

KNOW YOUR RISK FACTORS

There are many factors that put an individual at risk for heart disease. Knowing what your risks are, which risk factors you can change and how to monitor them, is the first step on the road to heart health.



LEARNING OBJECTIVES:

This chapter will help you to understand:

- The major risk factors for heart disease and why each is a risk factor
- What the optimal targets are for each risk factor
- Your personal risk profile so that you can take steps to reduce your risk.

KNOW YOUR RISK FACTORS

Knowing your risk factors is the first step on the road to building a heart healthy future. By knowing what your specific risk factors are, you can play an active role in making lifestyle changes that reduce your risk, help prevent future health problems and enable you to better manage your current condition.

We are all predisposed to heart disease at an early age. Genetics play a role in increasing your risk and if you have a family history of heart disease, it is important for you to prevent problems through lifestyle changes. Age is also a risk factor, with men over 45 years of age and women over 55 years of age at higher risk.

While age and gender – factors that we have little control over – do increase risk for some people, lifestyle factors have the biggest impact on heart health. How do we know this? While genetics have NOT changed over the past 50 years, we have seen an increase in heart disease, largely due to an increase in inactive lifestyles and an increase in excess weight and obesity in the general population. These are the factors that drive heart disease for most people.

Risk factors for coronary artery disease fall into two categories:

1. NON-MODIFIABLE RISK FACTORS

These are risk factors that you have no control over, including

- Age: with increasing age there is an increased risk of developing heart disease
- Gender: Men are more likely to develop heart disease at an earlier age than women. However, after menopause, a woman's risk of developing heart disease equals that of men.
- Family history of heart disease: If you have a family member that developed heart disease, especially at a young age (i.e. under 60 years of age), you have a genetic tendency to develop heart disease.

2. MODIFIABLE RISK FACTORS:

These are risk factors that you do have some control over through lifestyle changes, including:

- High blood pressure (hypertension)
- High blood cholesterol

- Diabetes
- Being overweight
- Physical Inactivity
- Stress
- Smoking

How these risk factors contribute to heart disease is explained in the rest of this chapter. Knowing what your personal risk factors for heart disease are is an important first step on the road to recovery.

The bottom line is that genes are not destiny and you can take a large amount of control over your heart health even though we are all predisposed to heart disease. As you read further through this manual, you will learn more about how lifestyle changes can have a positive influence on a number of different risk factors. Even one lifestyle change alone can help improve one or more of your risk factors, which in turn helps to reduce your risk of heart disease.

HIGH BLOOD PRESSURE (HYPERTENSION)

Blood pressure refers to the amount of pressure exerted by the blood against the walls of the arteries. The top number is your systolic blood pressure – the pressure at the moment your heart pumps blood into your arteries. The bottom number is your diastolic blood pressure – the pressure when your heart is relaxed (i.e. in between heartbeats).

Normal blood pressure is below 120/80 mmHg. Hypertension occurs when blood pressure is consistently more than 140/90 mmHg (over 130/80 mmHg if you have diabetes).

If your blood pressure is between 130/85 mmHg and 139/89 mmHg ("high normal blood pressure), regular blood pressure monitoring is important. More than half of people with 'high normal' blood pressure develop hypertension within four years unless lifestyle and health behavior changes are made.

If the doctor suspects that you may have high blood pressure or high normal blood pressure, they may order a test called an ABP (ambulatory blood pressure) – a 24-hour blood pressure monitor.

Over time, high blood pressure can weaken and injure the walls of the arteries causing scarring that promotes the build-up of plaque. The plaque can narrow and eventually block the artery. High blood pressure also makes the heart work harder than it needs to causing straining and eventual weakening of the heart muscle.

	SYSTOLIC BLOOD PRESSURE	DIASTOLIC BLOOD PRESSURE
Target Optimal Range	Less than 120 mmHg	Less than 80 mmHg
High Normal Range	130 to 139 mmHg	85 to 89 mmHg
Range for Most Adults	Less than 140 mmHg	Less than 90 mmHg
Target Range for People with Diabetes or Chronic Kidney Disease	Less than 130 mmHg	Less than 80 mmHg

Source: 2008-2009 Blood Pressure Canada, Heart and Stroke Foundation of Canada, Canadian Hypertension Education Program (CHEP), Canadian Hypertension Society

Know your blood pressure and have it checked regularly.

HIGH BLOOD CHOLESTEROL

Cholesterol is one of the fats in your blood. Your body makes cholesterol and you also get it from the food that you eat. Your body needs cholesterol to make cell membranes, vitamin D and hormones. There are two main types of cholesterol:

1. **Low-Density Lipoprotein (LDL) Cholesterol** is known as bad cholesterol. LDL cholesterol in high levels in the blood promotes the build-up of plaque in the artery walls.
2. **High-Density Lipoprotein (HDL) Cholesterol** is known as good cholesterol. HDL cholesterol helps carry LDL-cholesterol away from the artery walls.

Total Cholesterol (TC) is the total amount of cholesterol in your blood. This includes LDL, HDL and a portion of the triglycerides.

Total Cholesterol/HDL Cholesterol Ratio shows how high your HDL cholesterol is relative to your overall cholesterol levels (i.e. how much cholesterol is 'bad' versus 'good'). The lower your TC/HDL ratio the more 'good' cholesterol you have.

Triglycerides are not a type of cholesterol, but a type of fat found in your blood. When you eat, your body uses the calories it needs for quick energy. Any extra calories are turned into triglycerides and stored in fat cells to be used later. If you regularly eat more calories than you burn through activity, you may have high triglycerides. High triglycerides are linked to heart disease in some people and may be a result of other diseases, such as untreated diabetes.

Cholesterol becomes a health concern if your levels of total cholesterol and LDL (bad) cholesterol are too high and/or your levels of HDL (good) cholesterol are too low. This can lead to a build-up of plaque in the artery wall, which can narrow and eventually block the artery.

CHOLESTEROL TARGETS – WITH KNOWN CARDIOVASCULAR DISEASE (CACR 2009 Guidelines)	
Total Cholesterol (TC)	<4.0
Triglycerides (TRIG)	<2.0
High Density Lipoproteins (HDL)	>1.0
Low Density Lipoproteins (LDL)	<2.0
TC/HDL Ratio	<4.0
The lower the LDL and the higher the HDL the better	

Know your blood cholesterol levels and have them checked regularly.

DIABETES

Our bodies need energy to work, think and play. To get the energy it needs, the body breaks down sugars and starches from food (bread, potatoes, rice, pasta, milk, fruit and some vegetables) and turns it into glucose (sugar).

After a meal or snack, glucose enters your bloodstream where it travels to cells throughout the body to be used for energy. A hormone called insulin takes the glucose from the blood into the cells. If there is not enough insulin or if the insulin is not working well, glucose can build up in the blood stream and can lead to diabetes.

Consistently high blood glucose levels in the blood causes it to become sticky, making it more likely to clump together and cause blood clots, especially if plaque and/or stents are present in an artery. These high blood glucose levels also weaken and injure the artery wall, which can lead to a build-up of plaque. This plaque build-up can narrow and eventually block the artery, damaging blood vessels and nerves, and lead to serious health conditions such as heart disease, stroke, kidney problems, blindness, and amputations.

Diabetes is the leading cause of cardiovascular disease. Having diabetes doubles the risk of heart disease in men and triples the risk in women. There are different types of diabetes:

- Type 1 Diabetes:
 - Usually diagnosed before the age of 30, most often in childhood or teen years
 - It occurs when the pancreas does not produce insulin
 - The cause of Type 1 diabetes remains unknown
- Type 2 Diabetes:
 - Usually develops in adulthood
 - It occurs when the pancreas does not produce enough insulin or when the body does not properly use the insulin that it makes
- Pre-diabetes:
 - Refers to blood glucose levels that are higher than normal, but not yet high enough to be diagnosed as Type 2 diabetes.
 - Although not everyone with pre-diabetes will develop Type 2 diabetes, many people will.

It is important to know if you have pre-diabetes, as research has shown that some long-term complications associated with diabetes – such as heart disease and nerve damage – may begin during pre-diabetes.

In Canada, every one in three people has diabetes or pre-diabetes yet an estimated 1.5 million do not know it. The answers to a few simple questions below may provide a clue as to whether or not you may be at risk:

	YES	NO	DO NOT KNOW
I have a parent, brother or sister with diabetes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am of Aboriginal, Hispanic, South Asian, Asian or African descent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have been told that I have pre-diabetes (impaired glucose tolerance or impaired fasting glucose)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have high blood pressure or am being treated for high blood pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have high cholesterol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am overweight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you answered 'yes' or 'do not know' to any of the above statements, you may be at risk for diabetes. Talk to your doctor or healthcare team about being tested. There are a number of blood tests used to monitor blood glucose levels, including, hemoglobin A1C and oral glucose tolerance test (OGTT).

The Canadian Diabetes Association recommends testing at least every 3 years if you are 40 years of age or older **OR** you are at risk for Type 2 diabetes.

If you have diabetes, there are steps you can take to protect your blood vessels and reduce your risk of heart attack and stroke. Even small improvements in blood glucose can greatly reduce your risk. Talk to your healthcare team for more information on diabetes and pre-diabetes.

Know your blood glucose levels and have them checked regularly.

WEIGHT

Weight is one of the risk factors for heart disease. Carrying excess weight, especially around your waist, is associated with an increased risk of health problems, including:

- High cholesterol and triglyceride levels in the blood;
- High blood pressure;
- Type 2 diabetes

BODY MASS INDEX (BMI)

BMI is a measure of your body weight relative to your height and is used for adults between the ages of 18 through 65 to classify weight and screen for potential health risks. It is calculated by dividing your weight in kilograms by your height in meters squared.

$$\text{BMI} = \text{weight}(\text{kg}) / \text{height}(\text{m})^2$$

CANADIAN WEIGHT CLASSIFICATION BMI	
Underweight	Less than 18.5
Normal weight	18.5 to 24.9
Overweight	25 to 29.9
Obese	30 and over

A weight that is above the 'normal weight' range is associated with an increased risk for heart disease.

WAIST CIRCUMFERENCE (WC)

Waist circumference is one of the methods used to measure the amount of fat an individual is carrying in their abdominal region.

A waist circumference greater than 102cm (40 inches) for men or 88cm (35 inches) for women is associated with an increased risk for heart disease.

WEIGHT FOR HEART HEALTH

If your numbers for BMI or waist circumference fall into categories that place you at higher risk, you may be considering options for losing weight. You do not need to achieve a 'normal' BMI in order to see health benefits. Among people who are overweight or obese, weight loss of 5-10% of body weight has been associated with improved cardiovascular outcomes such as lowered blood cholesterol and blood pressure.

It's important to note that while both BMI and waist circumference are used as a screening tool for health risk their numbers alone are not representative of individual health and should not be used for calculating individual weight loss goals. If your BMI and/or waist circumference place you in a higher risk group, refer to the 'Weight for Heart Health' section for information on health behaviours that can help.

However, weight loss is challenging, multifactorial, and much more complicated than calories in versus calories out. Additionally, it's well established that weight regain after loss is common. On average, participants of cardiac rehab do not see significant weight loss. However, there is significant improvement in blood cholesterol, blood pressure, aerobic capacity and risk for mortality. Therefore, an approach that focuses on health behavior change rather than weight as an outcome is more favourable for long-term health.

The *Eat Well for Your Heart* and *Be Active* chapters go into more detail on how you can make health behavior changes around healthy eating and physical activity. For some individuals, persistent feelings of stress and sleep problems also play a role in weight issues. The *Manage Stress and Sleep Well* chapter provides practical advice to manage stress and improve sleep habits.

Adopting healthy behaviours such as regular physical activity, healthy diet patterns, managing stress, and achieving healthy sleep patterns can help you achieve your long-term health goals.

PHYSICAL INACTIVITY

People who are not physically active are at a higher risk for health complications. A lack of regular physical activity makes your heart and other muscles inefficient. Muscles that are not active require more oxygen than those that are active. This inefficiency can make the heart work harder than it needs to and can lead to an increased heart rate and blood pressure.

Physical inactivity is not only a risk factor on its own – it can also increase the risks of the other modifiable risk factors, including:

- High blood pressure
- High cholesterol levels
- Diabetes
- Weight gain
- Smoking
- Stress

The less time spent sitting, the better. Physical activity is anything that gets your body moving and burns calories, such as walking, golfing or gardening. Physical activity may promote the development of small blood vessels called collateral vessels. When the main coronary arteries are narrowed or blocked due to the build-up of plaque and blood clots, these collateral vessels provide an alternate route to help supply blood to the area of the heart muscle that is threatened from a heart attack.

While any amount of physical activity has health benefits, aim to be active most days and try to accumulate 150 minutes of moderate-intensity physical activity each week in periods of 10 minutes or more. Check out the *Be Active* chapter later in this manual for more information and tips to get you started.

Plan to be active every day.

***Aim for 150 minutes of moderate physical activity each week
or 10,000 steps each day.***

STRESS

Stress is a normal reaction to the demands in life. When you are faced with a stressful situation, your body reacts by releasing a hormone called adrenaline. Adrenaline makes your breathing more rapid, speeds up your heart rate, causes your blood pressure to rise, and increases glucose levels in the blood. These physical reactions prepare you to deal with the stressful situation by confronting it or by running away from it – also known as the "fight or flight" response.

When your body is in this stress-prepared state for a prolonged period or it becomes a part of your daily life, stress can have a negative impact on your heart. The sudden increase in adrenaline can help a person cope in the short term, but if prolonged over time, these high adrenaline levels (and the increased heart rate, blood pressure and blood glucose levels that accompanies it) can put you at risk for hypertension or diabetes.

Did you know that anger is the most commonly reported 'trigger' for a heart attack?

People who experience high stress levels, anxiety or depression may also make lifestyle choices that increase their risk of high blood cholesterol and increased blood pressure, such as avoiding exercise, overeating, eating unhealthy foods or smoking.

Stress is a part of all our lives, but it may take on a larger role when a person is faced with coping with a chronic illness like heart disease. Adjusting to a new routine of medications, managing financial obligations during your recovery, and making lifestyle changes to increase your activity level and change your diet may add to your everyday concerns and worries and impact your overall level of stress. It is how you respond to stress that will determine its impact on your health and wellness.

Stress can display itself in many forms, including:

- Sadness
- Anxiety/worry
- Frustration
- Anger
- Isolation
- Lack of energy
- Feel tired all the time
- Depression
- Shock/denial
- Tearfulness
- Poor appetite / overeating
- Difficulty falling asleep

More information on how to identify your stressors and effectively manage them can be found in Chapter 7.

SMOKING

The more you smoke, the more likely you are to have a heart attack. Smoking harms almost every organ in the body, including your heart and blood vessels, by:

- Reducing the amount of oxygen in the bloodstream so that angina can occur more easily
- Increasing heart rate and blood pressure making the heart work harder
- Decreasing 'good' HDL cholesterol levels, therefore increasing 'bad' LDL cholesterol levels
- Making your blood stickier which can cause it to clump together to form clots.
- Weakening the artery wall which leads to plaque build up that can narrow and eventually block the artery.

Smokers who have a heart attack are less likely to survive than non-smokers who have had a heart attack.

Quitting smoking is one of the most important things you can do for your heart health. It is also one of the hardest. Not only is the nicotine in cigarettes highly addictive, for some people, smoking can be a social activity too, a way to manage stress or a way to keep weight down. That is why it takes a person an average of 7 to 9 attempts before quitting for good.

For most people trying to quit, the first 72 hours are the most difficult. But within the first few days of quitting, your chances of a heart attack are reduced, your sense of smell and taste improve. Quitting can reverse many of the negative effects of smoking on the heart.

TIME AFTER QUITTING	BENEFIT
48 hours	Your chances of having a heart attack start to go down and your sense of smell and taste begin to improve
3 days	Your lung capacity increases and breathing becomes easier
2 weeks – 3 months	Your blood circulation improves, and lung function increases 30%
6 months	Coughing, sinus congestion and fatigue improve
10 years	The risk of dying from lung cancer is cut in half
15 years	The risk of dying from a heart attack is equal to a person who never smoked

There is no one-way or 'right' way to quit smoking but there are many quit options available to help you succeed, including nicotine replacement therapy (NRT), self-help books and group support programs.

Your healthcare team and Alberta Health Services are committed to helping you quit when you are ready. A variety of services and quit options are available for those thinking about quitting or ready to quit. Talk to a member of your healthcare team or check out the *Resources* chapter at the end of this manual for more information on the quit options available in Alberta to help you quit.

***Make quitting a priority.
There are a number of resources available to help you.***

RISK FACTOR PROFILE

Now that you know more about the seven modifiable risk factors and how they affect your heart, it is time to give you some target values for each risk factor. Building a healthy future means reducing your risk factors for heart disease through medications and lifestyle changes, which will be discussed in the next half of this manual. Knowing your numbers is an important step towards healthy lifestyle change.

RISK FACTOR	TARGET VALUES (> means greater than and < means less than)
Diabetes	Hgb A1C <7%
Smoking	Abstinence
High Blood Pressure	Acceptable: 140/90 If you have diabetes or renal disease: <130/80
Abnormal Cholesterol	Total Cholesterol (TC) <4.0 Triglycerides (TRIG) <2.0 High Density Lipoproteins (HDL) > 1.0 Low Density Lipoproteins (LDL) <2.0
Physical Inactivity	Type of activity: continuous / aerobic How often: 3 to 5 times per week How long: 30 minutes or more How hard: target heart rate / RPE/ talk test
High Stress	Hospital Anxiety and Depression Scale (HADS) <ul style="list-style-type: none"> • Normal score for anxiety • Normal score for depression
Excess Weight	Body Mass Index (BMI): 18.5 – 24.9 kg/m ² Waist Circumference (WC): <ul style="list-style-type: none"> • Men: <102 cm (40") • Women: <88cm (35")

A risk factor profile, like that shown below, can be found in the *Resources* chapter at the end of the manual. The profile can help you monitor your risk factors over time.

RISK FACTORS MEASURED		MY VALUES				
		INITIAL	6-WEEKS (ECAC ONLY)	12-WEEKS	1-YEAR	2-YEAR
DIABETES	Hgb A1c:					
SMOKING	Non-smoker: Smoker:	<input type="checkbox"/> Non-smoker <input type="checkbox"/> Smoker		<input type="checkbox"/> Non-smoker <input type="checkbox"/> Smoker	<input type="checkbox"/> Non-smoker <input type="checkbox"/> Smoker	<input type="checkbox"/> Non-smoker <input type="checkbox"/> Smoker
BLOOD PRESSURE						
CHOLESTEROL	TC:					
	TRIG:					
	HDL:					
	LDL:					
	TC/HDL:					
PHYSICAL INACTIVITY	Type:					
	How Often:					
	How Long:					
	How Hard:					
HIGH STRESS	Anxiety Score:					
	Depression Score:					
WEIGHT	BMI:					
	WC:					
ADDITIONAL NOTES						

4. If you find yourself on either extreme end of the scale (1-2 or 9-10), take time to ask yourself what led you there. The idea is to be curious rather than judgemental about your eating habits.
- Did you skip a meal?
 - Were you busy and didn't notice your earlier hunger cues?
 - Were you eating quickly and didn't recognize fullness?
 - Was the food so tasty that you chose to eat past fullness?
 - Were you stressed and eating for comfort rather than hunger?

The goal of this exercise is to learn to be more in tune with your body's more subtle cues of hunger and fullness and to learn from your own patterns. It's normal to fall at extreme ends of the scale at times but, if it happens frequently, you can find ways to better regulate your eating patterns.

For example, you may notice you often miss lunch because you're busy and don't recognize your early hunger signals. This leads to being ravenous in the afternoon, making less healthy food decisions and eating quickly. To solve this, you can set a timer around noon where you take a moment to check in with your hunger and see if you should stop and eat sooner rather than later.

We don't always eat for hunger. Sometimes we eat for taste, comfort, celebration, and so on and that is okay. The hunger scale is a guide to help you fuel your body and feel comfortable but it's not a rule that must always be followed.

THE IMPORTANCE OF SATISFACTION

Many people think a heart healthy diet means cutting out all the foods that you enjoy and placing foods into *should* or *shouldn't* eat categories. But denying yourself certain foods you like will only serve to make you want them more.

When we eat foods that are not satisfying to us, we are more likely to overeat, whereas when we are experiencing pleasure from food, it is easier to stop when we feel comfortably full. If our diet is lacking satisfaction and enjoyment, it's unlikely to last very long. Instead, allow yourself foods that you enjoy and focus on adding in heart healthy foods to shift your dietary patterns over time.

But won't I just eat cake all the time?

Many people worry if they allow themselves to eat food they enjoy they will want to eat cake, chips, cookies, etc. all the time. But when you focus on how food makes you feel you might notice that you get an upset stomach or bloating, don't feel full for very long, become cranky between meals, or that you enjoy eating a variety of foods.

FREQUENTLY ASKED QUESTIONS

Is alcohol good for heart health?

While there may be some benefit to heart health from drinking wine, beer, or spirits in moderation, there are several health problems linked with excess consumption.

How much is too much? Men should aim for no more than 2-3 drinks per day, with a maximum of 15 per week. Women should aim for no more than 1-2 drinks per day, with a maximum of 10 per week. A drink is considered 12 ounces of beer, 1.5 ounces of spirits, or 5 ounces of wine.

Saving your weekly drinks for the weekend brings its own host of problems, such as increased incidence of heart attack, stroke, and cancer.

Is it okay to have caffeine?

It's fine to have up to 300 mg a day of caffeine – about the amount in 2 cups (8 ounces or 250 mL) of coffee. However, even small amounts of caffeine may interfere with sleep for some people, and good sleep is important for heart health. Remember to avoid caffeine three hours before and one hour after exercise, including an exercise stress test.

I've heard that supplements, such as fish oil, are good for heart health. Is it true?

While some supplements such as fish oil may be of benefit to some people – for example, those who have abnormally high levels of fats in their blood (high triglycerides) – it is recommended that all supplements be discussed with your doctor as they may interact with your medications. High doses can cause harmful side effects.

We also know that no supplements can fully replicate food and that the best way to get your nutrients is by eating whole foods.

Should I avoid fish because of the mercury in it?

For adults with heart concerns, the health benefits of fish outweigh the risk of consuming too much mercury. To limit your intake of mercury and other potential contaminants you can vary the fish you eat, limit your intake of high mercury fish (e.g. fresh/frozen albacore tuna, shark and swordfish), and eat no more than 4-5 servings of fish a week.

Is sea salt better than table salt?

Sea salt is often marketed as healthier than table salt because of its mineral content but the amount of salt you would need to consume to get any noticeable amount of minerals would negate the benefits. Both types of salt have the same amount of sodium. However, taste and texture may differ. You may prefer the use of one over the other, but both should be used in moderation.

What about coconut oil?

Coconut oil is promoted as a “health food” for everything from weight loss to Alzheimer’s disease. Unfortunately, there is little research to back up these claims. We do know that coconut oil raises blood cholesterol levels, so it’s recommended to choose unsaturated liquid oils instead.

Should I choose butter or margarine?

Butter is primarily made up of saturated fat which raises our LDL cholesterol whereas margarine is made up of unsaturated fat which helps lower our LDL cholesterol. In the past, hard stick margarine contained trans fats which are particularly bad for heart health, but they have since been banned from our food supply. Non-hydrogenated margarine is the heart healthier choice (however, in small amounts, it isn’t likely to make much difference one way or the other). When possible, use a natural healthy fat like olive oil or peanut butter instead.

Why do I find conflicting nutrition information online?

Nutrition science is complicated because we don’t eat foods in isolation and how or what we eat is affected by other factors including stress and sleep (which are also risk factors for many chronic diseases). As more research is done, our understanding of nutrition evolves and small shifts in recommendations and guidelines occur.

What causes confusion is that many online sources sensationalize or misinterpret nutrition information to create headlines or sell products. When reading nutrition information, take time to ask yourself these questions:

- Is it written by a nutrition expert (i.e. a registered dietitian)?
- Are they trying to sell a product, increase readership, etc.?
- Is the article discussing a single study or considering the entire body of evidence?

Go to organizations such as Dietitians of Canada, Heart and Stroke Foundation or the American Heart Association for trusted advice.

I've heard eggs are high in cholesterol, should I be avoiding them?

For a long time, guidelines suggested strictly limiting eggs in the diet due to their high cholesterol content. However, we now know that, for most people, dietary cholesterol has a limited impact on blood cholesterol levels. While some studies suggest that people who eat a lot of eggs experience more heart problems, particularly if they have diabetes, the evidence is not conclusive.

Eggs are a nutritious, convenient, and affordable protein source that can be chosen as one of your protein options.

Do I need a protein powder to meet my protein needs?

Many people worry if they reduce their meat portion to 3 ounces or choose more plant-based protein options they won't meet their daily protein requirements. By filling $\frac{1}{4}$ of your plate with protein foods and choosing a variety of protein options at each meal and snack, most people can meet their protein needs through food alone.

Protein powders can be a convenient option but whole foods will always give you more vitamins, minerals and other nutrients. If you buy protein powder, be sure to check the product's sugar content. Other portable protein options include trail mix and whole grain crackers with hummus or peanut butter.

I want to lose weight; how much should I aim for and how should I change my diet?

A common goal coming into cardiac rehab is weight loss. However, while diets for weight loss work in the short term, research shows that most people regain the weight lost within 2-5 years. Stalled weight loss or weight regain is discouraging and often causes a return to previous dietary habits. Shifting the focus from weight loss to health behaviour change allows you to develop long-lasting, health-boosting behaviours.

Focus on changing dietary and lifestyle habits one at a time – allowing each change to become habit before moving onto the next. This will help provide lasting benefits to your health and ultimately be better for helping you to feel better and live longer. If you're struggling to make sense of weight loss versus behaviour change, speak with one of your health coaches, family doctor, or a dietitian.

Should I consider a diet plan like ketogenic diet or intermittent fasting?

Any diet plan that restricts categories of food or times in which you can eat may result in short-term weight loss. However, weight regain is likely and these diets may impair your ability to eat mindfully, find satisfaction in food, and regulate your hunger/fullness.

The ketogenic diet restricts entire categories of foods including fruit, whole grains, and legumes which have been proven to help prevent and protect against heart disease. Instead of focusing on what to cut out of your diet, focus on what you can add in!

How can I prevent weight gain when I quit smoking?

After quitting smoking many people experience an increased appetite and, as a result, weight gain. Research shows that the benefit obtained from quitting smoking outweighs any risk you might add by gaining some weight.

Should I choose sugar substitutes over sugar?

Choosing sugar substitutes such as aspartame, sucralose, and Stevia can help to reduce sugar in the diet. However, all sweeteners, including natural ones like Stevia, are highly processed and primarily found in highly processed food products such as pop, candy, and cookies. The best approach would be to limit highly processed foods and reduce both sugar and sugar substitutes in the diet.

ONLINE RESOURCES FOR HEART DISEASE AND RISK FACTORS

- **Alberta Health Services Online Education:** <http://wcmprod2.ucalgary.ca/cdm>
Audio-video sessions on topics such as diabetes, weight and stress management from your home computer.
- **Alberta Health Services Alberta Healthy Living Program:** www.ahs.ca/ahlp
Group classes and self-management workshops to support those living with a chronic condition. For more information or to register, visit www.ahs.ca/ahlp or call 403-943-2584.
- **Alberta Quits:** www.albertaquits.ca
Website with tools and services to help you quit smoking. Toll-free helpline with trained cessation counselors available daily from 8:00 am to 8:00 pm at 1-866-710-QUIT (7848).
- **Poison & Drug Information System (PADIS)**
Free and confidential advice and expertise on the health effects of poisons, chemicals and medications, 24 hours a day, 7 days a week. Call toll-free 1-800-332-1414.
- **American Heart Association:** www.heart.org
An online resource for heart disease and the lifestyle changes you can make to improve your heart health.
- **Canadian Diabetes Association:** www.diabetes.ca
A site for people living with diabetes/ pre-diabetes to help them manage their condition and minimize their cardiovascular risk
- **Cardiosmart:** www.cardiosmart.org
Online patient education to help individuals prevent, treat and manage heart disease.
- **Heart and Stroke Foundation:** www.heartandstroke.ca
Online resource for heart disease, risk factors and lifestyle change. Includes a variety of e-tools to help you manage your heart health.
- **MyHealthAlberta:** <https://myhealth.alberta.ca>
Online resource for Albertans that includes information on various medical conditions, health tools, as well as links to programs and services.
- **MayoClinic:** www.mayoclinic.com/health-information
Online medical information and tools for healthy lifestyles.