

Patient Education Workbook



Central East

REGIONAL CARDIOVASCULAR REHAB

Get on track to better heart health

EXERCISE • EDUCATION

LIFESTYLE COACHING • MOTIVATION AND SUPPORT

Editorial Information

Foreword by Dr. Ricci, Medical Director

Welcome to the Central East Regional Cardiovascular Rehabilitation Program!

Congratulations on your decision to take control of your cardiovascular health.

Cardiovascular rehabilitation is proven to improve your health. You can slow and reverse the 'hardening' of the arteries. You will increase your fitness and enhance enjoyment of activities with family and friends. Your symptoms will be lessened. You will be less likely to suffer another event like a heart attack or be admitted to hospital. You can expect to add years to your life.

Good health is about both prevention and reducing risk factors. Through exercise, education and lifestyle coaching, you can gain the knowledge and self-care skills to achieve your best possible health.

Cardiovascular rehabilitation is a lifelong journey. This program is developed to assist you on your path. There is so much you can do! Be active. Eat well. Look after your emotional well-being.

Good health is a team effort. We work with you to support your doctor, pharmacists, and other caregivers. Our dedicated cardiovascular rehabilitation professionals are committed to you and our community.

Over three decades, this service has grown to support your needs and is now the largest cardiovascular rehabilitation service in Canada. The service is funded by our health care system and is free of charge for all persons with cardiovascular conditions.

We hope you enjoy your time with our team and can look forward to many years of good health.



Dr. Joseph Ricci
Medical Director
Central East Regional Cardiovascular Rehab Program
Scarborough Health Network

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Program Introduction

Welcome to the Central East Regional Cardiovascular Rehabilitation Program! The aim of this program is to provide you with the knowledge and self-management skills to lead a heart healthy lifestyle. This program is free of charge, helping to improve your quality of life through exercise, education and lifestyle coaching.



Available Services:

Registered Dietitian: A Registered Dietitian is available for individual counselling on heart healthy eating.

Smoking Cessation: Services and resources are available for those looking to reduce their smoke intake or exposure.

Heart Failure Enhancement: For those living with heart failure, specialized assessment and education is provided by Cardiac Nurses.

Program Website: gethearthealthy.ca

The program website contains various educational materials and resources to assist you in leading a heart healthy lifestyle.



- **Live Virtual Events:** Live virtual events are hosted on a regular basis and include both educational and/or exercise content. Possible event topics include warm-up and resistance training, yoga, balance training, CPR demonstrations, and/or education sessions led by Exercise Therapists, Pharmacists, Dieticians, and Physicians. The schedule of live events can be found on the program website.
- **Accessibility:** The program website can be translated into a variety of languages.

How to Use the Education Workbook

- The aim of this workbook is to deliver education on a variety of cardiac-related topics, and provide you with the knowledge and skills to lead a heart healthy lifestyle.
- Each week, your Exercise Therapist will inform you what the education topic is. Please read and review the related pages, completing any activities and questions included within.
- Your Exercise Therapist may refer to the workbook during your appointment; please have your workbook with you when communicating with your Exercise Therapist.

Navigation: Where other pages of the workbook are referred to (e.g., "refer to p.34"), you are able to click on the text to take you directly to that page. Clicking on bolded words will redirect you to the glossary. Clicking on web links will open the corresponding website.

Notes: The end of each education topic contains a "Notes" section, where you can document feedback, comments, or questions you may have. This is a great place to write down anything that you would like to speak with your Exercise Therapist about.

Reflective Activities: "Test Your Knowledge" and "Ask Yourself" activities are included throughout the workbook to allow you to reflect upon what you have learned. Your Exercise Therapist will be discussing these topics with you, so be sure to have them completed.

Program Website: Further information on each education topic can be found on our program website: www.getthehearthealthy.ca. At the top of each education topic, a link to the related web page is provided. Clicking this link will redirect you to our program website.

Glossary: Medical-related words have been bolded throughout the workbook. The glossary and definitions can be found at the back of the book. Clicking the bolded word will redirect you to the glossary.

Exercise Tracking: Tracking your exercise is an important component of the program. Submitting your weekly exercise information to your Exercise Therapist will allow them to provide you with personalized feedback and assist you in achieving your fitness goals. Exercise can be tracked using the exercise diary or the Cardiologica app.

- **Exercise diary:** The exercise diary, and information on how to complete it, can be found on p.43.
- **Cardiologica app:** This is an exercise tracking tool that can be accessed on your mobile device, computer, or tablet. The exercise information that you input will be sent to your patient profile for your Exercise Therapist to view. If you would like to use the Cardiologica app to track your exercise, please speak to your Exercise Therapist for further information.

If you have any questions, please contact our team at 1-855-448-5471 or 416-281-7022.

Blood Pressure

getthehearthealthy.ca/blood-pressure/

In this section you will learn:

- What blood pressure is and how to properly measure it
 - The complications of high blood pressure
 - How to manage your blood pressure
- Blood pressure is a measure of the force of blood pushing against the blood vessel walls
 - Blood pressure is comprised of two numbers:
 - **Systolic** (top number) is a measure of the pressure in the vessels when the heart contracts, pumping blood through the arteries.
 - **Diastolic** (bottom number) is a measure of the pressure in the vessels when the heart relaxes, between beats.
 - For those living with cardiovascular disease, the recommended resting blood pressure value is <120/80 mmHg.
 - Factors that contribute to high blood pressure include physical inactivity, unhealthy dietary habits, excessive alcohol intake, smoking, unmanaged stress, unmanaged sleep apnea, non-compliance with medications, increased age, and family history.
 - High blood pressure is also referred to as **hypertension**.

Complications of High Blood Pressure



Can damage the blood vessels that supply the heart, impacting the heart's blood supply and ability to pump efficiently

- **Coronary artery disease**
- **Angina**
- **Arrhythmias**
- Heart attack
- Heart failure



Can damage the vessels that supply and nourish the brain

- Stroke
- Transient ischemic attack (TIA)
- Cognitive impairment



Can damage the blood vessels that supply the eye

- **Retinopathy**
- Vision loss



Can damage the vessels that supply the kidneys, which act as filters to remove waste products from the blood

- Kidney failure
- Kidney disease



Can damage the blood vessels that supply the limbs

- **Peripheral artery disease**



Can limit blood flow to reproductive structures

- Erectile dysfunction
- Reduced libido

Managing Blood Pressure

Regular physical activity and exercise: Each week, aim to complete 150 to 300 minutes of cardio-based exercise, and at least two days of resistance training.

Reduce sodium intake: When you consume excess sodium, your body pulls water into your blood vessels in effort to dilute it. This increases the total volume inside the blood vessels, which increase the pressure on the blood vessel walls. Most of the sodium in your diet comes from processed foods and restaurant or take-out meals; cook your own meals as often as possible. Learn to read the sodium content on food labels, choosing foods with five percent or less daily value for sodium (refer to Reading Food Labels on p.10).

Manage stress levels: Stress management solutions are unique to each individual; finding what works best for you is important. Suggestions include engaging in physical activity and exercise, improving sleep hygiene, or completing meditation or relaxation exercises (refer to Stress on p.30).

Limit alcohol intake and smoke exposure: Ensure you stay within the recommended guidelines if drinking alcohol. Smoking tobacco harms almost every organ in the body and can contribute to high blood pressure. Develop a plan to quit, seeking advice as necessary (refer to Alcohol and Tobacco on p.34). Additionally, both alcohol and tobacco may impact the effectiveness of some blood pressure medications.

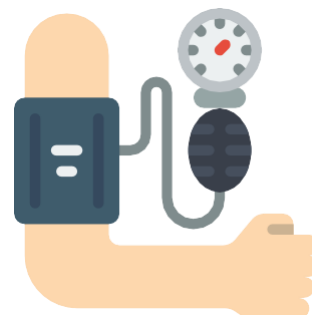
Medications: There are many types of medication that can be prescribed to aid in the management of high blood pressure. Take your medications as prescribed.

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to view the
Calendar of
Live Events

High blood pressure is often called the 'silent killer', as many people experience no symptoms. Therefore, it is important to monitor your blood pressure regularly.

How to Measure Your Blood Pressure

- Do not smoke or drink caffeine 30 minutes prior to checking
- Rest quietly for five minutes before checking
- Sit in a comfortable position, with your arm at heart level
- Feet should be flat on the floor; do not cross your legs or have your feet unsupported
- Take your blood pressure two to three times, and use the average of these values as your measurement



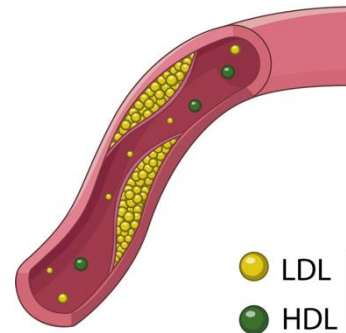
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Cholesterol and Triglycerides

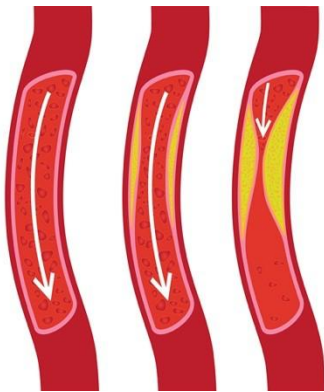
getthehearthealthy.ca/cholesterol-triglycerides

In this section you will learn:

- What cholesterol and triglycerides are
 - The effects of elevated cholesterol and triglycerides levels
 - How to manage your cholesterol and triglyceride levels
- Cholesterol and triglycerides are types of fat within the blood.
 - The body converts excess calories into triglycerides, which are stored as fat.
 - 80 percent of cholesterol is produced in the liver, and 20 percent comes from diet.
 - There are two types of cholesterol:
 - Low density lipoprotein (LDL): **LDL** is known as “bad” cholesterol, as it can build up in your arteries, making the arteries hard and narrow, impacting blood flow.
 - High density lipoprotein (HDL): **HDL** is known as “good” cholesterol, as it carries **LDL** back to the liver, to be recycled or removed from the body.



Effects of Elevated Cholesterol and Triglyceride Levels



- High **LDL** cholesterol and triglyceride levels can cause plaque build-up in the arteries. This is known as **atherosclerosis**, where the arteries narrow and harden, impacting blood flow.
- Plaque can build up in any artery in the body (heart, legs, eyes, kidney, etc.), contributing to conditions such as **angina**, **coronary artery disease**, **peripheral artery disease**, chronic kidney disease, and gallstones.
- Plaque build-up can develop into a total blockage, which can lead to heart attack or stroke.

High blood pressure and high cholesterol levels are linked. When the arteries narrow and harden due to plaque build-up, the heart has to work harder and exert more pressure against the artery walls in order to pump blood through them.

Managing Cholesterol and Triglyceride Levels

Regular physical activity and exercise: Engaging in regular physical activity and exercise increases **HDL** levels, and decreases **LDL** and triglyceride levels. Each week, aim to complete 150 to 300 minutes of cardio-based exercise, and at least two days of resistance training.

Healthy eating: Limit your intake of saturated and trans fats, as these can increase **LDL** levels. Examples include red meat, poultry with skin, butter, and packaged foods containing partially hydrogenated vegetable oil. Whole grains that are rich in fibre, such as whole wheat bread, oats, brown rice, and quinoa, can reduce **LDL** levels.

Saturated fats are usually solid at room temperature.

Reduce smoke exposure: Exposure to smoke decreases **HDL** levels, and increases **LDL** and triglyceride levels. Smoking also damages artery walls, promoting plaque build-up. Develop a plan to quit, seeking advice as necessary (refer to Alcohol and Tobacco on p.34).

Limit alcohol intake: Alcohol can increase your triglyceride levels, as alcohol is high in calories that contain no nutritional value. These excess calories are converted to triglycerides and stored as fat. Ensure you stay within the recommended guidelines if consuming alcohol (refer to Alcohol and Tobacco on p.34).

Medications: Statins are a commonly prescribed class of medication, used to manage cholesterol and triglyceride levels. Take your medications as prescribed.

Know Your Target Values

When you have bloodwork done, always ask for a copy. It is important to know your cholesterol and triglyceride level values, and to monitor them over time.

	Threshold	Write your most recent values here:
LDL	<2.0mmol/L	
HDL	Males: >1 mmol/L Females: >1.3 mmol/L	
Triglycerides (non-fasting)	<2.0 mmol/L	

*Please note treatment thresholds set by your physician may differ

Prior to menopause, females have increased estrogen levels, which increases **HDL** levels. Post menopause, estrogen levels decrease, negatively impacting **HDL** levels. Therefore, having a higher **HDL** target for females helps to combat the increased risk that occurs post menopause.

[Click here to view the Calendar of Live Events](#)

Notes:

Reading Food Labels

getthehearthealthy.ca/reading-food-labels

In this section you will learn:

- Why it is important to read food labels
 - How to read food labels
 - Which nutrients impact heart health
- Food labels provide information on the nutrients and ingredients within packaged food products.
 - Understanding how to read food labels helps you make informed decisions about the foods you eat.

How to Read Food Labels

1

Serving Size

When comparing items, ensure you are comparing the same amount. The serving size is often listed as both a common measure (e.g., # of crackers) and a weight measure (e.g., grams). The serving size is not a regulated number; it is set by the company. For example, the serving size for one loaf of bread may be one slice, and for another, it may be two slices.

2

% Daily Value

% Daily Value (%DV) is a regulated number that is based on the recommended amounts of nutrients that the average person consumes daily. The %DV acts as a benchmark, helping you to determine if a food is high or low in certain nutrients. Five per cent or less is said to be “a little” and 15 per cent or more is said to be “a lot”.

3

Nutrients

Use the %DV to see if the serving size is high or low in certain nutrients. For heart health, choose products that have a %DV of 15 per cent or more for fibre, and a %DV of 5 per cent or less for saturated fat and sodium. Aim for zero trans fat.

Nutrition Facts			
Per 9 crackers (23 g)			
Amount		% Daily Value	
Calories 90			
Fat 4.5 g			7 %
Saturated 2.5 g + Trans 0 g			13 %
Cholesterol 0 mg			
Sodium 280 mg			12 %
Carbohydrate 12 g			
Fibre 1 g			4 %
Sugars 0 g			0 %
Protein 3 g			
Vitamin A	0 %	Vitamin C	0 %
Calcium	2 %	Iron	8 %



Ingredients in Disguise!

Ingredients are listed in order by weight, from highest to lowest. It is important to note that there are many alternative names for different types of fats, sugars, and salts. This means that these food ingredients might seem “hidden” on the ingredient list.

Nutrients That Impact Heart Health

Fat

- Saturated and trans fats increase LDL (“bad”) cholesterol levels, which can lead to narrowing and hardening of the arteries.
- Examples of foods high in saturated and trans fats: full-fat dairy such as butter and cheese, red meat, fried foods, and shortening.
- Alternative names on ingredient list: beef fat, butter, shortening, palm oil, coconut, milk solids, ghee, hydrogenated oil.

Sodium

- Sodium (salt) has been linked to increased blood pressure, which contributes to cardiovascular disease. Most of the sodium in your diet comes from processed foods and restaurant or take-out meals.
- Alternative names on ingredient list: celery/garlic/onion salt, monosodium glutamate, brine, rock salt, sodium nitrate, baking soda.

Fibre

- Fibre can decrease LDL (“bad”) cholesterol levels, maintain bowel regularity, and keep you full for longer. Fibre is only found in plants, so you will not find it on nutrition labels for animal products.
- Examples of foods high in fibre: fruits, vegetables, lentils, brown rice, and oats.

Sugar

- A high intake of added sugar is associated with cardiovascular disease, obesity, diabetes, and liver disease.
- Sugar is naturally found in some foods such as milk, fruit, and yogurt, which have high nutritional value. Unfortunately, food labels do not distinguish between added and natural sugar. We must have the knowledge to be able to recognize the source.
- Examples of foods high in added sugar: baked goods, cereals, soft drinks, condiments.
- Sugar-based ingredients are grouped on the ingredient list after the title ‘sugars’

Test Your Knowledge

If you plan to eat 8 crackers, which product would you select?

Nutrition Facts			
Per 8 crackers (42 g)			
Amount	% Daily Value		
Calories 90			
Fat 4.5 g	7 %		
Saturated 2.5 g	13 %		
+ Trans 0 g			
Cholesterol 0 mg			
Sodium 280 mg	12 %		
Carbohydrate 12 g	4 %		
Fibre 1 g	4 %		
Sugars 0 g	0 %		
Protein 3 g			
Vitamin A 0 %	Vitamin C 0 %		
Calcium 2 %	Iron 8 %		

Saturated fat: _____
Trans fat: _____
Sodium: _____
Fibre: _____
Sugar: _____

Nutrition Facts			
Per 4 crackers (20 g)			
Amount	% Daily Value		
Calories 41			
Fat 2 g			3 %
Saturated 0.3 g		2 %	
+ Trans 0 g			
Cholesterol 0 mg			
Sodium 90 mg			4 %
Carbohydrate 15 g			5 %
Fibre 1 g		4 %	
Sugars 1 g		1 %	
Protein 2 g			
Vitamin A 0 %	Vitamin C 0 %		
Calcium 2 %	Iron 8 %		

Saturated fat: _____
Trans fat: _____
Sodium: _____
Fibre: _____
Sugar: _____

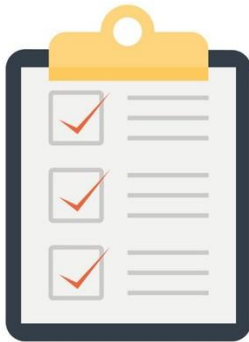
Exercise Prescription and Progression

gettheearthhealthy.ca/exercise-prescription-progression

In this section you will learn:

- What an exercise prescription is
 - What factors are considered when developing an exercise prescription
 - When and how to safely progress an exercise program
- An exercise prescription outlines a program designed to improve your health and well-being.
 - Your customized exercise prescription is developed by your Exercise Therapist, and is designed with your preferences and goals in mind.
 - Exercise prescriptions should be reviewed regularly and adjusted as necessary.

Factors Considered When Prescribing Exercise



- Medical history
 - Cardiovascular: surgeries, events, conditions
 - Musculoskeletal: surgeries, injuries, conditions, limitations
- Fitness assessment results (GXT or stress test)
- Current fitness/activity level
- Exercise goals and preferences
- Available equipment

Ensuring Your Exercise Prescription is Appropriate

- Monitor your exercise intensity with one of the following tools:
 - Rating of Perceived Exertion (RPE) scale
 - Cardio-based exercise should feel “somewhat hard”, or RPE 13
 - Resistance training exercises should feel “hard”, or RPE 15

RPE Scale (Rating of Perceived Exertion):

6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Effortless Very Light Fairly Light Somewhat Hard Hard Very Hard Maximum Effort

- Exercise heart rate
 - Your Exercise Therapist may have outlined a heart rate range for you to aim to exercise within.
 - This heart rate range is based on the results of your most recent fitness assessment results (GXT or stress test), if available.
 - Exercising within this heart rate range ensures that you are obtaining cardiovascular benefits, without putting yourself at risk.



When to Not Progress Your Exercise Program

- Your RPE is above 15, or “hard”
 - When exercise becomes overly strenuous, the body begins to fatigue more quickly, which can reduce exercise tolerance, provoke symptoms, or increase the risk of injury.
- Your exercise heart rate is higher than the range outlined by your Exercise Therapist
- You feel unwell or are experiencing symptoms such as chest discomfort, shortness of breath, excessive fatigue, or muscle/joint pain.
 - For individuals living with chronic pain or stable **angina**, it may be safe to progress an exercise program despite having symptoms; speak to your healthcare provider or Exercise Therapist.
- You have had a recent change to your medications. It is important that you trial exercising at the same intensity, to ensure that your new medication regime has not altered how you respond to exercise.
- Your goal is to maintain your current level of fitness, and you are achieving the recommended exercise guidelines.
- You are acclimatizing to a new environment or weather condition.



When to Progress Your Exercise Program

- RPE is below 11, or “fairly light”
- Your exercise heart rate is consistently below the heart rate range outlined by your Exercise Therapist.
- Your goal is to improve your fitness.

How to Progress a Walking Program

- Many factors can be altered to progress a walking program. It is important to note that only one factor should be adjusted at a time.
 - Increase duration/distance: aim for 150 to 300 minutes of moderate to vigorous **aerobic exercise** each week
 - Increase walking speed
 - Alter terrain: increase incline on treadmill or include hills in your walking route
 - Cross-train: include a variety of exercise modes in your routine (e.g., elliptical, biking, swimming, etc.)

Ask Yourself

What is your RPE for cardio-based exercise?
What is your RPE for resistance training exercise?
Is your goal to improve your fitness level, or to maintain it?

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to view the
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Live Events](#)

Understanding Symptoms

getthehearthealthy.ca/understanding-symptoms

In this section you will learn:

- How to distinguish between cardiac and non-cardiac related symptoms
 - What **angina** is, and how to manage it appropriately
- If you experience pain or discomfort in the chest, jaw, arms, back or neck, or have symptoms such as heartburn, weakness, nausea, cramping, or shortness of breath, you may be unsure whether your symptoms are cardiac-related, or if they are being caused by something else within the body.
 - Though it can be difficult to distinguish between cardiac and non-cardiac related symptoms, there are some key features that can help you to determine where your symptoms are originating from.
 - Always inform your doctor of any new or worsening symptoms. Call 911 if you experience any new or worsening symptoms that are not resolved quickly.



Non-Cardiac Related Symptoms

- Symptoms may originate from muscles, joints, nerves, or connective tissue
- Commonly described as feeling achy, sore, burning, tingling, or sharp
- Symptoms are often localized and can be pinpointed (area < size of a quarter)
- Symptoms often change when you press on or massage the area
- Symptoms often change when you adjust your body position, such as lifting your arm, lying on your side, or bending forward
- May occur after injury or strenuous activity/exercise. Stress or anxiety can also cause muscle soreness, fatigue, shortness of breath or other symptoms

Delayed Onset Muscle Soreness (DOMs): You may experience muscle soreness 24-72 hours after exercising. This commonly occurs when you begin a new exercise program, change your exercise routine, or increase your exercise intensity.

- Heartburn may also present similar to cardiac-related symptoms. If you are experiencing symptoms of heartburn, ask yourself:
 - Do you have a history of indigestion or heartburn?
 - Did you do something to provoke the heartburn (e.g., eat spicy or greasy food)?
 - Are your symptoms relieved with typical measures (e.g., antacids)?
- If you answer no to these questions, it is best to seek medical assistance

Cardiac-Related Symptoms

- Cardiac-related symptoms are referred to as **angina**.
- **Angina** occurs when the heart does not receive enough oxygen-rich blood. This can occur during vigorous exercise, high-stress situations, or with exposure to extreme temperatures.
- Symptoms may present as pain, discomfort, squeezing, pressure, heaviness, or burning in the chest, jaw, arms, back or neck.
- Symptoms may also include weakness, nausea, cramping, or shortness of breath.

Angina Management

- Avoid heavy meals or overeating, especially before exercise. When you eat a large amount of food at once, the stomach expands and the body shifts blood away from the heart, to the digestive system.
- Avoid exercising in extreme temperatures (refer to Exercise and Hot/Cold Weather on p.38).
- Perform a warm-up and cool-down with each exercise session. During warm-up, heart rate and blood pressure gradually increase, preparing your body for exercise. Arteries begin to dilate (widen), allowing blood and oxygen to easily circulate through the body. Cooling down helps the body return to a resting level.

[Click here to view the warm-up demonstration video on our website!](#)

- If cardiac-related symptoms occur with exercise or activity, slow down for one to two minutes. If symptoms persist, sit down and rest for one to two minutes. Ask yourself if your symptoms are improving or worsening. If symptoms do not resolve with one to two minutes of rest, call 911
- If you have been prescribed **nitroglycerin** spray, ensure you always have it with you, and that you are familiar with how and when to use it.



- Ensure you are seated when administering
- Spray into the air a few times before taking your dose
- Spray once underneath the tongue. Wait five minutes
- If symptoms persist, spray the second spray underneath the tongue. Wait five minutes
- If symptoms persist, spray the third spray under the tongue and call 911
- Do not administer more than three sprays

Nitroglycerin should be stored in a neutral temperature area. Do not shake the bottle, and always check the expiration date.

[Click here to view the Calendar of Live Events](#)

Modifiable Risk Factors

getthehearthealthy.ca/modifiable-risk-factors

In this section you will learn:

- What the risk factors for cardiovascular disease are
- The difference between modifiable and non-modifiable risk factors
- Strategies for management of modifiable risk factors

Modifiable vs. Non-Modifiable Risk Factors

- A risk factor is something that increases your chance of developing a disease; the more you have, the greater your chance of developing the disease.
- Non-modifiable risk factors are things that you do not have control over. These include age, ethnicity, and family history.
- Modifiable risk factors are things that you have control over. These include:



Physical
activity levels



Dietary
choices



Blood sugar
levels



Cholesterol
levels



Blood
pressure



Smoke intake
and exposure



Alcohol
consumption



Stress
levels



Sleep habits

Circle the risk factors that apply to you

Strategies to Manage Modifiable Risk Factors

Engage in regular physical activity and exercise: Regular, moderate to vigorous exercise can lower your risk of cardiovascular disease. Each week, aim to complete 150 to 300 minutes of cardio-based exercise, and at least two days of resistance training.

Follow a heart healthy diet: Aim to include plant-based foods as often as possible. Plant-based foods are rich in fibre, minerals, vitamins and antioxidants. Examples include vegetables, fruits, whole grains, nuts, seeds and legumes. Fatty fish and olive oil are also healthy choices.

Manage blood sugar levels: Blood sugar values can be impacted by many of the risk factors listed here; managing these will help to contribute to blood sugar control. Ensure you are aware of your target values, and that you are taking your medications as prescribed.

Manage blood cholesterol levels: There are several ways to manage your cholesterol levels including regular exercise, eating whole, minimally processed foods more often, and taking your medications as prescribed.

Review healthy blood cholesterol targets on p.8.

Manage blood pressure levels: For most people living with cardiovascular disease, the recommended resting blood pressure value is less than 120/80 mmHg. Blood pressure values can be impacted by many of the risk factors listed here; managing these will help to contribute to blood pressure control.

Reduce smoke intake and exposure: Smoking, or exposure to smoke, can harm almost every organ in the body. When planning to reduce exposure to smoke, it is important to develop a plan and get support.

Speak with your Exercise Therapist for smoking cessation services and resources.

Follow recommended alcohol guidelines: If you drink alcohol, ensure you stay within alcohol consumption guidelines. The risk of negative outcomes increases with increased consumption. If consuming more than two standard drinks per week, most individuals will have an increased risk of injury or health concerns.

Stress management: Stress management solutions are unique to each individual; finding what works best for you is important. Suggestions include engaging in physical activity and exercise, improving sleep hygiene, or completing meditation or relaxation exercises.

Establish good sleep habits: It is recommended that adults achieve seven to nine hours of quality sleep per night. Practice good sleep hygiene by keeping a regular sleep schedule, limiting screen time prior to bedtime, and avoiding alcohol or heavy meals prior to bedtime.

Ask Yourself

Select one of the modifiable risk factors that you circled above.
What is one thing that you can do this week to help manage this risk factor?

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Goal Setting

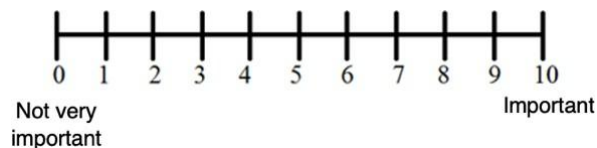
gethearthealthy.ca/goal-setting

this section you will learn:

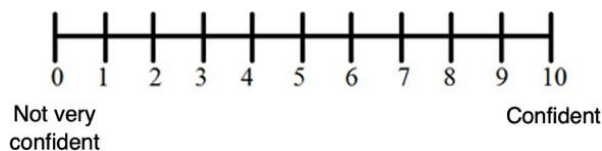
- What S.M.A.R.T. goals are
- How to set goals using these criteria
- How to create an action plan to help you achieve your goals

Selecting a Goal

- The first step in setting a goal is to ask yourself what you would like to achieve. There may be many things you would like to work on; it is easiest to select one goal to work on at a time.
- How important is this goal to you? On a scale of zero to 10, the importance of your goal should be seven or greater. If your rating is less than seven, research indicates that it is best to reconsider the goal you have set



- How confident are you that you will achieve this goal? On a scale of zero to 10, your confidence of achieving this goal should be seven or greater. If your rating is less than seven, research indicates that it is best to consider setting a more achievable goal



Developing an Action Plan

An action plan acts as a framework for achieving your goal. When creating an action plan, consider the following questions:

- What can I do this week and when am I going to do it?
- Where am I going to do it?
- How much and how often am I going to do it?



You can always re-evaluate and adjust your action plan as necessary, to aid you in achieving your goal.

S.M.A.R.T. Goals

The acronym S.M.A.R.T. is a set of criteria that can be used to guide your goal setting and increase the likelihood of achieving your goals. Fill out the chart below with a goal that you would like to work towards.

Goal:	
S Specific	Be specific about what you want to accomplish. What do you want to achieve? Who will be involved? Where will you achieve it?
M Measurable	How will you track your progress and determine when you have reached your goal?
A Achievable	Will you be able to safely and realistically achieve your goal?
R Relevant	Make sure that the goal matters to you! Why are you setting this goal?
T Timely	When do you want to achieve this goal by?

Tips to Stay on Track

- Write down your goal
- Tell others about the goal you have set, or include them in the process
- Schedule regular check-ins to review your progress
 - If your week did not go as planned, ask yourself “what went well?” and “what went wrong?”
- Plan activity during times when you find you have more energy
- Celebrate your accomplishments

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Notes:

Canada's Food Guide

gettheearthhealthy.ca/canadas-food-guide

In this section you will learn:

- What Canada's Food Guide plate model is
- How to make meals according to the plate model
- Healthy eating habits to incorporate into your routine

The Plate Model

- The plate model is a visual representation of what your plate should be comprised of.
- It should be used as a reference tool to help you make healthy meals and snacks.

Fruits and Vegetables

High in Fibre

- Promotes a healthy digestive system
- Lowers **LDL** cholesterol
- Associated with weight management

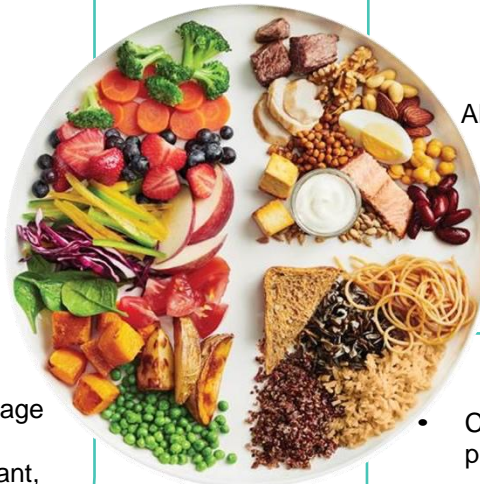
Contains Various Vitamins and Minerals

- Improves overall health
- Boosts the immune system

Contains Antioxidants

- Prevents and slows the progression of cellular damage

Apples, beets, cabbage, eggplant, mango, okra, papaya, turnip



Protein

High in Iron, Zinc, and Calcium

- Iron improves hemoglobin levels, which carries oxygen in the blood
- Zinc boosts the immune system and aids in wound healing
- Calcium is important for bone health

Building Blocks

- Helps build muscle and other body tissues

Keeps You Full and Satisfied

Almonds, beans, chicken, eggs, lentils, salmon, tofu, yogurt

Whole Grains

Energy Source

- Carbohydrates are the body's preferred source of energy

High in Fibre

- Promotes a healthy digestive system
- Lowers **LDL** cholesterol
- Associated with weight management

Contains Various Vitamins and Minerals

- Improves overall health
- Boosts the immune system

Barley, oatmeal, popcorn, quinoa, sweet potato, whole grain bread

Water should be your drink of choice! To add flavour, add fresh fruits or vegetables such as berries, cucumbers, or lemon.

Healthy Eating Habits

Eat meals with others: Though food is often a main part of celebrations, eating with others does not need to be saved for special occasions. Doing so allows you to spend quality time with others, share food traditions, and explore new foods.

Cook more often: Cooking and preparing your food allows you to learn new skills, save money, and reduce your intake of processed foods. Meal planning and involving others in meal preparation can help you to cook more often.

Be mindful of your eating habits: Being mindful of your eating habits can help you make healthier food choices, reduce overeating habits, and give you a better understanding of your body's hunger, craving, and fullness cues.

Ensure proper meal timing: Refuel your body throughout the day by having three balanced meals at regular times. Incorporate healthy snacks if you feel hungry. Balanced meals should keep you full for three to four hours.

Think about the last meal or snack that you ate. Can you describe:

What you ate?

Why you ate?

When you ate?

Where you ate?

How you ate?

How much you ate?

Eating Healthy Does Not Have to be Expensive!

Fruits and vegetables

- Buy in-season
- Buy frozen or canned options. Ensure you are purchasing products that do not have added salt or sugar

Protein

- Buy meat in bulk, and freeze portions for later
- Eat eggs, beans, and lentils more often, as these are cheaper alternatives to meat

Whole grains

- Buy dried grains in bulk
- Buy bread products on sale and freeze portions for later

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Ask Yourself

Are you having a vegetable at every meal?

Is water your beverage of choice?

How does your body feel when you are hungry? What about when you are full?

Exercise is Medicine

getthehealthy.ca/exercise-is-medicine

In this section you will learn:

- Why exercise is considered medicine
 - The benefits of engaging in regular exercise
 - General exercise guidelines
- Similar to prescribed medications, your exercise prescription is individualized, and includes a frequency, intensity, and duration (refer to Exercise Prescription and Progression on p.12)

Benefits of Engaging in Regular Exercise

Cardiovascular

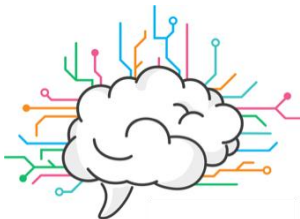
- Reduces the risk of developing cardiovascular disease
- Improves blood pressure values
- Improves cholesterol and triglyceride levels
- Improves general fitness, making activities of daily living easier, and allowing you to engage in the hobbies and activities you enjoy

Diabetes

- Improves blood sugar control and insulin sensitivity
- Reduces the risk of developing type 2 diabetes

Cognitive Function

- Improves blood flow to the brain
- Stimulates the growth of new blood vessels and nerve networks within the brain
- Improves memory, thinking skills, and ability to focus



Brain imaging studies have shown that areas in the brain that are responsible for thinking and memory are larger in those who engage in regular exercise, compared to those who do not.

Mental Health

- Improves mood and emotional control
- Acts as an effective stress management tool
- Reduces the risk of developing anxiety, depression, and other mood disorders

When you exercise, your body releases chemicals called endorphins. Endorphins are often called “feel-good chemicals”, as they can elevate mood and reduce stress.

Weight and Waist Circumference

- Helps you to achieve and maintain a healthy body weight and waist circumference

Bone Health

- Improves bone health and strength
- Slows the rate of bone loss

The best exercises for building and maintaining bone health are weight-bearing and resistance training exercises.

Other

- Improves sleep patterns and quality
- Reduces the risk of developing other health concerns (e.g., diabetes, osteoporosis, mood-disorders, cancer, etc.)

Ask Yourself

Have you noticed any physical or mental changes since beginning your exercise program?

How many minutes of **aerobic exercise** are you completing each week?

How many resistance training sessions are you completing each week?

If you are over 65, are you incorporating balance training into your exercise routine?

General Exercise Guidelines

- All physical activity is beneficial! This may include daily activities such as walking the dog, vacuuming, or gardening.
- The most beneficial activity for heart health is moderate to vigorous exercise for bouts of 10 minutes or more.



Aerobic Exercise

Frequency	5 days/week
Intensity	RPE 12-14, or "somewhat hard"
Time	150-300 mins/week
Type	Walking, cycling, elliptical, swimming, etc.



Resistance Training

Frequency	2-4 days/week
Intensity	RPE 15-16, or "hard"
Time	15-20 mins/session
Type	Dumbbells, exercise bands, machines, household items, bodyweight, etc.

Mediterranean Diet

gettheearthhealthy.ca/mediterranean-diet

In this section you will learn:

- The main principles of the Mediterranean diet
 - The benefits of following the Mediterranean diet
 - How to integrate the principles of the Mediterranean diet into your lifestyle
- “Mediterranean diet” is a term based on the traditional eating habits in the countries bordering the Mediterranean Sea.
 - It is not a “diet”, but an overall pattern of eating that can be adapted to different lifestyles, cultures, and budget levels.
 - The main principles of the Mediterranean diet are represented in a pyramid, highlighting which foods should be included more often, less often, and in moderation.
 - The pyramid also highlights daily exercise and the beneficial social aspects of eating meals together.

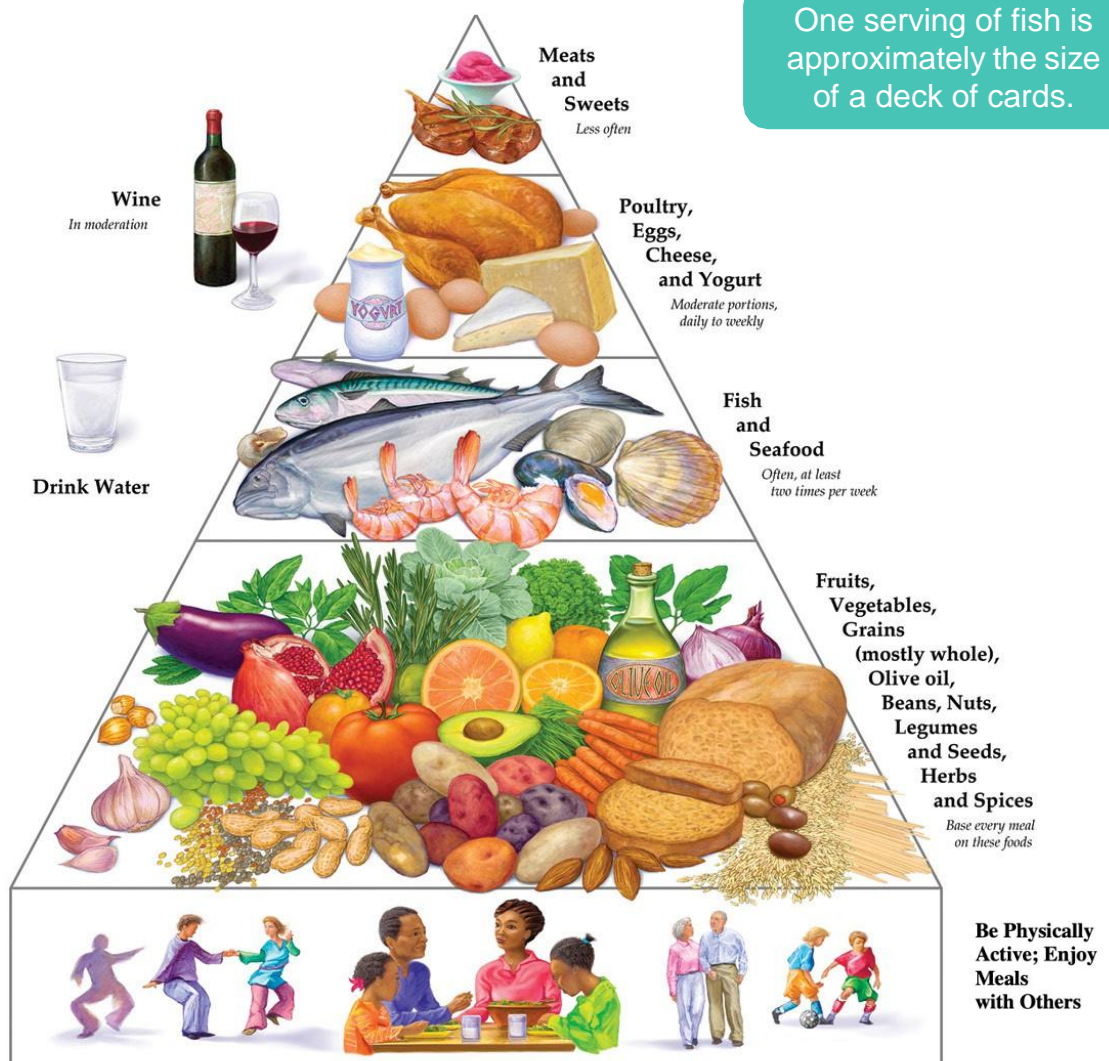


Illustration by George Middleton

Olive oil provides monounsaturated fat, which lowers total cholesterol and **LDL** cholesterol levels. Nuts and seeds also contain monounsaturated fat.



Main Principles of the Mediterranean Diet

- Base all meals on fruits, vegetables, whole grains, beans, nuts, seeds, legumes, herbs, and spices
- At least twice per week, include fish and seafood
- Poultry, eggs, cheese and yogurt should be eaten in moderation
- Red meat and sweets should be eaten less often
- Enjoy wine in moderation (refer to Alcohol and Tobacco on p.34)
- Avoid eating processed foods
- Olive oil should be the main source of fat
- Physical activity and enjoying meals with others are critical to a healthy lifestyle

Benefits of the Mediterranean Diet

- Lowers blood pressure
- Lowers **LDL** cholesterol levels
- Improves blood sugar control
- Improves cognitive function
- Maintains a healthy body weight
- Reduces mortality
- Reduces risk of developing cardiovascular disease or type 2 diabetes

Tips for Following the Mediterranean Diet

- Snack on nuts or vegetables
- Eat more fish
- Swap butter for olive oil when cooking and baking
- Make your own salad dressings
- Enjoy fruit for dessert
- Plan out your meals
- Eat mindfully, and with others when possible

Inform your Exercise Therapist if you would like to speak with our program Dietitian.

Test Your Knowledge

What is considered one serving of fish?
What is the main source of fat in the Mediterranean diet?
What are some recommended sources of protein in the Mediterranean diet?

Blood Sugar

getthehearthealthy.ca/blood-sugars

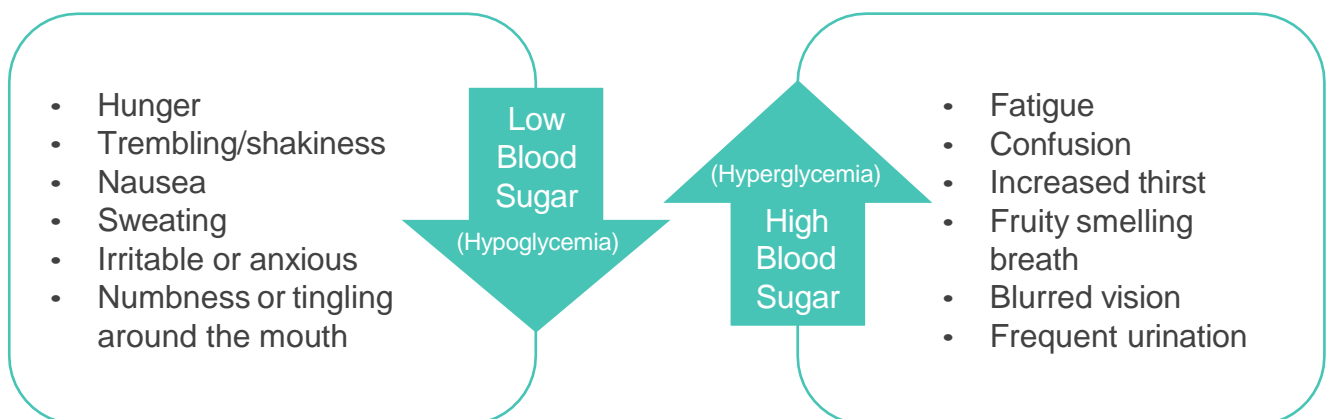
In this section you will learn:

- What blood sugar is, and the role that it plays
 - The complications of long-term high blood sugar
 - How to improve blood sugar control
- The food you consume gets broken down into glucose (sugar) and released into your bloodstream.
 - When your blood sugar levels increase, your pancreas is signalled to release a hormone called insulin. Insulin acts as a “key”, allowing the glucose to travel from the bloodstream into the body’s cells.
 - Glucose is the main source of energy for the cells in your body.
 - With diabetes, the body either does not produce enough insulin, or is unable to properly use insulin. Therefore, blood sugar levels remain high in the bloodstream
 - There are several forms of diabetes: type 1, type 2, pre-diabetes, and gestational diabetes.



Approximately 11 million Canadians are living with diabetes or pre-diabetes.

Know the Symptoms



Complications of Long-Term High Blood Sugar

Diabetes increases your risk for many health problems. With proper treatment and lifestyle changes, it is possible to prevent or delay the onset of these complications.



Cardiovascular Disease

- High blood sugar levels can negatively impact the vessels and nerves that control the heart and blood vessels.
- When the arteries of the heart are damaged, the risk of developing plaque in the arteries (**atherosclerosis**) increases.
- **Atherosclerosis** can reduce blood flow to major organs and increase your risk of heart disease and/or stroke.
- **Atherosclerosis** can also occur in the vessels that supply the limbs; this is called **peripheral artery disease (PAD)** and can lead to cramping or pain with activity.



Eye Damage

- Damaged blood vessels in the eye may leak fluid and cause swelling. In response, new blood vessels may begin to grow, which are often weak.
- This can cause bleeding, scarring, or increased pressure inside the eye.
- If blood sugar levels are unmanaged, you are at increased risk of vision conditions such as **diabetic retinopathy**, cataracts, glaucoma, or macular edema.



Kidney Damage

- The kidneys contain many small blood vessels that act as filters, removing waste products from the blood.
- High blood sugar can damage this filtering system, causing waste products to accumulate in the blood.
- Severe damage can lead to kidney failure or irreversible end-stage kidney disease, which may require dialysis or a kidney transplant.



Nerve Damage (neuropathy)

- High blood sugar can damage the walls of the vessels that nourish your nerves
- This can lead to tingling, numbness, burning, or pain. These sensations usually begin at the tips of the toes or fingers and gradually spread upward. Left untreated, this can lead to complete loss of sensation in the affected limbs.
- Damage to the nerves related to digestion can cause nausea, vomiting, diarrhea or constipation.
- Nerve damage in the feet increases the risk of various foot complications. Left untreated, cuts and blisters can develop serious infections, which often heal poorly. These infections may lead to amputation.

How to Improve Blood Sugar Control

Physical Activity and Exercise

- When you exercise, your muscles use more glucose, lowering the glucose levels in your blood.
- Exercise also helps the insulin in your body work better. This effect can last for several hours after exercise.
- Aim for 150 to 300 minutes of moderate to vigorous **aerobic exercise** each week and resistance training a minimum of twice per week.

Healthy Eating

- Refer to Canada's Food Guide on p.20 to ensure you are eating a balanced diet.
- Aim to include high-fibre foods such as whole grains, vegetables and fruits.
- Avoid processed foods.
- Do not skip meals; eat at regular times.

Medication

- There are a variety of medications that can manage blood sugar levels.
- Ensure that you are taking your medications as prescribed .
- Speak to your doctor, pharmacist or diabetes specialist if you have questions about your medications.



Manage Stress Effectively

- Stress impacts your body's hormone levels, which can lead to an increase in blood sugar levels.
- Learning to manage stress can help you to better manage your diabetes (refer to Stress on p.30).

Education and Support

- Attending a Diabetes Education Program can equip you with the tools and knowledge to better manage your diabetes.
- Speak to your Exercise Therapist if you would like to be referred to a Diabetes Education Program.

Know Your Numbers!

- Ask your doctor to check your fasting blood sugar and **HbA1c** values.
- **HbA1c** values indicate the average blood sugar levels over the past three months.



For those living without diabetes, general guidelines are: Fasting blood sugar: 4.0 – 5.9 mmol/L

HbA1c: 0.04 – 0.59, or 4 – 5.9%

For those living with diabetes, general guidelines are: Fasting blood sugar: 4.0 – 7.0 mmol/L

HbA1c: < 0.07 or < 7%

Prediabetes range: Fasting blood sugar: 6.0 – 6.9 mmol/L

HbA1c: 0.06 – 0.064, or 6.0 – 6.4%

Pre-diabetes occurs when blood sugar levels are higher than normal, but not high enough for a diagnosis of diabetes. Research has shown that if you take steps to manage your blood sugar levels, you can delay or prevent the development of diabetes.

Special Considerations When Exercising with Diabetes

- Know the signs and symptoms of high and low blood sugar levels.
- Wear white, polyester-blend, wool, polypropylene, or acrylic socks.
 - Avoid wearing cotton socks as they hold moisture, creating a wet layer around your foot
- Wear well-fitting athletic shoes.
- Ensure you stay hydrated.
- Be aware of timing in regards to exercise and meals; consider having a snack before exercising.
- If necessary, check your blood sugar levels before and after activity.
- After activity, inspect your feet for sores, blisters or irritation.

Tip: Shop for your shoes later in the day, as your feet often swell by then.



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Ask Yourself

Do you know what your blood sugar levels are?
What are the symptoms of low blood sugar? High blood sugar?
If diabetic, do you inspect your feet after you exercise?
If diabetic, when was the last time you attended a Diabetes Education Program?

Stress

getthehearthealthy.ca/stress-your-health

In this section you will learn:

- What stress is and how the body responds to it
- The impacts of long-term stress on your health
- Strategies to manage your stress

The Stress Response

- Stress is something that affects everyone in some form; it is how you respond to the stress that impacts your health.
- When you encounter a stressor, your body releases hormones, which trigger a “fight or flight” response. This response prepares your body to react to the perceived danger.
- Some of the physical effects of this response include increased heart rate, increased breathing rate, increased blood pressure, tunnel vision, nausea, reduced ability to concentrate, and muscle tension.

Health Impacts of Long-Term Stress



Brain

Difficulty concentrating, impaired memory, anxiety, depression, irritability, disordered sleep



Heart

Elevated heart rate and blood pressure, increased risk of heart attack and stroke, **arrhythmias**



Skin

Hair loss, brittle nails, dry skin, acne



Immune System

Decreased immune function, increased risk of becoming ill, prolonged recovery time



Digestion

Ulcers, irritable bowels, reflux, nausea, weight fluctuations, diarrhea



Reproductive System

Decreased hormone production, reduced sex drive, reduced fertility



Joints and Muscles

Inflammation, tension, reduced bone density

Stress hormones can impact your internal hunger cues, which may cause you to crave high calorie foods or to experience a loss of appetite. Long-term changes to exercise and eating habits can lead to unhealthy changes in body weight and waist circumference.

Stress Management Strategies

Regular physical activity and exercise: Each week, aim to complete 150 to 300 minutes of cardio-based exercise, and at least two days of resistance training. Exercise can help to release muscle tension and refocus your mind.

Deep breathing exercises: Movement of the diaphragm stimulates anti-stress hormone production in the brain, promoting relaxation.

Meditate: Help re-focus and re-train your mind on more positive thoughts and images.

Communicate: Talk to a friend, family member, or trained professional to help you find solutions to your stress.

Engage in social activities, hobbies or recreational activities: Setting aside time to participate in activities that you enjoy can help you cope more effectively with stress.

Prioritize sleep: Aim to get seven to nine hours of quality sleep each night. Improving your sleep hygiene can improve your immune system function, thinking patterns, and memory.

Try Belly Breathing!

- Sit or lie in a comfortable position.
- Place one hand on your belly and the other on your chest.
- Take a slow, deep breath in through your nose, feeling your belly move outward.
- Exhale slowly through your mouth, feeling your belly fall.

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Ask Yourself

What causes you stress?
What stress management strategies work best for you?
Have you tried belly breathing?

Sleep

getthehealthy.ca/sleep-your-health

In this section you will learn:

- The importance of sleep
- The effects of poor sleep on your health and wellbeing
- How to improve your sleep hygiene

- Sleep supports your physical health, brain function and emotional wellbeing
- Evidence suggests that most adults require seven to nine hours of sleep per night

Effects of Poor Sleep

Cardiovascular Disease

- Increased risk of cardiovascular disease
- Increased blood pressure

One night of poor sleep can result in elevated blood pressure levels for up to 24 hours.

Blood Sugar Levels

- Increased blood sugar levels
- Increased risk of developing diabetes, or difficulty managing existing diabetes

Mental Health

- Increased risk of developing anxiety, depression, and other mood disorders

Weight and Waist Circumference

- Increased hunger levels
- Altered food cravings
- Impacted exercise schedule

Sleep maintains a balance of the hormones that make you feel hungry (ghrelin) and full (leptin). When sleep-deprived, ghrelin levels increase, and leptin levels decrease. This leads to an increase in hunger levels.

Cognitive Function

- Impaired memory and concentration
- Reduced ability to regulate mood and emotions
- Reduced productivity

Immune System

- Decreased immune function
- Increased risk of becoming ill
- Prolonged recovery time



Sleep apnea is a condition in which your breathing is interrupted during sleep. These interruptions typically last between 10-20 seconds and can occur up to 100 times per hour! Individuals with sleep apnea may not be aware of these disruptions at the time, but often complain of fatigue, headaches, or waking with a dry mouth or sore throat.

Improving Your Sleep Hygiene

- The term “sleep hygiene” refers to behavioural and environmental recommendations that promote healthy sleep.

Physical Activity and Exercise

- Aim for 150 to 300 minutes of moderate to vigorous **aerobic exercise** each week and resistance training a minimum of twice per week

Manage Sleep Apnea

- If you have been diagnosed with sleep apnea, it is important to follow the recommendations of your doctor or sleep specialist
- This may include using a CPAP machine nightly

Reduce Screen Time

- Screen time (TV, phone, tablet) is stimulating to the brain
- Avoid screen time one to two hours prior to bedtime

Bedroom Setup

- Minimize light, noise, and clutter
- Reduce your home temperature a few degrees at night
- Ensure you are sleeping on a good mattress, with breathable bedding
- Consider including soothing colours, décor, and odours in your bedroom

Avoid Alcohol, Caffeine, and Heavy Meals Before Bed

- While alcohol may initially increase drowsiness, it may cause restlessness one to three hours after consumption, disrupting sleep quality
- Eating a heavy meal before bed can lead to stomach pain, indigestion, or acid reflux
- Avoid drinking excess fluid before bedtime, to prevent having to urinate in the night

Maintain a Regular Schedule

- Aim to wake up and go to bed at the same time every day
- A regular schedule helps your body to know when to release the hormones that assist you in waking up and falling asleep

Relaxation Techniques

- Practice relaxation techniques such as meditation or deep breathing exercises
- Movement of the diaphragm stimulates the production of anti-stress hormones

Ask Yourself

How many hours of sleep do you get per night?
Do you keep a regular sleep schedule?
What is one thing you can do this week to improve your sleep hygiene?



Alcohol and Smoking

getthehearthealthy.ca/alcohol-your-health
getthehearthealthy.ca/smoking-your-health

In this section you will learn:

- The current alcohol consumption guidelines
- How heavy alcohol consumption and smoke exposure impact your cardiovascular health
- Strategies to reduce smoke exposure

Alcohol Consumption Guidelines

- All levels of alcohol consumption are associated with some risk, so drinking less is best
- The risk of negative outcomes increases with increased consumption. If consuming more than two standard drinks per week, most individuals will have an increased risk of injury or health concerns
- Alcohol can impact the way medications work within the body. Alcohol may cause medications to become less effective, or dangerously toxic. Speak with your pharmacist or healthcare provider before consuming alcohol

What is Considered a Standard Drink?



5 ounces of wine
≤12% alcohol



12 ounces of beer
≤5% alcohol



1.5 ounces of distilled
spirits (whiskey, gin, vodka,
etc.)

Impacts of Heavy Alcohol Consumption on Cardiovascular Health

Increased Risk of Cardiovascular Disease

- Increased blood pressure
- Increased LDL cholesterol and triglyceride levels
- Reduced HDL cholesterol levels
- Increased risk of stroke, heart failure and arrhythmias

Heavy alcohol consumption weakens and thins the heart muscle, affecting its ability to pump blood efficiently.

Weight Gain and Increased Waist Circumference

- Increased waist circumference and unhealthy weight gain
- Many alcoholic beverages and their associated sweeteners and mixes, are high in calories and low in nutritional value
- Increased appetite and tendency to make poor food choices

Uncontrolled Blood Sugar Levels

- Increased risk of developing diabetes
- Impaired ability to regulate blood sugar levels; alcohol can cause serious fluctuations in blood sugar levels, depending on the type of medications you are taking

Smoking

- Smoking tobacco harms almost every organ in the body, including the heart, blood vessels, and lungs
- Smoking cannabis has similar physical health concerns as smoking tobacco
- Non-smokers who are regularly exposed to second-hand smoke increase their risk of developing cardiovascular disease by 25-30 percent
- Quitting smoking is the single most important thing you can do for your health

After one year of being smoke-free, your risk of having a heart attack is reduced by 50 percent.

Smoking Cessation Strategies



Develop an action plan: Make a list of reasons why you want to become smoke-free. What do you like about smoking? What do you not like about smoking? When/where do you typically smoke? What triggers you to smoke?

Medication: Nicotine replacement therapy (NRT) provides a safe and clean delivery of nicotine to reduce the symptoms of nicotine withdrawal. Nicotine replacement therapies come in many forms such as patches, gums, and lozenges. Prescription medications, such as varenicline (Champix) or bupropion (Zyban) can reduce symptoms of nicotine cravings and withdrawal.

Learn a new skill or behaviour: Try new activities to replace smoking.

Create smoke-free spaces: Make certain spaces, such as your home or car, smoke-free.

Be prepared for withdrawals: It is normal to experience withdrawal symptoms and cravings. Learning to live smoke-free takes practice. If you have a slip, think about what you could do differently. Remind your friends, family and co-workers that you are trying to quit.

Counselling: Speak with a professional to get information and support to improve your long-term success of becoming smoke-free. Speak with your Exercise Therapist if you would like access to smoking cessation services and resources.

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Notes:

Resistance Training

gethearthealthy.ca/resistance-training-your-health

In this section you will learn:

- What resistance training is
- The benefits of resistance training
- How to safely and effectively incorporate resistance training into your exercise routine

Resistance Training:

- Can also be referred to as weight training or strength training
- Is a form of exercise that involves working against a force that resists your movement
- Can be completed using a variety of equipment options including dumbbells, exercise bands, or exercise machines. Resistance training can also be completed with no equipment, using your own body weight as resistance.



Benefits of Resistance Training

Cardiovascular system: Resistance training, when combined with cardio-based exercise, has been shown to improve overall cardiovascular health. Studies have shown significant reductions in resting blood pressure after two months of regular resistance training. Resistance training can also improve **HDL** cholesterol levels and lower **LDL** cholesterol and triglycerides levels.

Muscle mass: Resistance training can increase muscle mass, strength and endurance, which can protect joints and bones from injury.

Adults who do not perform regular resistance training lose up to 5lbs of muscle mass every decade before the age of 50, and up to 10lbs every decade after the age of 50.

Bone health: Resistance training increases bone density and overall bone health, which can minimize the risk of fractures due to osteoporosis.

Blood sugar levels: Resistance training can reduce the risk of developing diabetes. For those living with type 2 diabetes, resistance training improves the muscle's ability to use blood sugar as a source of energy, which improves blood sugar control.

Weight and waist circumference: Resistance training increases lean muscle mass, which stimulates metabolism. This causes the body to burn more calories at rest, which can reduce abdominal fat.

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Getting Started

Complete a warm-up and a cool-down before and after resistance training:

- Duration of three to five minutes
- RPE should be 11, or “fairly light”

Select the proper weight:

- You should be able to complete eight to 10 repetitions of the exercise, with correct form
- RPE should be 15, or “hard”
- As you get stronger, you will need to adjust the resistance you are working against; continue to ask yourself “how hard does this feel?”, or “what is my RPE?”

Select exercises to include in your resistance training session:

- Select one exercise from each of the major muscle groups (legs, chest/shoulders, back, arms, core) to ensure a full body workout
- Refer to the resistance training package on our program website for exercise options and instructions
- Complete eight to 10 repetitions of each exercise
- Complete two sets of all exercises

Keep a regular routine:

- Resistance training should be completed at least two days per week
- Incorporate rest days between resistance training sessions to allow your muscles to rest and repair
- If you enjoy completing resistance training daily, alternate between lower body exercises one day, and upper body exercises the next

Rating of Perceived Exertion (RPE) Scale

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	

Repetition

How many times you do an exercise one after the other (e.g., 10 bicep curls = 10 repetitions)

Set

How many times you do a group of repetitions (e.g., 1 set of 10 repetitions)

Our program website contains a variety of resistance training exercise videos!

Safety Considerations

- Do not perform any exercise that causes you pain or discomfort
- Breathe normally as you perform these exercises; do not hold your breath
- Speak to your Exercise Therapist before performing any advanced exercises

Ask Yourself

How many days per week are you completing resistance training?
What is your RPE during these sessions?
Are you including exercises from each of the 5 major muscle groups?

Hot Weather and Exercise

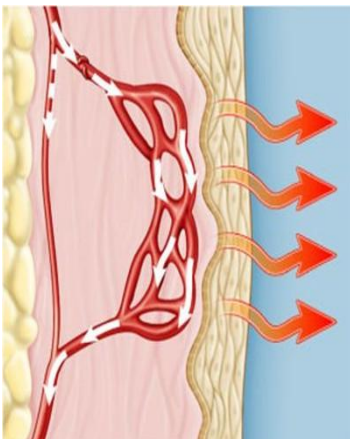
gettheearthhealthy.ca/hot-weather-exercise

In this section you will learn:

- The effects of hot weather on the body
 - Heat safety guidelines
 - Precautions to take when exercising in the heat
- If you plan to complete your exercise outdoors, or engage in activities such as gardening or yardwork, it is important to understand how doing so in higher temperatures can impact your heart.

Effects of Hot Weather on the Body

- The body has temperature-regulating mechanisms to maintain a stable internal body temperature of approximately 37°C.
- During exercise, muscle activity increases the internal body temperature. In response, the following cooling mechanisms occur:
 - **Blood vessels:** Blood vessels near the surface of the skin widen (**dilate**). This redirects blood away from the core, towards the surface of the skin, allowing heat to be transferred to the surrounding environment.
 - **Sweat glands:** Sweat glands are activated to produce sweat on the skin's surface, where it evaporates to aid in reducing the internal body temperature.
 - Sweat is made up of water and salts. It is important to ensure you are replenishing this lost fluid by staying hydrated.
 - If too much water is lost via sweating and is not replenished, blood volume decreases, which reduces blood pressure. In response, heart rate increases.



When the environment is humid, water particles in the air prevent sweat from evaporating off the skin's surface. Therefore, the body is less effective at temperature regulation through this mechanism in humid conditions.

- Exercising in hot weather places added risk on individuals living with cardiovascular disease, as the demand on the heart is increased. You may experience:
 - Shortness of breath
 - Excessive fatigue or dizziness
 - **Angina** (chest pain)
 - **Arrhythmias** (irregular heart rates)
 - Dehydration, heat exhaustion, or heat stroke
- During exercise, it is important that you monitor yourself for symptoms. Always inform your doctor of any new or worsening symptoms. Call 911 if you experience any new or worsening symptoms that are not resolved quickly

Heat Safety Guidelines

- If considering exercising in warmer temperatures, refer to the Heat Safety Index and Air Quality Health Index to determine if it is safe to do so, or if precautions should be taken
- These values are included daily in the local weather report

Reminder: These tools should be used as a guide and should not replace self-monitoring and individual needs; everyone tolerates heat differently!

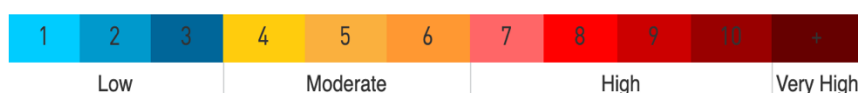
Heat Safety Index

- The Heat Safety Index refers to the “feels like” temperature, which includes humidity

“Feels-Like” Temperature	Exercise Recommendations
≤ 28°C	Safe to follow regular exercise prescription when exercising outdoors
29-38°C	Recommended to reduce exercise intensity/duration when exercising outdoors
39-45°C	Recommended to avoid exercising outdoors
≥ 45°C	Recommended to limit any outdoor exposure

Air Quality Health Index (AQHI)

- The AQHI is a scale from 1-10+; a higher AQHI indicates poorer air quality and greater health concern
- Poor air quality can impair exercise tolerance and increase the risk of experiencing symptoms. Individuals living with cardiovascular or lung disease may have increased sensitivity to poor air quality



Precautions for Exercising in the Heat

- **Hydration:** If your healthcare providers have not advised you to limit fluid intake, it is important to drink extra water (not caffeine or alcohol) when temperatures are elevated.
- **Apparel:** Wear light, breathable clothing, and a hat. Wear supportive training shoes; avoid exercising in sandals or flip flops.
- **UV protection:** Wear sunscreen. This is especially important over an incision scar
- **Time of day:** Avoid exercising during peak heat hours (10 a.m. – 3 p.m). Aim to exercise in the early morning or late evening.
- **Exercise route:** Exercise in shaded areas such as conservation areas, trails and parks that have good tree coverage.
- **Indoor alternatives:** Exercise in temperature-controlled environments such as indoor walking tracks, malls, community centres, or fitness facilities. Home exercise videos or use of indoor exercise equipment are great at-home options.

Notes:

Cold Weather and Exercise

gettheearthhealthy.ca/cold-weather-exercise

In this section you will learn:

- The effects of cold weather on the body
 - Precautions to take when exercising in the cold
 - Snow shovelling safety
- If you plan to complete your exercise outdoors, or engage in activities such as snow shovelling, it is important to understand how doing so in colder temperatures can impact your heart.

Effects of Cold Weather on the Body

- The body has temperature-regulating mechanisms to maintain a stable internal body temperature of approximately 37°C.
- In response to cold temperatures, blood vessels near the surface of the skin narrow (**constrict**). This redirects blood away from the surface of the skin, towards the core.
- Narrowing of the blood vessels increases blood pressure, requiring the heart to work harder.
- Exercising in cold weather places added risk on individuals living with cardiovascular disease, as the demand on the heart is increased. You may experience:
 - Shortness of breath
 - Excessive fatigue or dizziness
 - **Angina** (chest pain)
 - **Arrhythmias** (irregular heart rates)
- During exercise, it is important that you monitor yourself for symptoms. Always inform your doctor of any new or worsening symptoms. Call 911 if you experience any new or worsening symptoms that are not resolved quickly.

Precautions for Exercising in the Cold

- Perform a warm-up and cool-down with each exercise session
- Check the weather forecast for the “feels like” temperature. It is recommended to avoid outdoor exercise if the “feels like” temperature is -10°C or cooler.



Cloud coverage can reduce the temperature up to 7°C.

- It may take your body time to adjust to cooler temperatures. Reduce your exercise intensity or distance until you feel your body has adjusted to the temperature.
- **Indoor alternatives:** Exercise in temperature-controlled indoor environments such as indoor walking tracks, malls, community centres, or fitness facilities. Home exercise videos or use of indoor exercise equipment are great at-home options.

Cold Weather Attire

- **Head:** To prevent heat loss, wear a hat, mitts, and scarf/neck warmer.
- **Footwear:** To keep your feet dry and warm, avoid cotton socks. Avoid exercising in heavy boots, and consider adding grippers or spikes to your shoes if walking on icy surfaces.
- **Night safety:** Wear reflective materials and have a light on your outermost layer.
- Dress in layers to maintain core temperature and prevent heat loss:
 - Layer 1 (closest to skin): Moisture-wicking. This layer transports moisture off your skin towards the surface of the fabric, where it can evaporate. Fabrics such as polyester or nylon.
 - Layer 2: Insulation. This layer traps body heat to keep you warm. Fabrics such as cotton, wool, or fleece.
 - Layer 3 (outer layer): Wind/water resistance. This layer protects you from the wind and rain/snow. Look for items labelled as wind or water resistant.

Breathing in cold air may also trigger heart-related symptoms. Wearing a face covering such as a scarf or balaclava can help to warm the air you breathe in.

Snow Shovelling Safety

- Snow shovelling is a demanding physical activity. Paired with the additional strain on the heart due to colder temperatures, individuals living with cardiovascular disease are at increased risk for experiencing heart-related symptoms or having a heart event while shovelling.
- Most townships or cities offer free snow removal services for individuals living with health conditions. Call or visit your city's website for more information.
- If unable to arrange for someone else to clear your snow, consider these safety tips:



- Wear appropriate attire, as discussed above
- Complete a warm-up prior to snow shovelling
- Push the snow with a scoop rather than lifting it with a shovel. If you must lift the snow, lift small amounts
- Incorporate rest breaks
- Aim to clear snow more frequently, rather than allowing it to build up; the longer that snow stays on the ground, the wetter and heavier it becomes
- If you have been prescribed **nitroglycerin**, carry it with you

Ask Yourself

What indoor exercise alternatives are available to you?
Have you arranged for snow removal services or have someone who can assist you with snow removal?

Glossary

Aerobic exercise: Aerobic means “with oxygen”. Aerobic exercise refers to activities where you are maintaining an increased heart rate for a continuous period of time. Examples include walking, jogging, swimming, and cycling.

Angina: Chest pain/discomfort due to the heart not receiving enough oxygen-rich blood. It may present as pain, discomfort, squeezing, pressure, heaviness, or burning in the chest, jaw, arms, back, or neck. Symptoms may also include weakness, nausea, cramping, or shortness of breath.

Arrhythmia: Irregular or abnormal heartbeat. Common types of arrhythmias include tachycardia (too fast), bradycardia (too slow), and atrial fibrillation (disorganized/rapid).

Atherosclerosis: Narrowing and hardening of arteries due to plaque build-up.

Constrict: To become narrower.

Coronary artery disease (CAD): Plaque build-up in the arteries that supply the heart (coronary arteries), impacting blood flow to the heart.

Diabetic retinopathy: Damage to the blood vessels of the eye due to unmanaged diabetes.

Diastolic: A measure of the pressure in the vessels when the heart relaxes, between beats. This is the bottom number in your blood pressure reading (systolic/diastolic).

Dilate: To become wider.

HbA1c: Values indicate the average blood sugar levels over the past 3 months.

High density lipoprotein (HDL): HDL is known as “good” cholesterol, as it carries LDL back to the liver to be recycled or removed from the body.

Hypertension: High blood pressure values.

Hyperglycemia: High blood sugar values.

Hypoglycemia: Low blood sugar values.

Low density lipoprotein (LDL): LDL is known as “bad” cholesterol, as it can build up in your arteries. This can cause the arteries to harden and narrow, reducing blood flow.

Nitroglycerin: A prescribed medication used to treat chest pain (angina) due to the heart not receiving enough blood. Nitroglycerin widens (dilates) the blood vessels, increasing the amount of oxygen-rich blood reaching the heart. Nitroglycerin often comes in the form of a spray or tablet to be administered under the tongue.

Peripheral artery disease (PAD): A condition where the blood vessels that supply the limbs are narrowed due to plaque build-up (atherosclerosis), reducing blood flow. PAD most commonly affects blood vessels in the legs. Common symptoms of PAD include muscle cramping, pain, or fatigue with activity.

Systolic: A measure of the pressure in the vessels when the heart contracts, pumping blood through the arteries. This is the top number in your blood pressure reading (systolic/diastolic).

Exercise Diary

Tracking your exercise is an important component of the program. Submitting your weekly exercise information to your Exercise Therapist will allow them to provide you with personalized feedback and assist you in achieving your fitness goals. Exercise can be tracked using either the exercise diary or the Cardiologica app. If you are interested in using the Cardiologica app, please inform your Exercise Therapist.

[Click here to access the exercise diary](#)

How to use the exercise diary:

- Complete one exercise diary each week
 - Printable: Print the exercise diary. Complete one diary per week. Send scan/photo of diary to your Exercise Therapist each week, or have it available to discuss with them.
 - Fillable online: Save the exercise diary to your computer. Complete the diary online and save. Send to your Exercise Therapist each week.
- Your Exercise Therapist will review this information and provide you with feedback

How to complete the exercise diary:

Central East REGIONAL CARDIOVASCULAR REHAB

Patient's Name: _____

Exercise Therapist: _____
Phone: _____ ext. _____ • Fax: _____
Email: _____

Exercise Prescription: Always warm up and cool down.

This week: _____, _____ days and resistance training (RT) _____ days

RPE Scale (Rating of Perceived Exertion):

6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Effortless	Very Light			Fairly Light		Somewhat Hard		Hard		Very Hard				Maximum Effort

Date	Cardio-Based Exercise (i.e., walking, cycling)	Distance	Minutes	RPE	Resistance Training		Comments (symptoms, exercise heart rate, medical visits, medication changes etc.)
					# of Sets Completed	RPE	

Total cardio-based exercise minutes this week = _____ minutes

RESISTANCE TRAINING EXAMPLE:
For more information, speak to your Exercise Therapist, refer to our resistance training package, or visit our website: www.GetHeartHealthy.ca

MUSCLE GROUP: LEGS MUSCLE GROUP: BACK MUSCLE GROUP: CHEST MUSCLE GROUP: ARMS MUSCLE GROUP: CORE

Your Exercise Therapist will provide you with this information

Rate the difficulty of your cardio exercise using the RPE scale above

Rate the difficulty of your resistance training using the RPE scale above

Add your minutes of cardio-based exercise for the week

Central East REGIONAL CARDIOVASCULAR REHAB

Exercise Therapist: _____
Phone: _____ ext. _____ • Fax: _____
Email: _____

Health Vision: A health vision statement helps you imagine what is your "best-self". Ask yourself, what could I be doing consistently in three months from today? How would I like to feel? How is my future self different than my current self?

My health vision is: _____

S.M.A.R.T. Goals: The acronym S.M.A.R.T. is a tool that can be used to guide goal setting. Fill out the chart below with one or two goals to work towards this week.

S Specific	M Measurable	A Achievable	R Relevant	T Timely
Be specific about what you want to accomplish. What do you want to achieve? Who will be involved? Where will you achieve it?	How will you track your progress and determine when you have reached your goal?	Will you be able to safely and realistically achieve your goal?	Make sure that the goal matters to you! Why are you setting this goal?	When do you want to achieve this goal by?

How important is achieving this goal to you?

0 1 2 3 4 5 6 7 8 9 10
Not very important Important

On a scale of 0 to 10 the importance of the goal you are working on should be greater than 7.

How confident are you in achieving this goal?

0 1 2 3 4 5 6 7 8 9 10
Not very important Important

On a scale of 0 to 10 your confidence in achieving the goal you are working on should be greater than 7.

Reflect on your health vision weekly. Your vision may not change weekly, but reflecting on it and writing it down helps to keep it front of mind

Write in a goal that you are working towards this week. This should reflect your health vision. Again, this may not change weekly.

Example of completed exercise diary:

Central East REGIONAL CARDIOVASCULAR REHAB

Patient's Name: JANE DOE

Exercise Therapist: _____
Phone: _____ ext. _____ • Fax: _____
Email: _____

Exercise Prescription: Always warm up and cool down.

This week: WALK/BIKE/SWIM 20-30 MINUTES, 5 days and resistance training (RT) 2 days

RPE Scale (Rating of Perceived Exertion):

6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Effortless		Very Light			Fairly Light		Somewhat Hard		Hard		Very Hard			Maximum Effort

Date	Cardio-Based Exercise (i.e., walking, cycling)	Distance	Minutes	RPE	Resistance Training		Comments (symptoms, exercise heart rate, medical visits, medication changes etc.)
					# of Sets Completed	RPE	
JAN 1	WALK	2KM	20	13			
JAN 2	BIKE	5KM	20	14			HILLY ROUTE
JAN 3	BIKE	6KM	25	13	2	16	
JAN 4	WALK	2KM	30	12			SLIGHT LEFT KNEE PAIN
JAN 6					2	15	
JAN 7	SWIM	10LAPS	30	13			

Total cardio-based exercise minutes this week = 125 minutes

RESISTANCE TRAINING EXAMPLE:

For more information, speak to your Exercise Therapist, refer to our resistance training package, or visit our website: www.GetHeartHealthy.ca



Central East REGIONAL CARDIOVASCULAR REHAB

Exercise Therapist: _____
Phone: _____ ext. _____ • Fax: _____
Email: _____

Health Vision: A health vision statement helps you imagine what is your "best-self". Ask yourself, what could I be doing consistently in three months from today? How would I like to feel? How is my future self different than my current self?



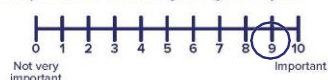
My health vision is:

I WOULD LIKE TO BE ABLE TO COMFORTABLY WALK AROUND THE BLOCK,
WITHOUT FEELING TIRED AND SHORT OF BREATH

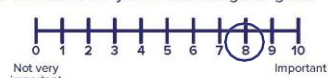
S.M.A.R.T. Goals: The acronym S.M.A.R.T. is a tool that can be used to guide goal setting. Fill out the chart below with one or two goals to work towards this week.

S Specific	Be specific about what you want to accomplish. What do you want to achieve? Who will be involved? Where will you achieve it? <u>I WILL WALK AROUND THE BLOCK 4 DAYS THIS WEEK, TAKING ONE REST BREAK HALF WAY</u>
M Measurable	How will you track your progress and determine when you have reached your goal? <u>I WILL USE THE EXERCISE DIARY TO TRACK THE NUMBER OF DAYS AND DISTANCE I WALK</u>
A Achievable	Will you be able to safely and realistically achieve your goal? <u>YES</u>
R Relevant	Make sure that the goal matters to you! Why are you setting this goal? <u>I WANT TO BE ABLE TO PLAY WITH MY GRANDKIDS WITHOUT FEELING TIRED</u>
T Timely	When do you want to achieve this goal by? <u>SUNDAY</u>

How important is achieving this goal to you?



How confident are you in achieving this goal?



Congratulations!

Congratulations on completing the Central East Regional Cardiovascular Rehabilitation Program! Hopefully you have enjoyed your time in the program and feel confident that you will be able to apply all that you have learned to continue to lead a heart healthy lifestyle. You are encouraged to continue to use this workbook as a resource and to access the program website (getthehearthealthy.ca). Your Exercise Therapist will be contacting you for your final appointment.

If you have any questions, please contact our team at 1-855-448-5471 or 416-281-7022.



- Perform a warm-up and cool-down with each exercise session.
- Always inform your doctor of any new or worsening symptoms. Call 911 if you experience any new or worsening symptoms that are not resolved quickly.
- Have an indoor exercise alternative for when the weather is poor
- Monitor your exercise intensity using the Rating of Perceived Exertion (RPE) scale.
 - Cardio-based exercise should feel “somewhat hard” (RPE 13)
 - Resistance training exercise should feel “hard” (RPE 15)
- Regularly review your exercise prescription, making adjustments as necessary.

General Exercise Guidelines



Aerobic Exercise

Frequency	5 days/week
Intensity	RPE 12-14, or “somewhat hard”
Time	150-300 mins/week
Type	Walking, cycling, elliptical, swimming, etc.



Balance Training (if over 65)



Resistance Training

Frequency	2-4 days/week
Intensity	RPE 15-16, or “hard”
Time	15-20 mins/session
Type	Dumbbells, exercise bands, machines, household items, bodyweight, etc.