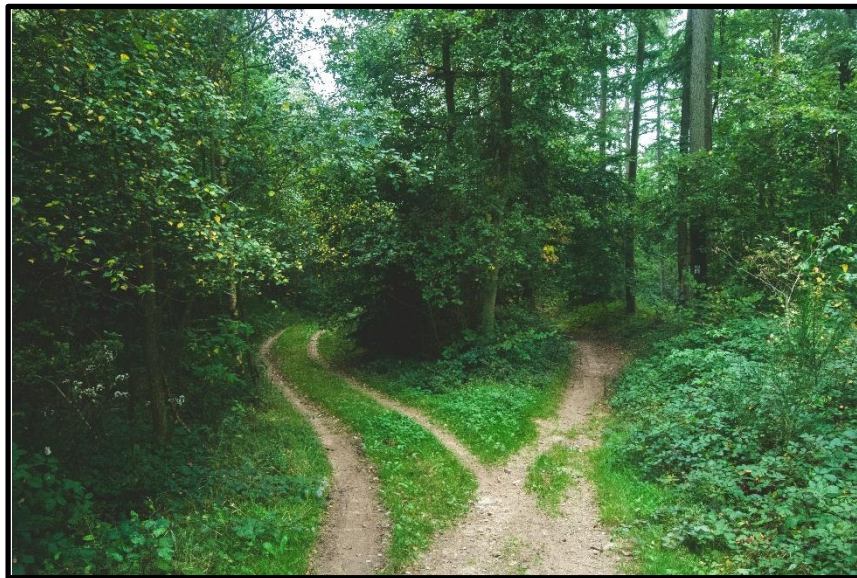


Bariatric Surgery Biliopancreatic Diversion with Duodenal Switch

Helping you on your path to healthy living



**Unity Health Toronto - Providence Healthcare
3276 St. Clair Ave. East, Toronto, ON M1L 1W1**

416-285-3666 ext. 4767

**Please bring this book with you to your
Pre-Admission Assessment visit, hospital stay
and follow-up appointments.**

The Ontario Bariatric Network is an Ontario Ministry of Health and Long-Term Care project featuring regional bariatric programs, general information and education.

For more information go to:

- www.ontariobariatricnetwork.ca

Other websites to investigate include:

- www.webmd.com
- www.obesityhelp.com
- www.obesitynetwork.ca/public

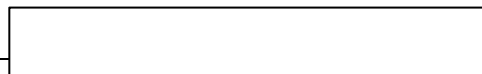
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Products mentioned in this book are used as examples only. Alternatives to these products may be used instead of the mentioned products with the advice of a health care professional and your bariatric health care team.

Picture on page 4 used with permission from University Health Network (Toronto Ontario, Canada).

This guide to Bariatric Surgery Program is adapted from the version developed by the Department of Nursing Practice and Education, and Center of Excellence Bariatric Surgery Program, St. Joseph's Healthcare Hamilton 2007 – 2016.

The section on Mental Health and Wellbeing in this guide is adapted from the version created by the Bariatric Centre of Excellence at Humber River Hospital 2017.



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Where to Go for Appointments and More

Place	Location	Telephone / Email
Unity Health Bariatric Centre of Excellence (BCOE) For your pre-operative & post-operative appointments and follow-ups. Visits may be in-person or virtual, depending on the nature of your appointment and individual needs.	<u>Address:</u> Providence Healthcare Unity Health Toronto 3276 St. Clair Ave. E, Toronto, ON M1L 1W1 <u>Location:</u> B1 level <u>Getting here:</u> Enter the building at the east side of the campus at the “CLINICS” Entrance, go into the clinics lobby and check-in at the registration desk	416-285-3666 ext. 4767 Email: BariatricCentre.PHC@unityhealth.to
Outpatient Pharmacy at Providence Healthcare For filling your prescriptions, liquid meal replacement, multi vitamins, or for services including consultation and medication reviews as needed.	<u>Address:</u> Providence Healthcare Unity Health Toronto 3276 St. Clair Ave. E, Toronto, ON M1L 1W1 <u>Location:</u> B2 level <u>Getting here:</u> Enter the building at the east side of the campus at the “CLINICS” Entrance, take the B1 elevator to level 2, and walk straight towards the end of the hallway where the clinic will be on your right; Alternatively, enter through the main entrance (by the Tim Hortons).	416-285-3805 Monday to Friday 8 a.m. to 5 p.m.

Where to Go for Appointments and More

Surgery and Pre-operative Appointments

Exact location and processes depend on where your surgery will take place.

More information will be provided to you by the team.

Place	Location	Telephone
Michael Garron Hospital	825 Coxwell Avenue Toronto, Ontario M4C 3E7	416-469-6487
St. Joseph's Health Centre Toronto Unity Health Toronto	30 The Queensway Toronto, Ontario M6R 1B5	416-530-6000

Appointments

Before Surgery Appointments:

Appointment	Date	Time	Location

After Surgery Follow-up Appointments:

1 week			Bariatric Clinic
1 month			Bariatric Clinic
3 month			Bariatric Clinic
6 month			Bariatric Clinic
1 year			Bariatric Clinic

An Important Message

- **There are times when our clinicians may run behind schedule. Please wait 15 minutes after your scheduled appointment time before calling our administrative team.**
- For unplanned reasons, your surgery may be cancelled at any time.
- This may happen before your surgery date or on the day of your surgery when you come to the hospital.
- If your surgery is cancelled you will be called at home and given another date for surgery.
- Please do not go to the Bariatric Clinic to make a new date.

Introduction

You have decided to have bariatric surgery. This book provides information that will help you prepare for this surgery and your new life after surgery.

You, your family, friends and supports can refer to this book and may need to read the information many times.

Please bring this book with you to all of your appointments before and after surgery and to the hospital when you have surgery.

Health Care Team

You will work closely with your health care team. We are here to support and guide you before, during and after surgery.

There is a list of your health care team members' roles at the front of this book. Fill in their names as you meet the members of your team.

What is Obesity

What does bariatric mean?

Bariatric is the medical word used to describe the treatment and management of weight. Bariatric programs help patients improve their health and well-being by treating and managing weight.

What causes obesity?

Obesity is a chronic condition that needs to be managed for the rest of your life. You have probably done some reading and research of your own by now and know that there is just not one cause. Research has shown that there are many reasons for obesity such as:

- genetic
- physiological
- metabolic
- hormonal
- psychological
- behavioural
- sociocultural
- environmental

Once you have obesity, there is no cure for it and you will need to manage this condition for the rest of your life.

Why can obesity be harmful to health?

This is not an easy question to answer. Research has shown that there are many health problems that can result from obesity such as:

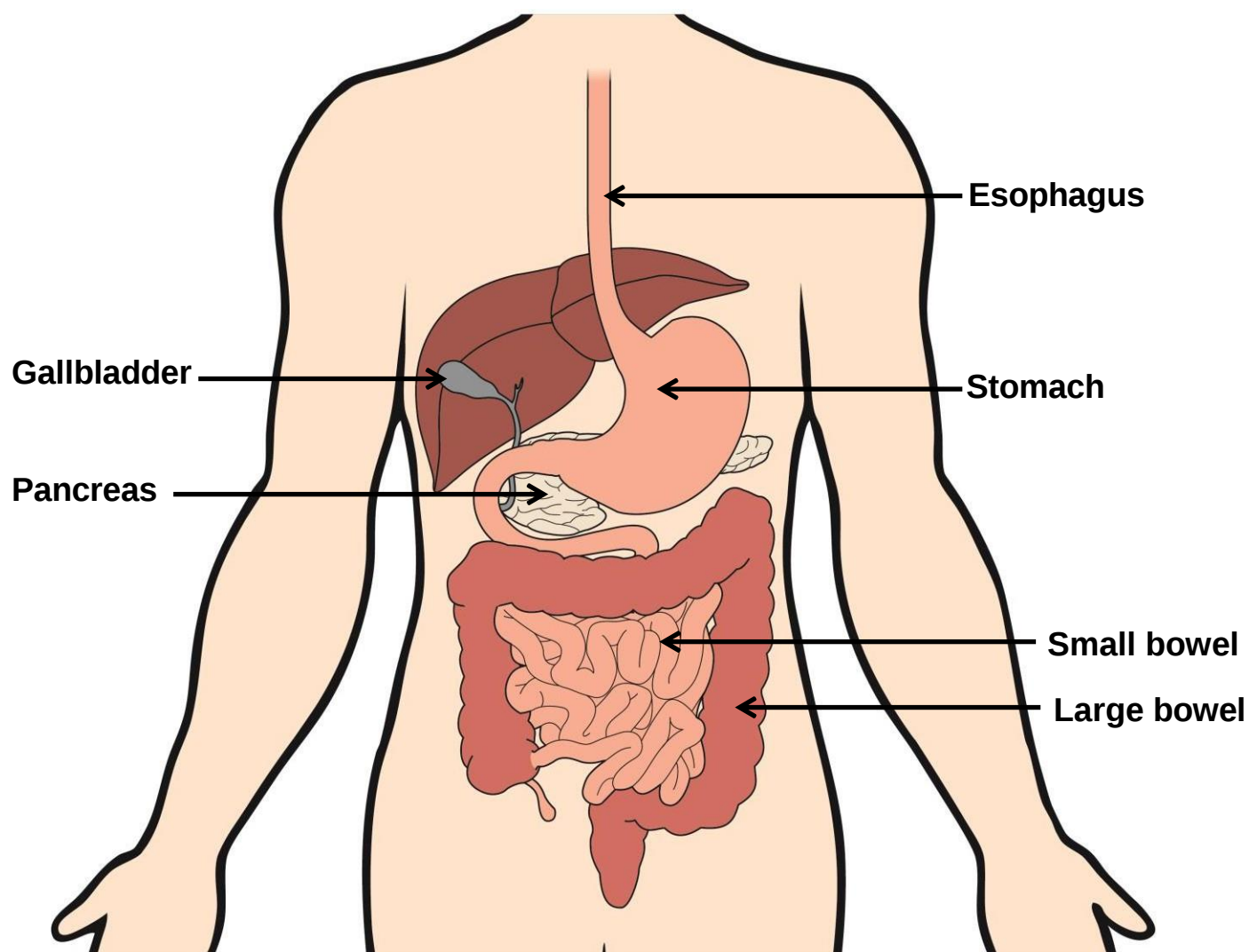
- hypertension
- heart disease
- gastro-esophageal reflux disease
- depression and/or anxiety
- respiratory disorders
- liver and kidney disorders
- high cholesterol
- sleep apnea
- type 2 diabetes
- infertility
- joint pain and/or osteoarthritis and/or gout
- certain cancers

Learning the Words and Pictures

Here are some words and pictures to help you understand this surgery:

Esophagus: (food tube)	The esophagus is the tube that carries the food you eat and drink from your mouth to your stomach.
Gallbladder:	The gallbladder stores bile produced by the liver. Bile is a digestive liquid needed to help break down food you eat and drink. Bile helps digestion by breaking down fat for example. The gallbladder releases bile when the food leaves the stomach and enters the small bowel.
Pancreas:	The pancreas produces digestive liquids and enzymes that help in digestion. It also produces the hormone insulin to regulate the amount of glucose (sugar) in the body.
Stomach:	The stomach breaks food into small pieces so your body can use it for energy.
Small bowel: (small intestine)	The food moves from the stomach to the small bowel first. The food is broken into very small pieces and is absorbed into the blood as the muscles push it along. The small bowel is also called the small intestine. The small bowel or intestine has 3 sections called the duodenum, jejunum and ileum.
Large bowel: (large intestine or colon)	The large bowel is the last part of the digestive system. Water is absorbed here and the remaining waste material is stored until you have a bowel movement. The large bowel is also called the large intestine or colon.

A look inside before surgery:



About Surgery

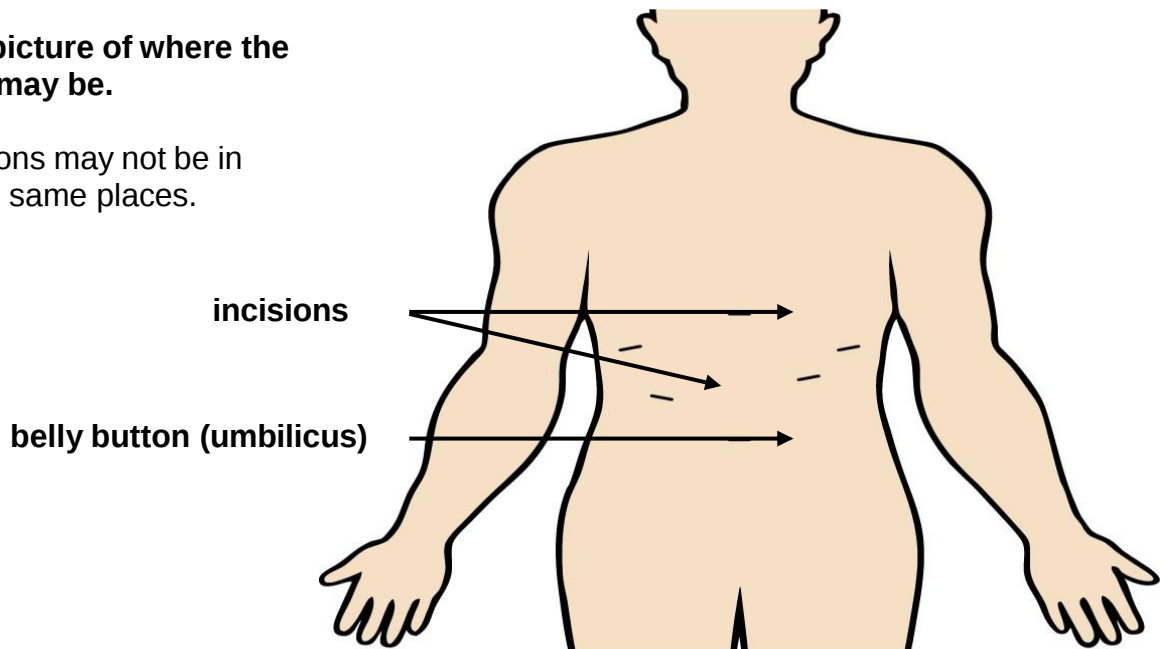
You will meet with your surgeon and the bariatric team and talk about the type of surgery planned. You, your surgeon and the bariatric team will all be involved in making a personal care plan for you.

Laparoscopic Surgery

This surgery is done using 5 to 6 small incisions. Each incision is 5 to 12 millimeters (mm) long. One incision is used to insert a small camera so the doctor can see. The other incisions are used for instruments needed to do the surgery. The incisions are closed with dissolvable stitches and special tape on top called steri-strips.

Here is a picture of where the incisions may be.

Your incisions may not be in exactly the same places.



What is Biliopancreatic Diversion with Duodenal Switch Surgery?

This is a complicated surgery to explain. Each person considered for this surgery will meet with the bariatric team to talk about the plan before surgery is planned and/or done. You always have time to ask questions and make sure you understand what may or may not happen before you consent to having this surgery and begin the process:

- Often the surgery is done in 2 stages where the vertical sleeve gastrectomy is done as the first step of the process.
- If you have the vertical sleeve gastrectomy first, most often after about 1 year you and your bariatric team decide if you will go on to the 2nd part of the surgery or not. Some people will go on to have the second part called the duodenal switch done while others will not.
- Rarely, the surgery is done all at one time in the operating room.

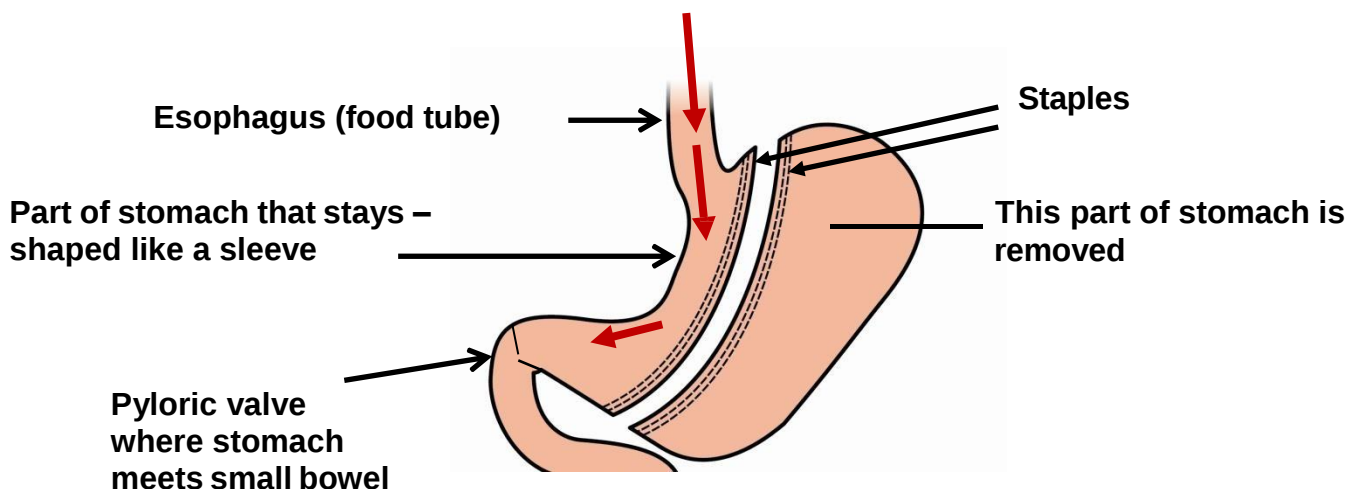
You and your bariatric team work closely together to make decisions that are best for you. Each person is unique and has their own plan of care so try not to compare yourself with others in the program.

Overview of Surgery

This type of surgery is called a restrictive **and** malabsorptive surgical procedure.

The restrictive part of the surgery is done first by doing a vertical sleeve gastrectomy. This means that most of the stomach is removed. The stomach is cut creating a long pouch that connects the esophagus to the small intestine. The pouch or 'sleeve' is stapled and the rest of the stomach is removed. Since the stomach is smaller, you feel full sooner. This reduces the amount of food you want to eat. You may have already had a sleeve done.

This part of the surgery may decrease the production of a hormone called ghrelin. A decreased amount of ghrelin is thought to reduce hunger therefore causing less food intake. This results in weight loss.



Arrows ↓ show food moving through body after surgery.

Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

At first, the sleeve holds about 100 to 120 ml (3 to 4 ounces). The size depends on the surgeon doing the surgery. Normally a stomach holds between 1000 and 1500 ml (35 to 50 ounces or 4 to 6 cups). Over time the sleeve will hold between 235 and 350 ml (8 to 12 ounces or 1 to 1½ cups).

As shown in the picture, the way the food leaves the stomach does not change. The nerves are also left intact. Therefore the stomach is smaller but the function stays almost the same. The smaller stomach continues to function normally.

The pyloric valve is left intact. The pyloric valve controls the amount of food that empties into the small bowel. Food enters slowly so you do not have dumping of food into the bowel called dumping syndrome.

You may have had the gastric sleeve surgery done already.

Overview of the Duodenal Switch Part of Surgery

Next, the malabsorptive part of the surgery is done. It is called a Duodenal Switch for short.

The surgeon divides and switches sections of the small bowel to create 2 separate pathways which then join to form one common channel just before the large bowel:

1. One pathway is called the digestive or food channel. It connects the last part of the small bowel, called the ileum, to the stomach sleeve. This pathway carries food from the stomach to the common channel.
2. The other pathway is called the biliopancreatic channel. It is the part of the small bowel that connects to the gallbladder and pancreas. It carries bile and digestive juices to the common channel. Bile is a fluid stored in the gallbladder and released by the liver. Bile helps with digestion by breaking down fat. It also helps get rid of cholesterol, water, bile salts, copper and other metals in your body. Pancreatic juices and enzymes also help absorb nutrients from the food you eat and drink.
3. The common channel is where the 2 pathways meet and mix before going into the large bowel. The common channel is usually between 75 and 150 centimeters long. Your surgeon can tell you about how long your common channel is after surgery.

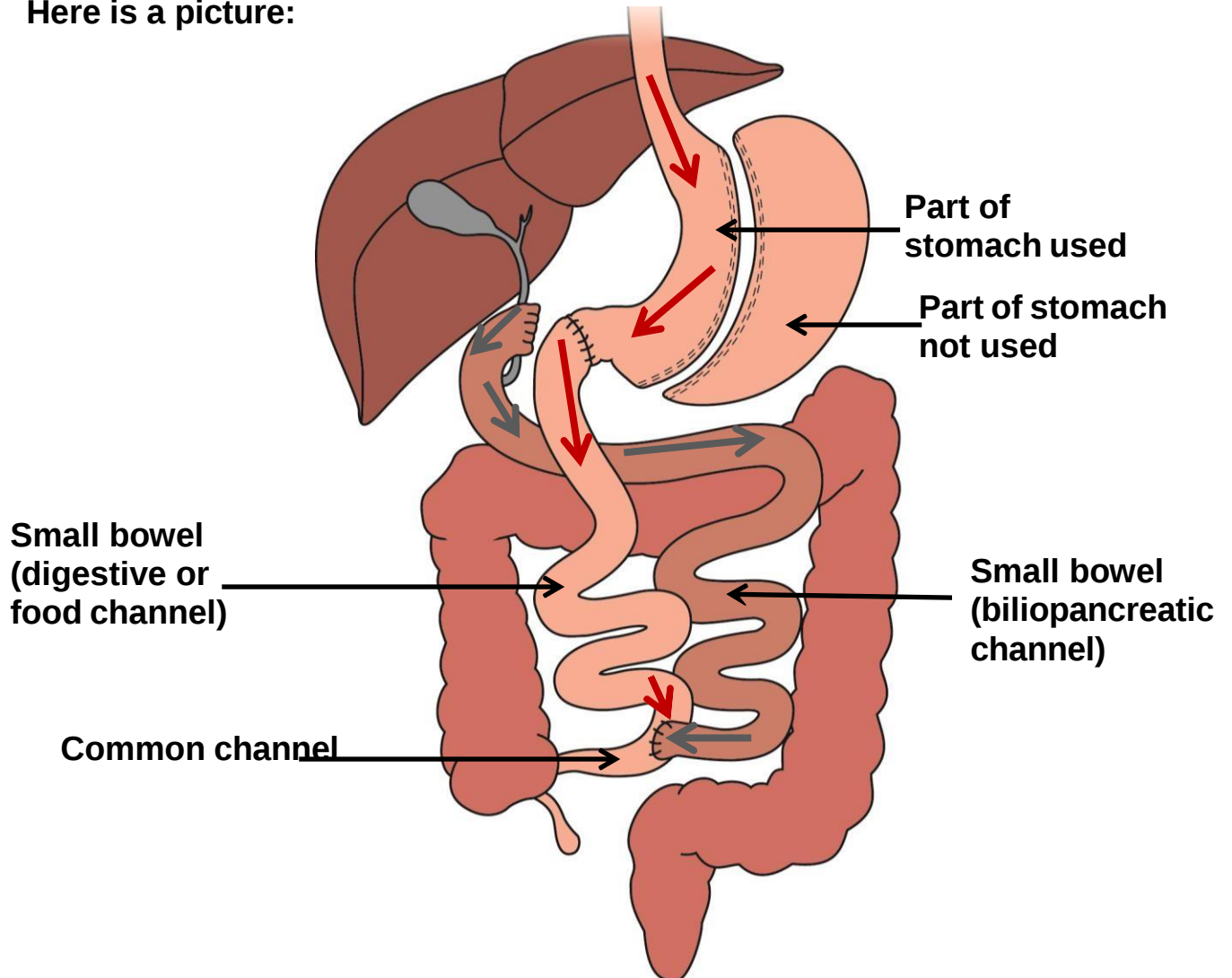
The common channel where the 2 pathways meet is where the food, bile and digestive juices are absorbed. This means only a very small section of the small bowel absorbs calories and nutrients.

4. The gallbladder is commonly removed during this surgery. This is done to prevent gallstones from forming which is common when weight is lost quickly.

After this type of surgery you lose weight because:

- your stomach is smaller and you eat less
- the food you eat and drink bypasses most of the small bowel
- less fat, protein and carbohydrates are absorbed
- the hormones that affect metabolism, hunger and appetite are changed

Here is a picture:



↓ Food moving through the small bowel digestive or food channel.

↓ Bile moving through the small bowel biliopancreatic channel.

What is the Single Anastomosis Duodeno-Ileal Bypass with Vertical Sleeve Gastrectomy (SADI)?

This is a complicated surgery to explain. Each person considered for this surgery will meet with the bariatric team to talk about the plan before surgery is planned and/or done. You always have time to ask questions and make sure you understand what may or may not happen before you consent to having this surgery and begin the process:

- Many times this surgery is done all at one time in the operating room.
- Sometimes the bariatric team decides that it is best to do this type of surgery in 2 stages where the vertical sleeve gastrectomy is done as the first step of the process.
- If you have the vertical sleeve gastrectomy first, most often after about 1 year you and your bariatric team decide if you will go on to the 2nd part of the surgery or not. Some people will go on to have the second part called the single anastomosis duodeno-ileal bypass done while other people will not.

You and your bariatric team work closely together to make decisions that are best for you. Each person is unique and has their own plan of care so try not to compare yourself with others in the program.

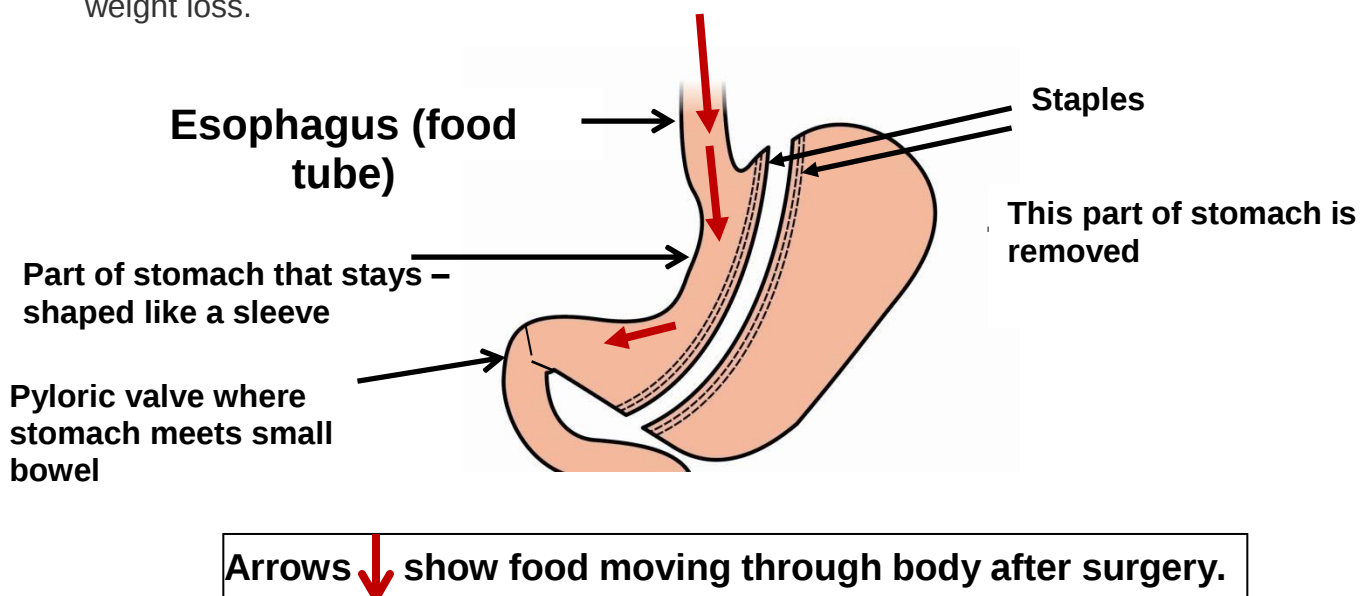
Overview of Surgery

This type of surgery is called a restrictive **and** malabsorptive surgical procedure.

The restrictive part of the surgery is done first by doing a vertical sleeve gastrectomy. This means that most of the stomach is removed. The stomach is cut creating a long pouch that connects the esophagus to the small intestine.

The pouch or 'sleeve' is stapled and the rest of the stomach is removed. Since the stomach is smaller, you feel full sooner. This reduces the amount of food you want to eat. You may have already had a sleeve done.

This part of the surgery may decrease the production of a hormone called ghrelin. A decreased amount of ghrelin is thought to reduce hunger therefore causing less food intake. This results in weight loss.



Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

At first, the sleeve holds about 100 to 120 ml (3 to 4 ounces). The size depends on the surgeon doing the surgery. Normally a stomach holds between 1000 and 1500 ml (35 to 50 ounces or 4 to 6 cups). Over time the sleeve will hold between 235 and 350 ml (8 to 12 ounces or 1 to 1½ cups).

As shown in the picture, the way the food leaves the stomach does not change. The nerves are also left intact. Therefore the stomach is smaller but the function stays almost the same. The smaller stomach continues to function normally.

The pyloric valve is left intact. The pyloric valve controls the amount of food that empties into the small bowel. Food enters slowly so you do not have dumping of food into the bowel called dumping syndrome.

You may have had the gastric sleeve surgery done already.

Overview of the Single Anastomosis Duodeno-Ileal Bypass Part of Surgery (SADI)

The word anastomosis means surgical connection between 2 things.

Examples of an anastomosis are:

- when 2 pieces of intestine are connected together with sutures or staples
- when the stomach and a part of the intestine are connected together with sutures or staples

This section explains the second part of the surgery. The second part of the surgery is a malabsorptive surgical procedure.

The surgeon takes a loop of the small bowel and attaches it just below the pyloric valve of the vertical sleeve gastrectomy. There is a loop connection of the bowel to just below the stomach. This loop connection is the only anastomosis made during this surgery. This is why the name of this surgery starts with the words **Single Anastomosis**.

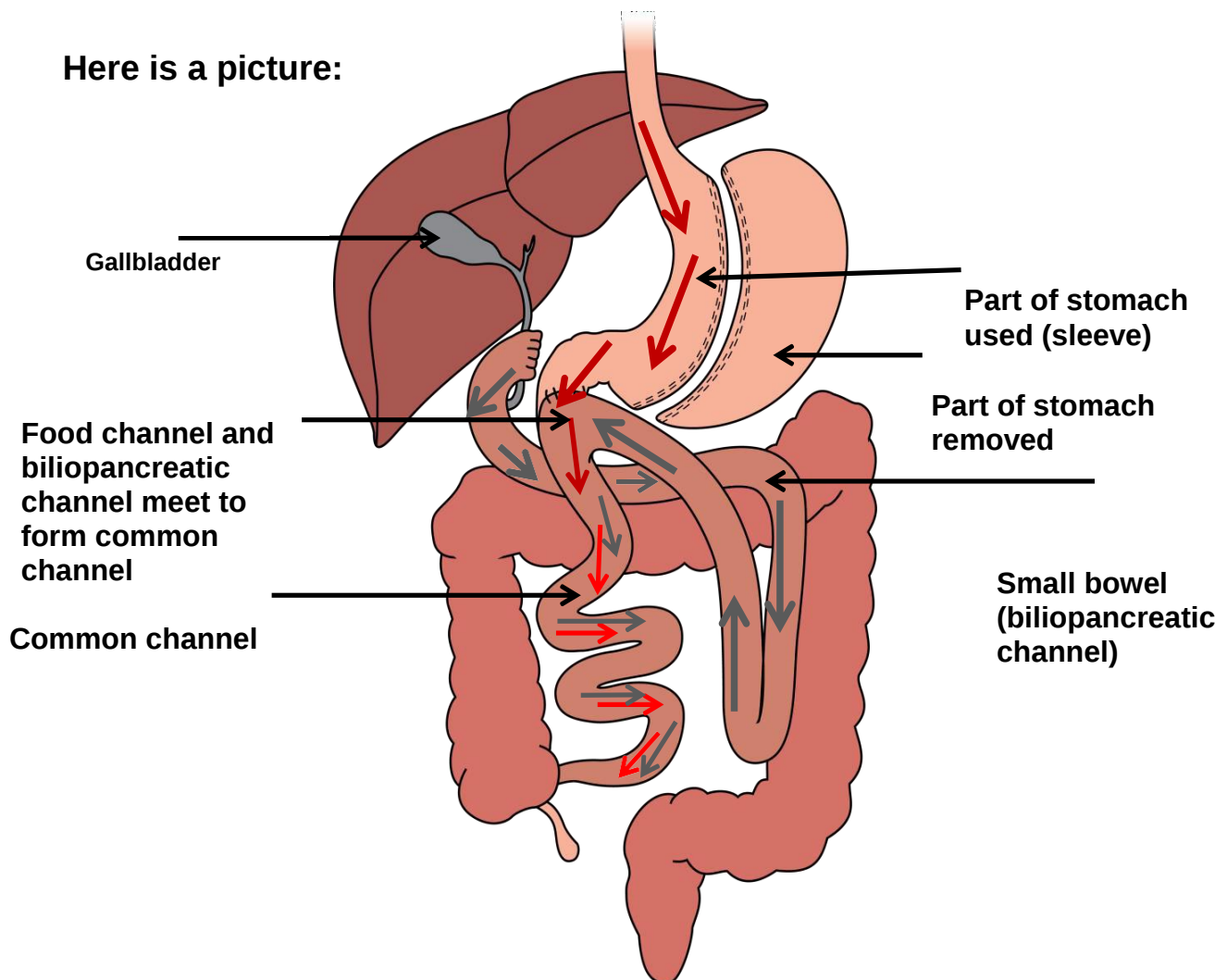
1. One part of the looped intestine is called the biliopancreatic channel. It is the part of the small bowel that connects to the gallbladder and pancreas. It carries bile and digestive juices to the common channel. No food is carried in this part of the bowel. Bile is a fluid stored in the gallbladder and released by the liver. Bile helps with digestion by breaking down fat. It also helps get rid of cholesterol, water, bile salts, copper and other metals in your body. Pancreatic juices and enzymes also help absorb nutrients from the food you eat and drink.
2. The second part of the looped intestine is called the common channel. This is where food, bile and digestive juices are mixed and absorbed before going into the large bowel. This means only a part of the small bowel absorbs calories and nutrients. In this procedure the common channel is usually between 250 and 300 centimeters long. Your surgeon can tell you about how long your common channel is after surgery.
3. The gallbladder is commonly removed during this surgery. This is done to prevent gallstones from forming which is common when weight is lost quickly.

Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

After this type of surgery you lose weight because:

- your stomach is smaller and you eat less
- the food you eat and drink bypasses most of the small bowel
- less fat, protein and carbohydrates are absorbed
- the hormones that affect metabolism, hunger and appetite are changed

Here is a picture:



↓ Food moving through the small bowel digestive or food channel.

↓ Bile moving through the small bowel biliopancreatic channel.

What to Expect After Surgery

You and only you

Since each person is different your journey will not be the same as anyone else. Try to avoid comparing yourself to others in the program.

After surgery, some people lose more weight and some people lose less weight; some people lose weight quickly while others lose weight slower but still lose weight.

Always keep in mind that you and your body need to do this in your own time. Remember that the real benefit of surgery is not necessarily how much weight you will lose, but the ability to keep most of it off in the long-term.

Most people lose between 30% and 40% of their total body weight within the first 2 years after surgery. However, the majority of your weight loss will happen in the first 6 to 12 months.

The focus in the bariatric program is to support you in following a healthy lifestyle and not set goal weights.

After 1 or 2 years

After the first or second year when your weight loss has slowed or stopped, you will typically gain some weight back slowly over time. People often regain 5 to 10% of the weight they lost within 5 years. This is normal and does not mean that you are doing anything wrong. Some people regain more than 10%.

It is important to remember that weight regain is complicated and not completely understood. It is very important that you contact the clinic if you are concerned about weight regain down the road.

Your best weight

Your best weight is the weight you can maintain while still eating and living in a way that you can enjoy and sustain. Your best weight may never be the ideal weight that you want. This is very important to keep in mind.

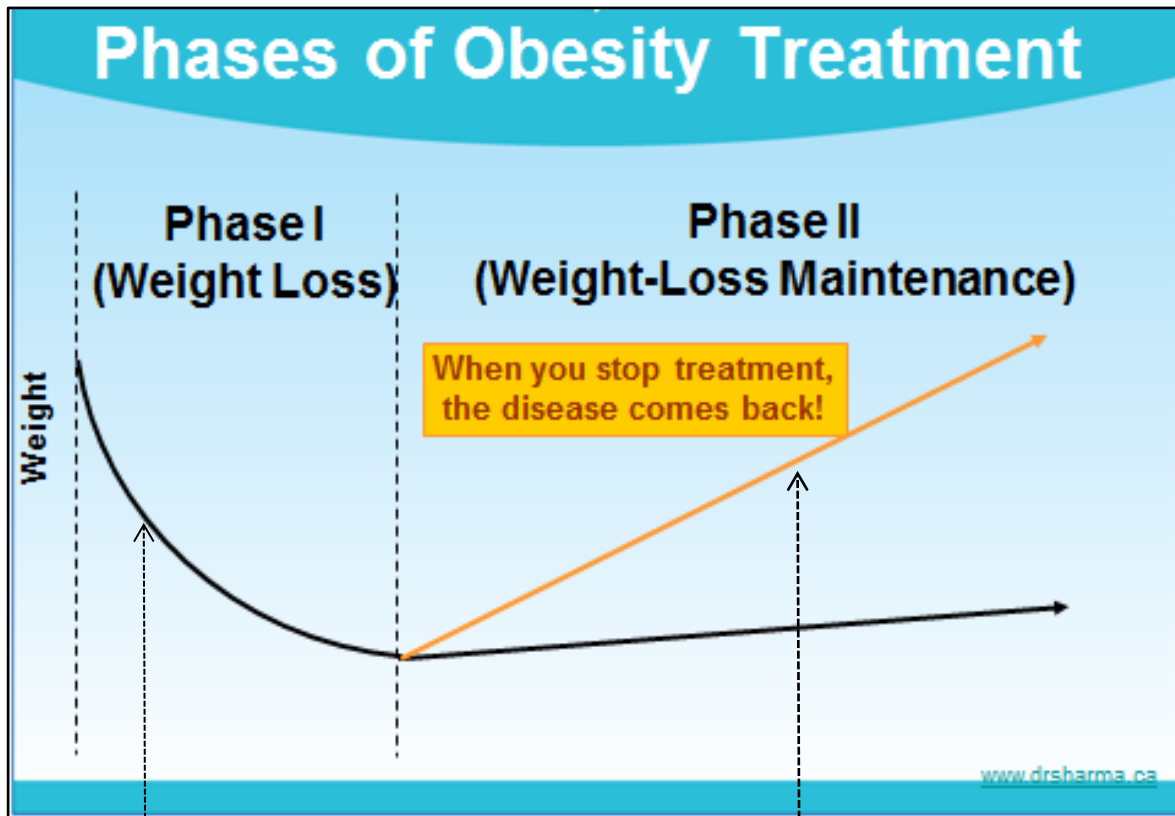
Remember that as little as 5% to 10% weight loss has been shown to improve weight related illnesses such as the problems shown on page 2.

Your lifestyle plan

As part of your lifestyle plan, you will need to follow a healthy diet and stay active.

If you do not maintain a healthy lifestyle, you will gain weight back and experience a relapse in your obesity related health problems.

The graph on the next page was created by Dr. Arya Sharma, a Canadian weight loss expert. The graph shows what generally happens after surgery.



The **dark line shows** what can happen if you eat healthy and exercise regularly.

The **lighter line shows** what will happen to people who stop treatment.

Source: www.drsharma.ca

Remember:

To keep weight off in the long term, you must always continue with the healthy behaviours you have established. If you stop treatment, you will regain weight.

Stopping treatment can mean many things:

- not following a healthy diet
- not exercising regularly
- not attending your follow-up appointments
- not attending to your physical and/or mental health needs

Your Mental Health and Well Being

When you are thinking about having bariatric surgery, our team meets with you to talk about your history of physical, emotional and mental health problems. We collect this type of information so we can make a plan for your care before and after surgery. Our goal is to help you prepare physically and emotionally for surgery and the changes that occur after.

A reality for many people who struggle with weight issues is that they may have:

- problem eating behaviours such as not consistently eating meals and/or binge eating
- concerns with body image
- mood disorders such as depression or bipolar disorder
- anxiety disorders
- post-traumatic stress disorder
- substance use problems with alcohol, tobacco and/or recreational drugs

Having a history of these problems will not prevent you from having bariatric surgery. It just means that we will need to work together to develop a plan of care that ensures that bariatric surgery is both safe and successful. Your team of bariatric professionals is here to help.

Emotional Eating and Coping

People eat for more than just hunger. Sometimes people eat to bring comfort, relieve stress, or as a reward. When we eat for reasons outside of physical hunger, we are emotionally eating. While eating may satisfy our feelings for now, it doesn't fix emotional problems in the long term.

All of us will occasionally eat for more than just physical hunger. For example, certain foods are often part of celebrations or other life events. Emotional eating becomes a problem when it becomes your primary emotional coping mechanism. If your first instinct is to look for a snack whenever you're upset, angry, lonely, stressed, exhausted, or bored, then this may suggest you are struggling with emotional eating. This can create an unhealthy cycle where you are unable to address your emotions or problems. Part of your journey in this program may be to work on building alternative coping strategies.

Signs you may be eating emotionally:

- You eat more when you're feeling stressed, angry, lonely, or upset
- You continue eating when you are full or eat when you're not hungry
- You eat to improve your mood
- You eat as a reward
- Food creates feelings of safety for you or feels like a friend
- You feel powerless over food or that you've lost control
- You eat out of habit or because it is part of your routine (for example, you always eat snacks while you watch your favorite TV show)

Is it emotional or physical hunger? How to tell the difference

Physical Hunger	Emotional Hunger
Comes on slowly	Comes on all of a sudden
Can be delayed	Must be satisfied right now
Lots of food looks good – you are open to options	You have cravings for specific foods
Hunger cues stop when you are full	Hunger may continue even when you are full
Eating for physical hunger generally doesn't bring on feelings of guilt, shame or blame	Can leave you with feelings of guilt, shame, blame, or that you've lost control

Coping with Emotional Eating

People who emotionally eat often feel that they are powerless over food cravings. When you feel an urge to eat, it might feel overwhelming or like an unbearable tension that makes you want to eat right now! It might feel like eating is the only thing on your mind.

If you have had difficulty resisting these intense urges in the past, you might believe that your willpower isn't strong enough to give you power over emotional eating. However, you have more power than you think! Keeping an emotional eating diary and practicing mindful eating are both good ways to start to conquer your cravings.

Keep an Emotional Eating Diary

One of the best ways to identify the patterns behind your emotional eating is to keep track with an Emotional Food Journal (see page 109 for an example).

Every time you feel the urge to overeat or feel driven to reach for your comfort food, take a moment to think: is there something that triggered this urge to eat? Often there is an upsetting or triggering event that kick started the emotional eating cycle. Common examples include workplace stressors, interpersonal conflict, parenting stress, or financial stress. Once you start tracking your emotional eating, you will probably see a pattern emerge. Once you can identify your emotional eating triggers, your next step will be to figure out alternative ways to cope with your feelings.

Mindful Eating

Mindful eating means paying attention to what you are eating while you are eating it, before you finish your meal. Sometimes people find it helpful to pay attention to the 5 senses (sight, smell, taste, hearing, touch) while eating. For example, what does your food taste like? What is the texture like? Mindful eating also means learning to listen to your body's hunger cues and fullness cues, to know when you should start and stop eating. Reconnecting with your body and listening to your feelings of hunger and fullness are the first steps to working on emotional eating. If you are physically full but feel emotionally hungry, what is something else you can do instead to satisfy that feeling?

Binge Eating and Other Problem Eating Behaviours

Binge eating is one of the most common eating behaviour problems. Binge eating involves eating large amounts of food in short periods of time. When a person binge eats, they may feel a loss of control over eating such as being unable to resist or stop eating certain foods. A person who binge eats often feels guilt, anger and shame. A person who binge eats may also experience physical problems such as pain or discomfort from overeating.

Problem eating behaviours can also be restricting the amount of food you eat to help with weight management or to make up for eating in unhealthy ways, intentionally vomiting after eating, using laxatives and/or over exercising to get rid of calories eaten.

It is important to know that bariatric surgery does not fix these problem eating patterns. Some people continue to struggle even after having bariatric surgery.

Problem eating behaviours can improve immediately after having bariatric surgery. This is because most people don't experience hunger for the first 12 months after surgery. Because people are not hungry after surgery, they may engage in other unhealthy behaviours, such as skipping meals. When people start to experience hunger again, they are at risk for returning to problem eating behaviours. If this happens and people don't obtain the necessary help, they are at increased risk of regaining their weight.

Having a history of problem eating behaviours will not prevent you from having bariatric surgery. It just means that we will need to work together to develop a plan of care that ensures that bariatric surgery is both safe and successful. Your team of bariatric professionals is here to help.

Depression

Depression is consistently having feelings of low mood or sadness and/or loss of interest in activities that were once interesting or enjoyable. Other symptoms of depression may include appetite/weight changes, sleeping problems, concentration problems, unusual fatigue and low energy level, restlessness, feelings of worthlessness, and thoughts of death/suicide. These symptoms last for at least a few weeks or longer, and can come and go over time. Depression can affect life in many ways. It can negatively impact relationships, employment, or doing things in life that people need to do.

Some people who seek bariatric surgery have a history of depression, and other people can develop depression after having surgery.

There are many effective treatments for depression.

Having a history of depression will not prevent you from having bariatric surgery. It just means that we will need to work together to develop a plan of care that ensures that bariatric surgery is both safe and successful. Your team at the BCOE is here to help.

Substance Use

Some people choose to use substances such as alcohol, tobacco products, or other recreational drugs for a variety of different reasons. The use of these substances can seriously complicate the pre-operative and post-operative phases of surgery. They can prevent your body from healing after surgery and can increase your risk of developing stomach ulcers.

After surgery your body will be more sensitive to certain substances such as alcohol. This means substances will be absorbed by your body more quickly making you feel the effects more easily and increasing the risk of becoming dependent on them. There are also safety risks when driving a car or operating machinery.

There are some people who develop substance use problems after surgery that have never had these problems before. Please let us know if you are using any of these substances. We will work with you to develop an appropriate plan to help you be safe and successful.

Having a history of using substances will not prevent you from having bariatric surgery. It just means that we will need to work together to develop a plan of care that ensures that bariatric surgery is both safe and successful. Your team of bariatric professionals is here to help.

Prioritizing Self Care

Making changes can be overwhelming and sometimes tiring. That's why it's so important you prioritize taking care of yourself while trying to make these big changes. Self-care is a way of looking after your own needs and making sure you have time to do things that feel good to you. The goal would be to include self-care 1 to 2 times daily but remember, new habits can be hard to build. Start off small and build on your successes. Some self-care ideas include: knitting, sitting outside, enjoying a bath or shower, phoning a friend, going for a walk in nature, or bird watching. Self-care can also just be a small moment you take to yourself. Self-care is anything that feels nourishing and provides you with a break from day to day stressors.

Medications and Mental Health

If you take medications to manage your mental health, you must closely monitor your symptoms after surgery. The surgery can change the absorption of some medications. Call your family doctor or health care provider if you notice changes in your symptoms of mental health.

Do not stop any medication or change doses on your own.

Many people report feeling better about their mental health and well-being after surgery. Some people face some new or different issues such as feeling pleased about their weight loss but then feeling negative about having loose or excess skin. Other people have a challenging time adjusting to their new lifestyle after bariatric surgery which can result in feelings of frustration.

We as a team will work closely with you to address any of these concerns. We need to work together to help your experience with bariatric surgery be successful. It is important to be honest with us about your current and past history. It is important to keep us updated on new or developing concerns. We will work with you to ensure that bariatric surgery will be as safe and successful as possible.

Getting Ready for Surgery

There are many things you need to do to get ready for surgery.

This section describes the general guidelines to follow.

6 Months before Surgery

Stop recreational drug use immediately

Some people choose to use recreational substances for a variety of different reasons. Some people use them to help manage their emotions or feelings, some people use them to help manage physical issues (chronic pain, sleep problems), and other people use them for fun. We know that using recreational substances before and after bariatric surgery can cause physical problems with the surgery and recovery, can cause new problems, or make other existing problems worse. Let the bariatric team know about any and all substances that you are, or have recently used. We can help you to understand some of the possible problems they can cause with surgery and work with you to put together a plan to help you be safe.

To be safe to proceed with bariatric surgery, you must have stopped using recreational substances for at least 6 months before surgery. You must also agree to not use these after surgery.

We will work with you to develop a plan to help you be safe and successful with surgery.

Stop smoking and/or using nicotine products and marijuana immediately

Smoking tobacco products, nicotine, marijuana, and other inhaled substances can delay wound healing and lead to problems such as lung infections and pneumonia. They also increase the risk of bleeding, post-operative leaks, and life-threatening ulcers in the stomach pouch after surgery.

To be safe to proceed with bariatric surgery, you must have stopped smoking and/or using inhaled substances for at least 6 months before surgery. This includes nicotine gum, e-cigarettes (vaping) and similar products. You must also agree to not smoke and/or use nicotine products or marijuana after.

If you are taking marijuana for medical reasons the bariatric team will review your chart and communicate with your prescribing physician to become aware of your management program. Anyone on medicinal marijuana will be considered for surgery on an individual basis.

For help quitting, contact your health care provider, pharmacist or the Smokers' Helpline. Make sure you tell anyone helping you that you are not allowed to use any type of nicotine products as well.

- Website: www.smokershelpline.ca

Remember:

- The use of substances like alcohol, tobacco and recreational substances can complicate bariatric surgery before and after the operation. If you use any of these substances, even infrequently, talk to a member of your health care team so we can find ways to help and support you through the changes you need to make.

Stop caffeine – 2 months before surgery

Caffeine irritates the lining of the stomach. Since you have a very small new stomach after surgery, you cannot have caffeine for at least 3 months.

Since stopping caffeine can take some time you need to do this before surgery.

When you first stop, you may get a headache and feel tired. This is called withdrawal. You need to withdraw from caffeine at least 2 months before surgery so you do not have this problem after surgery.

You will not be able to have caffeine for at least 3 months after surgery as well. However, you can have decaffeinated drinks. Your doctor or dietitian will tell you if or when you can have caffeine again after surgery.

Stop alcohol (includes liquor, beer and wine) – 2 months before surgery

Alcohol irritates the lining of the stomach and intestines and can lead to ulcers. Since you have a very small new stomach after surgery, you cannot have alcohol. Alcohol can also cause liver damage. When you lose weight fast, your liver takes up waste products and toxins produced in your body. This puts stress on the liver and can cause many problems.

Since stopping alcohol can take some time, you need to do this before surgery.

You need to withdraw from alcohol at least 2 months before surgery so you can avoid problems after surgery.

After surgery, you cannot drink alcohol for at least 6 months. After surgery, alcohol irritates the lining of your stomach pouch and/or your intestine and can cause ulcers.

Also, after surgery, your stomach pouch is not able to break down the alcohol and your blood absorbs it very fast. This means that you feel the effects quickly and can become intoxicated after a very small amount. Research has shown that a person who has had bariatric surgery absorbs 4 times as much alcohol from a drink. Research has also shown that the alcohol level is higher and that the higher level is maintained for a longer period of time than a person who has not had bariatric surgery. This is not safe for many reasons.

Your doctor or dietitian will tell you when and if you can have alcohol again.

Stop carbonated drinks – 2 months before surgery

Stopping carbonated drinks is important to do at least 2 months before surgery as it can be a challenge to stop.

You cannot have any carbonated drinks after surgery because carbonated drinks produce gas in the small stomach pouch and many people find this painful.

Carbonated drinks are also not nutritious and take up a lot of space in your small stomach.

Medications – 2 months before surgery

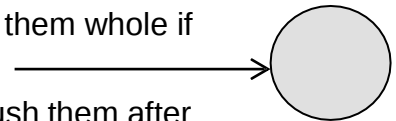
Before you have surgery, talk to your surgeon and family doctor about any medications, vitamins, herbal products and botanicals you take. Some of these may be stopped and others may be changed.

Stop taking anti-inflammatory medications such as Ibuprofen, Motrin, Advil, Naprosyn and Aleve. These medications put you at high risk for developing stomach ulcers. If you take Aspirin for reasons other than anti-inflammatory, speak to your doctor first before discontinuing.

Right after surgery, you may not be able to take some medications in pill or capsule form. Some pills may need to be split or crushed for 6 to 8 weeks or longer or for life. Some capsules may need to be opened. You may also need to take some medications in liquid form.

You will need to arrange how to take your medications and vitamin and mineral supplements with your family doctor, surgeon and pharmacist before surgery so that you can take them safely after surgery.

A general guideline for taking pills is you may be able to swallow them whole if they are smaller than 1.5 centimeters or the size of this circle.



If you have a problem taking pills this size, you should split or crush them after talking with your pharmacist.

Exercise and Activity – 2 months before surgery

It is important to be in good physical condition before surgery. Being in good shape will help you recover faster and prevent problems after surgery. Make sure that at least 2 months before surgery you begin or continue to do regular physical exercise. Talk to your doctor first before starting a new exercise program to make sure it is a good plan for you.

Walking is a great exercise. Walking helps you to:

- Improve blood flow
- Breathe better
- Build muscle
- Lose weight
- Manage stress, feel good, and get better sleep

Start walking regularly before surgery and slowly build up in time and number of days in a week you walk. The guideline is a total of 30 minutes, 5 days a week; however, you can break up the 30 minutes into smaller chunks. For example, 2-15 minute walks per day.

You will be moving and walking in the hospital the day you have surgery so it is best to get into shape now.

All physical activity is good. Move in a way that feels good to you

Remember:

- To maintain a healthy weight and to prevent weight gain, you need to develop and keep healthy eating habits.
- Physical activity must be part of your lifestyle plan.

Vitamins and Mineral Supplements – 2 months before surgery

Based on your bloodwork, medical history, and individual risk(s) identified during your assessments with our team, you may be prescribed vitamins and/or minerals to take prior to surgery. The purpose is to optimize your nutrition levels even before going into surgery. Some nutrition markers take much longer (6+ months) to correct than others.

- If you have already had bariatric surgery, you may already be taking vitamin and mineral supplements.

Nutrition and Diet – 2 months before surgery

You should begin making changes before surgery to prepare for your new lifestyle. Keeping a food journal will help you monitor your food and fluid intake. Your success will depend on your choices. **Weight loss surgery alone does not cure obesity.**

Here are some changes you can start working on now to prepare for changes after surgery:

- Keep a food journal or daily diary of what you eat, the amounts you eat and when we eat.
- Aim for eating 3 meals with protein a day.
- Eat 1 to 2 healthy snacks between meals every day.
- Start drinking more water each day.
- Clean out cupboards, fridge and freezer of high fat and sugar foods.
- Stop drinking calories using juice, pop, alcohol, chocolate milk, ice tea etc.
- Cut back in restaurant, take-out, and fast foods.

As you get closer to surgery:

- Read the Nutrition and Diet section to prepare for After Surgery.
- Prepare a grocery list so you will be ready for the nutrition and diet changes after surgery.
- Buy high protein supplements recommended by the dietitian to last at least 4 weeks after surgery.
- Avoid overeating or having a last big supper of your favourite foods before surgery.
- Have smaller cups, bowls and plates ready for smaller portions after surgery.

Exercise and Activity – 2 months before surgery

It is important to be in good physical condition before surgery. Being in good shape will help you recover faster and prevent problems after surgery. Make sure that at least 2 months before surgery you begin or continue to do regular physical exercise. Talk to your doctor first before starting a new exercise program to make sure it is a good plan for you.

Walking is a great exercise. Walking helps:

- your blood flow
- you breathe better
- you build muscle
- you lose weight
- you to feel good

Start walking before surgery. You will be moving and walking in the hospital the evening you have surgery so it is best to get into shape now.

Remember:

- To maintain a healthy weight and to prevent weight gain, you need to develop and keep healthy eating habits.
- Physical activity must be part of your lifestyle plan.

Pre-Surgery Sample Day of Eating #1

Breakfast

- 2-egg omelet
- 1 cup veggies of your choice
- Top with ¼ cup low-fat cheese (under 20% M.F.)
- 2 tablespoons sugar-free ketchup (use based on preference)
- 2 slices multigrain toast

AM Snack

- 1 small container Greek/Skyr yogurt
- 1 medium fruit (like apple, tangerine, pear, peach, etc.)

Lunch

- Zesty chicken wrap
- Joseph's wrap, Flatout Flatbread, or La Tortilla Factory high-fibre tortilla
- 3oz chopped baked chicken (make use of leftovers!)
- 2 cups veggies of your choice (use some in wrap and the rest can be a side salad)
- 2 tablespoons low-calorie Italian dressing mixed with 2-3 tablespoons 0% plain Greek Yogurt

PM Snack

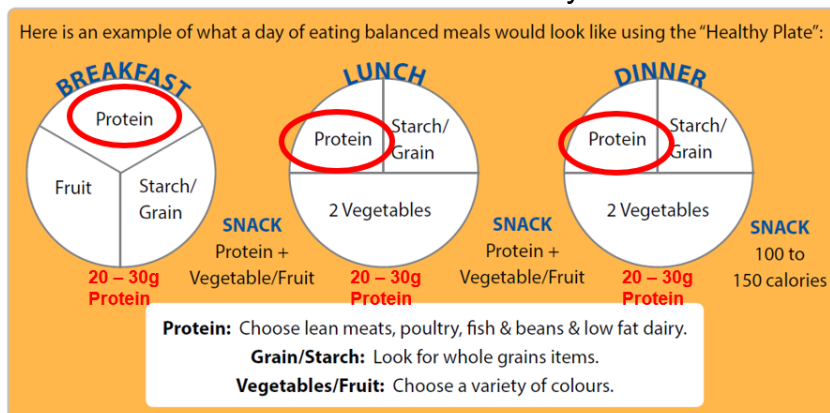
- 1 cup chopped veggie sticks
- 3 Light Babybel cheeses

Dinner

- 3oz Baked Salmon with low-calorie seasoning of your choice
- 2 cups roasted veggies of your choice
- 1 medium baked potato topped with Greek Yogurt in place of sour cream

Tip: use spray oil to lightly and evenly coat pan to minimize calories

Notice how the meals follow the “Healthy Plate” method of eating.



Snacks are recommended between meals longer than 4 hours apart. If your meals are shorter than 4 hours apart, then a snack is not needed.

Please note individual needs may vary. Your Dietitian will work with you to optimize your nutrition.

Pre-Surgery Sample Day of Eating #2 (Vegetarian)

Breakfast

1 cup cooked steel-cut oatmeal
1 teaspoon cinnamon (optional)
1 scoop whey protein powder
1 cup chopped fruit (like berries, apples, pineapple, peaches, etc.)
Sweetener or low-calorie syrup as needed

AM Snack

10 whole almonds

Lunch

Grilled tempeh salad
100g grilled tempeh (marinated with low-calorie seasoning of your choice)
1 cup cooked quinoa
2 cups veggies of your choice

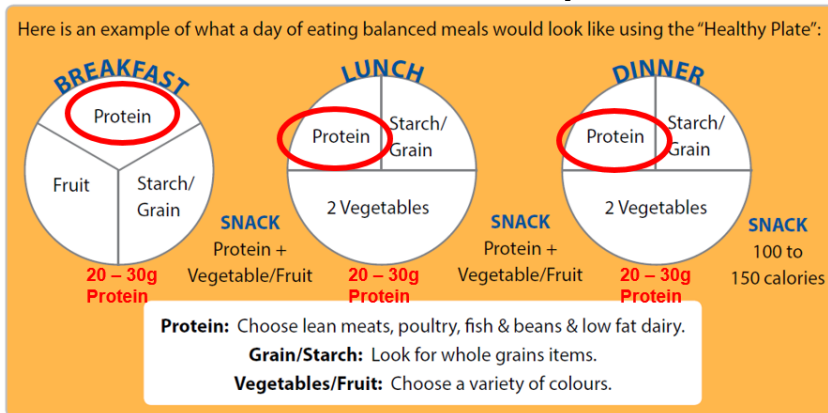
PM Snack

Low-fat string cheese (under 20% M.F.)
Multigrain crackers (up to 15g carbs)

Dinner

Vegetarian Chili
Sub in textured vegetable protein instead of ground meat

Notice how the meals follow the “Healthy Plate” method of eating.



Snacks are recommended between meals longer than 4 hours apart. If your meals are shorter than 4 hours apart, then a snack is not needed.

Please note individual needs may vary. Your Dietitian will work with you to optimize your nutrition.

Pre-Surgery Sample Day of Eating #3 (Minimal Prep)

Breakfast

Protein Bar (up to 200 calories; 20g protein or more)
Multigrain crackers (adding up to 15g carbs)
1 medium fruit

Snack

1 container 0% Greek yogurt

Lunch

2 boiled eggs
2 cups sliced veggie sticks
Crackers (up to 30g carbs)
1 medium fruit

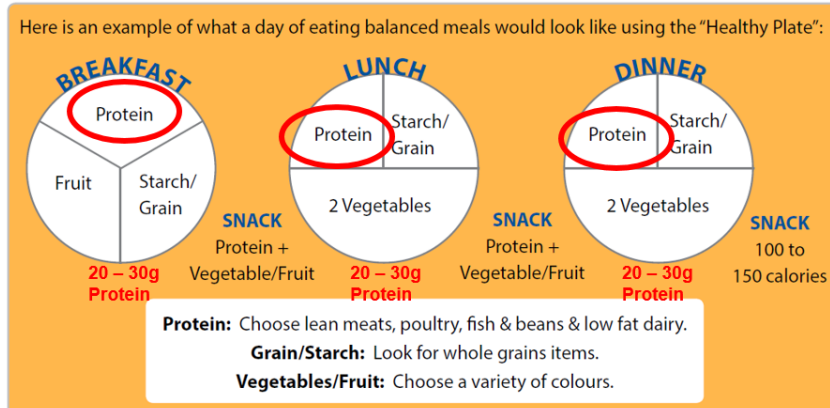
Snack

3 Light Babybel cheeses

Dinner

Chicken stir-fry
3oz cubed chicken breast
1 cup cooked quinoa
2 cups chopped mixed veggies of your choice
Season with garlic, ginger, green onions, and light soy sauce (or low-sodium seasoning of your choice)

Notice how the meals follow the “Healthy Plate” method of eating.



Snacks are recommended between meals longer than 4 hours apart. If your meals are shorter than 4 hours apart, then a snack is not needed.

Please note individual needs may vary. Your Dietitian will work with you to optimize your nutrition.

Pre-Surgery Liquid Meal Replacement Diet

You will be required to take a liquid meal replacement called Medi Meal for at least 2 – 4 full weeks before surgery (your surgeon will prescribe you the proper amount).

Medi Meal (4 packages) provides 900 calories and has all of the nutrients that your body needs. It is low in carbohydrate and fat and high in protein, which will shrink your liver. Carbohydrates in Medi Meal Time are slowly absorbed which means If you are living with diabetes, you may need to change your medications and/or insulin.

If you are living with diabetes or high blood pressure, please call the Providence Healthcare Bariatric Centre of Excellence clinic BEFORE starting Medi Meal: 416-285-3666 x4767. Please ask to speak to the Bariatric Pharmacist.

Here are some guidelines to follow:

- **It is very important to have all four packages every day for the prescribed amount of time before surgery or as recommended by your surgeon.**
- **Do not have less than four shakes per day. (This may result in losing muscle, which will interfere with healing after surgery.)**

Divide the four packages evenly over the day (every 4 hours) to avoid hunger. Avoid any additional foods. Extra calories can undo ketosis and result in rebound hunger.

- Mix 1 packet with at least 250-500mL (1-2 cups) cold water. You may add ice cubes if you like. Shake well in blender bottle, or blend in blender.
- After 3 to 4 days on Medi Meal, the ketones that your body produces from burning fat will help decrease your hunger. This mild state of ketosis is safe. You may notice an odour to your breath when you are in ketosis, this is normal.
- Do not take large doses of vitamin C while on Medi Meal. Too much vitamin C increases the risk of kidney stones. **If you are taking a multivitamin that contains vitamin C, consider staying off the multivitamin until after surgery.**
- **To manage constipation and/or diarrhea:** Drink plenty of fluids (2-3 litres per day) and try 1-2 Metamucil capsules or 1 tsp of Inulin fibre (sugar free) with each Medi Meal shake. (Avoid other brands of fibre laxatives as they may contain too many calories).

General Guidelines for Patients with Diabetes taking Medi Meal:

- If you are experiencing a low blood sugar level (under 4 mmol/L), check your blood sugar immediately and treat with **one** of the following 15 grams of quick sugar (Examples):

- 15 grams of glucose in the form of glucose tablets
- 3 teaspoon or 1 tablespoon or 3 packets of sugar dissolved in water
- 175 ml (3/4 cup) of juice
- 6 Life Savers (1 = 2.5 grams of carbohydrate)
- 1 tablespoon of honey

Source: The Canadian Diabetes Association 2008 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. September 2008, Volume 32 Supplement 1

- Wait 10 to 15 minutes; then check your blood glucose again. If it is still low:
 - Treat again with one of the 15g of quick sugar above
 - And if your next Medi Meal is more than 30 minutes away, or you are going to be active, eat a snack, such as a half-sandwich or cheese and crackers (something with 15 grams of carbohydrate and a protein source.)

Before Surgery:

- Stop Medi Meal the night before your surgery.
- Do not have any milk, cream, lemon juice, orange juice, pineapple juice, or grapefruit juice.
- Continue drinking only clear fluids, which includes water, decaf tea/coffee with no cream/milk, broth, clear Popsicle, Jell-O, or Crystal Light. You may have as much as you like, but this is all that you can have.
- After midnight before surgery, follow the eating and drinking instructions you were given by the pre-op assessment team.
- NPO or “Nothing to eat/drink” means no chewing gum, candy, lozenges, or similar products.
- You may take medications the anesthesiologist advised with a sip of water.

Making Medi Meal:

- Add 8 to 16 oz (250 to 500 mL) of water to the shaker and pour 1 packet of the Medi Meal meal replacement on top. Shake vigorously or add to blender and enjoy. Add ice cubes if you prefer it cold.
- Each day, drink at least 8-12 cups (2-3 litres) of fluid, including the fluid you add to Medi Meal. Choose **sugar-free, calorie-free** beverages that are **non-carbonated** and **caffeine-free**.

Acceptable fluids:

- Water (you can add some fresh lemon or lime juice)
- Decaffeinated coffee or tea (no milk and no sugar)

Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

- Nestea® Singles, Lipton® Iced Tea to Go, Crystal Light®, Great Value® – sugar free drink mix
 - Chicken bouillon/ beef or vegetable broth
 - Sugar-free Jell-O®
 - Sugar-free Popsicles
-
- You can eat up to a total of 500mL (2 cups) a day of the following vegetables while taking Medi Meal. Vegetables can be raw or cooked. **You can ONLY eat these vegetables:** Green peppers, broccoli, cauliflower, cabbage, lettuce, spinach, celery, zucchini, or cucumber.
 - **Do not eat any other foods or calorie-containing beverages on Medi Meal.** You may use artificial sweeteners, sugar-free gums or sugar-free mints (up to 20 calories per day).
 - Once Medi Meal has been mixed, you should drink it right away, as it will settle and form clumps if left to sit. If you do choose to save it for later, it must be refrigerated. It can be kept up to 24 hours in the refrigerator once it has been mixed with water.
 - Do not heat Medi Meal or add hot liquids. Keep packages in a cool, dry place.

Reminder:

Medi Meal is only to be used BEFORE surgery. Do not use Medi Meal Time after surgery, as it provides higher calories and volume of product than your pouch can tolerate. Please refer to the “Choose a Protein Supplement” section for an appropriate post-op protein supplement.

Medi Meal Recipe Ideas

To change the flavour:

- You may add calorie-free, sugar-free fluids such as Nestea® Singles, Lipton® Ice Tea to Go, Crystal Light®, or other sugar-free fluids. You may also add a few drops of flavouring extracts (sugar-free).

Recipe ideas:

Orange Creamsicle™ Shake 10-12 oz water 2 cups crushed ice 1 vanilla Medi Meal® 1-2 drops of orange extract Blend until smooth	Mint Chocolate 8 oz water 1 chocolate Medi Meal® 1-2 drops of mint extract Blend until smooth
Chocolate & Raspberry Shake 10-12 oz water 2 cups crushed ice 1 chocolate Medi Meal® 1 package of raspberry sugar-free drink crystals Blend until smooth	Root Beer Float 12 oz water 1 vanilla Medi Meal® 1/8 tsp of root beer extract Pinch of cloves Blend together and put it into the freezer for 1.5-2 hours. Take it out of the freezer and blend it again until slushy.
Bananas Foster 10-12 oz water 2 cups crushed ice 1 vanilla Medi Meal® 1 tsp of rum extract 1 tsp of banana extract Blend until smooth	Black Forest Chocolate Pudding 6 oz water 1 chocolate Medi Meal® 1 tsp of rum extract 1 tbsp of sugar-free cherry Kool Aid powder 1 packet of calorie-free sweetener Blend until smooth

Recipes courtesy of UHN, Toronto Western Hospital Bariatric Surgery Program.

What if I have constipation or diarrhea while taking MEDIMEAL?

Sometimes, people have constipation or diarrhea while taking MEDIMEAL. This is mostly related to the low amount of fibre found in the product.

If you have constipation:

- Try increasing your liquids up to 3 litres (12 cups) each day.
- You can also try using a fibre supplement such as Inulin fibre or Metamucil capsules. Use the sugar-free versions of these products. Start with the lowest dose and follow the instructions on the label, up to the maximum daily dose.
- If you still have constipation, you can also use medications for constipation such as Colace, Senokot, Restoralax or milk of magnesia.

If you have diarrhea:

- It is still important to drink at least 2 litres (8 cups) of fluids daily.
- Try a fibre supplement such as Inulin fibre, or Metamucil capsules. Use the sugar-free versions of these products. Start with the lowest dose and follow the instructions on the label, up to the maximum daily dose.
- You may be able to take Imodium if needed if you do not have any pre-existing bowel concerns. Talk to your health care provider about this before taking Imodium.

What should I do if I have diabetes and taking MEDIMEAL?

- If you need help adjusting your diabetes medications while on MEDIMEAL, please call our Providence Outpatient Pharmacy at 416-285-3805.

1 to 2 Weeks before Surgery

Pre-Admission Assessment Visit – 1 to 2 weeks before surgery

You will come to the Pre-Admission Assessment Unit to learn how to get ready for surgery. Here you will meet with a nurse, pharmacist and anesthesiologist.

You will have blood taken for any tests your surgeon has ordered. You will possibly have a heart test done called an ECG. You will meet with the anesthesiologist to talk about having general anesthesia for this surgery. This means that you are asleep during surgery.

In the Pre-Admission Assessment Unit you will get a set of instructions to follow before surgery. If you are not sure of anything, contact your surgeon's office for advice.

Stopping Some Medications and Other Products:

The anesthesiologist, nurse and pharmacist will tell you what medications and other products to stop before surgery. You will get a reminder list to take home.

If you take anticoagulant medications such as Heparin, Warfarin or Plavix, follow the guidelines from the doctor, nurse or pharmacist.

Make sure you have a list and tell the anesthesiologist, nurse and pharmacist about all of the vitamins, minerals, herbal products, botanicals or medications you are still taking during this visit. Some may cause your blood to be thin or cause other medical problems and need to be stopped before surgery.

Make sure you have stopped taking all herbal products such as St. John's Wort, ginkgo biloba, garlic, ginseng and kava kava **2 weeks before surgery**

1 Day (24 hours) before Surgery

If you have a CPAP or BiPAP machine:

Get ready to bring your machine and mask to the hospital the day of surgery.

Write down your prescription provider and settings for the machine so your health care providers will be able to operate it.

What to bring to hospital:

Pack your bag and follow the list you got in the Pre-Admission Assessment Unit. You will stay in the hospital 1 to 2 nights.

Bring your CPAP or BiPAP machine and mask if you use one.

After Midnight before Surgery

Instructions:

After midnight, follow the eating and drinking instructions you were given in the Pre-Admission Assessment Unit.

‘Nothing to Eat or Drink’ means no chewing gum, sucking candy or anything.

You can take any medications the anesthesiologist advised with a small sip of water.

Remember:

- **Follow the reminder paper the nurse and anesthesiologist in the Pre-Admission Unit filled out for you.**

The Operation

The Operating Room

When it is time, you will be taken to the operating room. This room is bright and cool. You may walk or travel by wheelchair or stretcher. You will be helped onto the operating room table.

The team then goes through the steps of preparing for surgery called a “surgical time out.” They make sure they have the right patient and the right surgery before starting.

You are in the operating room for 2 hours or longer.

Post Anesthetic Care Unit (PACU) then Nursing Unit

Recovery

You will go to the Post Anesthetic Care Unit (PACU). You will be watched closely by the nurses and given pain control medication. You will stay here until you are fully awake and then go to your bed on a nursing unit. There is a waiting room for your support person.

Pain Control

You may have some pain from your incisions. You will also have pain from the air that is put into your abdomen to help the surgeon do the surgery. This ‘gas bubble’ pain usually decreases within the first 2 days. Ask your nurse for pain control medication when you need it. The nurse will let you know how often you can have pain control medication.

Other ways to relieve pain are walking and any method of relaxation such as listening to music, deep breathing or imagery.

Intravenous Therapy

The IV will give you fluids and medication after surgery. It is taken out when you are able to drink well.

Nausea

Some people have nausea after a general anesthetic. It is very important to tell your nurse if you feel sick to your stomach. You will be given medication to prevent or help manage nausea and vomiting.

Activity

Exercise and activity are very important to help you recover. Getting up and moving helps keep muscles strong and prevents:

- breathing problems
- blood clots
- constipation

Do deep breathing exercises and circulation exercises every hour you are awake.

The First Time You Get Up

Ask your nurse to help you the first time you get up. You will be encouraged to move around as much as you can. Make sure you are wearing non-slip shoes, non-slip slippers or non-slip socks. As you feel stronger, you will be able to take longer walks.

The nurses will help you get up and walk the same day of your surgery. The next day you should walk at least 4 times.

Bathing and Showering

You can shower 4 days after surgery or as advised by your surgeon. Try to keep incisions dry when sponge bathing. Pat the incisions dry after bathing. Avoid using soap on your abdomen until incisions are well healed.

Incision Care

Look at your incisions each day. Each incision should be a clean, dry closed line. Your incisions may be covered with tape. Tell your nurse if you see any discharge coming from an incision or if an incision opens. You can take the steri-strips off 7 to 10 days after surgery depending on your surgeon's instructions. If the steri-strips fall off you can leave them off.

Nutrition and Diet

Since diet is very important, there is a complete diet section in this book starting on page 41.

Medications

Your health care team will give you your medications in a form that you can take. Some may be split or crushed. Some may be put into unsweetened applesauce, water or other liquid to help you swallow.

Making Plans to Go Home: Discharge Time is 11:00 a.m.

You will need to arrange for someone to drive you home.

At Home After Surgery

Pain Control

If you have pain, take the liquid pain control medication ordered by your doctor. Pain should decrease over time. **Call your doctor if your pain is not relieved by medication**, does not go away over a few weeks or you have a sudden increase in pain.

Bathing and Incision Care

When you shower, cover the incisions to keep them dry. You can shower 4 days after surgery or when your doctor advises.

You cannot take a bath or swim until your incisions are well healed. You can talk to your family doctor about this during a follow-up visit.

Keep the steri-strips on your incisions clean and dry for 7 to 10 days depending on your surgeon's instructions. If any steri-strips fall off, leave them off.

It is normal to have some swelling around the incisions. This takes a few weeks to go away. If you have severe swelling, bruising or redness that is spreading, contact your family doctor or the Bariatric Clinic as you may have bleeding or an infection.

You may have some numbness in the incision area. This is normal as some nerve endings were cut during surgery. Feeling may or may not return slowly over the next 2 to 3 months.

The incision scars may be red, dark pink or purple. These may or may not fade over the next year. This depends on your skin type.

Medications

You may need to split or crush some medications for about 4 weeks or longer or for the rest of your life. You can mix the medication with a small amount of unsweetened applesauce, water or other liquid to help it go down. Most people can swallow medication whole after about a month.

Your health care team will assess how to take your medication at each clinic visit.

Take 1 pill at a time. Wait before taking another medication to make sure it goes down. Drink fluid after taking a pill to help you swallow.

Your doctor and members of the health care team will tell you when you can start taking certain medications after surgery. Each person's plan of care for medications is different.

Talk to a member of your care team when you have questions or concerns.

Remember . . .

- **You must take a multivitamin/multimineral supplement every day for the rest of your life.**
- There are more details in the nutrition section starting on page 90

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

You can never take this type of medication after surgery. There are too many types and brand names to list here but some names include ibuprofen (examples Advil, Motrin), acetylsalicylic acid (example ASA) and COX-2 inhibitors (example Celebrex), Naproxen and Aleve. These medications put you at high risk for developing stomach ulcers.

If any health care provider or specialist you see wants you to take NSAIDs after surgery, you must contact the Bariatric Clinic first.

Ulcer Prevention Medication

You will take a special medication to help prevent stomach ulcers for at least 3 months. Your surgeon will prescribe this for you.

Be sure to take this medication ½ hour before breakfast and ½ hour before dinner.

Blood Pressure Medication

Blood pressure is written as 2 numbers.

There is a top number and a bottom number:

120 systolic = when your heart contracts and pumps blood forward

80 diastolic = when your heart relaxes

In this example the blood pressure is 120 over 80.

If you take medications to manage your blood pressure after surgery, you should monitor your blood pressure at least 2 times a week.

Call the health care provider who looks after your blood pressure such as your family doctor, nurse practitioner or cardiologist if you notice:

- the top number (systolic) is less than 100
- the top number (systolic) is more than 155

Do not stop any medication or change doses on your own.

Medications for Mental Health and/or Seizures

If you take medications to manage mental health and/or seizures, you must closely monitor your symptoms after surgery. The surgery can change the absorption of some medications. Call your family doctor or health care provider if you notice changes in your symptoms of mental health and/or seizures.

Do not stop any medication or change doses on your own.

Prevention of Blood Clot Medication

After surgery you have a higher risk of getting a blood clot. A blood clot can be very dangerous. A blood clot can block a blood vessel so blood cannot flow through your body:

- A blood clot in your brain can cause a stroke.
- A blood clot in your heart can cause a heart attack.
- A blood clot in a lung is called a pulmonary embolism. Symptoms include sharp chest pain, trouble breathing and shortness of breath.
- A blood clot in your leg is called a deep vein thrombosis. Symptoms include pain, redness, tenderness and swelling around the site of the clot.

You will be taking a medication called an anticoagulant or blood thinner. You will need to take this medication by injection for about 10 days after surgery. The best place to inject is into your abdomen making sure it is not injected into the same place each time.

This medication prevents:

- a blood clot from forming
- a blood clot that has formed from getting bigger

You may need to have the injections longer or you may be changed to a pill. This is decided by members of your health care team.



Exercise and Activity

Gradually resume your normal activities. Moving and walking helps you recover, prevents problems after surgery and promotes healthy living.

☒ Do not lift or carry anything over 4 kilograms or 10 pounds. This includes things like a grocery bag, suitcase, laundry basket, vacuum cleaner, pet or child until you check with your doctor. Most people should follow this guideline for 6 to 8 weeks

☒ Do not do any strenuous exercise for 6 to 8 weeks until your doctor says you can.

Start with short walks a few times a day. You can walk inside or outside. You will feel tired so rest and take breaks but keep on walking. As you recover you will be able to walk further each time, and more often. You may want to buy a pedometer (e.g. Fitbit) to wear and measure your progress.

Talk to your doctor if you have problems with your joints and walking is hard. There is an exercise for you! Sometimes water exercises are better. Talk to your doctor about starting any new exercises as you must be well healed first.

By 3 months you should be following an exercise plan that suits you and your lifestyle. There are many ways to exercise including going to a fitness centre, doing aquafit, hiking and biking. You can talk to members of your health care team in the Bariatric Clinic about your exercise and lifestyle goals.

Return to Work or School

The usual time off work is 3-4 weeks. When you return to work depends on what you do and how you feel. Talk to your doctor about when you can go back to work or school at your follow-up visits.

Sexual Activity and Pregnancy

You can resume sexual activity when you feel able. **It is important not to get pregnant until your weight is stable and you are following a healthy lifestyle. This is usually around 15 to 18 months after surgery.**

Rapid weight loss after bariatric surgery can greatly increase your fertility which means you can get pregnant easily. You need to talk to your family doctor and use non-oral hormonal birth control such as depo-provera.

If you would like to have a baby, it is very important to plan for a pregnancy. After surgery your nutritional levels may not be optimal. Vitamin and minerals levels need to be checked and followed to ensure proper growth of the baby. Pregnancy should be followed by an obstetrician who deals with high risk pregnancies.

If you become pregnant at any time or think you may be pregnant, contact the Bariatric Clinic. You will need to be referred to an obstetrician for an assessment of high risk pregnancy.

Follow-up

You will have a follow-up appointment at the Bariatric Clinic 7 to 10 days after surgery. You will also have scheduled appointments with the Bariatric Clinic around:

- 1, 3, 6, and 12 months after your surgery

Blood tests are done 3, 6, 9, and 12 months after surgery.

Contact your family doctor or health care provider if you notice:

- any incision is red, swollen, painful, bleeding
- any incision has yellow, green or smelly discharge
- you have a fever – a temperature 38.3° or above
- vomiting that lasts more than 3 hours
- dizziness that does not go away

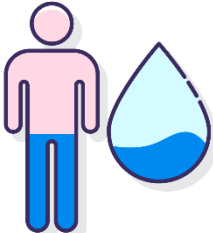
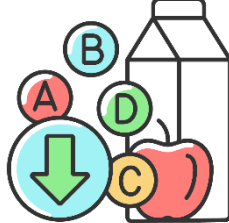
Go to St. Joseph's Hospital or the nearest Emergency if you have:

- leg pain or swelling
- shortness of breath
- chest or shoulder pain

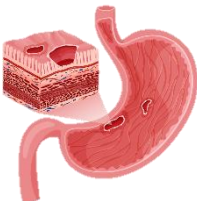
Call 911 or your local emergency number. Do not drive yourself.

Medical Complications After Bariatric Surgery

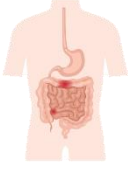
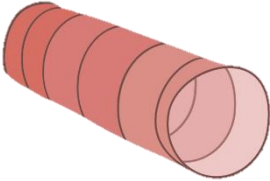
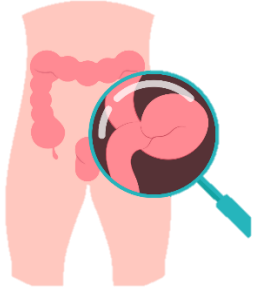
Bariatric surgery, while effective for weight loss and health, has risks. Understanding these is vital for patients.

Complication	Description	Signs & Symptoms
Nutritional		
Dehydration 	This can happen because you're drinking less fluid, vomiting, or sweating a lot. It can cause problems like imbalance in your body's electrolytes, feeling dizzy, and in severe cases, issues with how your organs work.	Dry mouth, eyes, skin, lips Dark urine (dark yellow, orange, amber) Not peeing enough Dizziness Weakness Confusion Rapid heartbeat Poor skin turgor (bounce back of skin)
Nutritional Deficiency 	Changes in your digestive system after surgery can make it harder for your body to absorb important nutrients like vitamins (such as B12 and D) and minerals (like iron and calcium). It's important to have regular check-ups and take supplements to avoid deficiencies.	Fatigue Weakness Dizziness Pale skin Brittle hair and nails Soreness/swelling of the tongue Mouth ulcers Brain fog
Weight Regain 	Can happen due to changes in lifestyle, hormones, or how the surgery affects the body. Regular check-ups and sticking to diet and exercise advice are crucial for keeping the weight off in the long term.	Gradual increase in weight Return of symptoms associated with obesity-related conditions (e.g., increased blood pressure, elevated blood sugar levels, worsening joint pain).

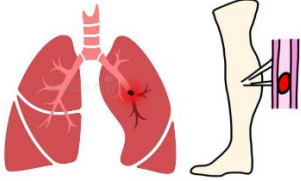
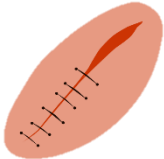
Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

Mechanical: the body		
Bleeding 	Minor bleeding can often get better on its own or with simple treatments. However, if bleeding is severe, it may need blood transfusions or another operation to stop it.	• Increased heart rate, • low blood pressure, • swelling or hardness around the surgical site, • bruising, • bleeding from the wound.
Ulcer 	Ulcers can form in the stomach or small intestine, leading to pain, bleeding, or perforations. Treatment involves medications to lower stomach acid and antibiotics if there's an infection.	• Abdominal pain (burning or gnawing) • Bloating • Nausea • Vomiting • Loss of appetite • Weight loss • Bloody or dark stools
Leaks 	A leak can happen if there's a hole or separation in the connections between parts of the digestive system, like the stomach or intestine. If not quickly found and treated with drainage, antibiotics, and sometimes surgery, it can lead to peritonitis (inflammation in the belly) or sepsis.	• Fever • Abdominal pain • Increased heart rate • Difficulty breathing • Decreased blood pressure • Drainage from the wound that may be foul-smelling
Bowel Obstruction 	Changes in the anatomy after surgery, such as internal hernias or strictures (narrowing of the intestines), can lead to bowel obstructions. Treatment may require surgery to relieve the obstruction.	• Severe abdominal pain or cramping • Bloating • Vomiting (often projectile) • Constipation or inability to pass gas • Abdominal distension

Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

Strictures 	A stricture is a narrowing in the gastrointestinal tract, commonly at the site of surgical connections. Treatment involves endoscopic dilation or surgical correction to widen the narrowed area.	• Difficulty swallowing • Feeling of food getting stuck after eating • Nausea • Vomiting • Regurgitation of food
Fistula 	An abnormal connection can form between different parts of the gastrointestinal tract or between the digestive tract and other organs or the skin surface. Symptoms vary depending on the location and may include pain, fever, and discharge. Treatment involves surgical repair.	• Pain • Fever • Drainage of fluid or pus from the wound or near the surgical site • Redness or swelling around the wound.
Hernia 	Incisional hernias can develop at the site of surgical incisions due to weakened abdominal muscles. Surgical repair may be necessary to prevent complications.	• Visible bulge under the skin • Discomfort or pain, especially when lifting or straining • Feeling of heaviness in the abdomen
Gallstones 	Rapid weight loss can lead to the formation of gallstones. Some patients may require surgery to remove the gallbladder (cholecystectomy) if symptoms are severe or recurrent.	• Sudden and intensifying pain in the upper right portion of the abdomen • Pain between the shoulder blades • Nausea, • Vomiting • Jaundice (yellowing of the skin or eyes).

Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

Systemic		
Blood Clots 	Patients undergoing bariatric surgery are at increased risk of developing blood clots, which can travel to the lungs (pulmonary embolism, PE) or form in the deep veins of the legs (deep vein thrombosis, DVT). Prevention measures include early mobilization, compression stockings, and anticoagulant medications.	Pulmonary embolism (PE): • Sudden shortness of breath • Chest pain (especially with deep breathing or coughing) • Fast breathing • Fast heart rate • Coughing up blood Deep vein thrombosis (DVT): • Swelling • Pain • Warmth or redness in the affected limb (usually the calf), sometimes with no symptoms
Wound Infection 	Incisions can become infected due to bacteria entering the incision site. Treatment involves antibiotics and wound care to prevent deeper infections.	• Redness • Swelling • Warmth • Tenderness around the wound • Pus • Discharge from the wound, • Fever • Chills

If you experience any of these symptoms, please seek prompt medical attention. Early recognition and treatment can help prevent serious consequences and improve your outcomes.

Contact your family doctor or health care provider if you notice:

- any incision is red, swollen, painful or, bleeding
- any incision has yellow, green or smelly discharge
- you have a fever – a temperature 38.3° or above
- vomiting that lasts more than 3 hours
- dizziness that does not go away

Go to the Emergency Department if you have:

- leg pain or swelling
- shortness of breath
- chest or shoulder pain
- Severe abdominal pain

Call 911 or your local emergency number. Do not drive yourself.

Getting Support from Family and Friends

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Good Support Helps

When you have decided to lose weight it is important to have the support of family and friends to help you achieve your goals. There has been a lot of research on the value of having positive relationships and supports when losing weight and keeping it off. Talk to your family and friends about how they can help you.

We all know that it is hard to change behaviour and sustain change over time. Researchers agree that losing weight is a major challenge. In order to lose weight a person often needs to combine several strategies. Having weight loss surgery is only the first step. You must also make permanent positive changes to your diet and eating habits as well as exercise to lose weight and maintain weight loss. Most people need and want support to make these changes.

After surgery, there may be an emotional adjustment to your new life. You will need to deal with changes in your relationship with food and changes in your new body image. Sometimes you may expect more or different changes. Sometimes the changes can be overwhelming even though it is what you wanted.

You may find a change in your lifestyle such as exercising more and going out less to eat interferes with your previous relationships. You may feel your role and identity with your family and friends has changed and this can sometimes lead to anxiety and depression.

It is helpful to have family and friends listen to you and encourage you as you go through these changes. Seeking individual counselling might also be of benefit. You may want to join a support group, chat-line or on-line forum. It can be helpful to hear from others who are going through some of the same experiences as you. If you use the internet remember that all sites are not safe, reliable or give accurate information.

Remember:

- You may need to combine several strategies of support to help you lose weight, maintain your weight loss and adjust to the changes in your life.

Monthly Support Group at St. Joseph's Healthcare Hamilton

You are invited to attend a monthly support group at St. Joseph's Hospital after bariatric surgery. The Bariatric Support Group provides a chance to have peer to peer support from others who have had this type of surgery. This support group does not have many members that have had duodenal switch surgery but people still find this group beneficial.

You will be able to talk to others about your challenges and experiences, share recipes and ideas and you may even find an exercise partner. You will be given more information about this group after surgery or feel free to ask about it.

Ways Family and Friends Can Help

Here are some helpful hints for family and friends with examples of how to help you.

You can copy this section and give to your family members and friends to read.

- Learn about obesity, weight loss and bariatric surgery. As you learn about this subject you will discover that no one plans to become overweight. Obesity is a result of a combination of physical, chemical, psychological and emotional issues. Losing weight is a major challenge and requires support from everyone around.
- Avoid becoming a “food cop”. What you may see as support, your family member or friend may see as harassment. Constant nagging, rolling your eyes or talking behind your family member’s or friend’s back is not healthy for the relationship. Offer support in positive ways.
- Prepare healthy choices when you invite your family member or friend for a meal. Plate the food at the counter or let them plate their own food. Offer fresh fruit instead of baked goods for dessert. Call in advance to discuss menu preferences so you can relax and enjoy each visit.
- Be patient. If you feel that your attitude is changing such as you are getting irritated or frustrated watching your family member or friend make unhealthy choices...walk away, read a book or go out for a while.
- Avoid eating tempting foods in front of your family member or friend. Some people will say, “I am not on a diet so why do I have to suffer?” You do not. However, it is hard to convince someone that you love him or her when you eat chocolate in front of him or her. Wait until you are not together. For example, treat yourself at work or school before you come home.
- Enjoy the benefits of being healthy yourself. There are many benefits of a healthy lifestyle regardless of body weight.
- Take part in activities and support others getting involved too. Help your family member or friend plan activities that he or she may like to do or want to try such as kite flying, golfing, dog walking and swimming. Help him or her build a routine with other friends and family. For example walk with you on Mondays, swim with another friend on Tuesdays, bike on Wednesdays with neighbours, walk on Thursdays with you etc.
- Avoid sabotaging your family member’s or friend’s plans. Do not cook or serve unhealthy, high calorie foods. Change traditions to support his or her weight loss and maintenance goals. For example, on Fridays, Jon and Ali had date night. To show his continued love for Ali, Jon brought her favourite chocolates home. When Ali expressed her desire to lose weight, Jon was upset as his tradition would be broken.

Ali asked Jon to bring a flower or fresh fruit instead but Jon resisted and continued to bring chocolates. Ali tried hard to not eat the chocolates but having them there each week was tough.

You have probably heard people say things like “It is a birthday. Everyone has to have some cake” or “I made this especially for you”. Change the way you think and respect your family member’s or friend’s plans.

- Talk about what type of support your friend or family member wants and how much you can offer. Here is an example. Sharyl asked her friend Jenna to support her during her weight loss plan. Sharyl gave Jenna a copy of the book she was following and asked her to read it. Sharyl also asked that Jenna e-mail her once a week to encourage her and ask her how her plan was going. She did not want Jenna to check up on her by asking what she ate each day or how much exercise she had done. She felt that was asking too much and not Jenna's responsibility.

Jenna agreed to Sharyl's requests and read the book and sent emails and called Sharyl regularly. Jenna also randomly sent cards of encouragement and gave Sharyl interesting healthy recipes found in magazines and articles on various types of exercises such as yoga and Tai Chi from newspapers.

Sharyl appreciated the support and said that it was up to her to stay on track. She joined a fitness program to get support from trainers and friends she met there. When Jenna and Sharyl met once in a while, they walked and talked instead of meeting in a café.

- Avoid being the only support person. This can be hard to take on and keep your relationship going. Encourage your family member or friend to find other supports as well.
- Continue to communicate. Be clear, open and honest about how you feel. Every so often, take some time to evaluate how things are going. Talk to your family member or friend and ask how you are doing supporting him or her in these weight loss and healthy lifestyle plans. Relationships change over time and yours will too. Celebrate together as good relationships are worth keeping.

Understanding Change

Having bariatric surgery is an important decision. Along with this main decision are lots of other decisions and changes that you need to think about and perhaps make. Knowing about change theory is a good way to help you get ready for this time in your life.

A researcher called Prochaska and his colleagues have described a model for change called the Stages of Change. There are 6 Stages. You may be in one stage for one behaviour such as quitting smoking and another stage for a different behaviour such as starting an exercise program.

For each behaviour you want to change, look at the model and make a plan. You can do some work on this quietly by yourself and then talk to any of your support people or a member of your health care team when needed.

Stage of Change	Am I in this Stage?	Ways to Move On
Stage 1. Pre-contemplation I am not ready and I am resisting change	☐ Avoiding the thing that needs to change ☐ Being poorly informed ☐ Not taking responsibility for this change ☐ Using defense mechanisms such as: - Denial – I do not do this so - Rationalization – I do this because... - Projection – so and so does this not me - Blaming others (displacement) – I was raised this way	- Think about the subject - Become informed - Take responsibility - Become aware of your defenses - Concentrate on making a change - Think about how to change your defenses - Begin positive self-talk - Think about expressing your feelings through sport or exercise and do not take them out on other people
Stage 2. Contemplation I am getting ready and change is in my horizon	☐ Thinking about making the change seriously ☐ Weighing the pros and cons ☐ May procrastinate or delay ☐ May insist on finding the perfect solution first	- Try to emotionally attach such as watch programs that deal with this or talk to others who have done it - Imagine your change and the cons or bad effects it has on you and others in your life - Use a decision making process e.g., make a clear and honest list of pros/cons

Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

Stage of Change	Am I in this Stage?	Ways to Move On
Stage 3. Preparation I am ready	☐ Made a decision ☐ Decided on the steps to take to achieve this	- Commit to the change - Make it a priority - Take small steps to avoid being anxious - Set a time frame - Tell people about it - Make a clear action plan - Write your action plan down with timelines
Stage 4. Action Time for me to get going on this change and do it	☐ Following the steps in the action plan ☐ Evaluating the plan and making changes if needed	- Try healthy ways to cope with making this change such as taking a walk when feeling like smoking - Control environment such as getting rid of junk food in house, throw matches or lighters away, put running shoes by door to see them, do not walk by take-out places etc. - Start a food journal - Make a to do list and check off each day when done - Reward yourself using healthy rewards - Get others involved such as bet them you can change

Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

Stage 5. Maintenance Keeping the change up and staying there or moving forward more	☐ Keeping up the change for several months	- Stay alert to social pressures, negative self-talk and special situations - Review pros/cons list regularly and/or make a new pros/cons list - Avoid people and places that sabotage your success - Be clear about what you are doing and why to others - Make a crisis card to read to help you deal with times when you may be tempted
Stage of Change	Am I in this Stage?	Ways to Move On
Stage 6. Termination - I did it – I made the change or Recycling - I did not succeed but I learned from this	☐ New self-image and feel great about making this change ☐ Relapse – did not succeed this time	- Congratulate yourself - See this as 1 step back to take 2 steps forward - Many people take more than one try to make a change - Budget more time and energy to making the change - Be prepared for problems that arise next time - Start with a smaller change next time - Get some help and try again

Nutrition and Diet

After Duodenal Switch Surgery

This section is ONLY for people who have had Duodenal Switch surgery. Talk to your dietitian and make sure you are following the correct diet in the correct book.

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Diet Stages – Overview

After surgery, the diet stages are:

Diet Stage	Start Date	Details
In Hospital – Right After Surgery	Surgery day and perhaps day after	See page 53
In Hospital – Clear Fluids and Protein Supplements	1 to 2 days after surgery	See pages 54-55
Week 1 – Full Fluids	Start when you get home	See pages 56-60
Week 2 – Full Fluids	↓	See pages 56-60
Week 3 – Pureed Foods	↓	See pages 61-68
Week 4 – Pureed Foods	↓	See pages 61-68
Week 5 – Soft Foods	↓	See pages 69-72
Week 6 – Soft Foods	↓	See pages 69-72
Week 7 – Diet for Life	↓	See pages 73-79

Generally:

- Over a 6 week period, you will progress slowly from clear fluids to a soft diet.
- During the first 4 weeks you will need to drink protein supplements to get your recommended amount of daily protein.
- At first your stomach will hold about 60 to 120 ml (1/4 to 1/2 cup).
- By about 8 weeks you will be able to eat about 240 ml (1 cup) of solid food for each meal.

In Hospital – Right After Surgery

Right after surgery you may or may not be able to drink clear fluids. This depends on your surgeon.

The day after surgery you will start or continue to be on clear fluids depending on your surgeon's plan.

For a short time, you will also continue to get fluids through the IV. When you are drinking well, the IV will be removed.

Your nurse will give you a chart similar to the one below that is specific for your surgeon's orders for you. You will be responsible to mark off how much you are drinking. Your nurses will review this with you to make sure you are drinking enough.

St. Joseph's
Healthcare Hamilton

Date: _____

Your Drinking Record

✓ over each small cup of water that you drink during the day and night. Your nurses will look at this chart to make sure you are having enough to drink in hospital. ✓

✗ First night after surgery you cannot have anything to eat or drink

Next Day after Surgery			
Time	✓	What you drank	Amount
Hour 1			30 mls
Hour 2			30 mls
Hour 3			30 mls
Hour 4			30 mls
Hour 5			60 mls
Hour 6			60 mls
Hour 7			60 mls
Hour 8			60 mls
Hour 9			90 mls
Hour 10			90 mls
Hour 11			90 mls
Hour 12			90 mls
Hour 13			120 mls
Hour 14			120 mls
Hour 15			120 mls
Hour 16			120 mls

In Hospital - Clear Fluids and Protein Supplements

Tips and Suggestions

- You will start this stage in hospital after surgery.
- Clear fluids help decrease irritation and stress to the surgical area and allow time to heal.
- Clear fluids also help to prevent vomiting.
- You will begin by sipping throughout the day. Sip about 30 ml (2 tablespoons) each hour. You will progress slowly up to a maximum of 120 to 180 ml ($\frac{1}{2}$ to $\frac{3}{4}$ cup) an hour depending on your doctor's order.
- Record your fluid intake as advised.
- If you are tolerating clear fluids, on the first or second day after surgery you will get protein supplements on each of your meal trays. When you begin these supplements depends on your surgeon.
- It is very important to drink your protein supplements so you start to receive the nutrition you need to stay healthy. You will need to continue to take protein supplements at home as well.

Clear Fluids Diet Guide

Food Group	Foods Allowed	Foods Not Allowed
Milk and Alternatives	None	All
Meat, Fish, Poultry, and Alternatives	None	All
Fruit and Vegetables	No added sugar fruit juice (120 ml or 1/2 cup daily)	All others
Soups	Beef, chicken, or vegetable broth	All others
Grain Products and Starches	None	All
Beverages	Water Low calorie or no sugar added drinks	Carbonated drinks Caffeinated drinks Alcohol
Fats and Oils	None	All
Desserts, Sweets and Others	Sugar-free jello Sugar-free popsicles Artificial sweeteners	All other food and drinks not listed

Clear Fluids Diet + Protein Supplements

Sample Menu

During the Morning

- No sugar added fruit juice 120 ml (½ cup)
- Decaffeinated coffee or tea 120 ml (½ cup)
- Water 240 ml (1 cup)
- Protein supplement

During the Afternoon

- No sugar added fruit juice 120 ml (½ cup)
- Beef broth 120 ml (½ cup)
- Sugar-free jello 120 ml (½ cup)
- Crystal Light 120 ml (½ cup)
- Water 240 ml (1 cup)
- Protein supplement

During the Evening

- No sugar added fruit juice 120 ml (½ cup)
- Chicken broth 120 ml (½ cup)
- Sugar-free popsicle 60 ml (¼ cup)
- Decaffeinated coffee or tea 120 ml (½ cup)
- Water 240 ml (1 cup)
- Protein supplement

Full Fluids Weeks 1 and 2

Tips and Suggestions

- You will start full fluids when you get home from the hospital.
- The full fluids diet is based mainly on milk products. You can also continue to drink clear fluids.
- Full fluids are high in protein and low in sugar.
- Start by sipping about 120 to 180 ml (1/2 to 3/4 cup) each hour. Slowly increase the amount you drink until you can drink about 180 to 240 ml (3/4 to 1 cup) at each meal.
- Your goal is to drink 2 litres (8 cups) of fluid each day including your protein drinks. This may be hard at first, but it should get easier with time and practice.
- Your goal is to get a minimum of 100 grams of protein each day. You need to drink protein supplements to reach this goal.
- Track your fluid and protein intake by writing it down on the pages at the back of this book. Make more copies of these pages before you run out. If you prefer you can use a notebook to track. Another way to track is to use a website or 'app' such as My Fitness Pal (www.myfitnesspal.com).
- Talk to your dietitian if you are not able to meet your goals.

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Full Fluids Diet Guide Weeks 1 and 2

Food Group	Foods Allowed	Foods Not Allowed
Milk and Alternatives	Milk (skim, 1%, 2%) Soy milk – plain or unsweetened (less than 12 grams of sugar each serving) Yogurt or Greek yogurt (smooth, 1% or less milk fat, less than 12 grams of sugar each serving)	Cream Chocolate milk Soy milk with 12 grams or more sugar each serving Yogurt with pieces of fruit, nuts or seeds All others
Protein Supplements You need 2 to 4 protein supplements a day for the first 2 weeks depending on how much protein your supplement contains	Pre-mixed Protein Supplements with 15 to 30 grams of protein in each serving (e.g., Premier Nutrition, Fairlife Nutrition Plan) Protein Powder with 20 to 30 grams of protein in each serving (e.g., whey isolate or soy isolate) mixed with milk or water	Protein supplements with more than 6 grams of sugar each serving Protein bars
Meat, Fish, Poultry and Alternatives	None	All
Fruit and Vegetables	Thinned and pureed vegetable soups (one consistency, no seeds or skins) ie. tomato, squash etc	All others
Soups	Cream soup (strained) Beef, chicken, or vegetable broth	All others
Grain Products and Starches	Cooked cereals such as oatmeal or cream of wheat (less than 10 grams of sugar each serving)	All others

Continued on next page

Full Fluids Diet Guide Weeks 1 and 2 (continued)

Food Group	Foods Allowed	Foods Not Allowed
Beverages	Water Low-calorie drinks (e.g., Crystal Light, sugar-free Kool-Aid, Gatorade G2) No added sugar fruit juice (120 ml or ½ cup a day)	Carbonated drinks Caffeinated drinks Alcohol Regular sports drinks Energy drinks
Fats and Oils	None	All
Desserts, Sweets and Others	Sugar-free Jell-O Sugar-free popsicles Pudding with no sugar added or artificially sweetened Artificial sweeteners	All other food and drinks not listed

Full Fluids Diet

Sample Menu

Weeks 1 and 2

These are examples of possible menus. You may change the type of fluids to whatever you like from the Full Fluids list but remember you must have 2 to 4 protein drinks a day (depending on how much protein is in a drink) and a total of 2 litres (8 cups) of fluid.

Note:

- This sample menu contains 2 protein drinks as the Premier Nutrition brand is high in protein. If you are using another protein drink, you may have to add another drink or two to this menu depending on the amount of protein each drink contains.

During the Morning

- 325 ml of Premier Protein drink
- Milk 120 ml ($\frac{1}{2}$ cup)
- Water 240 ml (1 cup)

During the Afternoon

- 325 ml of Premier Protein drink
- No sugar added/artificially sweetened pudding 120 ml ($\frac{1}{2}$ cup)
- Milk 120 ml ($\frac{1}{2}$ cup)
- Water 120 ml ($\frac{1}{2}$ cup)

During the Evening

- Strained, cream soup 120 ml ($\frac{1}{2}$ cup)
- Yogurt 120 ml ($\frac{1}{2}$ cup)
- Water 120 ml ($\frac{1}{2}$ cup)

Full Fluids Recipes

Vanilla-Raspberry Heaven (or flavour you like)

- 1 scoop vanilla protein powder or 1 scoop of flavoured protein powder that you like
- 240 ml (1 cup) skim, 1%, 2% milk or soy milk
- ½ single package Crystal Light raspberry flavour OR 5 ml sugar free raspberry extract or any flavour that you like

Mix in shaker or blender with ice

Protein Drink

- 1 scoop flavoured protein powder that you like
- 240 ml (1 cup) skim, 1%, 2% milk or soy milk
- 1 to 2 ice cubes
- 2 to 3 drops flavoured extract that you like

Blend

Protein Smoothie with a Boost

- 1 to 2 scoops vanilla, chocolate, or unflavoured protein powder containing a total of 20 to 40g protein
- 125 ml (½ cup) skim, 1%, or 2% milk or soy milk
- 1 (100 grams) container of yogurt with less than 12 grams of sugar and less than 12 grams of fat **or** 15 to 30 ml (1 to 2 tablespoons) of Greek yogurt for added protein.

Mix ingredients in blender

High Protein Chocolate Peanut Butter Smoothie

- 1 to 2 scoops chocolate protein powder containing 20 to 40 grams protein
- 240 ml (1 cup) skim, 1%, or 2% milk or soy milk
- 1 tablespoon peanut butter powder such as PB2 powder

Mix in blender

High Protein Peanut Butter Banana Smoothie

- 1 to 2 scoops banana flavoured protein powder containing 20 to 40 grams protein
- 240 ml (1 cup) skim, 1%, or 2% milk or soy milk
- 1 tablespoon peanut butter powder such as PB2 powder

Mix in blender

Puréed Foods Weeks 3 and 4

Tips and Suggestions:

- Puréed/Blended Foods are foods blended to a smooth consistency.
- Foods should be low in fat and sugar.
- Eat protein foods first, followed by vegetables and fruit, then grains.
- Avoid spicy foods as well as very hot/cold foods, as these may cause discomfort.
- Try only one new food at each meal to test tolerance.
- Goal is to achieve 100 – 120g protein each day (20 – 30g protein at each meal).
- You may continue to use protein shakes/powders to meet protein targets.
- Do not puree or eat pasta, bread, noodles, rice, or muffins.
- Do not have anything with pieces of nuts, seeds, tough skins, or dried fruits.
- At each meal, you may be able to eat about 125 – 175ml (1/2 – ¾ cup).
- Slowly eat 2 – 4 tablespoons every 15 minutes. Each meal will take about 60 – 90 minutes to finish.
- Take your time to eat slowly and focus on eating.
- If you feel pain or discomfort when you eat, stop eating and take a break. Try again later.

100

How do I purée foods?

To purée food, you need a food processor, blender, or a hand blender. The final consistency of the food should be smooth and thick enough to scoop with a fork or spoon. There should not be any chunks, pieces, or skins.

Meat & Fish:

1. Boil, roast, or bake until the meat separates easily from the bones or the fish flakes easily with a fork.
2. Remove bones and skin, trim off the fat.
3. Cut meat or flake fish into small pieces.
4. Blend. You may need to use some cooking water or broth to get the right texture.

Meat Alternatives:

1. Cook legumes such as beans, lentils and chickpeas according to package directions.
2. Blend with a little water or broth.

Vegetables & Fruits:

1. Wash, peel, pit and/or seed.
2. Cut into smaller pieces.
3. Steam or boil until soft.
4. Drain and save the cooking water.
5. Blend. You may need to use some cooking water to get the right texture. Do not use juice.

Puréed Foods Weeks 3 and 4 (continued)

Food Group	Foods Allowed	Foods to avoid
Meat & Alternatives	Puréed meat, chicken/turkey Puréed extra lean ground beef/pork Puréed fish Puréed firm/extra-firm tofu Puréed textured vegetable protein (TVP) Puréed scrambled/soft-poached eggs Puréed legumes (e.g., hummus)	High-fat meats (sausage, hot dogs, ribs, chicken wings, fried chicken, hamburgers) Fried eggs, hard boiled eggs Oil-packed canned fish
Milk & Alternatives (High Protein)	Same as Full Fluids	High-fat cheeses (>20%M.F.)
Vegetables and Fruit	Puréed vegetables (e.g. cauliflower, broccoli, carrots) Puréed fruits without skin and seeds (e.g. apple, pears, peach, nectarine)	Sweetened fruit sauces Juice
Grain products and Starches	Soda crackers (saltines) Melba toast Cornmeal, cream of wheat Mashed potatoes, yams, sweet potatoes	Crackers with nuts/seeds Buttery mashed potatoes Rice Bread Pasta

Puree Foods Weeks 3 and 4 (continued)

Puréed/Blended Foods Menu Sample

TIPS:

- Eat 3 small meals and 3 small snacks to keep you nourished.
- Focus on the techniques of eating to prevent vomiting or discomfort.
- Focus on high protein foods to help heal. At each meal, eat the protein-rich food first, followed by vegetables or fruit, and then grain products.
- Add some water or low sodium broth to foods before reheating food on the stove or in a microwave.
- **Remember to sip on water throughout the day; aim for 2L a day.**

Breakfast	60 ml (1/4 cup) hot cereal made with low fat milk (add 15 ml (1 tbsp) skim milk powder, sprinkle of unflavoured protein powder) or with one poached egg 60 ml (1/4 cup) yogurt 30 to 60 ml (2 to 4 tbsp) puréed fruit or unsweetened fruit sauce
Morning Snack	125 ml (1/2 cup) protein drink 30 ml (2 tbsp) puréed fruit
Lunch	30 to 60 ml (2 to 4 tbsp) low fat puréed soup (add 15 ml (1 tbsp) skim milk powder or sprinkle some unflavoured protein powder) 1 to 2 crackers 85 ml (1/3 cup) vegetable or tomato juice (optional) 125 ml (1/2 cup) protein drink
Afternoon Snack	30 to 60 ml (2 to 4 tbsp) yogurt 125 ml (1/2 cup) protein drink
Dinner	30 to 60 ml (2 to 4 tbsp) puréed meat or puréed fish 30 ml (2 tbsp) mashed potato 30 ml (2 tbsp) puréed vegetables
Evening Snack	125 ml (1/2 cup) protein drink

Sample menu courtesy of Humber River Hospital

Soft Foods

Weeks 5 and 6

100

Tips and Suggestions

- This stage is designed to last a minimum of 3 weeks. For some people, this stage may take longer than 3 weeks because everybody heals differently and has different tolerances.
- The focus of this stage is on **soft protein** foods that are easy to chew and digest. This should cause you the least amount of discomfort. **You can still eat all foods from the list for the previous weeks.**
- Your goal is to get a minimum of 100 grams of protein each day.
- Always eat your protein foods first so that you are more likely to meet your daily protein requirements. Refer to **pages 72 to 76** for help with meeting your daily protein intake.
- You need to continue to eat slowly and to chew very well in order to minimize discomfort. Your meal should take 30 to 40 minutes to eat. Avoid distractions such as watching television or using the computer while you eat so that you are less likely to overeat or eat too quickly.
- You need to pay close attention to your portion sizes. Stop eating as soon as you feel full. You should be able to eat about 120 to 240 ml ($\frac{1}{2}$ to 1 cup) of food at one time.
- You should plan to eat 3 meals each day. You will also need to add a snack in the morning and the afternoon in order to meet your requirements.
- Add one new food at a time. Start with only a small amount at first. If you have trouble tolerating a new food, try it again in a few weeks.
- Do not drink liquids before or during meal times as they may fill you up and leave you unable to eat your meal.
- Moist meats such as canned fish, slow-cooked stews or soups are generally better tolerated than dry or tough meats. Use small amount of gravy or broth to moisten foods and improve tolerance.
- Some people find spicy foods hard to tolerate at this stage. Avoid them if they cause you discomfort.

Soft Food Diet Guide

Week 5

Food Group	Foods Allowed	Foods Not Allowed
Milk and Alternatives	Milk (skim, 1%) Soy milk – plain (less than 12 grams of sugar each serving) Skyr or Greek yogurt (smooth, 1% or less milk fat, less than 12 grams of sugar each serving) Cottage cheese (1% or less milk fat) Soft cheese (e.g., cheese strings, Babybel, Laughing Cow) Cream soup	Homogenized milk Cream Soy milk with 12 grams or more sugar each serving Yogurt with pieces of fruit, seeds or nuts Hard cheese Hard cheese over 20% M.F. Milk and yogurt over 2% M.F.
Protein Supplements Your goal is to get protein from food sources but you may still need 2 to 3 protein supplements each day during weeks 5 to 6	Pre-mixed Protein Supplements with 20 to 30 grams of protein in each serving (e.g., Premier Nutrition) Protein Powder with 20 to 30 grams of protein in each serving (e.g., whey isolate or soy isolate) mixed with milk or water	Protein supplements with more than 12 grams of sugar each serving Protein bars

Soft Food Diet Guide

Week 5 (continued)

Food Group	Foods Allowed	Foods Not Allowed
Meat, Fish, Poultry and Alternatives	Poultry (soft, moist) Beef and pork (ground, lean or extra lean) Fish (fresh/frozen filets) Tuna or salmon (canned, water-packed) Lean deli meats (limit to 2 times a week) Eggs Egg salad (without hard vegetables such as celery and onion) Peanut butter (smooth) Soft tofu Pureed legumes (e.g., hummus)	Fried or barbequed meat Fried eggs Fried tofu Skin of chicken, turkey or other Sausages, wieners Bacon Fish with bones Peanut butter (chunky) Nuts and seeds
Fruit and Vegetables	Soft cooked vegetables (e.g. cauliflower, broccoli, carrots) Soft Cooked fruits without skin and seeds (e.g. apple, pears, peach, nectarine)	Fruit with seeds or tough skin (e.g., cherries, oranges, watermelon, strawberries, raspberries, blackberries) Canned fruit packed in juice or syrup Dried fruit Raw or stringy vegetables (e.g. celery, snow peas, asparagus)
Grain Products and Starches	Cooked cereals such as oatmeal or cream of wheat (less than 12 grams of sugar each serving) Soda crackers or melba toast	Bread, bagels, toast Rice Pasta, noodles All other cereals Potato skins French fries

Soft Food Diet Guide

Week 5 (continued)

Food Group	Foods Allowed	Foods Not Allowed
Beverages	Water Low-calorie drinks (e.g., Crystal Light, sugar-free Kool-Aid, Gatorade Zero)	Carbonated drinks Caffeinated drinks Alcohol Juice
Fats and Oils Use small amounts of these choices	Butter Non-hydrogenated margarine, Healthy oils (e.g., olive, canola) Light Mayonnaise Avocado	Hydrogenated margarine Lard, shortening Coconut, palm oil All others
Desserts, Sweets and Others	No sugar added jam, jelly Pudding (no sugar added or artificially sweetened) Sugar-free Jell-o Sugar-free Popsicles Artificial sweeteners	Agave Honey Molasses Regular jam, jelly Ice cream Popcorn Rice pudding Tapioca pudding Baked goods (e.g., muffins, pastries, cookies) Chips Candies All others

Soft Food Diet Guide

Week 6

100

- Remember to eat protein foods first in order to meet your 100 grams a day requirement.
- This week, you may continue to eat all of the foods from the previous weeks.
- You may also begin to **add** the following foods:

Food Group	Foods Allowed	Foods Not Allowed
Milk and Alternatives	Same as Week 5	Same as Week 5
Protein Supplements	Same as Week 5	Same as Week 5
Meat, Fish, Poultry and Alternatives	Same as Week 5	Same as Week 5
Fruit and Vegetables	Fruit (fresh, soft) Canned fruit (water-packed) Vegetables (soft and well-cooked)	Fruit with seeds or tough skin (e.g., cherries, oranges, watermelon strawberries, raspberries, blackberries) Canned fruit packed in juice or syrup Dried fruit Raw or stringy vegetables (e.g., celery, snow peas, asparagus)
Grain Products and Starches Limit these choices to small servings so that you can meet your protein goal	Cereal (less than 12 grams of sugar each serving) Mashed potatoes Couscous Quinoa	Bread, bagels, toast Rice Pasta, noodles Baked potato with skin French fries
Beverages	Same as Week 5	Same as Week 5
Fats and Oils	Same as Week 5	Same as Week 5
Desserts, Sweets and Others	Same as Week 5	Same as Week 5

Soft Food Recipes

High Protein Blended Soups

When looking at recipes, consider some of the following options:

- minestrone
- lentil
- navy bean
- cream of tomato
- cream of spinach
- potato soup

Add unflavoured protein powder containing 10 to 20 grams of protein or skim milk powder for each portion of soup

Let the soup cool before adding protein powder or it may clump.

Strain if needed.

President Choice (PC) Blue Menu Tomato and Roasted Red Pepper Soup

In large cooking pot, add:

- 1 can PC Blue Menu Tomato and Roasted Red Pepper Soup
- 1 can of white kidney beans or white navy beans
- Spices to taste such as basil, oregano, pepper etc.

Cook soup until beans are soft.

Add 30 to 45 ml (2 to 3 tablespoons) of Greek yogurt when cool to boost protein and make the soup creamier.

Leave as is or blend if desired.

Spaghetti Squash Supreme

Ingredients:

- 1 spaghetti squash
- special protein sauce (see next recipe)
- ground chicken, turkey, or beef (browned)
- soft vegetables such as mushrooms, zucchini, pepper, onion, garlic, spinach

Directions:

Cut spaghetti squash lengthwise down the middle.

Scrape out seeds and pulp.

Microwave squash for about 6 to 8 minutes or cook in 350° oven for 20 minutes face down then 10 minutes face up.

Separate strands by running fork through squash from end to end.

Mix cooked meat and vegetables into sauce and pour over top of squash noodles.

Special Protein Sauce

Ingredients:

- 1 to 2 cans white navy beans or kidney beans
- 2 cans of no salt added diced tomatoes
- spices of your choice such as pepper, oregano, basil, bay leaf
- any soft, cooked, steamed or microwaved vegetables
- onion
- garlic

Directions:

Add everything to blender and blend.

Cook in slow cooker.

This sauce boosts protein and adds vegetables in your meals. It can be used as a pasta sauce, added to beef stew, as a base for chili, mixed into meatloaf or meatballs, or can be poured over chicken.

Make this sauce in large batches and portion into containers and refrigerate or freeze.

Crustless Spinach Quiche (Makes 8 small portions)

Ingredients:

- 10 ml (2 teaspoons) vegetable oil
- 1 medium onion, chopped
- 1 package (10 ounces) frozen chopped spinach, thawed and drained
- 360 ml (1½ cups) shredded cheddar cheese
- 4 egg whites
- 2 whole eggs
- 80 ml (1/3 cup) cottage cheese (4% or less milk fat)
- 1.5 ml (¼ teaspoon) cayenne pepper
- pinch salt
- pinch nutmeg

Directions:

Pre-heat oven to 375°. Coat a 9 inch pie pan with vegetable cooking spray.

In a medium non-stick skillet, heat oil on medium high. Add onion and cook 5 minutes or until softened. Add spinach and stir in 3 more minutes or until spinach is dry. Set aside.

Sprinkle cheese in pie pan. Top with onion and spinach mixture.

In a medium bowl, whisk egg whites and whole eggs, cottage cheese, cayenne pepper, salt and nutmeg. Pour over spinach layer. Bake 30 to 35 minutes or until set. Let stand 5 minutes before cutting and serving.

Spanish Omelet (Makes 2 portions)

Ingredients:

15 ml (1 tablespoon) drained/chopped roasted red pepper or ½ red pepper (diced)

30 ml (2 tablespoons) chopped tomato

2.5 ml (½ teaspoon) fresh minced garlic

3 to 4 button mushrooms, cleaned and chopped

2 tablespoons ham diced

120 ml (½ cup) liquid egg substitute

1 slice mozzarella cheese cut into strips

7.5 ml (1½ teaspoons) fresh cilantro chopped

30 ml (2 tablespoons) fresh salsa

Fresh strawberries

Directions:

Coat a 6 inch non-stick omelet or frying pan with cooking spray or butter and heat to medium high. Add roasted red pepper, tomato, garlic, mushrooms, and ham. Sauté for about 4 minutes or until the mushrooms are soft.

Transfer the mixture to a bowl, drain off excess liquid and set aside. Wipe the pan clean with a paper towel and coat again with non-stick spray. Heat over medium heat and add the egg substitute.

Using a rubber spatula, carefully lift the sides of the omelet up to let the egg substitute spilled underneath the cooked solid bottom. Repeat the process until the egg mixture is almost done then turn off the heat.

Immediately add the cheese and cilantro to the bottom half of the omelet followed by the sauté mixture. Gently fold the top half of the omelet over the bottom half and carefully slide onto a serving plate.

Top the omelet with salsa and garnish with strawberries.

Diet for Life Guide

Week 7 and Forward

120

- This is your new diet plan for the rest of your life.
- Your protein goal will increase to 120 grams a day.
- Remember to eat protein foods first so you can meet your protein requirement.
- Certain foods are not always tolerated until several months after surgery. They are listed in the 'Proceed with Caution' column.

Food Group	Choose More Often	Proceed with Caution (may not be tolerated)	Choose Less Often
Milk and Alternatives	Milk (skim, 1%) Soy milk – plain or unsweetened (less than 12 grams of sugar in a serving) Yogurt or Greek yogurt (smooth, 1% or less M.F., and less than 12 grams of sugar per serving) Cottage cheese (1% or less milk fat) Light soft cheese (e.g., cheese strings, Babybel, Laughing Cow) under 20% M.F. Hard cheese under 20% M.F.		Cream Chocolate milk Yogurt with 12 grams or more sugar in a serving Liquid yogurt drinks
Protein Supplements • Your goal is to get protein from food sources but you may use protein shakes to help meet your goal.	Pre-mixed Protein Supplements – 20 to 30 grams of protein in each serving (e.g., Premier Nutrition) Protein Powder – 20 to 30 grams of protein in each serving (e.g., whey isolate or soy isolate) mixed with milk or water	Protein Bars (at least 20 grams of protein in each serving and less than 10 grams of sugar and under 200 calories in each serving)	

Diet for Life Guide (continued)

Week 7 and Forward

Food Group	Choose More Often	Proceed with Caution (may not be tolerated)	Choose Less Often
Beverages	Water Low-calorie drinks (e.g., Crystal Light, sugar-free Kool-Aid, Gatorade Zero)	Caffeine: not until 3 months after surgery	Carbonated drinks Alcohol Juice Flavoured milk Specialty drinks with sugar and cream
Fats and Oils • Use small portions for these choices	Ground flaxseeds Avocado Low-fat mayonnaise Low-fat salad dressing	Butter Non-hydrogenated margarine Canola oil Olive oil, canola oil	All others High fat salad dressing and sauces
Desserts, Sweets and Others	Sugar-free Jell-O Sugar- free Popsicles Artificial sweeteners	Spicy foods	Honey, jam, jelly, syrup Pies, pastries, donuts Ice cream Puddings, custards sweetened with sugar Candy High-fat and/or high-calorie baked goods Fried snacks including chips, cheese puffs, corn chips Popcorn

Diet for Life

Menu Ideas and Recipes

Breakfast ideas:

Choose one food from each food group to create balanced meals, some examples are:

Protein	Vegetable and Fruit	Grain and Starch
1 to 2 eggs 120 ml (½ cup) cottage cheese 15 to 30 ml (1 to 2 tablespoons) peanut butter or other nut butter as tolerated 60 grams (2 ounces) lean ham 120 ml (½ cup) plain or artificially sweetened yogurt or Greek yogurt (choose 4% milk fat or less) 22.5 ml (1½ tablespoons) protein powder	1 small ripe pear or apple 2 to 3 tomato slices ½ cup strawberries ½ small banana ½ cup canned peach 120 ml (½ cup) diced melon 120 ml (½ cup) blueberries	1 slice of whole grain toast 1 whole wheat English muffin 3 to 4 Ryvita crackers 180 ml (¾ cup) high fibre cereal 180 ml (¾ cup) oatmeal

Peanut Butter and Fruit Wrap:

- 1 small 6" whole wheat tortilla
- 1 to 2 tablespoons peanut butter
- ½ banana or thinly sliced apple with cinnamon

Spread peanut butter on wrap. Top with banana or apple with cinnamon and roll.

Cut into bite sizes if desired. Keep refrigerated.

Cheesy Wrap:

- 1 small 6" whole wheat tortilla
- baby spinach leaves with stems removed
- cheese string or slice of cheese under 20% milk fat

Spread baby spinach leaves on centre of wrap. Top with cheese.

Roll and wrap in paper towel.

Microwave for about 10 to 20 seconds depending on your microwave.

Nutty Oatmeal:

Stir 15 to 30 ml (1 to 2 tablespoons) peanut butter, almond butter or nut butter of your choice into 180 ml ($\frac{3}{4}$ cup) oatmeal cooked with hot water or milk.

Wait for nut butter to melt.

Add cinnamon and top with fruit of your choice.

A Cheesy Change:

Mix 120 ml ($\frac{1}{2}$ cup) cottage cheese with diced canned peaches.

Spread on 3 to 4 Ryvita crackers, Melba toast or 1 slice of whole grain toast.

McHome:

Top $\frac{1}{2}$ of a whole wheat English muffin with Dijon mustard, tomato slice, 1 to 2 slices lean ham and 1 scrambled or boiled egg.

Yogurt Parfait:

120 ml ($\frac{1}{2}$ cup) of blueberries

30 to 45 ml (2 to 3 tablespoons) of bran buds or 60 ml ($\frac{1}{4}$ cup) oats

120 ml ($\frac{1}{2}$ cup) plain or artificially sweetened Greek yogurt or mix plain yogurt with flavoured yogurt

Mix together.

Lunch Ideas:

Choose one food from each food group to create balanced meals, some examples are:

Protein	Vegetable and Fruit	Grain and Starch
60 ml (¼ cup) hummus	cucumber slices	5 to 8 Triscuits
30 ml (2 tablespoons) peanut butter or other nut butter (as tolerated)	1 small apple	3 to 4 flatbread crackers
60 to 90 grams (2 to 3 ounces) canned tuna/salmon	30 to 60 ml (2 to 4 tablespoons) tomato bruschetta	2 to 3 slices toasted baguette
120 ml (½ cup) cottage cheese	240 ml (1 cup) chopped garden salad	1 slice whole grain bread
90 ml (1/3 cup) egg salad	3 to 4 avocado slices (1/6 of an avocado)	1 small 6" whole wheat tortilla
120 ml (½ cup) beans such as baked, black, kidney	120 ml (½ cup) raw or steamed vegetables (fresh or frozen)	90 ml (1/3 cup) pearl barley
60 to 90 grams (2 to 3 ounces) diced chicken	90 ml (1/3 cup) pineapple	½ to 1 small whole wheat pita

Fajita Time:

- 1 small 6" whole wheat tortilla
- 120 ml (½ cup) black beans
- 30 ml (2 tablespoon) salsa
- 15 ml (1 tablespoon) sour cream (4% or less milk fat)
- 1 ounce shredded cheese
- diced lettuce and tomato

Fill tortilla and roll or fold in half and warm in microwave if desired.

Pizza Pizzazz:

Top whole wheat English muffin with tomato sauce, pineapple, 2 to 3 ounces diced chicken or ham, and shredded cheese. Broil until cheese is melted.

Egg Salad Sandwich:

Enjoy 1/3 cup of egg salad with 3 to 4 flatbread crackers such as Ryvita and 1 cup chopped garden salad topped with light salad dressing and 6 to 8 chopped almonds.

Topped Up Chicken Stew:

Add 90 ml (1/3 cup) of cooked pearl barley to 120 ml (½ cup) cooked vegetables to 120 ml (½ cup) of chicken stew.

Supper Ideas:

Choose one food from each food group to create balanced meals, some examples are:

Protein	Vegetable and Fruit	Grain and Starch
120 ml (½ cup) lentils 120 ml (½ cup) chili with beans or ground beef 120 ml (½ cup) turkey stew 90 grams (3 ounces) grilled or baked chicken breast 90 grams (3 ounces) grilled or baked fish 90 grams (3 ounces) lean pork or lean beef (as tolerated) 90 grams (3 ounces) veggie burger (about ½ small burger)	120 ml (½ cup) mixed vegetables 120 ml (½ cup) carrots 120 ml (½ cup) tomato and cucumber salad 120 ml (½ cup) green beans 120 ml (½ cup) zucchini 120 ml (½ cup) cooked mushrooms 120 ml (½ cup) broccoli	½ small sweet potato 60ml (¼ cup) quinoa 60ml (¼ cup) scalloped potato (low fat recipe) 60ml (¼ cup) whole wheat couscous small whole wheat roll 4 to 8 oven baked potato fries

Fish and Chips:

Bake 90 grams (3 ounces) fish seasoned with lemon pepper, garlic and pepper. Serve with 120 ml (½ cup) steamed carrots and 4-8 oven baked potato fries.

BBQ Chicken:

Brush 90 grams (3 ounces) chicken breast with BBQ sauce and grill. Serve with 120 ml (½ cup) green beans and ½ of a small sweet potato.

Chili:

Serve 240 ml (1 cup) chili with mushrooms over 60 ml (¼ cup) whole wheat couscous or quinoa. Sprinkle with parmesan cheese.

Chili Bowl:

Put 120 ml (½ cup) chili on 240 ml (1 cup) of romaine lettuce with 15 to 30 ml (1 to 2 tablespoons) of salsa and 30 grams (1 ounce) shredded cheese.

Burger Delight:

Enjoy ½ small veggie burger patty on a small whole wheat roll. Top with 120 ml (½ cup) tomato and cucumber salad.

Vegetarian Bean Chili

Ingredients:

- 30 ml (2 tablespoons) vegetable oil
- 1 large chopped onion
- 2 cloves minced garlic
- 15 ml (1 tablespoon) chili powder
- 5 ml (1 teaspoon) cumin
- 5 ml (1 teaspoon) dried oregano
- 1 can 796 ml/28 ounces) diced tomatoes
- 1 can (540 ml/19 ounces) red kidney beans
- 1 can (540 ml/19 ounces) black beans
- 1 can (540 ml/19 ounces) chick peas
- 1 green, red or yellow pepper diced
- 240 ml (1 cup) sliced mushrooms
- 15 ml (1 tablespoon) cider vinegar
- ½ teaspoon cinnamon
- pinch salt and fresh ground black pepper

Directions:

In a large saucepan or pot, heat oil over medium to high heat.

Sauté onion and garlic until softened.

Stir in chili powder, cumin, oregano and tomatoes with juice.

Add beans, peppers, vinegar, salt, cinnamon and pepper.

Bring to boil then reduce heat to medium low and simmer for 20 minutes.

Freeze leftover portions. This recipe cooks well in a crock pot too.

Serve with a small whole wheat roll or slice of whole grain bread to balance the meal.

Key Eating Habits

It is important to follow some healthy eating habits to avoid discomfort, pain, vomiting and to help with weight loss.

- Take 30 to 60 minutes to eat a meal
- Always eat protein first
- Keep food moist to help with tolerance. Use moist cooking methods like stewing, steaming, boiling, poaching, pressure cooking, or baking in foil.
- Cut food into small pieces
- Chew every bite thoroughly and eat slowly
- Put spoon/fork down between bites
- Pay attention to taste. Note taste and flavour of food
- Sit at the kitchen or dining room table to eat
- Avoid distractions such as using the phone, watching television, surfing the net or working while eating
- Stop eating as soon as you feel full
- Do not eat and drink at the same time. Separate solids and liquids by 30 minutes
- Avoid straws if they cause too much gas
- Have water nearby at all times

Key Diet Guidelines

Get enough fluids:

- Drink at least 2 litres (8 cups) of fluid a day. You will need to sip on liquids throughout the day.
- Start slowly and increase the amount you drink as you tolerate fluid. Listen to your body. It is important to get enough fluids for many reasons.
- Drink all fluids 15 minutes before or 30 minutes after a meal. This prevents dehydration, bloating, low food intake and vomiting.

☒ Do not drink fluids with meals once you are eating solid food. Soup and dry cereal are the same as eating and drinking, even though they are a combination of liquid and solids.

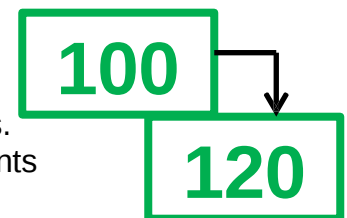
Remember:

- Measure the amount of fluid you have each day for at least 8 weeks after surgery.
- You can use the Fluid and Protein Record starting on page 98 to help you record and follow the amount of fluid you have each day.

Get enough protein:

- Meeting your protein needs during weight loss helps promote the loss of body fat and preserve lean body mass or muscle.
- Protein helps with healing right away.
- Have your protein at the beginning of each meal to be sure that you meet your daily requirements.

- **At first, your goal is to have at least 100 grams of protein each day.** After week 5 this increases to 120 grams of protein each day. Divide this amount into at least 5 to 6 meals and snacks. For more information on how to meet your daily protein requirements refer to pages 72 to 76.



Get enough vitamins and minerals:

- Take your multivitamin/multimineral supplement and any other supplements prescribed every day.
- Remember to crush or split pills for 6 – 8 weeks post-op, and as long as needed after that. There is more information starting on page 90-95.

Get Enough Protein

Protein Supplements:

- During the first 6 to 8 weeks after surgery, you need to drink protein shakes in order to get enough protein. After the first 6 to 8 weeks, you may need to continue to drink protein supplements until you are able to get enough protein from food. Most people need at least 1 protein shake a day to meet their 120 grams of protein. Ready-to-drink protein supplements can be used or you can make your own using protein powder.
- If you choose to buy a liquid ready-to-drink protein shake look for one that has at least **20 grams of protein, less than 12 grams of carbohydrate and less than 5 grams fat for each serving.**
- Do not choose any of the following supplements as they are too high in carbohydrates: Carnation Breakfast Essentials, Boost, Ensure and Slim Fast.
- If you decide to make your own protein shakes using a protein powder supplement, choose one made of whey protein isolate or a soy protein isolate, both of which are lactose-free. When choosing a protein powder look for one that has **20 to 40 grams of protein, less than 5 grams of sugar and less than 3 grams of fat for each serving.**
- When using protein powder to make your own protein shake, read and follow the directions on the label carefully. Mix the protein powder with milk or soy milk (less than 12 grams of sugar for each serving) or water. Do not mix with juice as this will provide too many calories and sugar.

How many protein drinks do I need in a day?

100

During the Full Fluids Stage:

- During the first 2 weeks, most of your protein comes from protein drinks. The rest of your protein comes from food sources.
- Your goal is to have at least 100 grams of protein in a day. The amount of protein in the protein supplement or shake you decide to use will determine how many you need in a day.
- If your shake has 30 to 40 grams of protein for 1 serving then you need to drink at least 2 to 3 every day to meet your protein needs.
- If your shake has 20 to 30 grams of protein for 1 serving then you need to drink at least 3 to 4 every day to meet your protein needs.
- Ask your dietitian if you are not sure of how many protein shakes to drink each day.
- It is important to know how much protein is in your protein shake or the protein powder you buy so your dietitian can help you meet your protein needs.
- It is important to keep track of your protein intake for the first several months and for the long-term as well. The chart on the next page will help you figure out how much protein you are getting.
- You can either use the pages at the back of this book or a notebook to keep track or use a website or 'APP' such as My Fitness Pal (www.myfitnesspal.com) or Baritastic.

When you start eating soft foods:

100



120

- Continue to aim for at least **100** grams of protein each day.
- As you move through weeks 3, 4 and 5, you will get more protein from food sources.
- After week 5, the goal is to have **120** grams of protein each day.
- During the puree stage of your diet, you can start cutting down on your protein supplements. However, you will need to keep track of how much protein you get from foods and protein supplements.
- Bring your food records to your follow-up appointments after surgery.

Dietary Sources of Protein

100

120

You need to have at least 100 grams of protein each day and after week 5 your goal is to have 120 grams of protein a day for life. It is important to track this for a long time.

If you take a protein supplement such as Premier Nutrition or use another protein powder, you need to calculate the number of grams of protein you need as well as your supplement to total 100 to 120 grams a day. Ask for help calculating if needed.

Meat, Poultry, Eggs:

Food (Cooked)	Serving Size	Calories	Protein (g)
Chicken, skinless	3 oz	141	28
Steak	3 oz	158	26
Turkey, roasted	3 oz	135	25
Lamb	3 oz	172	23
Pork	3 oz	122	22
Ham	3 oz	139	14
Egg, large	1 egg	71	6

Seafood:

Food (Cooked)	Serving Size (oz)	Calories	Protein (g)
Salmon	3	155	22
Tuna	3	99	22
Shrimp	3	101	20
Lobster	3	76	16
Scallops	3	75	14

Legumes, Grains, Vegetables:

Name of Food (Cooked)	Serving Size (cup)	Calories	Protein (g)
Pinto Beans	½	197	11
Adzuki Beans	½	147	9
Lentils	½	101	9
Edamame	½	95	9
Black Beans	½	114	8
Red Kidney Beans	½	112	8
Chickpeas	½	134	7
Black-eyed Peas	½	100	7
Fava Beans	½	94	7
Wheat Berries	½	151	6
Kamut	½	126	6
Lima Beans	½	105	6
Quinoa	½	111	4
Peas, Green	½	59	4
Spinach, cooked	½	41	3

Dietary Sources of Protein (Cont.)

Nuts and Seeds:

Food	Serving Size	Calories	Protein (g)
Soy Nuts	1 oz	120	12
Pumpkin Seeds	1 oz	159	9
Peanuts	1 oz	166	7
Peanut Butter	1 Tbsp	188	7
Almonds	1 oz	163	6
Pistachios	1 oz	161	6
Flax Seeds	1 oz	140	6
Sunflower Seeds	1 oz	140	6
Chia Seeds	1 oz	138	5
Walnuts	1 oz	185	4
Cashews	1 oz	162	4

Dairy Products:

Food	Serving Size	Calories	Protein (g)
Greek Yogurt	6 oz	100	18
Cottage Cheese (1% fat)	4 oz	81	14
Regular Yogurt (non-fat)	1 cup	100	11
Milk, Skim	1 cup	86	8
Soy milk	1 cup	132	8
Mozzarella (part skim)	1 oz	72	7
String Cheese (non-fat)	1 piece (0.75 oz)	50	6

More about protein:

A piece of meat the size of a normal deck of cards in thickness and surface area weighs about 90 gram (3 ounces). This amount contains around 21 grams of protein.

Ways to get the amount of protein you need each day:

- **Breakfast:** 15 to 20 grams
- **Morning snack:** 10 to 15 grams
- **Lunch:** 25 to 30 grams
- **Afternoon snack:** 10 to 15 grams
- **Dinner:** 25 to 30 grams
- **Bedtime snack:** 10 to 15 grams

Tips for getting more protein:

After bariatric surgery you should consume moist protein. Soup, stew, chili and meat cooked in a slow cooker will help you get moist protein.

Try to drink 250 to 500 ml (1 to 2 cups) of milk or soy milk a day. This gives you fluids and protein at the same time.

Examples of high protein snacks and food:

- Cheese with 4 to 6 crackers
- Cottage cheese with fruit
- Tuna, egg or salmon salad made with mayonnaise – serve on top of crackers
- Peanut butter or other nut butter with banana
- Kidney beans, chick peas, lentils or other legumes added to soup
- Greek yogurt added to a serving of lentil, bean or tomato or cream soup

When you have questions:

If you have any questions about the amount of protein you need from food, call the dietitian.

Protein Shakes – Make Your Own

(Recipes reprinted with permission of the Registered Dietitians at Toronto Western Hospital (UHN) Bariatric Surgery Program)

As your lifestyle program progresses your goal is to use less and less protein shakes and by the end of 3 to 6 months get all of your protein from solid food.

Remember – Do not add any fruit until Week 3.

Strawberry Banana Shake:

Blend together until smooth:

- 1 scoop protein powder
- ½ cup (120 ml) milk frozen into ice cubes
- ½ cup (120 ml) plain yogurt
- 4 whole unsweetened frozen strawberries
- 2 inches (5 cm) banana
- ½ teaspoon (2.5 ml) vanilla
- 1 package artificial sweetener if desired

Peach Shake:

Blend together until smooth:

- 1 scoop protein powder
- ½ cup (120 ml) milk frozen into ice cubes
- ½ cup (120 ml) plain yogurt
- ¼ cup (60 ml) chopped unsweetened frozen peaches
- ½ teaspoon (2.5 ml) vanilla
- 1 package artificial sweetener if desired

Helpful Hints:

- Prepare frozen fruit in small baggies or containers in advance so they are ready to pop into the blender when needed.
- Use plain, no sugar added yogurt since you are adding your own fruit.
- Try adding flavourings and extracts for extra flavour.
- Do not add sugar, honey, juice or sweetened syrups.

Label Reading

It is important to learn how to read labels so you can compare products and make the best choice for your health. If you need help reading food labels, talk to your dietitian.

For example the portion size on the label gives you the nutrition information for that size only.

This example is 125 mL or ½ cup.

If you eat more or less than this amount you have to multiply or divide to know how much is in the amount you eat.

Note: g = grams

Protein:

You need to have at least

70 grams (g) of protein a day.

This product has 3 grams (g) in 125 mL or ½ cup.

Nutrition Facts

Per 125 mL (87 g)*

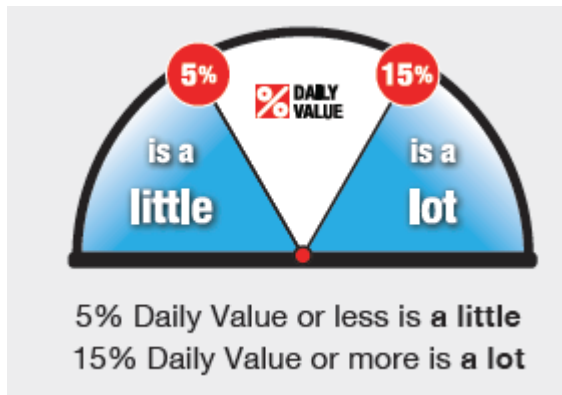
Amount	% Daily Value
Calories 80	
Fat 0.5 g	1 %
Saturated 0 g + Trans 0 g	0 %
Cholesterol 0 mg	
Sodium 0 mg	0 %
Carbohydrate 18 g	6 %
Fibre 2 g	8 %
Sugars 2 g	
Protein 3 g	
Vitamin A 2 %	Vitamin C 10 %
Calcium 0 %	Iron 2 %

Nutrition Facts

Valeur nutritive

Per 1 bowl (300 g) / Pour 1 bol (300 g)

Amount Teneur	% Daily Value % valeur quotidienne
Calories / Calories 440	
Fat / Lipides 19 g	29 %
Saturated / Saturés 4 g + Trans / Trans 0.2 g	21 %
Cholesterol / Cholestérol 35 mg	
Sodium / Sodium 860 mg	36 %
Carbohydrate / Glucides 53 g	18 %
Fibre / Fibres 4 g	16 %
Sugars / Sucres 6 g	
Protein / Protéines 15 g	
Vitamin A / Vitamine A	45 %
Vitamin C / Vitamine C	4 %
Calcium / Calcium	20 %
Iron / Fer	20 %



This product has 15 grams of protein in a 300 gram bowl.

Label Reading (Cont.)

Fats:

- Choose foods less than 5% Daily Value (DV), or 3g, of fat per serving
- Choose foods especially low in saturated fat (<1g)
- Avoid trans fats completely whenever possible

Nutrition Facts	
Valeur nutritive	
Per 10 Crackers (20g)	
Pour 10 craquelins (20 g)	
Amount	% Daily Value
Teneur	% valeur quotidienne
Calories / Calories 80	
Fat / Lipides 1.0 g	2 %
Saturated / saturés 0 g	0 %
+ Trans / trans 0 g	0 %
Cholesterol / Cholestérol 0 mg	0 %
Sodium / Sodium 220 mg	9 %
Carbohydrate / Glucides 17 g	6 %
Fibre / Fibres 1 g	4 %
Sugars / Sucres 0 g	
Protein / Protéines 2 g	
Vitamin A / Vitamine A	0 %
Vitamin C / Vitamine C	0 %
Calcium / Calcium	2 %
Iron / Fer	2 %

Sugar:

- Limit sugar to no more than 10g per serving
- For dairy products, tolerable sugar level is 12g per serving of milk and 7g per serving of yogurt
 - o Look for unsweetened or no sugar added dairy
 - o Artificially sweetened dairy is acceptable
- Fresh, whole fruit is slower to leave the pouch due to fiber content which minimizes the risk of dumping syndrome.

Nutrition Facts	
Serving Size 1 Block of Noodles (50g)	
Servings per Container 2	
Amount Per Serving	
Calories 180	Calories from Fat 0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 270mg	11%
Potassium 120mg	3%
Total Carbohydrate 40g	13%
Dietary Fiber 6g	24%
Sugars 0g	
Protein 5g	

Getting Enough Vitamins and Minerals after Surgery

With a Duodenal Switch procedure, your body does not absorb all the vitamins and minerals from your food. Problems caused by a lack of these vitamins and minerals are common after surgery and can lead to serious conditions. It is important to remember the Duodenal Switch surgery has a very high risk of leading to nutritional deficiencies.

Start taking your vitamin and mineral supplements the day you come home from the hospital.

Remember:

- **To help prevent problems you need to take vitamin and mineral supplements for the rest of your life.**

You will need to take the following:

1. Multivitamin(s)
2. Vitamin A
3. Vitamin D
4. Vitamin E
5. Vitamin K
6. Vitamin B₁₂
7. Calcium citrate with added Vitamin D
8. Iron

These can be combined as explained on the next few pages.

You may also need to take other vitamin or mineral supplements before or after surgery. Your doctor or dietitian will talk to you if you need more.

Please bring your vitamin and mineral supplements with you to each appointment with the dietitian.

The next few pages review:

- each vitamin or mineral supplement you need
- the amount you need to take each day
- why you need it

Multivitamin and Mineral Supplement:

Check the label when buying a multivitamin and mineral supplement. It should contain a full range of vitamins and minerals. Children's or 'gummy' types of vitamins are **NOT** recommended.

Example vitamin plans:

Celebrate Essential Multi 2in1 (Chewable) + Celebrate Calcium Chews

Time	Supplement	Take with Food	Take on Empty Stomach (2 hrs after last meal)
Breakfast	2 Celebrate Essential Multi 2in1 1 Vitamin A 10,000 IU (every other day)	Y	
AM Snack			
Lunch	2 Celebrate Essential Multi 2in1	Y	
PM Snack			
Dinner	1 Celebrate Calcium Chew 500mg 2 Vitamin K 100mcg (total = 200mcg)	Y	
Bedtime	Celebrate iron + vit C (1 for non-menstruating, 2 for menstruating) OR prescribed iron supplement		Y

OR

Celebrate Capsules + Celebrate Calcium Chews

Time	Supplement	Take with Food	Take on Empty Stomach (2 hrs after last meal)
Breakfast	1 Celebrate Capsule 1 Celebrate Calcium Chew 500mg 1 Vitamin A 10,000 IU (every other day)	Y	
AM Snack	1 Celebrate Calcium Chew 500mg	Y	
Lunch	1 Celebrate Capsule 1 Celebrate Calcium Chew 500mg	Y	
PM Snack			
Dinner	1 Celebrate Capsule 1 Celebrate Calcium Chew 500mg 2 Vitamin K 100mcg (total = 200mcg)	Y	
Bedtime	Celebrate iron + vit C (1 for non-menstruating, 2 for menstruating) OR prescribed iron supplement		Y

Bariatric Surgery – Biliopancreatic Diversion with Duodenal Switch

Kirkland Signature Women Multivitamin

Time	Supplement	Take with Food	Take on Empty Stomach (2 hrs after last meal)
Breakfast	2 Calcium citrate 300mg (total = 600mg) 1 Vitamin D 1000 units 1 Vitamin A 10,000 units 1 Vitamin B12 500mcg	Y	
AM Snack			
Lunch	2 Calcium citrate 300mg (total = 600mg) 1 Vitamin D 1000 units 1 Vitamin E 400 units	Y	
PM Snack			
Dinner	2 Calcium citrate 300mg (total = 600mg) 1 Vitamin K 300mcg	Y	
Bedtime	1 Celebrate Iron + C 2 Multivitamin (e.g. Kirkland, Equate, Centrum)		Y

Calcium Citrate with Vitamin D Supplement:

- Since it is very hard to get the amount of calcium and vitamin D you need from food, you will take daily supplements.
- You need to take a type of calcium called **calcium citrate**. Take one that also has vitamin D added to it. Most pharmacies carry this type of calcium, but you may need to ask for help finding it. It is available in pill and liquid forms.
- You need to take **600 mg of calcium citrate 3 to 4 times a day**. This gives you a total dose of 1800 to 2400 mg of calcium a day. Your doctor or dietitian will tell you how much calcium to take. You can only take 600 mg at one dose because your body cannot absorb more than this at one time. Depending on the type of pill or liquid you buy, this should also give you between **400 and 800 IU of vitamin D a day**.
- You may take your calcium citrate with vitamin D supplement with or without food.
- Take your calcium citrate with vitamin D supplement at least 2 hours before or 2 hours after taking any iron-containing supplement. Iron and calcium compete for absorption in the body, so if taken together you reduce the absorption of each.
- Talk to your pharmacist if you are on other medications as some cannot be taken at the same time as your calcium citrate with vitamin D supplement.

Calcium – Why you need it

Calcium is needed to develop and maintain healthy bones, nails and muscles. It helps in blood clotting and heart nerve functions as well as prevents osteoporosis (decreased bone density).

Low amounts of calcium cause bone loss, bone fractures and osteoporosis (decreased bone density).

Sources of calcium in your diet include all milk products, oysters, scallops, salmon and sardines with bones, tofu, green leafy vegetables, broccoli and dates.

Vitamin D – Why you need it

Vitamin D is needed for normal growth and healthy bones, teeth and nails. Vitamin D helps the absorption of calcium and phosphorous and prevents osteoporosis (decreased bone density).

Low amounts of vitamin D may cause a problem called osteomalacia or softening of the bones. Sources of vitamin D in your diet include fortified milk products, eggs, liver and fish liver oils.

You may need to add additional vitamin D beyond the recommendation above. Your doctor or dietitian will tell you if you need extra vitamin D.

B₁₂ Supplement

With a duodenal switch you need to take a Vitamin B₁₂ supplement.

There are 3 options for this supplement. You can take:

- a 1000 mcg oral pill every day **OR**
- a 1000 mcg sub-lingual tablet dissolved under your tongue every day **OR**
- a 1000 mcg injection from your family doctor once a month

B₁₂ – Why you need it

B₁₂ has many functions. It is needed for energy and red blood cell production, utilization of folic acid, and nervous system function. It also helps break down carbohydrates and fats and helps build proteins.

Low amounts of vitamin B₁₂ may cause anemia and neurological disorders. Symptoms of anemia include looking pale, feeling weak, tired, dizzy and short of breath.

To prevent low Vitamin B₁₂ you may need to have intramuscular injections if the oral vitamin B₁₂ supplement is not enough. Sources of vitamin B₁₂ in your diet include meat (organ meat), eggs, fish, legumes, cheese and yogurt.

Iron

Your multivitamin/multimineral supplement contains some iron, however you will still need to take an additional iron supplement. Please take your iron as prescribed if you don't have prescription iron please take one of the two following options:

1. 300 mg of ferrous sulfate with Vitamin C 250-500mg – Take once daily on an empty stomach if you are a menstruating individual, take one every other day on an empty stomach if you are a non-menstruating individual
2. 2 Celebrate Iron + C on an empty stomach if you are a menstruating individual, 1 Celebrate Iron+ C on an empty stomach if you are a non-menstruating individual

Taking extra iron may upset your stomach. Talk to your dietitian or doctor if this causes a problem for you.

Iron – Why you need it

Iron helps make healthy red blood cells that carry oxygen to all of the cells in your body. It is not absorbed well after bariatric surgery so you need to take an iron supplement after surgery. Low amounts of iron cause anemia, a weakened immune system and problems with your neurological system. Symptoms of anemia include looking pale, feeling weak, tired, dizzy and short of breath.

Sources of iron in your diet include meat, liver, eggs, shellfish, nuts, sardines, legumes, broccoli, peas, spinach, prunes, raisins, bran and iron enriched cereals and wheat germ. Non-meat sources of iron are not well absorbed after surgery so eating iron-rich foods alone may not be sufficient for some people.

It is important to have a source of vitamin C when eating foods containing iron to improve the absorption of iron. Sources of vitamin C include citrus juices, strawberries, tomatoes and potatoes.

Helpful hints for taking your supplements:

- Keep your supplements in a handy spot but always out of the reach and safe away from children.
- Follow a regular schedule to help you remember to take them.
- Use a pill organizer to keep track of the medications you take.
- If you take other medications, ask your pharmacist to help you design a schedule for all of your pills. Some medications cannot be taken with vitamin and mineral supplements.

Here is a sample schedule:

Time	Option 1	Option 2
Morning	ADEK multivitamin Calcium citrate	Calcium citrate Vitamin D Vitamin A
Afternoon	ADEK multivitamin Calcium citrate	Calcium citrate Vitamin D Vitamin E
Evening	ADEK multivitamin Calcium citrate	Calcium citrate Vitamin K
Bedtime	Iron	Iron Multivitamins

This sample schedule is only an example. **Your schedule is based on your blood tests and overall needs after surgery.** The schedule is changed by members of your health care team based on the results of your blood tests.

Arrange to have your blood tests done about 2 to 3 weeks before your 3, 6, and 12 month follow-up appointments with the Bariatric Clinic. This allows time for the tests to be done and the results to be ready for the team to review with you.

Diet Related Problems after Surgery

Nausea and Vomiting

After surgery, it is common to have an upset stomach or nausea.

This can be caused by:

- the surgery
- eating too much
- eating too fast
- certain smells
- pain medication

Nausea caused by the surgery can last a few days to a few weeks. This should go away over time. If you think the problem may be caused by pain medications, contact your doctor for a change in medication.

Nausea can also happen when you eat too much. Eating too much will put pressure on the surgical area.

Pressure and distention may also cause vomiting. Too much vomiting can cause dehydration and a change in the nutrients in your body. It may also cause problems with your incision healing. This is not healthy.

You can prevent vomiting by:

- eating slowly
- eating small amounts
- chewing well
- not laying down after eating
- not drinking fluids for 30 minutes before or after meals
- not drinking with meals

You can usually eat again shortly after vomiting.

If you have persistent nausea and vomiting or if you are concerned, contact the Bariatric Clinic or go to Emergency.

Stricture

A stricture can occur when the new connection between the stomach pouch and small intestine heals but forms scar tissue as it heals. The scar tissue makes the opening of the connection narrow. You may have symptoms such as difficulty swallowing liquids or food, persistent nausea and/or vomiting, increased saliva or mucous, pain with swallowing or regurgitation of food or liquids.

Contact your surgeon or health care provider if you think you may have a stricture.

The surgeon may be able to fix the stricture by a procedure done in Endoscopy. A tube with a small balloon on the end is passed down your esophagus through the scar. The balloon is then inflated to stretch the scar wide enough for food and liquid to go through. The tube and balloon are then removed.

Dehydration

Dehydration means that you do not have enough water in your body to function well. People with severe dehydration are admitted to the hospital and given fluids through their veins.

Symptoms of dehydration are:

- dark urine
- nausea
- feeling tired all of the time
- lower back pain
- making less urine
- dry mouth and tongue
- feeling dizzy
- feeling irritable

You can prevent dehydration by:

- Drinking at least 2 liters (8 cups) of fluid a day.
- Sip fluids all day long. Buy a sports bottle and keep on filling it and drinking.
- Sucking on ice chips or sugar-free popsicles if you have nausea.

Diarrhea

Some people experience diarrhea for a few months after surgery and many people will continue to experience loose bowels over the long-term. Some people also experience having stools that are foul smelling. The amount of fat in your diet can affect your stool so avoid very greasy foods.

Drink extra fluids. You may need to take a fiber supplement to help thicken your stool. You may need to add foods that thicken stool to your diet such as bananas, applesauce and oatmeal. This depends on the stage of diet you are on when you have diarrhea. Talk to your dietitian.

If you have many bouts of diarrhea several times daily that continues more than 3 days, contact the Bariatric Clinic.

Constipation

Your stool may be soft at first as you are not eating solid food. Some people have stool that is hard to pass. This is called constipation.

Constipation may be caused by:

- eating less fiber because you are eating less food
- not drinking enough fluids during the day
- pain control medications such as Tylenol #3
- medications and supplements such as iron and calcium

After a Duodenal Switch, most people have soft or loose bowel movements. However, some people may struggle with constipation for the first month or two.

To help your bowels stay soft and move, your fluid intake needs to be at least 2.0 litres (8 cups) a day and you need to have regular physical activity.

If you have not had a soft bowel movement after 2 days start adding 120 ml (1/2 cup) of prune juice to your meal plan. After having the prune juice, drink warm water, decaffeinated coffee or tea. You can do this 1 to 2 times a day to help. Remember that prune juice adds extra calories to your diet plan so be sure to count this and avoid other types of juice if drinking prune juice.

If you still have constipation or pain when you have a bowel movement your dietitian may want you to add a 100% inulin fibre supplement such as Benefibre, Metamucil Simply Clear or equivalent generic product.

Start by adding a small amount in your diet such as 5 ml (1 teaspoon) daily and increase slowly 5 to 10 ml (1 to 2 teaspoons) 1 to 2 times a day until your stool is soft and your bowels move every 1 to 3 days. Increasing too fast will cause an increase in gas and can cause problems and pain.

You should **not** use a fibre supplement such as Benefibre or Metamucil if you are not drinking 2 liters (8 cups) of fluid a day. This amount of water is needed to make the fibre supplement work. If you cannot drink 2 liters of fluid a day and take a fibre supplement you may become more constipated.

If you have not had a bowel movement after 3 days you can talk to your pharmacist about adding a product such as Colace, Senokot or Milk of Magnesia. Your pharmacist can counsel you on the dose to start with and how to take this type of product.

If you do not have a soft bowel movement for 3 days, contact the Bariatric Clinic.

Gas

After surgery it is normal to have pain or discomfort from gas in your abdomen. After Duodenal Switch surgery some people may have a lot of gas that can be extremely foul smelling. It is important to know that for some people, foods rich in carbohydrates and foods that are refined or processed often make gas worse and smell more.

Other foods that may cause gas are:

- beans, lentils, legumes
- vegetables such as broccoli, cauliflower
- melons
- apple skins
- eggs
- beer
- carbonated drinks
- diabetic products that contain sugar alcohols

To help prevent gas:

- eat slowly and chew food well
- avoid skipping meals
- avoid using straws and chewing gum
- avoid or limit food that contains added sugar and refined carbohydrates

If you snore or breathe through your mouth, you may also have more gas.

Hair Thinning or Loss

Hair thinning or loss can happen during rapid weight loss. You may be the only one who can see your hair loss. Many people have hair thinning between 3 and 9 months after surgery. Your hair grows back as your body recovers.

To help prevent problems:

- follow your diet plan
- make sure you get enough protein and water in your diet
- take your vitamin and mineral supplements each day

Vitamin and Mineral Deficiencies

As you recover and adjust to your new lifestyle your needs may change.

It is very important to follow the diet and vitamin and mineral supplementation guidelines advised. Refer to page 90-95 for information on vitamins and minerals.

After surgery you have an increased risk of developing serious and life-threatening problems from a nutritional deficiency. This is especially true after a Duodenal Switch.

Following your diet and taking your vitamin and mineral supplements as directed will help prevent problems and help you feel better, stronger, and healthier.

Blood tests will be done and monitored before surgery and at your follow-up appointments to assess for vitamin and mineral deficiencies. You may need to take more supplements.

Some vitamin and mineral deficiencies do not have obvious symptoms.

It is very important that you come to your follow-up appointments and that you get your blood tests done 2 to 3 weeks before your scheduled visits. This is the only way that we can know if you have a deficiency.

Kidney Stones

After bariatric surgery there is an increased risk of developing a certain type of kidney stone. Your risk increases if you have a history of having kidney stones already.

Urine is made up of water and substances such as calcium and oxalate. Crystals begin to form in the kidney when:

- there are higher than normal amounts of these substances in the urine
- the amount of water in the urine is low which makes the urine concentrated

The crystals get bigger and bigger as more substances build up around them. Then they are called kidney stones.

Kidney stones often cause severe back pain. The pain may move to the groin if the stone moves down the ureter. You may see blood in your urine. A CT scan of the kidneys, ureters and bladder can show the presence of most stones. An ultrasound or dye injection can also show the size of a stone.

Kidney stones may stay in the kidney or move down a ureter to be sent out of the body in the urine.

Some kidney stones are too big to pass out in the urine. They may block the flow of urine from a kidney to the bladder and need to be removed by surgery.

Ways to prevent kidney stones:

Drink fluids:

- Make sure you follow the instructions for the amount of fluids to have for each stage of your diet. This is very important.
- You can find the details about the amount of fluids to drink in the Nutrition and Diet after Surgery section.

Eat recommended amount of protein:

- Make sure you follow the instructions for the amount of protein to have for each stage of your diet. This is very important.
- You can find the details about the amount of protein to have in the Nutrition and Diet after Surgery section.

Follow a low oxalate diet if your dietitian tells you to:

Avoid these high oxalate foods:

- | | | |
|---------------------------|-----------|------------------|
| • beets | • greens | • soy, tofu |
| • black tea, coffee, soda | • leeks | • spinach |
| • celery | • peanuts | • sweet potatoes |
| • cocoa, chocolate | • prunes | • wheat germ |
| • dried beans | • quinoa | • wheat bran |

Take all of your supplements:

- Make sure you take all of your daily supplements. Members of your bariatric health care team will monitor the supplements you take and make changes based on your blood test results.
- Do not take any extra supplements unless advised by your health care team.

Remember:

- You and members of your health care team will work together to determine your risk of getting kidney stones based on your health history and lifestyle.
- You may have to follow a special diet or make changes to the supplements you take.

Diabetes and/or Low Blood Sugar after Surgery

When you go home from the hospital after surgery, you should **not** be taking any medications for diabetes. This includes oral medications and insulin. When you attend your 1-week follow-up visit, your diabetes medications will be re-assessed. This is why it is very important to test your blood sugars often after surgery.

You should test your blood sugar 2 to 4 times a day, including a fasting blood sugar first thing in the morning.

What do I do with my blood sugar results?

- Write all your blood sugars on a Blood Sugar Record at the back of this book. Record the results down even though your meter has a memory. This will help your diabetes care provider see the patterns in your blood sugar levels.
- When you test your blood sugars on a regular basis, you can see if your blood sugars are in good control.

Sample Blood Sugar Record

Date	Breakfast		Lunch		Supper		Evening
	Before	After	Before	After	Before	After	
Jan 15	6		4.8	6			5.4
Jan 16	6.3	8		7.8	5.5		
Jan 17		7.5			6.2		8.3
Jan 18	7			8.5			

What should blood sugars be?

Target blood sugar levels are:

Before meals	4 to 7 mmol/L
2 hours after meals	5 to 10 mmol/L

Your blood sugar targets may be different. You and your diabetes care provider will work together to set your blood sugar targets.

Low Blood Sugar after Surgery

Since you are eating in small amounts you are at risk of having low blood sugar. Low blood sugar is also called hypoglycemia.

Some signs of low blood sugar are:

- sweating
- dizziness
- feeling tired
- feeling shaky
- blurred vision
- headache
- clammy skin
- slurred speech
- mood change
- feeling hungry

You need to check your blood sugar if you have any of the above symptoms.

If you have problems with low blood sugar, you need to test your blood sugar.

Your diabetes care provider will give you a blood testing meter and show you how to use it if you do not already have one.

Your diabetes care provider will tell you when to test your blood sugar.

Up to 3 Weeks after Surgery

When your blood sugar is below 4 mmol/L:

1. Take 15 grams of a fast acting carbohydrate right away by:
 - Sipping 175 ml ($\frac{3}{4}$ cup) juiceDoing this will raise your blood sugar.
2. Wait 15 minutes and check your blood sugar again.
3. Repeat these steps until your blood sugar is in your target level then sip your protein drink to keep your blood sugar in your target range.

After 3 Weeks and More after Surgery

When your blood sugar is below 4 mmol/L:

1. Take 15 grams of a fast acting carbohydrate right away.
Examples of having 15 grams of fast acting carbohydrate are:
 - Chewing 3 to 4 dextrose or glucose tablets – read the label **or**
 - Drinking 175 ml ($\frac{3}{4}$ cup) juiceTaking 15 grams of a fast acting carbohydrate will raise your blood sugar quickly.
2. Wait 15 minutes and check your blood sugar again.
3. If your blood sugar is still below 4 mmol/L, treat again with one of the fast acting carbohydrates listed above.
4. Repeat these steps until your blood sugar is in your target level.
5. If your next meal or snack is more than 1 hour away, you need to have solid snack that contains carbohydrate and protein and fits into the stage of diet you are at – for example cheese and crackers.

If you have any concerns about having low blood sugar or what to do, talk to your diabetes educator.

What is A1C?

A1C is also called glycosylated hemoglobin. A1C shows the 3-month average blood sugar level before the test was taken. You do not have to fast before this test.

When your A1C result is less than 7%, you decrease your risk of complications.

The A1C is not the same as your blood sugar results.

The chart below will help you know what your A1C results mean.

Comments	A1C Results:	Your average blood sugar during the past 3 months:
Normal Range: 4.4% to 6.4% Lowest risk of complications	5%	5 mmol/L
	----- 6%	----- 6 to 7 mmol/L
Lower risk of complications	7%	8 to 9 mmol/L
Higher risk of complications: Need to make changes to improve blood sugar control	8%	9 to 11 mmol/L
	----- 9%	----- 11 to 13 mmol/L
	----- 10%	----- 12 to 15 mmol/L
	----- 11%	----- 14 to 17 mmol/L
	----- 12%	----- 15 to 19 mmol/L

Records and Logs

If you need more pages, copy a blank form before using.

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How to Start and Use a Food Journal

A food journal is a great way for you and your dietitian see what you are eating, help you understand positive changes you have made and/or offer advice to help prevent or manage problems.

Bring 3-5 days of food journals with you every time you meet with your dietitian.

There are many types of food journals available. There is a paper sample on the next page for you to use as an example or you can use online websites or apps for food journals such as:

- My Fitness Pal
- EaTracker
- My Net Diary
- My Plate
- Baritastic

Tips for starting and using a food journal:

- You can begin by tracking everything you eat and drink so you can get into the habit.
- If you decide to track only 3 days in a row, make sure 1 day is a 'weekend' type day (a day off from work or school for example).
- Record exactly what you eat and/or drink right after you have it, so that you don't forget. It is important to be specific by writing things like amount, type, way it was cooked and/or brand of product used such as:
 - 240 ml of **1%** milk
 - ½ cup **steamed** broccoli
 - 1 cup hot tea with **skim** milk
 - 1 teaspoon (15 ml) **Becel** margarine (put on broccoli)
 - 3 ounces stir fried chicken breast **cooked in 5 ml (1 teaspoon) of olive oil**
- Write down time of your meals and snacks, as well as the amount of time taken to eat
- If you eat at a restaurant or take-out place, record the name of the place.
- Record the vitamins and minerals you took in your journal.
- Record your thoughts and feelings, if you find this helpful

There is a sample food journal on the next page followed by a blank copy.

Be sure to make copies before you start if you plan to use the sample provided.

Sample Food Journal

Date: Monday, May 9, 2016

Time of Day	Food	Amount	Type/Brand/Details
Breakfast Time: 9:00 - 9:30 am	fruit smoothie	½ cup (120 ml) ½ cup (120 ml) 2 tablespoons (30 ml) 1 packet	skim milk frozen strawberries whey isolate protein powder Splenda sweetener
Morning Snack Time:			
Lunch Time: 12:20 -12:50 pm	turkey sandwich milk	1 slice 1 teaspoon (5 ml) 1 slice 3 slices 1 cup (240 ml)	Dempsters whole wheat bread dijon mustard tomato Schneider's deli turkey skim
Afternoon Snack Time: 3:00 - 3:05 pm	Cheese	1 piece	Original Babybel (red)
Dinner Time: 6:15 - 6:45 pm	chicken olive oil soy sauce rice vegetables	4 ounces (120 grams) 1 tablespoon(15 ml) 1 teaspoon (5 ml) ½ cup (120 ml) 1 cup (240 ml)	pan fried, boneless, skinless breast Bertoli, extra virgin China Lily low sodium steamed brown rice steamed broccoli
Evening Snack Time:			
Supplements taken	☐ Multivitamin/multimineral ☐ Other: ☐ 600 mg Calcium citrate 3 to 4 times a day ☐ Vitamin D: _____ ☐ Other: ☐ Vitamin B ₁₂		
How I felt today:			

Food Journal

Date: _____

Time of Day	Food	Amount	Type/Brand/Details
Breakfast Time:			
Morning Snack Time:			
Lunch Time:			
Afternoon Snack			
Dinner			
Evening Snack Time:			
Supplements taken	☐ Multivitamin/multimineral ☐ Other: ☐ 600 mg Calcium citrate 3 to 4 times a day ☐ Vitamin D: _____ ☐ Other: ☐ Vitamin B ₁₂		
How I felt today:			

My Emotional Eating Journal

When did I get the urge to eat? What was the time and date?	What was my mood or feeling at the time?	What did I do? Did I eat the food or do something else?	What did I eat?	How much did I eat?	How did I feel after I ate?

Fluid and Protein Record

Monday Time:	Fluid Type	Fluid Amount	Protein Type	Protein Amount
	Fluid Total:		Protein Total:	

Tuesday Time:	Fluid Type	Fluid Amount	Protein Type	Protein Amount
	Fluid Total:		Protein Total:	

Fluid and Protein Record

Wed Time:	Fluid Type	Fluid Amount	Protein Type	Protein Amount
	Fluid Total:		Protein Total:	

Thurs Time:	Fluid Type	Fluid Amount	Protein Type	Protein Amount
	Fluid Total:		Protein Total:	

Fluid and Protein Record

Friday Time:	Fluid Type	Fluid Amount	Protein Type	Protein Amount
	Fluid Total:		Protein Total:	

Sat Time:	Fluid Type	Fluid Amount	Protein Type	Protein Amount
	Fluid Total:		Protein Total:	

Fluid and Protein Record

Sunday Time:	Fluid Type	Fluid Amount	Protein Type	Protein Amount
	Fluid Total:		Protein Total:	

Time:	Fluid Type	Fluid Amount	Protein Type	Protein Amount
	Fluid Total:		Protein Total:	

Blood Sugar Record

[illegible]

Targets:

- Before meals: 4 to 7
- 2 hours after meals: 5 to 10

Blood Pressure Record

[illegible]

Weight Tracking Record

Date	Weight (kg)	Waist Circumference (cm)	Hip Circumference (cm)
Before Surgery			
4 to 6 weeks			
3 months			
6 months			
9 months			
12 months			
18 months			

Medication and Supplement Record

Date and Time	Name and Strength	Number Taken

Medication and Supplement Record

Date and Time	Name and Strength	Number Taken

Book Resources

Name: The Complete Weight-Loss Surgery Guide and Diet Program

Author: Sue Ekserci and Dr. Laz Klein

This book is written by the registered dietitians and surgeons of the Humber River Regional Hospital Bariatric Surgery Program. It provides information on bariatric surgery procedures and the risks and benefits of these surgeries. It is the only Canadian weight loss surgery cookbook and includes 150 recipes.

Name: Weight Loss Surgery Cookbooks for Dummies

Author: Brian Davidson, David Fouts and Karen Meyers

This book offers recipe ideas for different diet phases after bariatric surgery.

Name: Eating Well after Weight Loss Surgery

Author: Patt Levine and Michele Bontempo-Saray

Co-written by Patt Levine, who had lap-band surgery in 2003, this book offers recipe ideas for different diet phases after surgery.

Name: Recipes for Life after Weight-Loss Surgery

Author: Margaret Furtado and Lynette Schultz

Written by a clinical dietitian and chef, this book provides recipe ideas and information on entertaining and eating on the go.
