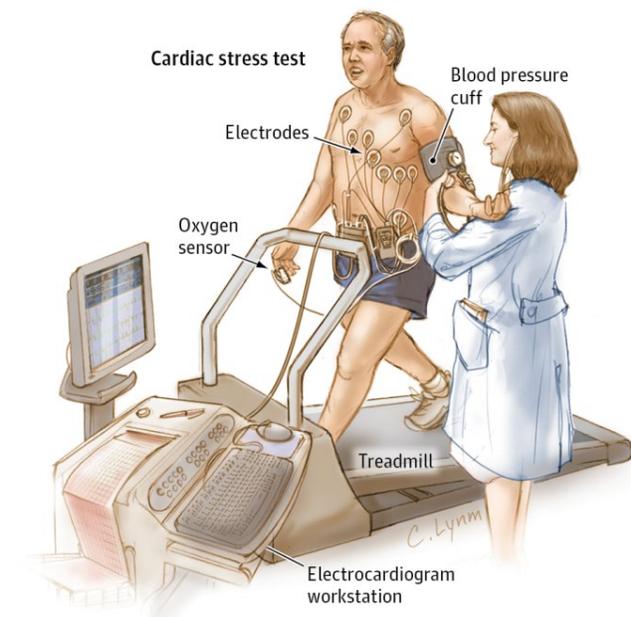
either device, you'll likely be asked to keep a log of what you were doing, symptoms experienced, and any other important details at the time of the event.



Exercising Stress Test

A treadmill exercise stress test is used to determine how your heart responds to exercise. This test allows doctors to detect abnormal heart rhythms and diagnose the

presence of coronary artery disease. You may be asked to undergo this test to help determine the severity of the disease progression, or to determine how much exercise you can safely do.



During the test, you'll walk on a treadmill or cycle on a stationary bike while your heart is monitored using an ECG. Your heart rate and blood pressure will also be monitored before, during, and following the test. During each stage of the test, the intensity of the exercise increases, and the test is stopped when you can no longer continue to increase the intensity of exercise because you're too tired or it's unsafe to continue.

The exercising stress test is usually performed in a clinic or hospital. It's a safe procedure, although it may trigger chest pain or irregular heart rhythms.

Stress Echocardiogram

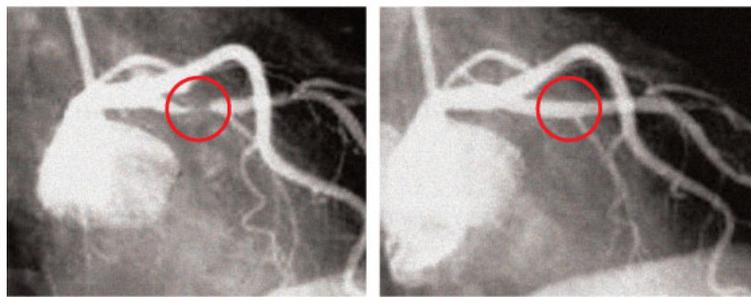
This test is an imaging test that combines the exercise stress test with an echocardiogram. The purpose of this test is to show how well your heart works during the stress of exercise.

First you'll undergo a resting echocardiogram to create a picture of the heart, its shape, movement of muscle, valves, and chambers. Next, you'll undergo another echocardiogram during low, moderate, and/or peak levels of exercise. Throughout the test, you'll exercise using a special bike that allows you to lay flat on your back, or the effects of exercise will be mimicked through the use of a drug called Dobutamine. Throughout the test and following the test, your heart rate, blood pressure, and ECG are monitored.

Images for the resting and exercise echocardiograms are then compared. If any parts of the heart aren't getting enough blood and oxygen during exercise, this will show up on the exercise echocardiogram.

Angiogram

An angiogram is used to determine how much narrowing or blockage exists in the coronary arteries of the heart or to see how well blood is moving through the heart chambers. It's a dye test performed under X-ray. During the procedure, a thin tube (catheter) is inserted from the groin or wrist and guided up to the heart. Once in position, special dye is injected and X-ray pictures are taken of the coronary arteries. When the dye is released, you may feel a brief sensation of heat. The pictures produced look like a road map of your heart, and blockages or narrowed spots are highlighted.



LAD Stenosis pre (left) and post (right) angioplasty

Angiograms are commonly recommended for people with angina or suspected coronary artery disease (CAD). This procedure is generally considered safe, and is usually performed with exploratory intent. Often, if significant narrowing is found, the doctor will also perform an angioplasty, inserting a balloon catheter and deploying a stent at the same time.

Cardiac Computed Tomography (CT) Scan

Cardiac computed tomography (CT) is an imaging process that uses X-rays to provide 3-D images of the arteries and veins of the heart, and how it works. Images are used to determine whether plaque or calcium deposits are present in your blood vessels and causing a blockage, the severity of coronary artery disease, and the ejection fraction of the left ventricle.

During a cardiac CTA, you'll lay face up on a table that moves through a donut-shaped scanner. This scanner is a special type of x-ray machine. When the machine is turned on, an X-ray tube inside the machine spins rapidly around you. X-rays pass through you at different angles producing detailed images in a short amount of time. You're required to lie as still as possible throughout the test.

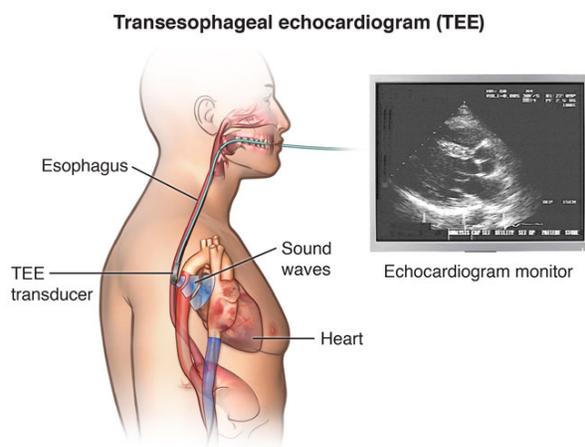
This test is quick and completely painless, though the machine can be quite loud.

Chest X-ray

A chest X-ray produces a detailed image of the heart, lungs, and bones of the chest. X-rays are passed through your body and captured by a special detector. The image created can tell your doctor how large your heart is, whether there is fluid in the lungs, or if your heart is an unusual shape.

A chest X-ray is completely painless and only takes a few minutes. You'll be asked to lie still on an X-ray table and hold your breath for two to three seconds.

Transesophageal Echocardiogram (TEE)



A transesophageal echocardiogram (TEE) is used when your doctor wants to look more closely at your heart to see if it could be producing blood clots. Similar to an echocardiogram, the TEE uses high-frequency ultrasound waves to create images. While a standard echocardiogram is performed with the transducer on the chest, a TEE is performed by inserting the transducer into the esophagus.

A TEE is usually performed after a standard echocardiogram as it may provide clearer images of the heart structures if needed. Once the transducer is in the esophagus, it rests closer to the heart, improving image and Doppler quality.

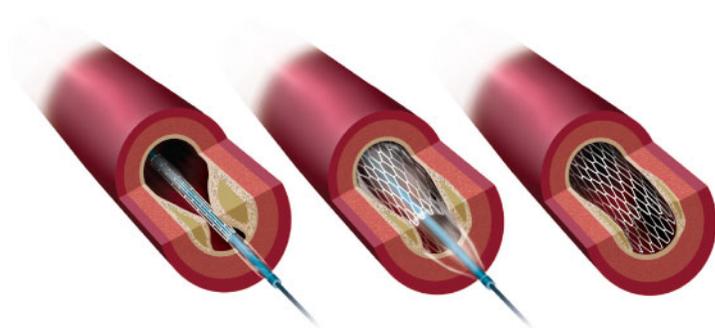
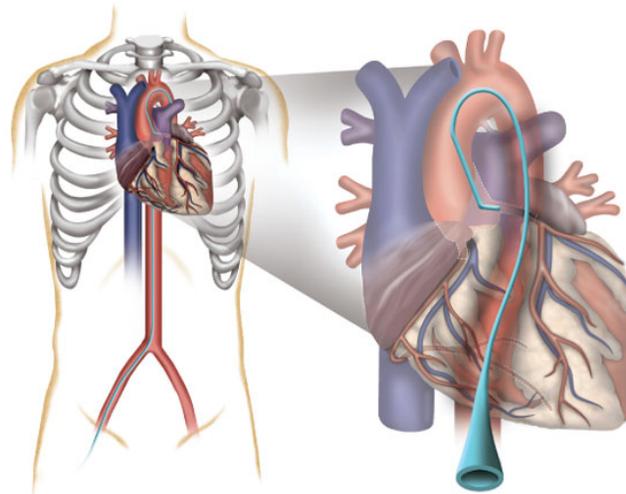
This test is performed under a mild sedative and anesthetic is applied to your mouth and throat to suppress the gag reflex. The doctor will carefully insert the finger-sized ultrasound probe down the back of your throat into your esophagus. You'll be asked to swallow several times to allow the probe to get past the gag reflex. It won't be painful or interfere with your breathing. You may feel the probe moving but will feel more comfortable once the probe is positioned behind the heart. The doctor will manipulate the probe while images and measurements are taken. The probe is removed after about 20 minutes. You'll be allowed to return home following the procedure.

Cardiac Procedures

Angioplasty (Percutaneous Coronary Intervention, PCI)

An angioplasty is used to open up areas of the coronary arteries that have become narrowed or blocked because of plaque buildup. This narrowing reduces the flow of blood through the coronary arteries, reducing the amount of blood reaching the heart muscle.

In this procedure, a thin flexible tube called a catheter is inserted through an incision in your groin or wrist, and fed through to your heart. The catheter has a small inflatable balloon at the tip, often covered by a stent. A stent is a small metal mesh tube that is permanently implanted into the narrowed part of the artery. When the tip of the catheter is in place in the narrowed section of the artery, the balloon is inflated for a short period of time to push the plaque back against the wall of the artery. If a stent is also used, the expanding of the balloon will also expand the stent. The stent lowers the risk of this area narrowing again.



Coronary angioplasty and stenting

An angioplasty is used to widen the narrowing arteries without surgery and, in most cases, will provide immediate relief from the symptoms of coronary artery disease. The total time for the procedure is usually 30 – 90 minutes, and patients may be sent home later that same day.

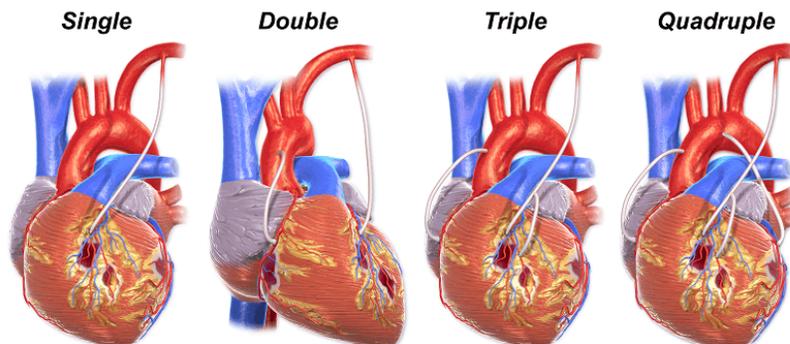
Cardioversion

Cardioversion is used to restore the heart's normal rhythm from an abnormal rhythm. Cardioversion is similar to defibrillation in that an electrical current is administered to the heart to shock it, but using much lower levels of electricity.

Cardioversions are often performed to treat atrial fibrillation. Two paddles are placed on the chest and selected amounts of electrical pulses are sent from the paddles through the heart. The energy jolts the heart out of atrial fibrillation and back to normal rhythm. During a cardioversion, the patient is sedated and will wake quickly afterwards without any memory of the shocks. Patients usually go home the same day as the procedure.

Coronary Artery Bypass Graft (CABG)

A coronary artery bypass graft surgery improves blood flow to the heart muscle where there is a build-up of plaque in the coronary artery. A section of blood vessel is taken from your leg, arm, or chest and is inserted above and below the problem section of the blocked artery. This allows the blood to go around, or bypass, the blocked artery.



Coronary Artery Bypass Graft (CABG)

Cardiac Ablation – Standard and Surgical

Cardiac ablation is a procedure used to restore normal heart rhythm. Often, these irregular rhythms are caused by abnormal heart tissue that causes the electrical system to “short circuit.” In an ablation, these tissues are ablated or destroyed, helping the circuit function normally. Ablation can be done surgically or by catheter. After the procedure, irregular rhythms can persist for two to three weeks following. Normal rhythm isn’t usually achieved until 3 to 6 months after the procedure.

Heart Transplant

Heart transplant surgery is the removal of a failing heart and replacing it with a donor heart. Heart transplant surgery is used to treat severe, end-stage heart failure as a last resort. In order to receive a donor heart, you’ll be evaluated to determine whether you’re a good candidate for a heart transplant. If you are, your name will be put on a transplant waiting list. You’ll be contacted immediately once a donor heart becomes available for you, and will undergo surgery within hours of being notified. Heart transplant surgery is very invasive. You can expect to be in the hospital for 2-3 weeks following surgery, and will require months of follow-up. You’ll also be required to take drugs to suppress your immune system in order to prevent your body from rejecting the donor heart.

Heart Valve Surgery, Transcatheter Aortic Valve Implantation (TAVI)

Heart valve surgery is performed to repair or replace a valve in the heart that isn’t working properly.

Valves control the flow of blood by keeping it moving in one direction through the heart. If a valve isn’t working properly, blood doesn’t flow properly. If you have a valve that is leaking or narrowed, a valve repair or replacement may be appropriate.

Common procedures include:

- **Valvuloplasty:** Surgeons sew the torn flaps of the damaged valve together so that the valve may close properly again.
- **Annuloplasty:** Surgeons repair the ring which holds the valve in place.
- **Valvulotomy:** Surgeons repair a valve flap.
- **Percutaneous mitral balloon valvotomy:** Surgeons insert a catheter into a vein in the right leg and guide it up into the mitral valve. There, a small balloon on the end of the catheter's tip is inflated, opening the blocked valve.

Valve replacement

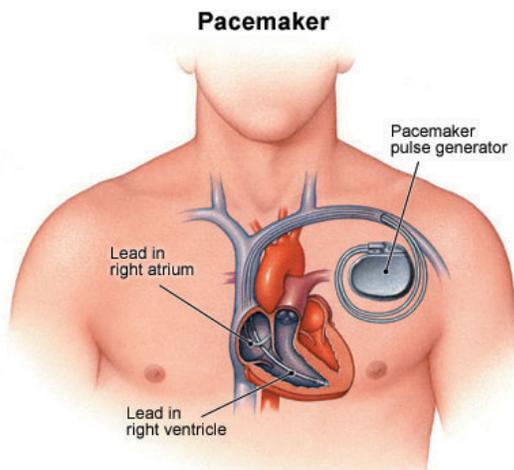
If heart valves are too badly damaged to be repaired, doctors may recommend surgically replacing the damaged valve. This is a major operation, involving open-heart surgery. The actual operation can last three hours or longer, and patients take several weeks to recover. Human heart valves may be replaced with mechanical valves, or with specially prepared heart valves from human or animal donors (known as bioprosthetic or tissue valves).

Implantable Cardioverter Defibrillator (ICD)

Implantable Cardioverter Defibrillators are used to treat arrhythmias and other cardiac conditions. Similar to a pacemaker, the small computer-like device responds to and treats rapid heart rhythms by delivering a small pulse or shock to the heart. The device and one or two leads are implanted under the skin in your upper chest. The leads are threaded into your heart via a vein.

This procedure is done under anesthesia. Following the procedure, you may be released home the same day, or held overnight.

Pacemaker



A pacemaker is a small device that is used to help regulate the heart's rhythm. It's a treatment option for certain types of arrhythmias, such as a slow heartbeat or heart block. A pacemaker is surgically inserted into the chest just below the skin, and wires are placed inside the right atrium of the heart. The tiny device senses the heart rhythm and sends a small electrical impulse into the heart, causing it to contract when the heart rate becomes too slow.

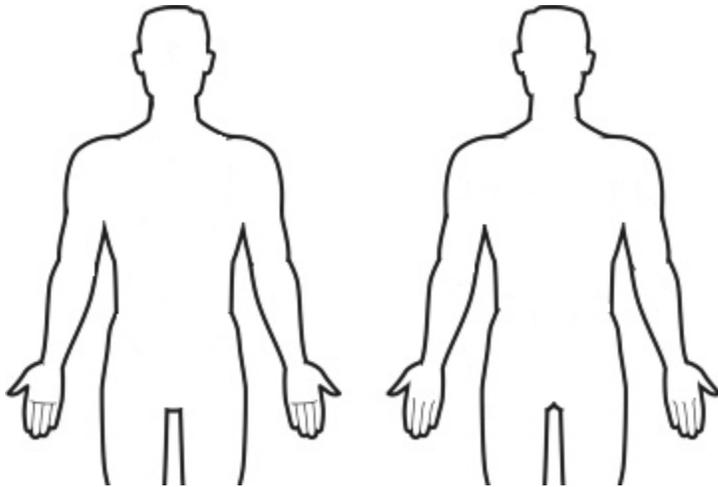
In more complex cases, a different pacemaker is installed, functioning to also coordinate the two ventricles to contract at the same time and provide a balanced heartbeat. This is more common in heart failure patients. These patients may also benefit from an implantable cardiac defibrillator (ICD), and will often receive both devices combined into one.

Session 4: What Have I Learned So Far?

My Heart History

I began experiencing heart symptoms (when, where, what were you doing, feeling, etc):

My heart symptoms:



Describe the discomfort and how long it lasted:

Use the body outline to mark the location of the discomfort with a severity rating of 1 to 10 (1 = mild; 10 = severe).

Pain/Discomfort

- Sharp
- Stabbing
- Dull
- Throbbing
- Piercing
- Burning
- Pressure
- Comes & goes
- Fullness Stinging

Breathing

- Shallow
- Labored
- Wheezing
- Coughing
- Hacking
- Shortness of breath
- Can't catch a breath

Other

- Nauseous
- Clammy skin
- Feverish
- Tired
- Indigestion
- Dizzy
- Light-headed
- Weak
- Sweaty
- Chills

Tests I remember having done:

I was diagnosed with _____ on (date) _____.

I had the following procedures performed (include date):

Session 5: Risk Factors

Cardiac **risk factors** are qualities, characteristics or exposures of an individual that increases the chance of developing heart disease. They can also increase the chance of heart disease becoming worse. There are some risk factors that cannot be controlled. These are called **non-modifiable risk factors**. Refer to the following table for a better understanding on each of these factors.

Non-Modifiable Risk Factors

Risk Factor	Why?
Age	Your risk of heart disease increases as you get older. Heart disease becomes a greater risk after the age of 55 for men and 65 for women.
Sex	Generally, men are at a greater risk (about 3 to 5 times) of heart disease than women. However, the risk of heart disease is about the same for both men and women after the age of 65 when other risk factors are similar.
Family History	Family history is a strong indicator of your own risk of heart disease because you and your blood relatives share the same genes. Specifically, you may be at a greater risk of heart disease if you have a close family member who has developed heart disease before the age of 55 if male or 65 if female.
Ethnicity	Ethnicity refers to a group of people of the same cultural or geographical background. Family history and ethnicity are closely related because people of the same ethnicity share similar genes and may pass down the same genetic mutations. Specifically, First Nations people and people of African or Asian descent are at a greater risk of heart disease.

*Adapted from the Ottawa Heart Institute.

Throughout the Cardiac Rehab Program, we won't be spending a lot of time on non-modifiable risk factors because there is nothing that we can do to change them. However, it's important to understand that there are many risk factors that we can change. These are called **modifiable risk factors**. Part of the program will be helping you to identify the **modifiable risk factors** that you can change by altering your lifestyle (e.g., exercise, healthy eating).

Heart disease is a progressive disease. This means that the likelihood of it becoming worse is higher if you cannot get your modifiable risk factors under control. It's important to keep track of all of your potential risk factors and take steps toward making positive changes. The more risk factors that you have under control means the better chance you have of preventing another heart event and living a longer life.

In order to control your modifiable risk factors:

- Know what your risk factors are
- Identify which factors are under control and which are not
- Learn what you need to do in order to get those risk factors under control

Modifiable Risk Factors

Take a look at the following table. This is an overview of the modifiable risk factors, what makes them a risk, and the desirable level of each factor.

Risk Factor	Why?	Desirable Level
Smoking	All of the harmful chemicals in cigarette smoke increase your blood pressure, makes your heart work harder, and causes damage to your blood vessels. The damage contributes to plaque formation in the blood vessels, which reduces blood flow to the heart. Continued smoking can both cause and worsen heart disease.	Non-smoking
High Blood Pressure	Blood pressure is the force of the heart pumping blood against the artery walls. If your blood pressure is too high then it can damage the walls of the arteries over time. This can cause plaque formation, which reduces blood flow to the heart.	< 140/90 < 130/80 if diabetic
Physical Inactivity	Physical inactivity plays a big role in promoting several other risk factors including high blood pressure, high cholesterol levels, diabetes, obesity, and plaque formation. All of which can lead to heart disease on their own.	Aerobic Exercise: Moderate to vigorous intensity, 20-60 minutes, 3-7 days per week Resistance Exercise: Moderate intensity, 10-15 reps, 2-3 non-consecutive days per week
Obesity (BMI) Large Waist Size	Having too much fat, especially around the waist close to the organs, contributes to other risk factors, including high blood pressure, high cholesterol levels, and diabetes.	BMI < 27 (minimum) BMI < 25 (optimal) Men: < 102 cm (40") Women: < 88 cm (35")
Unhealthy Eating	Just like physical inactivity, unhealthy eating promotes several other risk factors, including high blood pressure, high cholesterol levels, diabetes, obesity, and plaque formation.	A heart healthy diet intended to prevent or manage heart disease

<p>Psychosocial Factors</p>	<p>Psychosocial factors such as stress, anxiety, and depression are associated with heart disease. Stress is your body's response to change. Stressors are the events that cause the change. There are various stressors, both good and bad. However, common examples include changes in health, family, relationships, work, lifestyle, and finances. If you have difficulty coping with these events, your body may begin to negatively respond to them (e. g., anxiety, depression), which in turn may negatively impact your health. If this trend continues, it could increase your overall stress level and potentially increase your chance of having a heart event.</p>	<p>Developing supports and strategies to cope with all heart related stressors</p>
<p>High Cholesterol Levels</p>	<p>Cholesterol (LDL, HDL, and Triglycerides) is a type of fat in the blood that the body needs. However, having too much LDL cholesterol contributes to plaque formation in the arteries of the heart. This reduces blood flow to the heart, which can lead to heart disease. HDL cholesterol helps to remove LDL cholesterol from the arteries. So, having too little HDL cholesterol can also increase your risk of heart disease.</p>	<p>Total Cholesterol: < 4.5 mmol/L LDL: < 2.0 mmol/L HDL: > 1.0 mmol/L Triglycerides: < 1.7 mmol/L</p>
<p>Diabetes</p>	<p>High levels of blood glucose (sugar) in the body can increase your risk of diabetes and heart disease. Your body produces a hormone called insulin to lower blood sugar levels in the body. Diabetes causes "insulin resistance," which means that your body can no longer use insulin to lower blood sugar levels and use it as energy. This abnormality can cause damage to your blood vessels and contribute to plaque formation.</p>	<p>Fasting Glucose (amount of sugar in your blood after fasting for 8 hours): 4 – 5.6 mmol/L if non-diabetic and 4 – 7.0 mmol/L if diabetic A1C (average level of blood sugar over the past 3 months): < 6.5% if non-diabetic and < 7.0% if diabetic</p>
<p>Alcohol</p>	<p>Drinking too much of any type of alcohol may also increase your risk of high blood pressure and contribute to the development of heart disease.</p>	<p>Men: 3 drinks per day, most days, up to a weekly max of 15 drinks Women: 2 drinks per day most days, to a weekly max of 10 drinks</p>

*Adapted from the Cardiac College of the Toronto Rehabilitation Institute.

**Please note that the desirable levels for physical activity are guidelines only. Be sure to follow your personalized exercise prescription.

Session 5: What Have I Learned So Far?

1. What are cardiac risk factors?

2. What are non-modifiable risk factors?

3. What are modifiable risk factors?

4. What are the 9 modifiable risk factors that can be changed by altering your lifestyle:

5. What is the desirable level of physical activity?

Session 6: Cardiac Medications/Pharmacology

Your doctor may prescribe medications to you after you've had a cardiac event. You may also be on some of these medications if you've been determined to be at high risk of a heart event.

It will be important for you to know what medications you're taking and why you're taking them. Also, understand how and when to take them, and what to do if you forget a dose. Ensure you're following your own personal medical plan set for you by you and your doctor.



- Never use medications prescribed for someone else
- Never allow others to use your medications
- It's dangerous to mix drugs or try to prescribe medication yourself
- Consult your doctor before making any changes in your medication plan
- Talk to your doctor or nurse if you have any questions about your meds

****The information below is general and not meant to substitute information given to you by your physician or pharmacist****

Before reading this section, please fill out your medication list below:

Name of Medication	Dosage	Times taken per day

*If you need more space, feel free to make a copy of this chart

Why do I have to take medications?

Medications can be a very important part of managing a chronic illness. They won't cure the disease, but they're used to help keep the disease under control. Medications usually have a purpose:

1. To relieve symptoms (like pain medications, or an asthma inhaler)
2. To prevent further problems (like blood thinners to help prevent a stroke)
3. To improve disease or slow its progress (such as heart medications)
4. To replace substances/hormones that are normally produced by the body (such as insulin or thyroid medications)

*Adapted from Living a Healthy Life with Chronic Conditions (2007), 2017

There are several medications available to treat different heart conditions. Your physician will work with you and other health care providers to help you with taking the most appropriate medication for you. Side effects can be minimized by proper monitoring by the physician, pharmacist, and you as patient. Ask questions and become a key player in your heart health.

General Guidelines

Cardiac medications will most often be prescribed to:

- Improve blood and oxygen supply to the heart muscle
- Reduce the work load of the heart
- Reduce the risk of blood clots forming in the blood vessels
- Reduce the production of cholesterol by the body



At the Doctor's Office

Follow your doctor's instructions on the dosage of prescribed medications. If you see more than one physician, such as a cardiologist, dentist, optometrist or others, be sure that ALL of them are aware of your prescribed medications. Carry a medication list with you, so you can show the health care providers you see.

At the Pharmacy

Ask for the name of your medication – both the name brand and generic name. Check with your pharmacist if you're not sure how to take your medications (with or without food, or at morning or night, for example). Make sure you tell your pharmacist about ALL the medications you take, including non-prescription or over-the-counter medications, dietary supplements and any herbal or alternative medications, since these may interact with your prescribed medications. If you find it hard to keep track of your medications or remember when to take them, ask your pharmacist about having your medications put into a blister pack.

Common Cardiac Medications

Classification / Name		Action	Precautions / Warnings
Anti-Platelets	ASA (Aspirin)	These drugs, also known as “blood thinners,” decreases the stickiness of the platelets. This helps keep blood flowing more smoothly in your body. Lessens risk of heart attack and stroke.	Avoid taking with alcohol. Stopping could lead to sudden stent blockage.
	Plavix (Clopidigrel)		
Beta Blockers	Lopressor (Metoprolol) Tenormin (Atenolol) Monacor (Bisoprolol) Coreg (Carvedilol) Soctacar (Satalol) Inderal (Propranolol)	Lowers heart rate and blood pressure, and makes the heart workload easier.	Never double up a missed dose. Must be tapered gradually.
	Ends in “-lol”		
ACE Inhibitors & ARBs	ACE Inhibitors Altace (Ramipril) Vasotec (Enalapril) Inhibace (Cilazapril) Capoten (Captopril) Monopril (Fosinopril) Coversyl (Perindopril) Accupril (Quinapril) Ends in “-pril”	This drug causes the blood vessels to relax, lowering the blood pressure, increasing the supply of blood and oxygen to the heart and other vital organs, and lowers the risk of heart failure. The drugs also help to rid the body of excess accumulations of salt and fluids by increasing blood flow to the kidneys.	Common side effects of ACE Inhibitors are dry cough and headaches. See your doctor if you develop hives, lightheadedness, dizziness, or irregular heartbeat that you don’t normally have.
	ARBs Atacand (Candesartan) Avapro (Irbesartan) Cozaar (Losartain) Diovan(Valsartan) Teveten (Eprosartan)		
Classification / Name		Action	Precautions / Warnings

<p>Cardio-tonics</p>	<p>Lanoxin (Digoxin)</p>	<p>Used to treat heart failure. Digoxin increases the force with which the heart beats, therefore increasing the amount of blood pumped out per heartbeat, improving the efficiency of the heart.</p>	<p>Contact your doctor immediately if you have loss of appetite, nausea, vomiting, diarrhea, vision changes, irregular heartbeat, changes in pulse rate, confusion, headache or fainting.</p>
<p>Statins</p>	<p>Lipitor (Atorvastatin) Crestor (Rosuvastatin) Zocor (Simvastatin) Pravachol (Pravastatin) Mevacor (Lovastatin) Lescol (Fluvastatin)</p> <p>Ends in “-statin”</p>	<p>Reduces cholesterol, stops plaque from building up; however, it doesn’t get rid of what’s already there.</p>	<p>Cholesterol reduction is most effective when combined with a low-fat diet and regular exercise.</p> <p>Liver functions must be monitored by your physician when taking anti-cholesterol medication.</p> <p>Don’t eat or drink grapefruit while taking cholesterol medications. The fruit can dramatically increase the potency and absorption of the drug. It could cause serious liver or muscle damage.</p>
<p>Nitrates</p>	<p>Nitro (Nitroglycerin) Isodril (Isorbide Dinitrate)</p>	<p>Causes direct relaxation of the smooth cardiac muscles, decreases chest pain.</p> <p>They’re not a cure but they can decrease the symptoms of angina and allow you to be more active.</p>	<p>If prescribed, have your nitro with you at all times. Make sure your family members know where your nitro is kept.</p> <p>**Don’t take Viagra or any other erectile dysfunction drugs if you’re prescribed nitrates **</p>

Classification / Name	Action	Precautions / Warnings	
Calcium Channel Blockers	Adalat (Nifedipine) Cardizem (Diltiazem) Isoptin (Verapamil) Norvasc (Amlodipine) Plendil (Felodipine)	**Don't eat grapefruit or drink grapefruit juice while taking calcium channel blockers** Avoid alcohol, as the interaction can increase the side effects. Other medications you're taking may interact with the calcium channel blocker – make sure your doctor knows about ALL your medications.	
Diuretics	Chlorthalidone Ethacrynic acid (Edecrin®) Furosemide (Lasix®) Hydrochlorothiazide Indapamide (Lozide®) Metolazone (Zaroxolyn®)	Also known as “Water Pills.” These drugs help the body rid itself of excess sodium (salt) and water by helping your kidneys produce more urine. It's easier for the heart to pump without the extra fluid. They're often used to treat high blood pressure and heart failure.	Other medications you're taking may interact with the diuretic – talk to your doctor or pharmacist about ALL your medications, even non-prescription ones Limit your salt intake while taking diuretics Take at least 6 hours before going to bed, so you don't have to get up through the night to use the bathroom
Anti-coagulants	Apixaban (Eliquis®) Dabigatran (Pradaxa®) Rivaroxaban (Xarelto®) Warfarin (Coumadin®)	Also known as “Blood Thinners.” Don't actually “thin” the blood, but help to prevent new clots from forming, or prevent existing clots from getting bigger You'll likely need regular blood tests to monitor the viscosity (thickness) of your blood, so it's not too thin or too thick.	Avoid smoking and limit alcohol while taking anti-coagulants. Main side effect is unwanted bleeding – keep an eye on pink in the sink when brushing your teeth or shaving, nosebleeds, stool that's red or black, urine that's pink or brown

If you have further questions about any of the medications you're taking, you can always ask your health care professional about the MedsCheck Program.

MedsCheck is a program that allows you to schedule a 20- to 30-minute one-on-one meeting with your pharmacist to ensure that you're safely and appropriately using your medications. **And it's free!** Just bring your OHIP (Health) Card to the appointment. The MedsCheck appointment is your chance to discuss how your prescription, over-the-counter, and alternative medicines may be affecting each other.



Do I qualify?

- You must be an Ontario resident with a valid Ontario Health Card and be currently taking a minimum of 3 prescription medications for a chronic condition.
- You're eligible for one MedsCheck session per year from the date of original review.
- You're eligible for a MedsCheck follow up within the annual time frame, with the following criteria:
 1. You've been discharged from the hospital within the previous two weeks
 2. A pharmacist's documented decision based on:
 - i. Significant changes made to an existing medication profile or the addition of new medication
 - ii. Documented evidence of non-compliance
 - iii. You've changed your place of residence and have transferred your prescriptions to a different pharmacy
 3. A referral from a physician (MD) or a nurse practitioner (NP)
 4. A planned hospital admission

After you've completed the MedsCheck session, you'll be provided with a drug review list that is dated and authorized with yours and the pharmacist's signatures; the review list is important when you interact with other health care providers.

** Taken from Ontario Ministry of Health and Long-Term Care www.ontario.ca/medscheck, 2017

Medications and Travel

- When travelling, be sure you carry your medications with you in your carry-on bag
- If you'll be away from home for an extended period of time, contact your pharmacist to see how you can refill your prescription while you're away.
- Prescriptions must be in the original container, with the medication name and the traveler's name clearly stated.
- Bring an up-to-date medication list with you and keep it in your wallet or purse, in case of any medical emergency while you're away from home.
- If you're travelling internationally, check into health insurance coverage, especially if you've recently had a heart attack.



Session 6: What Have I Learned So Far?

1. Name a medication you're currently taking:

2. Why were you prescribed this medication?

3. What are two things you should remember when travelling while taking medications?

4. Name another medication you're currently taking:

5. Why were you prescribed this medication?

6. Name the program where you can meet with a pharmacist to ensure you're taking your medications properly?

Session 7: Goal Setting

What is a goal?

A goal is something you'd like to reach or attain. It's something you're working towards often for personal gain, development, or promotion. The best goals are set out with this in mind, and aren't done to satisfy or impress someone else.

Many of us have lifetime or long-term goals (months or years). Examples include:

- Learn how to cook
- Write a book
- Walk 5 kilometers

Short-term goals tend to be more specific and can be achieved in a short amount of time (days or weeks). Several short-term goals will usually lead to a larger or long-term goal.

Examples include:

- Purchase cooking utensils
- Sign up for a Creative Writing class
- Being able to walk for 5 minutes

What is goal setting?

Goal setting is a process that allows you to plan, organize and prioritize the steps that will lead you to your ultimate or long-term goal. Many of us have difficulty realizing our goals because they're not clearly defined.

A poorly defined goal:

Is discouraging
Is overwhelming
Decreases self-esteem

A clearly defined goal:

Is motivating
Increases self-confidence
Allows you to see progress

By taking the time to set goals for yourself and develop specifics around those goals, you're more likely to achieve them. Goal setting is particularly important for people with chronic pain or medical conditions. Goals can help you make lifestyle changes and to assist you in using strategies that will manage your condition.

Most effective are SMART goals:

Specific
Measurable
Attainable
Relevant
Time-bound

Use the following guide and goal setting activity to help you set effective goals.

Goal Setting 101

Specific

Decide what you want or hope to achieve. Begin with a general idea, and move towards specific by adding details and defining your terms. The more specific the goal, the greater the chance of accomplishing it. Including specific numbers can help make the goal more *measurable*. Answering “the 5 Ws” can help make your goal more specific:

- Who is involved? Typically goals will center around you, but some will require you to work with others (e.g., dietitian, a walking partner, supportive spouse, etc.)
- What specifically do you want to accomplish? Is it concrete, specific, and can it be measured?
- Where will you do the work of striving for your goal? At home? At a gym? At the library?
- When will this happen? Establish a realistic time frame or deadline (more on this later, but for now think about the big picture). Consider the time frame, but also consider the time of day, and how often.
- Why are you setting this goal? What are the specific reasons and benefits of accomplishing this goal?

The details you come up with can be used to make action steps – smaller, more achievable goals that will guide you towards the end goal. These action steps should still follow the SMART guidelines.

Measurable

Creating a measurable goal will make it easier to track your progress and recognize when you’ve reached your goal or when your goal needs to be re-evaluated. Whenever possible, use concrete numbers in your goals, and continuously measure and track your progress against this number. Ask yourself:

- How much?
- How many?
- How will I know when I’ve accomplished the goal?

Attainable

Ensure the goal you’ve set is one that you can actually achieve. This may be the hardest part of goal setting. Failing to set a goal that is truly attainable for you may cause you to become discouraged.

Begin by assessing your own personal limitations. Consider any obstacles you may face, and whether you’ll be able to overcome them. With any goal, there will be challenges. Is it reasonable to think you’ll be able to accomplish the goal in the face of these challenges? Be realistic about the amount of time you have to devote to your goals as well as your own personal background, knowledge, and physical limitations. If you don’t think you can reasonably achieve your goal given your current life situation,

set a new one that is attainable. It's a good idea to write down all the foreseeable constraints you face – this will help you develop a complete picture of the task.

Assess your level of commitment. Even if you think your goal is achievable, you must be committed to making the efforts necessary to reach it. Your goal and commitment level should match up. Be honest with yourself about the changes you're willing to make. Ask yourself:

- Are you prepared to make the commitment to reach your target?
- Are you willing to dramatically alter or at least adjust aspects of your life?

Take time to identify restraints or obstacles that may be part of the process. What will you need to do to achieve your goal? What obstacles will you face? Consider how you'll face and overcome these obstacles.

Your goal needs to be one you can achieve. Once you've considered the challenges you face and your level of commitment, adjust your goal if needed. If you conclude that it's not really a reasonable goal, consider revising it to fit your reality. If you decide your existing goal is achievable, you can move on to the next step.

Relevant

Closely related to a goal's attainability is its relevance. The question to ponder here is whether this goal will be fulfilling for you as an individual? This is the time to revisit the "why" questions. Will this goal truly fulfill your desires or is there a different goal that is more important to you? Consider your other goals and circumstances, and consider how your goal fits with other plans in your life. Conflicting plans can create problems.

Adjust your goal for relevance. If you decide your goal is relevant and will work well with your other plans, it's time to move on to the last step. If not, go back and make some more revisions.

Time-bound

Choose a time frame. Your goal should have a start date and a deadline. This will help you stick to the specific actions that you need to take and remove the "sometime in the future" mentality. If you don't set a timeline, there is no internal pressure to accomplish the goal, so it can often end up on the backburner.



Set benchmarks, especially if your goal is very long-term. Breaking your goal up into smaller goals can help keep it manageable and help you manage your progress. You can always go back and revise the goal and timeline as needed. Consistent progress means keeping one eye on today and one eye on the future. Within your time frame, ask yourself:

- What can I do today to reach my goal?
- What can I do over the next three weeks to reach my goal?
- What can I do over the long-term to reach my goal?

Celebrate!

Remember to track important milestones along the way to your target. You can pair each milestone with a reward. Small incentives will help you stay motivated! Consider making a list of people and resources you'll need to help achieve your goal. This can help you be strategic about taking the steps you need to attain it.

Motivate!

- Pick a physical activity – something that you enjoy doing
- Develop a recording system using cards, a notebook, a calendar, or a log
- Participate in physical activity with a friend/exercise buddy – part of your socialization
- Participate in community activities
- Associate your physical activity with daily activities (i.e., if you always watch the 6:00 news, place your exercise bike in front of the T.V.)
- Schedule exercise in your day
- Reward yourself for your accomplishments or goals achieved
- Think about all the benefits of exercise (*↑ energy, ↑ strength, ↑ flexibility, ↑ mood, ↑ sleep patterns, ↑ confidence, ↑ self-esteem, ↑ sense of well-being; ↓ pain levels, ↓ depression, ↓ stress, ↓ risk of developing stroke, diabetes, heart attack, osteoporosis*)

On the following pages, begin to develop your own personal goals. Your goal can be related to anything you'd like. If you're recovering from a cardiac event, a health goal may be a great place to start!

Session 7: Goal Setting Exercise

Write down one general goal that you'd like accomplish:

Now consider the criteria discussed on the previous page:

Specific. Consider:

Who?

What?

When?

Where?

Why?

Measurable. Assign number values to your goal. How will you know you've reached your goal?

Attainable. The most important reasons why I want to achieve this goal are:

Some limitations that may prevent me from reaching my goal and ways to overcome them include:

I would rate my commitment level to this goal as:

(low commitment) 0... 1... 2... 3... 4... 5... 6... 7... 8... 9... 10 (highly committed)

Any other barriers that will get in the way of your goal? How will you overcome them?

Possible Barriers	Solutions

Relevant: Is this goal relevant to me? Is it realistic in my current condition (consider pain levels/tolerances/other responsibilities)? **Yes** **No**

Time-bound: The date that I want to achieve my goal by is:

Some additional benchmarks for completing this goal include:

1. By _____, I will _____.
2. By _____, I will _____.
3. By _____, I will _____.

Celebrate! When I reach my goal, I will reward myself by:

Now write out your goal statement using the individual details above to create a S.M.A.R.T. goal.

Complete the following contract and post it where you'll see it every day.

Make a commitment to achieve your goal and follow through with your plan!

Contract to Myself

I, _____, am responsible for following

(please print name)

my action plan and committing to my goal of

I plan to reach my goal by

(goal date)

When I reach my goal, I will reward myself by

Date:

Signature:



Session 8: Heart Healthy Diet



There can be a lot of information and resources about healthy eating, especially after you've had a cardiac event. At times, this information is overwhelming and it's hard to filter what applies to you and what does not. As part of the Cardiac Education & Rehabilitation program, you have access to a Registered Dietitian who will work with you on your nutritional goals and set an individualized healthy eating plan.

****The information provided in this chapter is meant for the general population and not meant to substitute information given to you by your health care professional****

The 5 F's of Healthy Eating	
Fiber	Eat vegetables, whole grains, lentils and legumes. Fiber can be found in complex carbohydrates, such as wild rice and oatmeal. It can also be found in fresh fruits and vegetables.
Fish	Fatty fish such as: sardines, anchovies, salmon, trout, and pickerel are excellent sources of healthy omega-3 fatty acids.
Fruit	Frozen or fresh fruits and vegetables are a great source of nutrients. Canned sources can also be a good alternative. However, be cautious as they may be packed in syrup or have a higher salt content.
Fresh	Limit excess consumption of pre-packaged or prepared foods; focus on fresh as often as you can!
Fat	Consume more mono- and poly-unsaturated fats and less saturated fats (from animal sources) and trans fats (from processed foods). Limit foods that are high in cholesterol (animal sources). See "Types of Fat" section below for more information.

Consider portion control as part of healthy eating. Look at the following table to help you determine proper portion sizes for different foods.

Serving-Size Comparison Chart

FOOD	SYMBOL	COMPARISON	SERVING SIZE
Milk & Milk Products			
Cheese (string cheese)	 	Pointer finger	1½ ounces
Milk and yogurt (glass of milk)	 	One fist	1 cup
Vegetables			
Cooked carrots	 	One fist	1 cup
Salad (bowl of salad)	 	Two fists	2 cups
Fruits			
Apple	 	One fist	1 medium
Canned peaches	 	One fist	1 cup
Grains, Breads & Cereals			
Dry cereal (bowl of cereal)	 	One fist	1 cup
Noodles, rice, oatmeal (bowl of noodles)	 	Handful	½ cup
Slice of whole wheat bread	 	Flat hand	1 slice
Meat, Beans & Nuts			
Chicken, beef, fish, pork (chicken breast)	 	Palm	3 ounces
Peanut butter (spoon of peanut butter)	 	Thumb	1 tablespoon

©2012 Dairy Council of California

Healthy Portions

When you're filling your plate, try to fill at least half of it with vegetables. Fill one quarter of the plate with a lean protein, like chicken, fish, beans or lentils. The other quarter of the plate can be a healthy carbohydrate, like brown rice, a piece of bread, or whole grain pasta. See information on healthy carbohydrates on page 77 for more healthy options!

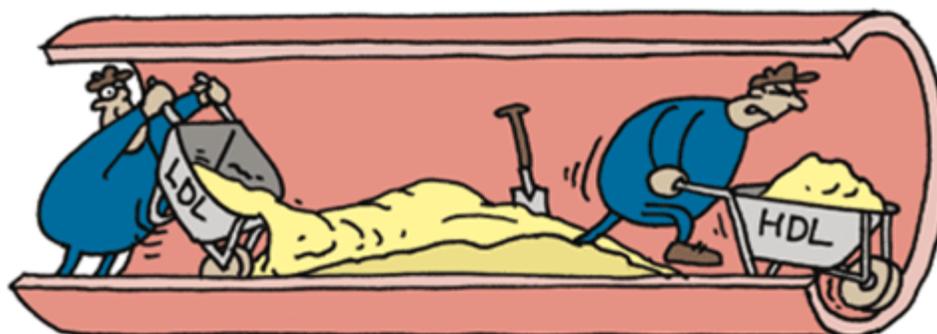


*Image from www.food-guidecanada.ca, 2019

Types of Fat

Fats are an essential part of a healthy diet and provide us with calories and energy, like protein and carbohydrates. Our liver makes all the cholesterol our body needs, but food sources of fat can increase the amount of cholesterol in our bodies.

Type of Fat in Food	Effect	Sources	
Saturated	Occurs naturally in animal products, solid at room temperature, and you cannot see through it	Raises LDL cholesterol	Mostly hidden in foods, like processed foods, meat, butter, and lard
Unsaturated	Trans Fat Rarely occurs in food naturally – it’s an <i>unsaturated fat that has been hydrogenated</i> (shelf life has been extended – solidifies fats that would otherwise be liquid)	Raises LDL and lowers HDL	Hard margarines, shortening, lard, fried food, chips, cookies, pastries, pre-packaged food
	Mono-unsaturated Fatty Acids (MUFA)	Helps to lower LDL cholesterol and maintain HDL	Olive oil, canola oil, avocado, almonds, peanuts, natural peanut and almond butters
	Poly-unsaturated Fatty-Acids (omega-3, omega-6) (PUFA)	Helps to lower LDL, doesn’t have an effect on HDL	Sunflower oil, corn oil, flax, walnuts, pine nuts, sesame and sunflower seeds, salmon, sardines, pickerel



Types of Fat in Blood		Description	Notes
Cholesterol	Low-Density Lipoprotein (LDL)	“Bad” cholesterol contributes to fat build-up in the arteries “L” = lousy	The liver makes all the cholesterol your body needs. The “bad” fats you eat may raise your cholesterol levels.
	High-Density Lipoprotein (HDL)	“Good” cholesterol helps prevent fat build up in the arteries “H” = healthy	
Triglycerides	When you eat calories your body doesn’t use right away, they’re stored as triglycerides.	Makes blood thick and tar-like	Too many triglycerides in the blood can lead to narrowing and hardening of the arteries.

Steps You Can Take to Increase HDL and Lower LDL Cholesterol

Try one of the suggestions in each section to see if you can improve your Lipid Profile (Cholesterol Levels) for your next bloodwork check. You can also use your goal setting worksheet to help with this action plan.

How Can I Increase my HDL Cholesterol?	
Suggestion	My Action Plan
Increase your activity level—work up to 150 minutes per week or 30 minutes per day, in bouts of 10 or more minutes	
Increase your intake of omega-3 and mono-unsaturated fats	
Eat more fruits and vegetables	
If you smoke, try to cut back or quit!	

How Can I Decrease my LDL Cholesterol?	
Increase your activity level—work up to 150 minutes per week or 30 minutes per day, in bouts of 10 or more minutes	
Decrease use of foods with trans fats, like deep-fried foods, chips, cookies	
Decrease use of saturated fats, like full fat dairy products and processed meats	
Add more soluble fiber to your diet (see fiber information below)	

Fiber

A heart-healthy diet includes foods that are high in fiber. Good sources of fiber can be found in two food groups: complex carbohydrates, such as wild and brown rice, and fresh fruits and vegetables. Fiber is an important part of a healthy diet; however, most of us are getting less than half the recommended amount!

There are some easy ways to boost your fiber intake. Simply switching to a high-fiber cereal from a refined one, switching from white bread to whole wheat bread, or switching from white rice to brown rice can make a dramatic difference in your fiber intake.

Types of Fiber	Description	Sources
Soluble	A soft fiber that may help lower cholesterol and help to control blood sugar.	Oatmeal, oat bran, legumes such as dried beans, peas and lentils and fruit like apples, oranges and strawberries.
Insoluble	Also known as “Roughage.” It helps you feel fuller and promotes bowel regularity.	It’s found in wheat bran, whole-grain foods and the skins, leaves and seeds of fresh fruit and vegetables. Helps to reduce constipation. When eating high-fiber foods, be sure to have plenty of water or broth-based soups to aide in good digestion and prevent bloating or diarrhea.

When shopping for high-fiber, check food labels carefully. Look for 100% whole grain or 100% whole wheat with the germ at the beginning of the ingredients list, and check the fiber content in the Nutrition Facts tables. Products with **2 grams of fiber or more per serving** are a healthy option.

Nutrition Facts		
Serving Size 1 Slice		
Servings per Container 22		
Amount per serving		
Calories 50 Calories from Fat 10		
% Daily Value *		
Total Fat	1g	1%
Saturated Fat	0g	0%
Cholesterol	0mg	0%
Sodium	115mg	5%
Total Carbohydrate	10g	3%
Dietary Fiber	5g	20%
Sugars	1g	

Carbohydrates

Carbohydrates are an essential part of heart-healthy eating. Found in vegetables, fruit, and whole grains, carbohydrates are a primary source of energy for the body. They also have a wealth of vitamins and minerals and they're an important source of fiber. There are two types of carbohydrates you can choose.

Type of Carb	Description	Source
Complex Carbs	Complex carbs break down slowly, helping you feel full longer, which can help prevent overeating. They score low on the GI Scale (see below).	Fresh fruits and vegetables, whole grains such as 100% whole grain bread and brown rice, nuts, soy products, and legumes such as dried beans and peas.
Simple Carbs	The simplest carbohydrate is white sugar! It breaks down quickly in the body, leaving you hungry sooner. They score high on GI scale (see below).	Most commercial bakery products, sugary soft drinks, sugary cereals, white bread, and white rice have simple carbs.

The Glycemic Index

The **Glycemic Index (GI)** is a relative ranking of carbohydrates in foods according to how they affect blood glucose levels. Carbohydrates with a low **GI** value (55 or less) are more slowly digested, absorbed and metabolized, and cause a lower and slower blood glucose rise.

LOW GI (55 or less)* Choose most often	MEDIUM GI (56-69)* Choose more often	HIGH GI (70 or more)* Choose less often
BREADS		
<ul style="list-style-type: none"> • 100% whole wheat • Heavy mixed grain • Pumpnickel 	<ul style="list-style-type: none"> • 60% whole wheat • Rye bread • Pita 	<ul style="list-style-type: none"> • White bread • Kaiser roll • Bagel, white
CEREAL		
<ul style="list-style-type: none"> • All Bran™ • Bran Buds with Psyllium™ • Oat Bran™ 	<ul style="list-style-type: none"> • Puffed wheat • Oatmeal • Quick oats 	<ul style="list-style-type: none"> • Bran flakes • Corn flakes • Rice Krispies™
GRAINS		
<ul style="list-style-type: none"> • Barley • Pasta/noodles • Parboiled or converted rice 	<ul style="list-style-type: none"> • Basmati rice • Brown rice • Couscous 	<ul style="list-style-type: none"> • Short-grain rice
OTHER		
<ul style="list-style-type: none"> • Sweet potato • Yam • Legumes (lentils, chickpeas, kidney beans, split peas, soy beans, baked beans) 	<ul style="list-style-type: none"> • Potato, new/white • Sweet corn • Popcorn • Black bean soup 	<ul style="list-style-type: none"> • Potato, baking (Russet) • French fries • Rice cakes • Soda crackers

*Adapted from Diabetes Canada www.diabetes.ca, 2017

Protein and Cardiac Health

Protein is an essential part of our diet for building muscles and for brain and heart health. Protein is like carbohydrate and fat, in that the main purpose is to give us calories or energy. Protein is found in animal-based products, like fish, meat and dairy products. It's also plant-based, in the form of legumes, nuts, and some grains. We should eat a healthy source of protein every day. If you don't get enough protein in your diet, your memory and mental agility may decrease.

Because protein sources are often high in calories, try to limit your serving size to approximately 4 ounces, or the size of the palm of your hand.

Daily intake recommendation for protein is based on individual body weight. The calculation is 0.8 grams of **protein** per kilogram of **body weight**, or 0.36 grams per pound. For example, a 200lb male should intake 72 grams of protein per day ($200 \times 0.36 = 72$). This calculation is meant for the general population. There may be variations, depending on your activity level, other health conditions or what is recommended specifically for you. Talk to your dietitian if you have more questions about protein!

Type of Protein	Choose More Often	Choose Less Often
Animal Based	<ul style="list-style-type: none"> • Non-predatory fish, like pickerel or mackerel • Chicken • Low fat dairy, like cottage cheese, 1% milk, low fat cheese, Greek Yogurt • Wild Game (moose, deer) 	<ul style="list-style-type: none"> • Red meat • Processed Meats • Higher Fat Dairy (2% milk or homogenized milk, full fat cheese)
Plant Based	<ul style="list-style-type: none"> • Beans* • Lentils/legumes* • Tofu • Nuts (raw or plain, not roasted or salted) 	<ul style="list-style-type: none"> • Nuts (especially if they have added salt, seasoning or sugar)

* Beans, lentils and legumes can be dried, canned, or frozen. If you purchase canned beans, ensure they're a low-sodium/low-sugar option. You can also rinse them under water before use to reduce the sodium content

Salt

There is a place for salt in a healthy eating plan, however most of us consume two or even three times the recommended amount, often without realizing it! We need small amounts of salt for healthy body function. The Heart & Stroke Foundation suggests that Canadians use no more than 1tsp (5ml) of salt per day (2300mg), regardless of where the salt comes from (whether it's added or already existing in foods).

Check Nutrition Facts table on food products for sodium or salt. If the daily value of sodium listed is 10% or less, the product is considered low in salt.

For some people, excess dietary salt can increase the amount of blood in the arteries, raise blood pressure, and increase the risk of heart disease and stroke. If you can lower your salt/sodium intake a little each day, you can help reduce your blood pressure. About 80% of the salt we consume comes from processed foods, including fast foods, pre-packaged foods, processed meats such as hot dogs and lunchmeats, canned soups, bottled salad dressings, condiments like ketchup and pickles, and salty snacks like potato chips.

To help reduce added, unnecessary salt:

- Limit pre-prepared, pre-package, or processed foods
- Eat more fresh fruits and vegetables
- Reduce the amount of salt you add while cooking, baking, or at the table.
- Experiment with other seasonings, such as fresh onion and garlic (rather than the dried or salted versions), other fresh or dried herbs.
- Check food labels and opt for low-salt or no salt added versions
- Create your own salad dressing by mixing healthy oil (like olive oil) with some vinegar and fresh or dried herbs.

Kosher salt, sea salt, and gourmet salts all have about the same amount of sodium as regular table salt. They're not healthier choices!

For more information about salt and sodium, check out www.sodium101.ca.



Grocery Budget Tips

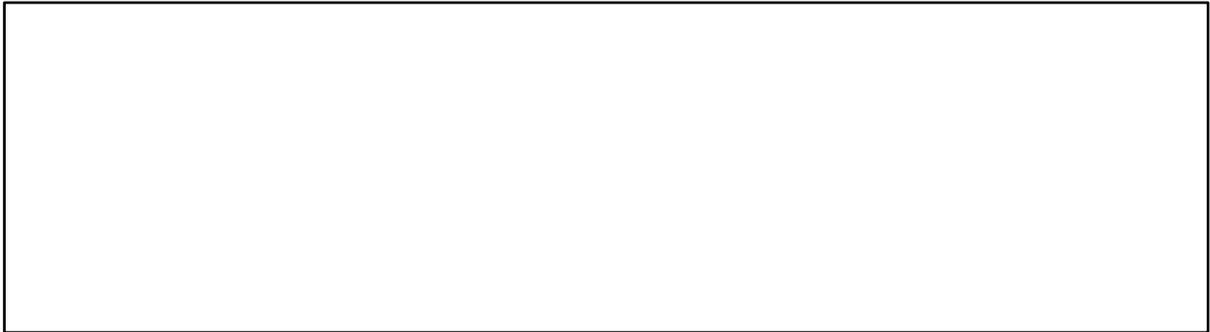
Food Group	Cost-Saving Tip
Fruit & Vegetables	<p>Buy fresh vegetables when they're in season, or try growing one or two different vegetables in a garden of your own!</p> <p>Buy frozen or canned fruits and vegetables when fresh items aren't in season or readily available. Make sure you rinse the canned produce before cooking or eating, in order to rid it of extra salt and/or sugar.</p> <p>Limit fruit juices. Water is the best choice.</p>
Grain Products	<p>Grain products can be purchased in bulk. Experiment with varieties of oats, brown rice, and barley</p> <p>Purchase unsweetened cereals, which will allow you to control how much sugar you add. Sweetened cereals often cost more than unsweetened!</p> <p>Hot cereals, like oatmeal and cream of wheat, are excellent options. They're inexpensive and rich in nutrients and fiber.</p> <p>Try "No Name" or store brand varieties. Often they're the same quality as the brand name option, but at a reduced cost!</p>
Milk Products	<p>Buy milk in bags rather than cartons.</p> <p>Buy cheese in larger bricks, rather than pre-shredded cheese. You can cut it or grate it yourself.</p> <p>Use skim milk powder or canned milk in recipes instead of more expensive fresh milk.</p>
Meat Products	<p>Try non-meat protein sources like dried beans, peas, lentils, eggs and nut butters. Try canned tuna, salmon and sardines for budget-friendly protein options.</p> <p>A whole chicken costs less than purchasing chicken pieces.</p>

*Adapted from Eat Right Ontario www.eatrightontario.ca, 2017

Session 8: What Have I Learned So Far?

1. What are three of the five F's of healthy eating?

2. To the best of your ability, draw a plate divided with healthy portions split between fruits/vegetables, proteins, and starches:



3. What are two things I can do to save money at the grocery store?

4. What are three foods that I should limit in order to enjoy a heart healthy diet?

Online Nutritional Resources:

Unlock Food

www.unlockfood.ca

Health Canada – Sodium

<https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/sodium.html>

Dietitians of Canada

www.dietitians.ca

Session 9: Smoking Cessation



Smoking damages the heart and blood vessels very quickly. However, the damage is repaired quickly for most smokers who stop smoking. Even long-time smokers can see rapid health improvements when they quit. Within a year, heart attack risk drops dramatically. Within five years, most smokers cut their risk of stroke to nearly that of a nonsmoker. Even a few cigarettes now and then damage the heart, so the only proven strategy to keep your heart safe from the effects of smoking is to quit. Most people find a combination of resources works best. Many smokers don't quit on their first attempt. Many need several tries to quit successfully. The benefits are well worth it! Just keep trying!

*Adapted from Smoking and Cardiovascular Disease, Centers for Disease Control and Prevention, Office on Smoking and Health, 2017

It's a common belief that smoking is a habit or lifestyle choice. But the truth is that it's an addiction, and one that can be very strong. Nicotine addiction changes brain chemistry over time, which is why quitting is so challenging.

When trying to quit, the most important thing is to keep trying, even if you give in to a craving. Just like you manage your overall health, take quitting one day at a time. Quitting smoking is one of the most important things you can do to help prevent or delay health complications. Fortunately, you have options when it comes to finding the best quit method for you.

It's never too late to quit! No matter how old you are, quitting smoking improves your health. If you quit, you're likely to add years to your life, breathe easier, and save money.

*Adapted from Smoke Free Ontario, 2017

What Happens When I Quit Smoking?

Within 20 Minutes of Last Cigarette

Blood pressure drops to normal
Heart Rate drops to normal
Body temperature of hands and feet increase to normal

8 Hours of Quitting

Carbon monoxide levels in blood drop to normal
Oxygen levels in blood increase to normal

Within 24 hours of Quitting

Chance of heart attack decreases

Within 48 hours of Quitting

Nerve endings start growing back
Ability to smell and taste things enhances
Digestion becomes more normal

Within 72 hours of Quitting

Breathing becomes easier
Climbing stairs become easier – you'll feel more energetic!

2 Weeks to 3 Months After Quitting

Circulation improves
Walking becomes easier
Lung function improves up to 30%

1 Month to 9 Months After Quitting

Coughing, sinus congestion, fatigue and shortness of breath decrease
Body's overall energy level increases

5 Years After Quitting

Lung cancer death rate for a pack-a-day smoker drops
from 137 to 72 out of 100,000 people

10 Years After Quitting

Lung cancer death rate drops to almost the rate of non-smokers
Risk of other cancers, such as mouth, bladder, kidney and pancreas, decrease

*Adapted from Calling It Quits, 2017

Tips on how to be successful when quitting smoking:

Before You Quit	During Quit Process	After You Quit
Tell your family, friends, or co-workers that you're quitting tobacco	Plan ahead for difficult situations. You want to give yourself the best chance of succeeding!	Finds ways to stay motivated to continue not smoking.
Tell your friends, family, or co-workers your quit-date so you can stay accountable!	Keep your mind and hands occupied	Continue with the effective tasks that help keep you occupied
Clean your house, car, and workplace in order to remove "reminders" of smoking	Find a support group	Continue with support group
Eat more fruit and vegetables	Visit non-smoking places	Continue with healthy lifestyle choices
Exercise, if your doctor allows it	Exercise, if your doctor allows it	Continue to exercise, if your doctor allows it
Reduce the amount of contact you have with tobacco users	Take a walk during your break or lunch time	Take a walk during your break or lunch time
Practice deep breathing	Wash dishes by hand after dinner	Find ways to keep your hands busy—a woodworking or knitting hobby may work!
Do what you can today to avoid stress later	Change driving routes, try not to go by the place where you'd normally purchase tobacco products	Continue with the new route, or find another one!
Make connections with ex-tobacco users	Practice stress reducers such as the 4D's: <ul style="list-style-type: none"> • Delay • Deep Breath • Drink lots of water • Do something else 	Continue to practice stress reduction techniques that you've found helpful!
Review your self-help material	Set aside daily private time for prayer, meditation, or deep breathing	Continue with relaxation/meditation techniques that you've found helpful!
Consider using NRT to help you quit using tobacco	Cut down on caffeinated drinks	Celebrate successes! One hour, one day, one week, one month!
Identify your triggers for smoking (after meals, driving, boredom, drinking coffee, stressful situations, parties)	Get rid of tobacco products (lighters, papers, old cigarette packages)	Maybe purchase something (like new clothes or a vacation) with the money you've saved from not smoking!

*Adapted from Smoke Free Ontario, 2017

What are my NRT options?

Nicotine Replacement Therapy (NRT) products are designed to help you manage your cravings and withdrawal symptoms. They supply your body with low doses of nicotine and deliver it more slowly than cigarettes. While you still experience cravings with NRT, they should occur less often and be less intense over time. NRT products come in several different formats and strengths. Ask your healthcare provider to find out which option might work best for you!



Nicotine Patch

A good option for smokers who want a constant level of nicotine over 24 hours.



Nicotine Gum

Replaces the oral fixation of smoking. Short acting and can be used anytime to handle cravings.



Nicotine Inhaler

A short acting replacement which mimics the physical movement of smoking.



Nicotine Lozenge

Similar to gum, short acting nicotine replacement. Provides an oral fix.



Nicotine Spray

One of the latest NRT options, provides fast relief from cravings.

Cardiac Health and Recreational Drugs



Most illegal drugs can have adverse cardiovascular effects, ranging from abnormal heart rate to heart attacks. Injecting illegal drugs also can lead to cardiovascular problems, such as collapsed veins and bacterial infections of the blood vessels and heart valves.

The following recreational drugs can also increase your risk of having a stroke:

- Amphetamines
- Cannabis or marijuana
- Cocaine
- Ecstasy
- Heroin or opiates
- Lysergic acid diethylamide (LSD)
- Phencyclidine (PCP)

The side effects and risks associated with use of these drugs include:

- Changes in body temperature, heart rate, and blood pressure
- Headaches, abdominal pain, and nausea
- Impaired judgment and greater risk of some sexually transmitted infections
- Heart attacks, seizures, and respiratory arrest

Cardiac Health and Alcohol



Drinking too much of any type of alcohol can increase your blood pressure and contribute to the development of heart disease and stroke.

If you drink alcohol, limit yourself to no more than:

- Three drinks a day most days, to a weekly maximum of 15 for men
- Two drinks a day most days, to a weekly maximum of 10 for women

A “drink” means:

- 341 mL / 12 oz (1 bottle) of regular strength beer (5% alcohol)
- 142 mL / 5 oz wine (12% alcohol)
- 43 mL / 1 1/2 oz spirits (40% alcohol)

Do not drink when:

- You’re driving a vehicle
- Taking medications or other drugs that interact with alcohol
- Pregnant or planning to be pregnant
- Making important decisions or are responsible for the safety of others
- Doing any kind of dangerous or high level physical activity
- Living with alcohol dependence or mental or physical health problems

If you’re concerned about how drinking may affect your health, talk to your doctor or pharmacist.

If you choose to drink, **Canada’s Low-Risk Alcohol Drinking Guidelines** (Appendix E) can help you decide when, where, why, and how to reduce your immediate and long-term alcohol-related harm. You should not adjust your drinking habits or begin to drink for health benefits without consulting your healthcare provider.

Session 9: What Have I Learned So Far?

1. What does NRT stand for?

2. What is one NRT option I have?

3. What are three positive things that will happen when I quit smoking?

4. When should I avoid alcohol?

Online Patient Resources

Smokers Helpline

www.smokershelpline.ca –or– 1-877-513-5333

The STOP Program

www.nicotinedependenceclinic.com/English/stop/Pages/Home.aspx

Health Canada

www.canada.ca/en/health-canada/services/smoking-tobacco.html

Tobacco Wise

www.tobacrowise.com

Smoke Free Ontario

www.ontario.ca/smokefree

QuitNow

www.quitnow.ca

Break It Off

www.breakitoff.ca (talk to your health care provider for more information)

Session 10: Cardiac Mental Health

"I didn't think it would ever happen to me!"

"I knew I should've taken better care of myself when I was younger - it's my fault that I had a heart attack"

"I was so scared of dying after my heart attack!"

"It didn't just happen to me, I feel fine, I'm not really that sick".

"Why is this happening to me? I'm too busy to deal with this - I'm too young! Life is so unfair!"

Common Feelings

SHOCK & FEAR

DENIAL

GUILT

ANGER

SADNESS

ACCEPTANCE

Mental Health Services Available in Sioux Lookout and Surrounding Areas

Name	Contact information	Location	Referral?
SLMHC MHAP (Mental Health & Addictions Program)	737-1275	Sioux Lookout	Self-Referral Patient can call
SLFNA (Sioux Lookout First Nations Health Authority) Nodin Child & Family Intervention Services	737-4011 or 1-800-446-7863	Sioux Lookout	Self-Referral Patient can call First Nations clients focused
Crisis Response Line	1-866-888-8988	Dryden	24 / 7 phone service Patient can call
Older Adults Program	737-4996 223-8816	Sioux Lookout Dryden	For Ages 65+, need referral from doctor

Common Emotions, Associated Symptoms, and Helpful Tips after a Cardiac Event

It's common to have mental, emotional, and financial stress after a cardiac event, and it's completely normal to experience these emotions. Having a support system will be important! **Highlight the feelings/emotions or symptoms below if you've experienced them** – try some of the tips to help with coping. Monitor which tips are helpful for you!

Always know that there is support there for you!

Emotion	Symptoms / Self Talk	Helpful Tips
Shock & Fear	I can't believe it happened to me	Take one step at a time
	I'm scared it will happen again	Your main priority is your health
	I'm worried about the future	Talk to someone, ask questions
	Shock and fear can elevate blood pressure and heart rate, making your heart work harder!	Wait before making big life decisions!
Denial	I'm going to stop taking my meds, I feel fine!	What frightens you?
	I'm not going to go to my doctor's appointment, what a waste of time!	Talk about your fears and emotions with someone you trust
	Denial can be harmful if it lasts for a while, because it can keep you from taking care of yourself.	Make a list of what could happen (both good and bad) if you don't follow your doctor's advice
	Denial means acting like your heart disease didn't happen or it doesn't matter.	Take your medications properly Understand that you're in charge of your health! This will help you cope and feel more in control
Guilt	It's my fault I had a heart attack, I should've taken better care of myself	Guilt can make you feel powerless, hopeless and depressed.
	You say "If only" statements, like "If only I took better care of myself when I was younger"	Some causes of heart disease are beyond your control, like family history Focus on what you can do now to take care of your health and become more control of your life

Emotion	Symptoms / Self Talk	Helpful Tips
Anger	I feel like it's so unfair!	Recognize that you're angry and talk about it. Don't blame yourself or others.
	I feel like I'm losing control and want to fight back	Let people know how you feel. Be honest
	I feel like I'm being punished	Don't hold these negative feelings in. Talk about them when they happen. You may explode later if you hold them in
	I don't think anyone understands how I feel	Learn how to deal with anger without harming your health or relationships.
	I'm angry at my friends and family	
Sadness	I've lost my good health, I'm sad that it happened	Talk about your feelings with someone you trust
	I'm sad or overwhelmed with the lifestyle changes I need to make to take care of my heart	Know that you're a valuable person with positive attributes, like strength and knowledge
	I fear not being able to make lifestyle changes	Let yourself cry if you need to
	I cry easily and don't take pleasure in things I used to enjoy	If you feel sad, going for a walk for 10 minutes can help increase your "feel good" hormones, called endorphins
	I cry easily and don't take pleasure in things I used to enjoy	Ask your health care provider about seeing a social worker or counsellor if your feelings worry you.
Acceptance	I'm feeling less angry, guilty, and sad	Ask your health care providers questions and take genuine interest in their answers!
	I feel like I can get back to my life and do the things I enjoy	Feel good about the healthy lifestyle choices you're making
	I see the future positively	
<p>When to ask for professional help: (Asking for help is not a sign of weakness – it's a sign of courage!)</p> <ul style="list-style-type: none"> • If you have trouble following what your healthcare team has recommended for you (e.g., taking medications as prescribed) • If you fear end of life, which is making it hard to do day to day things • If you feel depressed, anxious, increase stress most days, or aren't sleeping well most nights • If you're having trouble controlling your anger or are having outbursts • Or if you just feel the need to talk to someone other than someone you know! 		

Stress

Stress is a part of our everyday lives as we respond to positive and negative events and situations. Stress is different for everyone! What is stressful for you may be fun for someone else! Learning to live with stress means getting to know yourself, what makes you stressed, what makes you tense, and what works for you to reduce the tension and stress.

Here are some general stress reduction suggestions. Feel free to try these to see if they work for you!

- Do one thing at a time. Divide your workload into smaller tasks and enjoy feeling accomplished.
- Learn how to say “no.” Many people who have had heart attacks are “yes” people who find their lives are busy and crowded with someone else’s obligations and commitments.
- Try to talk through a concern or issue. Try not to bottle up your feelings
- Identify the situations and people that trigger your stress and try to limit your exposure to them, when possible. Walk away or deal with the difficulty when you feel more composed.
- Spend time enjoying the company of people who make you feel good or doing an activity that you enjoy.
- Learn relaxation techniques, and use the ones that work best for you. Try relaxation techniques at least once a day. See Appendix F: Progressive Muscle Relaxation for deep breathing and progressive muscle relaxation techniques you can try.
- Identify support networks and use them.
- Keep a Stress Awareness Journal for two weeks to help you identify stressors in your day-to-day life. Here are some example entries, with the blank journaling section on the next page.
- Feel free to make copies of the Stress Awareness Journal for future use!

Stress Awareness Journal Sample Entries

Date/Time	Stressful Event	Symptoms	Coping Techniques
Monday, 7:50AM	Alarm didn't go off, rushing, late for work	Agitated, angry, increased heart rate	Took deep breath, called boss to let them know I'm running late - no concerns
Wednesday, 4:00PM	Busy day at work, have to pick up kids from school, stressed about preparing supper	Increased heart rate, headache, irritable with kids, frustrated	Took deep breath, called family member to help with supper tonight
Saturday, 1:00PM	Family coming to visit on short notice	Panic, frustration, annoyance, irritation	Took deep breath, had time for a brisk 10 minute walk to de- stress before planning for the family visit

Stress Awareness Journal			
Date/Time	Stressful Event	Symptoms	Coping Technique
<p>After two weeks, review your journal entries. Try to define your main stressor or triggers of stress. How have you reacted to these stressors (emotionally, physically)? Is there a way you could cope better with the situation? Choose healthy alternatives. Did the coping techniques you tried work?</p>			

If you only have a couple minutes, here is a quick muscle relaxation sequence you can do anywhere. Review Appendix F: Progressive Muscle Relaxation for more information on muscle relaxation.



Session 10: What Have I Learned So Far?

1. What are three common feelings associated with having a cardiac event?

2. What are three common questions people ask after having a cardiac event?

3. What are three common tips to help cope with having a cardiac event?

4. When should you talk to a mental health professional?

5. What are services in your area that you can access?

Mental Health Resources

Heart & Stroke Foundation of Canada
<http://www.heartandstroke.ca/heart/recovery-and-support>

Session 11: Staying Active & Maintaining Your Progress

Benefits Beyond Your Heart

There are many great benefits that come with regular physical activity – more than just benefits to your heart! Additional benefits include:

- May help to prevent cancers of the breast, uterus, and colon
- Strengthens your lungs and helps them work more efficiently
- Tones & strengthens your muscles
- Builds stamina
- Keeps your joints in good condition
- Improves balance
- May slow bone loss
- Gives you more energy
- Help you to relax and cope better with stress
- Builds confidence
- Helps you to fall asleep more quickly and sleep more soundly
- Helps you beat the blues
- Provides an enjoyable way to share time with friends or family

Return to Work

A key part of recovering from a heart event and managing a heart condition is returning to activities you used to do. For some people, this includes returning to work. Most people with heart disease go back to work **one** to **three** months after leaving the hospital.

Some people believe that a physical job isn't safe for your body, but this is usually not true. Jobs that involve some level of physical activity are often better for the heart than desk jobs. You may think you should retire early. It's important to take your time and talk about your concerns with your health team – base your decision on facts rather than fears.

Talk to your doctor before returning to work.

In deciding when you can return to work, you and your doctor will consider:

- How stable your condition is
- How safe you are to do your job
- What the licensing requirements are (e.g., for truck drivers or pilots)
- What the demands of your job are – both physically and mentally

Be prepared to tell your doctor:

- The physical work that you do, including lifting or carrying
- Whether you use heavy tools, like jackhammers
- The conditions that you work under (e.g., extreme temperatures, poor ventilation, late hours)
- The amount of job stress you have

You'll likely require a letter from your doctor stating when you can return to work and what you can or cannot do. If your doctor writes "light duty," this will be explained: what duties you can perform, what hours you can work, and how long light duty is to continue.

Sexual Activity

Sexual activity is an important part of life, and many people have anxiety or fears about having sex after a heart attack or heart surgery. You may be afraid that sex will be too much for your heart, or your partner might silently think the same. Some people become less interested in sex or experience erectile dysfunction while they're adapting to their heart condition. These problems can be increased by other medical conditions, medication side effects, mental health conditions, or problems in your relationship.

Ask your healthcare provider about when you can safely have sex again. For most people, this will be **two to eight** weeks after your heart attack or heart surgery. After this healing period, the risk of having a heart attack during sex is quite low. If you continue to experience chest pain, shortness of breath, or tiredness after climbing stairs, you should wait until you're doing better before having sex.

Sexual intercourse is like any other activity in that your heart rate and blood pressure increase. It's comparable to walking 3-6 km/h, or climbing 20 stairs in 10 seconds. Because of this, there are a few things you should keep in mind:

- Plan sexual activity for the time of day when you have the most energy and are least bothered by other health issues.
- Avoid having sex after a large meal. Give yourself 2-3 hours after eating before you have sex.
- Do not have sex in a very hot or cold place, and limit the amount of alcohol you drink. Avoid using tobacco. These may limit sexual function and increase strain on your heart.
- The effort on your heart is about the same regardless of your position.
- Share your fears, needs, desires and wishes with your partner about having sex again. This will promote closeness with your partner and improve the quality of your relationship.

Erectile Dysfunction & Heart Attacks

Erectile dysfunction (ED) is often associated with heart disease. Some medications used to treat heart disease or hypertension can cause a drop in your sex drive and difficulty with erections or orgasms. Speak to your doctor if you think your medications are affecting sexual function. **Never stop taking your cardiac medications because you have side effects that affect your sex life.**

Check with your doctor before starting or resuming ED medications. These medications are usually safe but can cause dangerous drops in blood pressure if taken within 48 hours of any form of nitroglycerin. If you do experience chest pain within 24 hours of taking ED medication, **call 911** and let the paramedics and emergency physician know you've taken these medications. **Do not take nitroglycerine.**

Tips for Staying Active

Taking time to participate in a regular or structured exercise routine can be difficult sometimes. Busy schedules, travel, and responsibilities can often get in the way. It's important to make physical activity a priority in your life to maintain heart health. Physical activity can be worked in to your everyday lifestyle by following a few simple tips!

1. Look for ways to be active with lifestyle activities. These are all around you!
 - Take the stairs instead of the elevator
 - Park farther away from the store and walk the extra distance
 - Cut the grass with a push mower
 - Work in the garden
 - Walk the dog instead of watching TV
 - Play ball with your children or grandchildren
 - Walk to lunch instead of riding in a car
 - Play golf walking the course instead of using a cart
2. Make exercise a regular part of your daily routine. Here are some ways you can do this:
 - Plan to exercise with a friend, colleague, neighbor, spouse, or children
 - Carry your workout bag, especially your athletic shoes, with you in the car at all times
 - Put your exercise clothes on and do not take them off until you've exercised
 - Place your home exercise equipment in a pleasant location in your home
 - Ask someone to remind you to exercise

3. Plan ahead! Adapt to changes in your routine and overcome situations that might make it difficult to continue with your regular exercise session. Have a plan in place to help you maintain your routine while you're traveling, busy, or not feeling motivated. Return to and review your SMART goal. Failing to plan is planning to fail!
- **Travel**
 - Walk instead of taking taxis.
 - Take a brisk walk before breakfast or at the end of the day.
 - Explore a new city by walking, jogging, or cycling to see the sights
 - Use the hotel gym/pool facilities.
 - **Work Responsibilities**
 - Fit in short bouts of brisk walking several times during the day.
 - Discuss work issues with coworkers while walking.
 - Stretch during your breaks to improve productivity and concentration.
 - **Special Occasions/Holidays**
 - Let others know that exercise is a priority for you and ask for their support.
 - Combine social activities with exercise, such as dancing, ice skating, hiking, cycling.
 - **Injuries and sickness**
 - Look for a substitute activity – stationary cycling, chair exercises.
 - Do not break your routine. Continue to set aside time for exercise.
 - Never exercise when you have a fever.
 - Gradually build back up once you're well.
 - **Family responsibilities**
 - Find opportunities for you and your family to exercise together.
 - Go for a walk together and use the time to talk.
 - Serve as an active role model for other family members.

As you move along through your Cardiac Rehab Program, it's important to start thinking about the ways that you will stay active and maintain your progress over the long term:

Session 12: Program Completion

Congratulations

Congratulations on completing the Cardiac Education & Rehabilitation Program! As mentioned throughout the program, our main goal is to teach you self-management techniques to help you maintain a healthy, active lifestyle for as long as possible! We hope you now have the tools, knowledge, and motivation to continue to make positive changes to your health. While the program is over, it's up to you to keep moving forward, stay active, and make your health a priority!

In this final chapter of your workbook, you'll find a Graduation Heart Health Risk Profile, which summarizes your intake and discharge measurements; this will give you a quick glance to see how you've progressed over your time in the program. Your kinesiologist will fill this form out during your discharge appointment. This information can be used when you visit your doctor or cardiologist or if you want to share the information with others. You'll also find the follow up plan, which we will set up as part of the discharge process--we will work with you to determine which follow up plan works best!

In this chapter, you'll also find our FAQ section, which should answer any other questions you may have. We have also included some lined blank pages so you can write down questions, thoughts or ideas you may have. This is so you can write down questions to ask health care professionals within the program, or ask your doctor or cardiologist to prepare for an upcoming appointment. We know it can be hard to remember everything!

At the very end of this workbook, you'll find a program evaluation form, which we would appreciate you taking the time to fill out during your discharge appointment with us. The information you include on the evaluation form will let us know how we are doing and if there is anything we can improve on. Please let us know your thoughts, both positive and negative!

Because we appreciate the work that goes into managing a chronic condition or learning about and living with a new condition, we want to celebrate your success! We have included a Completion Certificate that you can proudly display around your home or work, so you can reflect back on all the progress you've made over the last few months.



Frequently Asked Questions

What should I do if I have any questions after my discharge from the program?

You're welcome to contact your Kinesiologist at any time after your discharge from the program. You can also write down the questions you have in the blank notes pages and ask them during an upcoming doctor appointment.

Can I be re-referred to the program?

Yes! When your current file is discharged, you do need to have your doctor prepare a new referral to enter back into the program.

Do I need a doctor's referral to be a part of the program?

Yes. A referral from a doctor or nurse practitioner is required for acceptance into the program.

Appendix

Appendix A: Blank Exercise Log Book Page

Appendix B: Cardiac Rehab Program Stretches

Appendix C: Canadian Alcohol Intake Guidelines

Appendix D: Progressive Muscle Relaxation

Certificate of Completion

Graduation Heart Health Risk Profile

Program Evaluation

Appendix A: Blank Exercise Log Book Page

Date: _____

Date: _____

PRE-EXERCISE MEASUREMENTS Resting HR: _____ BP: ____/____	PRE-EXERCISE MEASUREMENTS Resting HR: _____ BP: ____/____
WARM UP Time: _____ Type: _____ HR: _____ RPE: _____	WARM UP Time: _____ Type: _____ HR: _____ RPE: _____
TREADMILL Min: _____ MPH: _____ %Incline: _____ HR: _____ RPE: _____ Dist. _____	TREADMILL Min: _____ MPH: _____ %Incline: _____ HR: _____ RPE: _____ Dist. _____
NUSTEP Min: _____ Level: _____ Dist: _____ HR: _____ RPE: _____ SPM: _____	NUSTEP Min: _____ Level: _____ Dist: _____ HR: _____ RPE: _____ SPM: _____
UPRIGHT BIKE Min: _____ Level: _____ HR: _____ RPE: _____ RPM: _____	UPRIGHT BIKE Min: _____ Level: _____ HR: _____ RPE: _____ RPM: _____
RECUMBENT BIKE Min: _____ Level: _____ HR: _____ RPE: _____ RPM: _____	RECUMBENT BIKE Min: _____ Level: _____ HR: _____ RPE: _____ RPM: _____
ARM ERGOMETER Time: _____ Level: _____ HR: _____ RPE: _____	ARM ERGOMETER Time: _____ Level: _____ HR: _____ RPE: _____
STAIR STEPPER Time: _____ Level: _____ HR: _____ RPE: _____	STAIR STEPPER Time: _____ Level: _____ HR: _____ RPE: _____
HALLWAY WALKING Dist.: _____ Time: _____ HR: _____ RPE: _____	HALLWAY WALKING Dist.: _____ Time: _____ HR: _____ RPE: _____
POST-EXERCISE MEASUREMENTS HR: _____ BP: ____/____ Comments:	POST-EXERCISE MEASUREMENTS HR: _____ BP: ____/____ Comments:

Appendix A: Blank Exercise Log Book Page

Date: _____

Date: _____

PRE-EXERCISE MEASUREMENTS Resting HR: _____ BP: ____/____	PRE-EXERCISE MEASUREMENTS Resting HR: _____ BP: ____/____
WARM UP Time: _____ Type: _____ HR: _____ RPE: _____	WARM UP Time: _____ Type: _____ HR: _____ RPE: _____
TREADMILL Min: _____ MPH: _____ %Incline: _____ HR: _____ RPE: _____ Dist. _____	TREADMILL Min: _____ MPH: _____ %Incline: _____ HR: _____ RPE: _____ Dist. _____
NUSTEP Min: _____ Level: _____ Dist: _____ HR: _____ RPE: _____ SPM: _____	NUSTEP Min: _____ Level: _____ Dist: _____ HR: _____ RPE: _____ SPM: _____
UPRIGHT BIKE Min: _____ Level: _____ HR: _____ RPE: _____ RPM: _____	UPRIGHT BIKE Min: _____ Level: _____ HR: _____ RPE: _____ RPM: _____
RECUMBENT BIKE Min: _____ Level: _____ HR: _____ RPE: _____ RPM: _____	RECUMBENT BIKE Min: _____ Level: _____ HR: _____ RPE: _____ RPM: _____
ARM ERGOMETER Time: _____ Level: _____ HR: _____ RPE: _____	ARM ERGOMETER Time: _____ Level: _____ HR: _____ RPE: _____
STAIR STEPPER Time: _____ Level: _____ HR: _____ RPE: _____	STAIR STEPPER Time: _____ Level: _____ HR: _____ RPE: _____
HALLWAY WALKING Dist.: _____ Time: _____ HR: _____ RPE: _____	HALLWAY WALKING Dist.: _____ Time: _____ HR: _____ RPE: _____
POST-EXERCISE MEASUREMENTS HR: _____ BP: ____/____ Comments:	POST-EXERCISE MEASUREMENTS HR: _____ BP: ____/____ Comments:

Appendix B: Cardiac Rehab Program Stretches

Neck Side Bend

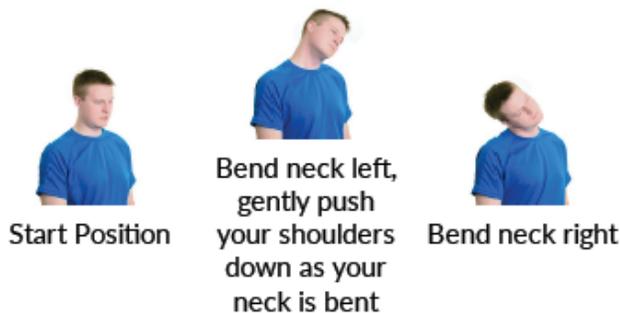
Sets: 1 | Reps: 2 - 4 | Hold: 15 - 30 sec

Preparation:

- Sit or stand with good posture

Execution:

- Slowly lower your left ear to your left shoulder as far as you comfortably can
- Raise your head up, then lower your right ear to your right shoulder as far as you comfortably can
- That completes 1 rep



Shoulder Stretch

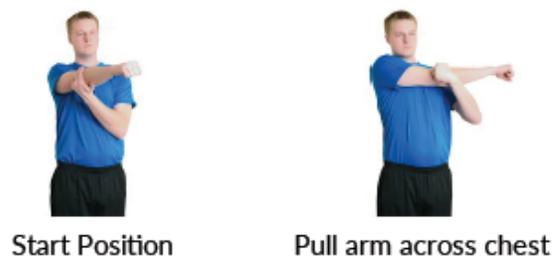
Sets: 1 | Reps: 2 - 4 | Hold: 15 - 30 sec

Preparation:

- Sit or stand with good posture

Execution:

- Reach across your chest
- Use your other arm to pull a little bit further
- Relax and repeat on the other side
- That completes 1 rep



Shoulder Circles

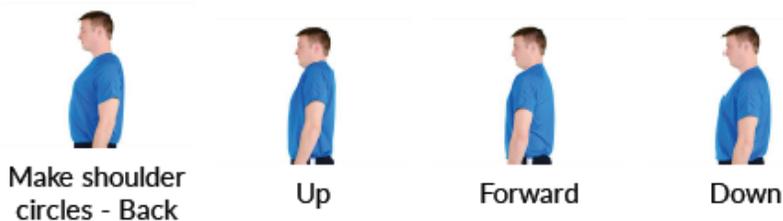
Sets: 1 | Reps: 15

Preparation:

- Sit or stand with good posture

Execution:

- Roll your shoulders in wide, lazy circles, keeping your arms relaxed
- To make a shoulder circle - move your shoulders back, up, forward, and down in one smooth motion
- That completes 1 rep



Shoulder Blade Squeeze

Sets: 1 | Reps: 10 | Hold: 1 - 2 sec

Preparation:

- Sit or stand with good posture
- Shoulders relaxed

Execution:

- Squeeze your shoulder blades together
- Don't hunch your shoulders
- Hold for 1 or 2 sec then relax
- That completes 1 rep



Start position



Squeeze your shoulder blades together

Standing Side Bend

Sets: 1 | Reps: 2 - 4 | Hold: 15 - 30 sec

Preparation:

- Stand with good posture

Execution:

- Bend to the side in a very controlled manner, sliding your arm down your thigh reaching for your knee
- Return to the start position
- Repeat on the other side
- That completes 1 rep



Good posture



Bend to the side



Reach for your knee

Calf Stretch (Wall)

Sets: 1 | Reps: 2 - 4 | Hold: 15 - 30 sec

Preparation:

- Stand in front of a wall or chair with one leg forward and one leg back

Execution:

- Keep your back leg straight, heel on the ground, and toes facing forward
- Lean forward bending your front knee
- Relax and repeat on the other side
- That completes 1 rep



Eyes and head forward, hands relaxed on wall, belly button pulled in



Bend elbows to move closer to the wall to stretch the back leg, keep front knee behind toes

Hamstring Stretch

Sets: 1 | Reps: 2 - 4 | Hold: 15 - 30 sec

Preparation:

- Sit on the edge of a chair

Execution:

- Put one leg out front
- Keep your knee locked with your toes pointed up toward the ceiling
- Keeping your back straight, lean forward thinking about moving your chest toward your toes
- Relax and repeat on the other side
- That completes 1 rep



Eyes and head forward, hands resting on thigh, toes toward the ceiling



Hinge at hips to feel stretch in the back of the thigh

Quadriceps Stretch (Chair + Wall)

Sets: 1 | Reps: 2 - 4 | Hold: 15 - 30 sec

Preparation:

- Stand in front of a wall with your toes resting on the edge of a chair

Execution:

- Push your hips forward to feel a stretch in the front of your thigh
- Bend your front knee to feel a deeper stretch
- Relax and repeat on the other side
- That completes 1 rep



Eyes and head forward, slight bend in standing leg, foot resting on chair



Bend front knee to feel a deeper stretch

Appendix C: Canadian Alcohol Intake Guidelines

For these guidelines, “a drink” means:



Your limits

Reduce your long-term health risks by drinking no more than:



- 10 drinks a week for women, with no more than 2 drinks a day most days
- 15 drinks a week for men, with no more than 3 drinks a day most days

Plan non-drinking days every week to avoid developing a habit.

Special occasions

Reduce your risk of injury and harm by drinking no more than 3 drinks (for women) or 4 drinks (for men) on any single occasion.

Plan to drink in a safe environment. Stay within the weekly limits outlined above in **Your limits**.

When zero's the limit

Do not drink when you are:

- driving a vehicle or using machinery and tools
- taking medicine or other drugs that interact with alcohol
- doing any kind of dangerous physical activity
- living with mental or physical health problems
- living with alcohol dependence
- pregnant or planning to be pregnant
- responsible for the safety of others
- making important decisions

Pregnant?

Zero is safest

If you are pregnant or planning to become pregnant, or about to breastfeed, the safest choice is to drink no alcohol at all.



Delay your drinking

Alcohol can harm the way the body and brain develop. Teens should speak with their parents about drinking. If they choose to drink, they should do so under parental guidance; never more than 1–2 drinks at a time, and never more than 1–2 times per week. They should plan ahead, follow local alcohol laws and consider the **Safer drinking tips** listed in this brochure.

Youth in their late teens to age 24 years should never exceed the daily and weekly limits outlined in **Your limits**.

Safer drinking tips

- Set limits for yourself and stick to them.
- Drink slowly. Have no more than 2 drinks in any 3 hours.
- For every drink of alcohol, have one non-alcoholic drink.
- Eat before and while you are drinking.
- Always consider your age, body weight and health problems that might suggest lower limits.
- While drinking may provide health benefits for certain groups of people, do not start to drink or increase your drinking for health benefits.

Low-risk drinking helps to promote a culture of moderation.

Low-risk drinking supports healthy lifestyles.

CCSA wishes to thank the partners who supported development of Canada's Low-Risk Alcohol Drinking Guidelines. For a complete list of the organizations supporting the guidelines, please visit www.ccsa.ca/Eng/topics/alcohol/drinking-guidelines/Pages/Supporters-LRDG.aspx

Canada's Low-Risk Alcohol Drinking Guidelines

Visit our website to find out more!

www.ccsa.ca

Reference:

Butt, P., Beirness, D., Gilksman, L., Paradis, C., & Stockwell, T. (2011). *Alcohol and health in Canada: A summary of evidence and guidelines for low-risk drinking*. Ottawa, ON: Canadian Centre on Substance Use and Addiction.

Drinking is a personal choice. If you choose to drink, these guidelines can help you decide when, where, why and how.

The Canadian Centre on Substance Use and Addiction changes lives by bringing people and knowledge together to reduce the harm of alcohol and other drugs on society. We partner with public, private and non-governmental organizations to improve the health and safety of Canadians.



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Cette publication est également disponible en français.



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Evidence. Engagement. Impact.

Appendix D: Progressive Muscle Relaxation

Muscle tension is commonly associated with stress, anxiety, and fear. Sometimes we don't even notice how our muscles become tense but you may clench your teeth so your jaw feels tight or maybe your shoulders become stiff or tight. Muscles tension can also be associated with backaches and headaches.

One method of reducing muscle tension found helpful is a technique called Progressive Muscle Relaxation (PMR). In PMR exercises, you tense up particular muscles and then relax them.

Preparing for Relaxation:

When you're beginning to practice PMR, keep in mind the following points:

- Set aside at least 15 minutes to complete the exercise.
- Find a place you can do this without being disturbed. Turn off the TV and use soft lighting.
- Try this exercise twice a day for the first couple of weeks. The more you become more comfortable with this exercise, the quicker it will "kick in" when you really need it!
- Start doing this exercise when you're already calm – that way, as you practice, it will be easier to relax when you're feeling anxious.
- Use a chair that comfortably seats your body, including your head. Wear loose clothing and take off your shoes.
- Avoid practicing PMR after heavy meals and do not practice after consuming alcohol.

General Procedures:

- Once you've set aside the time and place for relaxation, slow down your breathing and give yourself permission to relax.
- When you're ready to begin, tense the muscle group described. Make sure you can feel the tension, but not so much that you feel a great deal of pain. Keep the muscle tensed for approximately 5 seconds.
- Relax the muscle and keep it relaxed for approximately 10 seconds. It may be helpful to say something like "relax" or "breathe" as you relax the muscle.
- When you've finished the relaxation procedure, remain seated for a few moments to allow yourself to become alert and oriented to your surroundings.

Practice Means Progress:

Through practice can you become more aware of your muscles, how they response to tension, and how you can relax them. Training your body to respond effectively to stress is like any training—practice is the key.

Have a look at a Relaxation Sequence that you can try – you can read it yourself or you can have someone read it for you, so you can focus solely on relaxing.

Relaxation Sequence

Pay special attention to the feeling of releasing tension in each muscle and the resulting feeling of relaxation. Let us begin.

1. Sit back or lie down in a comfortable position. Shut your eyes if that's more comfortable.
2. Begin by taking a deep breath and noticing the feeling of air filling your lungs. Hold your breath for a few seconds.
3. (brief pause)
4. Release the breath slowly and let the tension leave your body.
5. Take in another deep breath and hold it.
6. (brief pause)
7. Again, slowly release the air.
8. Even slower now, take another breath. Fill your lungs and hold the air.
9. (brief pause)
10. Slowly release the breath and imagine the feeling of tension leaving your body.
11. Now, move your attention to your feet. Begin to tense your feet by curling your toes and the arch of your foot. Hold onto the tension and notice what it feels like.
12. (5 second pause)
13. Release the tension in your foot. Notice the new feeling of relaxation.
14. Next, begin to focus on your lower leg. Tense the muscles in your calves. Hold them tightly and pay attention to the feeling of tension
15. (5 second pause)
16. Release the tension from your lower legs. Again, notice the feeling of relaxation. Remember to continue taking deep breaths.
17. Next, tense the muscles of your upper leg and pelvis. You can do this by tightly squeezing your thighs together. Make sure you feel tenseness without going to the point of strain.
18. (5 second pause)
19. And release. Feel the tension leave your muscles.
20. Begin to tense your stomach and chest. You can do this by sucking your stomach in. Squeeze harder and hold the tension. A little bit longer.
21. (5 second pause)
22. Release the tension. Allow your body to go limp. Notice the feeling of relaxation.
23. Continue taking deep breaths. Breathe in slowly, noticing the air fill your lungs, and hold.

24. (brief pause)
25. Release the air slowly. Feel it leaving your lungs.
26. Next, tense the muscles in your back by bringing your shoulders together behind you. Hold them tightly.
27. Tense them as hard as you can without straining and keep holding.
28. (5 second pause)
29. Release the tension from your back. Feel the tension slowly leaving your body and the new feeling of relaxation. Notice how different your body feels when you allow it to relax.
30. Tense your arms all the way from your hands to your shoulders. Make a fist and squeeze all the way up your arm. Hold it.
31. (5 second pause)
32. Release the tension from your arms and shoulders. Notice the feeling of relaxation in your fingers, hands, arms, and shoulders. Notice how your arms feel limp and at ease.
33. Move up to your neck and your head. Tense your face and your neck by distorting the muscles around your eyes and mouth.
34. (5 second pause)
35. Release the tension. Again, notice the new feeling of relaxation.
36. Finally, tense your entire body. Tense your feet, legs, stomach, chest, arms, head, and neck. Tense harder, without straining. Hold the tension.
37. (5 second pause)
38. Now release. Allow your whole body to go limp. Pay attention to the feeling of relaxation, and how different it is from the feeling of tension.
39. Begin to wake your body up by slowly moving your muscles. Adjust your arms and legs.
40. Stretch your muscles and open your eyes when you're ready.

**Taken from TherapistAid.com © 2014, 2017

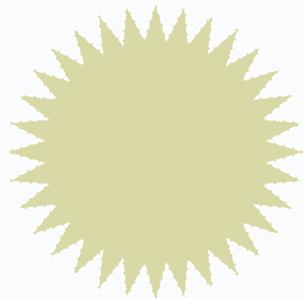


CERTIFICATE OF COMPLETION

THIS CERTIFIES THAT

Has completed the Sioux Lookout Meno Ya Win Health Centre
Cardiac Education & Rehabilitation Program

Awarded this ____ day of _____, 20__



Presenter Name and Title

Excellence Every Time



SIoux LOOKOUT
Meno Ya Win
HEALTH CENTRE

CARDIAC EDUCATION AND REHABILITATION



SIOUX LOOKOUT
Meno Ya Win
HEALTH CENTRE

Graduation Heart Health Risk Profile

Name: _____

Intake Date: _____ Discharge Date: _____

Health Factor	Intake Score	Grad Score	Desirable Level	Notes
Smoking			Non-smoking	
Blood Pressure			< 140/90 < 130/80 if diabetic	
Physical Inactivity			Aerobic Exercise: Moderate to vigorous intensity, 20-60 minutes, 3-7 days per week Resistance Exercise: Moderate intensity, 10-15 reps, 2-3 non-consecutive days per week	
Obesity (BMI)			BMI < 27 (minimum) BMI < 25 (optimal)	
Waist Size (cm)			Men: < 102 cm (40") Women: < 88 cm (35")	
Unhealthy Eating			A heart healthy diet intended to prevent or manage heart disease	
PHQ-2			Coping mechanisms for stress, anxiety, and depression	
Total Blood Cholesterol			< 4.5 mmol/L	
LDL			< 2.0 mmol/L Note: LDL calculation inaccurate when triglyceride value is >2.3mmol/L	
HDL			> 1.0 mmol/L	
Triglycerides			< 1.7 mmol/L	
Diabetes			Fasting Blood Glucose: 4 – 5.6 mmol/L if non-diabetic and 4 – 7.0 mmol/L if diabetic A1C: < 6.5% if non-diabetic and < 7.0% if diabetic	

Stress Test	Target Heart Rate (bpm)	Achieved Heart Rate (bpm)	Time (mm:ss)	RPE (6 – 20)	Maximum METs	Notes
Intake						
Discharge						

Abbreviation Legend:

< - less than

> - greater than

LDL – low density lipoprotein

HDL – high density lipoprotein

mmol/L - millimoles per litre

cm – centimeter

BMI – body mass index

Follow Up Plan	1 Month	3 Month	6 Month	1 Year	Notes:

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**Sioux Lookout Meno Ya Win Health Centre
 Cardiac Education & Rehabilitation Program Evaluation**

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 Fax: 807-737-5272
 www.slmhc.on.ca

Please rate your experience with the program and the staff of the Cardiac Education and Rehabilitation Program. Information from these forms will go toward program improvements.

Program Rating

	1 = Poor	2 = Fair	3 = Satisfactory	4 = Good	5 = Excellent
Staff Knowledge	<input type="checkbox"/>				
<i>Comments</i>					
Staff Communication / Listening Skills	<input type="checkbox"/>				
<i>Comments</i>					
Quality of Exercise Sessions (in gym)	<input type="checkbox"/>				
<i>Comments</i>					
Quality of Education Sessions	<input type="checkbox"/>				
<i>Comments</i>					
Facility & Location of Sessions	<input type="checkbox"/>				
<i>Comments</i>					
Access to Program / Resources	<input type="checkbox"/>				
<i>Comments</i>					
Overall Rating of Program	1 = Poor	2 = Fair	3 = Satisfactory	4 = Good	5 = Excellent

Comments & Suggestions

Comments:

How could we improve?

Other areas you'd like to see covered, if applicable.

Department Staff Only

Staff Signature: _____

Date Received/Reviewed: _____

Manager Signature: _____

Date Received/Reviewed: _____

****Please drop of, mail or fax completed forms back to the Sioux Lookout Meno Ya Win Health Centre Rehabilitation Department using above information**