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Humber River Health Bariatric Surgery Program



# A Resource Book for Patients Having Duodenal Switch Surgery





Bring this booklet with you for ALL your appointments.

**Acknowledgements:** Portions of this book were adapted with permission from **St. Joseph's Healthcare Hamilton**. *Bariatric Surgery Biliopancreatic Diversion with Duodenal Switch: Helping you on your path to healthy living* © 2016)

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## INTRODUCTION

#### Welcome to the Humber River Health (HRH) Bariatric Program.

Like so many other Canadians, you are struggling with your weight. The good news is that you have decided to seek help. **Congratulations** on making this difficult first step!

You are about to begin a journey that could change your entire life. However, success takes hard work. For safety as well as success, pay close attention to the instructions and guidelines in this book, and follow the advice of your bariatric team.

While the bariatric team is here to guide you through each stage of your surgery, this book will serve as an important reference.

#### You will learn:

- How to prepare for duodenal switch surgery
- What potential nutritional complications can occur from the surgery
- · How to eat safely after surgery, and
- How to begin to make the dietary and behavioural changes you need for long-term success.

**Did you know?** The HRH bariatric team has many years of experience. We have received an accreditation from both the Canadian and American bariatric licensing bureaus, allowing us the distinction of a "Bariatric Centre of Excellence."



**Remember!** Bariatric surgery is just a tool. It is not a quick fix, but a lifelong commitment.

When making the decision to have this surgery, please do not take it lightly. To succeed with your weight loss goals after this surgery, you must make permanent changes to your eating habits, diet, and lifestyle.

While you read this booklet, jot down questions for your bariatric team. List down your nutrition and lifestyle goals and track your weight loss progress. You can use the templates on pages 171 to 176.

# Remember to bring this book and your notes and questions with you to every clinic visit.

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# WHERE DO YOU BEGIN?

## **The Approval Process**

Your doctor or nurse practitioner will submit a referral to the Ontario Bariatric Network (OBN).

- The OBN will assign you to the Bariatric Centre and surgeon.
- You will attend a 3-hour information session at the Bariatric Centre and submit forms.
- We will triage you based on your primary care doctor and the patient questionnaire.
- Within 10 to 12 weeks of the referral, you will receive appointment dates.
- Within 4 to 6 months, you will meet with the surgeon to discuss surgical options and risks. The surgeon will send you for pre-surgery blood work.
- You will have an initial assessment with the nurse, dietitian, and social worker. If you are unprepared for this initial visit, you may need to attend another assessment.
- You will have an appointment with the medical internist.
- 9 You will have a second visit with the surgeon to receive your surgery date and buy Optifast<sup>®</sup>.
- 10 At 2 to 4 weeks before surgery, start Optifast<sup>®</sup> as per the surgeon's instructions.

Refer to pages 47 to 52 for more information on the Optifast<sup>®</sup> diet.

- You will attend a pre-screening assessment.
- You will then have bariatric surgery.

4

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7

8

## YOUR BARIATRIC TEAM

# Who is part of my bariatric team?

You are the number one member of the team! You have come to us to receive help with losing weight and learning how to live a healthier lifestyle.

## When do I meet the team?

## Before the Surgery

You will first meet with the bariatric team to help decide if bariatric surgery is right for you.

#### Surgeon: Your surgeon will:

- Explain the surgery, including the risks and complications.
- Do a brief medical history.
- Give you an overview of how you will proceed through the program.

#### Registered Nurse ("nurse" or "RN"): The nurse will:

- Make sure that you are medically stable and healthy enough to proceed with surgery.
- Refer you to the right resources, either within the hospital or in your community, based on their assessment.
- Work with our medical team and your family doctor to ensure you have continuity of care as you move through the program.

**Internist:** This doctor will do additional tests to make sure that you are medically stable for bariatric surgery. It will continue the nurse's medical assessment.

#### Registered Dietitian ("dietitian" or "RD"): The dietitian will:

- Discuss your past attempts at weight loss, and help you understand why traditional diets have not worked.
- Ask why you feel this surgery will work for you.
- Assess your current diet by doing a 'diet history' and looking at your relationship with food.
- Educate you on healthier eating behaviors.
- Assess your blood work and recommend the supplements to take based on the results.



Social Worker (SW): The social worker will:

- Spend time getting to know you better, as a person.
- Ask about your support systems, both personal and professional.
- Look at your mental health history.

image and support systems, see **Psychosocial Perspectives After Surgery** on pages 133 to 139.

For more information on body

• Help you figure out if you will be able to afford the miscellaneous costs associated with surgery.

**Psychiatrist:** If your social worker feels you would benefit from an assessment by our program psychiatrist, they can refer you. This referral does not mean that we do not consider you a good candidate for surgery. It is simply an additional assessment that may help us better prepare you for the lifestyle changes associated with surgery.

**Pharmacist:** You may not need to meet the pharmacist in person before your surgery. They will review your current medicines. If any medicines are incompatible with bariatric surgery, they will let you know either in person or by phone.

### After the Surgery

After your surgery, you must attend various follow-up appointments. This is an up to 5-year relationship with your bariatric team that will help you reach your weight loss goals and keep them.

WHEN DO I SEE MY	BEFORE Surgery	24 HOURS after surgery	2 WEEKS after surgery	1 MONTH after surgery	3 MONTHS after surgery	6 MONTHS after surgery	12 MONTHS after surgery	Once a year for up to 5 years
Surgeon	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$
Nurse	$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Dietitian	$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Social Worker / Psychiatrist	$\checkmark$					<b>√</b>		
Internist	$\checkmark$							
Pharmacist	$\checkmark$							

## BARIATRIC SURGERY OVERVIEW

Bariatric surgery is a procedure of the gastrointestinal tract that results in a substantial weight loss. **Duodenal switch** (**DS**) is a type of bariatric surgery. There are 2 ways to do a duodenal switch:

- Biliopancreatic Diversion with Duodenal Switch (BPD/DS or **Traditional DS**)
- 2. Single Anastomosis Duodenal-Ileal Bypass (**SADI** or Loop Duodenal Switch)

Both surgeries start with a **vertical sleeve gastrectomy** to remove a large portion of the stomach. This will help to restrict how much food you can eat. Afterwards, you may either have the **Traditional DS** or **SADI** to shorten the small intestine. This will help to reduce how many calories you can absorb.

Sometimes, the bariatric team may recommend that the surgery is done all at once, while other times, it may be best to do the surgery in 2 stages. If we do your surgery in 2 stages, we will do the vertical sleeve gastrectomy first. Then, after about 1 year, you and your bariatric team will decide on going forward with either the Traditional DS or SADI.

You are unique, so you, your surgeon, and the bariatric team will all be involved in making a personal care plan for you. Ask questions and make sure you understand what may or may not happen before you consent to having this surgery and begin the process.

## What is digestion?

**Digestion** is the process your body goes through to get nutrients and energy from the food you eat. Your body needs energy and nutrients to stay healthy. Digestion involves many organs in your body, working together to form the "**digestive system**".

#### In this section:

What is digestion?7
How does a normal digestive system work?
What is Duodenal Switch surgery?9
What are the risks associated with bariatric surgery?

## How does a normal digestive system work?

To understand how your body and digestion will change after bariatric surgery, you will need to know how a normal digestive system works.

**Mouth:** Digestion starts in the mouth. Chewing and chemicals in your saliva,

called enzymes, start to break down food.

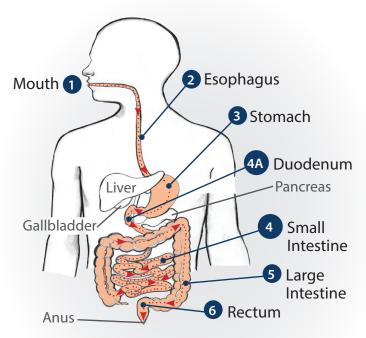
**Esophagus:** When you swallow your food, it moves down the esophagus.

- This is a long tube running from your
- mouth to your stomach. Wave-like
- muscle movements move food to
- the stomach.

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**Stomach:** The breakdown of food begins when food reaches the stomach.

- The average stomach can hold up to
- 6 cups of food. It is about the size of
- a football. The stomach mixes and churns
- food with enzymes and acid. Food moves to
- the small intestine to continue digestion.



Arrows show the direction food moves through body National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health.

Small Intestine (bowel): Made up of 3 parts - the duodenum, jejunum, and ileum:

**4A) Duodenum:** Food moves from the stomach, through the pyloric valve, into the first part of the small intestine, called the duodenum. The duodenum absorbs many of the vitamins and minerals from the food with help from the gallbladder and pancreas:

**Gallbladder:** Releases a fluid called bile into the small intestine to break down fat in food. It also helps get rid of cholesterol, water, bile salts, copper and other metals in your body.

**Pancreas:** Makes digestive juices, enzymes, and hormones, like insulin. Insulin helps move sugar into the cells. Digestive juices and enzymes break down the food to help absorb nutrients.

**4B) Jejunum and Ileum:** Food then passes through the last 2 parts of the small intestine, the jejunum and ileum. These areas continue to absorb the nutrients from the broken down food.

**Large intestine (bowel):** The remaining food is pushed into the large intestine, which absorbs some water and electrolytes from the remaining food.

Rectum: This stores solid waste, which later passes through the anus as a "bowel movement."

## What is Duodenal Switch Surgery?

**Duodenal Switch (DS)** surgery is a complicated surgery. It involves doing a **vertical sleeve gastrectomy** first, which removes a large portion of the stomach. Then, the surgeon does a **Traditional DS** or **SADI**, both of which shorten the small intestine. Depending on your plan of care, the gastrectomy and the DS surgeries may be done at the same time or during 2 separate surgery dates.

We will do this surgery **laparoscopically**. This means that instead of 1 large opening or incision into your body, we will do 5 to 6 small incisions (openings).

- Each incision is 5 to 12 millimetres (mm) long.
- The surgeon will use 1 incision to insert a small camera to see.
- They will use the other incisions to insert instruments needed to do the surgery.

At the end of the surgery, the surgeon closes the incisions with dissolvable stitches and special tape on top called steri-strips.

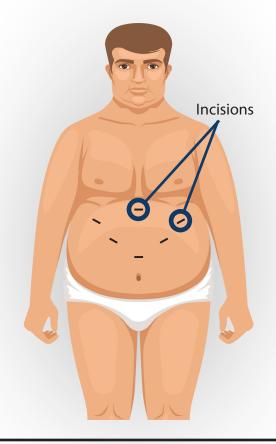
# To the right is a picture of where the incisions may be.

Your incisions may not be in exactly the same places.

After a DS, you will lose weight because:

- Your stomach is smaller and you eat less
- The food you eat and drink bypasses most of the small intestine
- Less fat, protein, and carbohydrates are absorbed
- The hormones that affect metabolism, hunger, and appetite have changed.

Actual length of a 5 mm incision	⊢–– 5 mm
vs. a 12 mm incision:	12 mm



## Step 1. Vertical Sleeve Gastrectomy

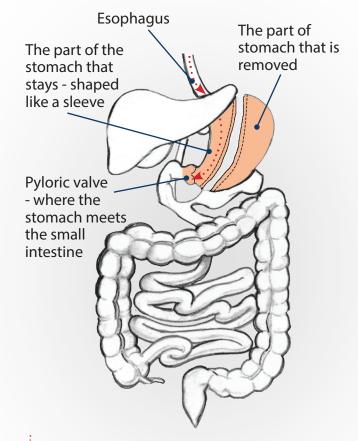
You will have the vertical sleeve gastrectomy first. This "restrictive" procedure involves removing most of the stomach. You may have already had a gastrectomy.

#### In a vertical sleeve gastrectomy:

- The surgeon will cut the stomach to create a long narrow pouch that connects the esophagus to the small intestine.
  - The surgeon will then staple the pouch (or sleeve) and remove the rest of the stomach.

As shown in the picture, the stomach is smaller so you will feel full sooner. This will reduce the amount of food you want to eat.

- Normally, a stomach can hold about 1500 ml (48 oz or 6 cups) of food/fluid.
- After this surgery, the remaining stomach (the sleeve) will only be able to hold about 125 to 175 ml (4 to 6 oz). This amount depends on the surgeon doing the surgery.
- Over time, the sleeve will expand to hold between 250 and 375 ml (8 to 12 oz or 1 to 1<sup>1</sup>/<sub>2</sub> cups).



The direction food moves through body after surgery.

This surgery may also make your body produce less of a hormone called **ghrelin**. This may reduce your feeling of hunger and lead you to eat less, resulting in weight loss.

The surgery keeps both the nerves and the pyloric valve intact. The smaller stomach can still function normally and the pyloric valve can still control the food leaving the stomach, allowing it to enter the intestine slowly. This surgery prevents the "dumping of food" into the small intestine that is common in other types of bariatric surgeries, called dumping syndrome.

## Step 2. Duodenal Switch

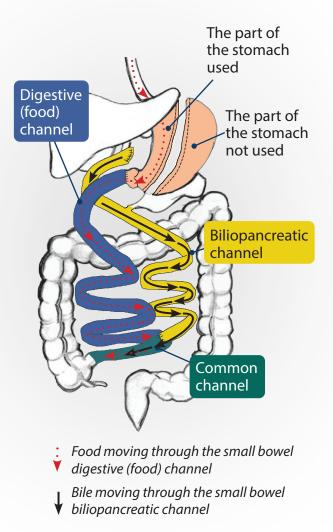
The duodenal switch surgery follows the sleeve gastrectomy. This may happen on the same day as the gastrectomy, or up to 1 year later. This surgery divides the duodenum (the portion of small intestine that normally connects to the stomach) to create a bypass. Instead of the food you consume going from your stomach into the duodenum, the food is re-routed or "switched" to the last part of the intestine (the ileum). The food bypasses the majority of the small intestine.

Most times, the surgeon will also remove the gallbladder during a duodenal switch. This will help prevent gallstones from forming, which is common when weight loss is rapid.

The duodenal switch can be done in one of 2 ways. You may have a Traditional DS or a SADI. You and your surgeon will discuss the pros and cons between the Traditional DS and SADI and decide which bariatric surgery is right for you.

#### In a Traditional DS:

- The surgeon will divide the duodenum just past the new stomach and pyloric valve.
- The surgeon will bring the ileum up to attach to the duodenum. When you eat, the food goes through your smaller stomach and straight into the last part of the small intestine. This shortened pathway is called the **digestive** or **food channel.**
- 3 The surgeon then re-attaches the bypassed small intestine directly to the new food channel. This pathway, called the **biliopancreatic channel**, will carry the bile and digestive juices from the gall bladder and pancreas to the food channel.
  - The last segment of the small intestine is now called the **common channel**. This is where food, bile, and digestive juices mix and get absorbed before going into the large intestine. The common channel is usually between 75 and 150 centimeters long. This means only a very small section of the small intestine absorbs calories and nutrients. Your surgeon can tell you how long your common channel is after surgery.



## Step 2. Duodenal Switch (continued)

#### In a SADI:

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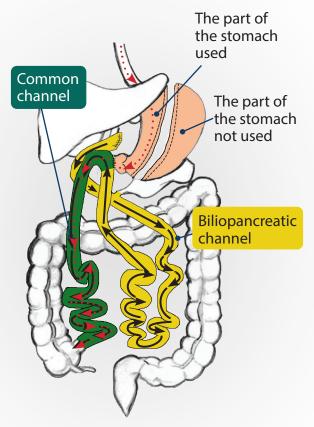
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The surgeon will divide the duodenum just past the new stomach and pyloric valve.

The surgeon takes a loop of the small intestine (at the ileum) and attaches it to the duodenum. This is the only connection that is made during this surgery. This creates 2 "loops".

One loop is called the **biliopancreatic channel**. The top of this channel remains connected to the gallbladder and pancreas. This channel now only carries bile and digestive juices. It no longer carries food from your stomach.

The second loop is called the **common channel**. When you eat, the food goes through your smaller stomach and straight into this second loop. This channel is where food, bile, and digestive juices mix and get absorbed before going into the large intestine. The common channel is usually between 250 and 300 centimeters long. Your surgeon can tell you how long your common channel is after surgery.



- Food moving through the sleeve into the
- small bowel common channel, where it mixes with the bile
- Bile moving through the small bowel biliopancreatic channel and into the small bowel common channel, where it mixes with the food

## What are the risks associated with bariatric surgery?

Your bariatric surgeon will discuss the risks and complications of bariatric surgery with you in detail. If you have questions, speak with your bariatric team.

Risks and complications from **any surgery**:

- Pneumonia
- Risks from anaesthesia
- Infection
- Hemorrhage/blood transfusion
- Blood clots
- Incisional hernia
- Stroke, heart attack

Risks and complications from **bariatric surgery**:

- Death
- Leakage
- Staple line disruption
- Stricture
- Ulcer
- Nutritional deficiencies
- Kidney stones/gallstones
- Sepsis
- Abscess
- Stomach perforation
- Low blood sugars
- Malnutrition
- Excessive vomiting
- Excessive diarrhea
- Hernias



## WHAT TO EXPECT AFTER SURGERY

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

#### In general:

- The higher your body mass index (BMI) is, the faster you will lose weight initially.
- If you have lost a substantial amount of weight before surgery, your weight loss may be slower after surgery.
- Your metabolic rate influences how fast you lose weight. Men tend to lose weight faster than women because they have more muscle mass. If you have a slower metabolic rate, you will lose weight slower.

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

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 the amount of weight you will lose, but the ability to keep most of it off in the long-term. The bariatric program's focus is to support you in following a healthy lifestyle, not setting weight goals.

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### Within the First 2 Years

Because every person is different, it is hard to predict how much weight you will lose. Within the first year, a typical weight loss is 100 lb or 60% of your excess body weight. Over 2 years, most patients are able to maintain a successful average weight loss of 70 to 80% of their excess body weight.

<b>My Excess Body Weight</b> = Current Weight - Ideal Weight (BMI 24.9) = Ib
My Expected Weight Loss = Excess Weight x .70 = Ib
My New Weight after Surgery = Current Weight - Expected Weight Loss =

Your dietitian can help you calculate your "percent excess body weight" at your initial visit.

The majority of the weight loss will happen in the first 6 to 12 months. Weight loss then plateaus between 12 to 18 months after surgery.

## After 1 or 2 Years

Bariatric surgery is not a guarantee you will maintain your weight loss.

- After the first or second year, when your weight loss has slowed or stopped, you will typically gain some weight back slowly over time.
- Within 5 years, people often regain 5 to 10% of the weight they lost.

For example, if you have lost 100 lb, it would be normal to gain back 5 to 10 lb. This does not mean that you are doing anything wrong. Some people regain more than 10%.

You might regain weight if you:

- Drink empty calories such as juice, alcohol, and specialty coffees.
- Eat high fat and high sugar choices.
- Snack or graze excessively.
- Consume large portion sizes resulting in stretching of the pouch.
- Do not exercise or you limit your physical activity.
- Do not pay attention to your hunger and fullness cues.

Remember that weight regain is complicated and not completely understood. If you are concerned about weight regain down the road, contact the clinic.

## **My 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. It is important to keep in mind that **your best weight may never be the ideal weight that you want**. In fact, as little as 5% to 10% weight loss has been shown to improve weight-related health problems, such as:

- Hypertension (high blood pressure)
- Heart disease
- Gastro-esophageal reflux disease (GERD)
- Respiratory disorders
- Liver and kidney disorders
- High cholesterol
- Sleep apnea
- Type 2 diabetes

- Infertility
- Joint pain and/or gout
- Certain cancers

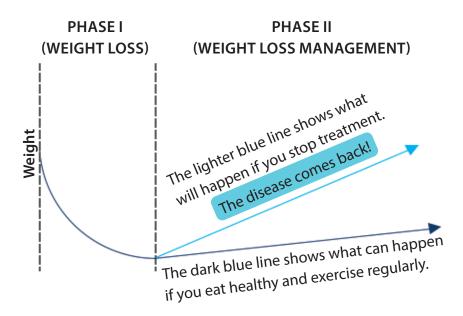
• Depression and/or anxiety

## **My Lifestyle Plan**

As part of your lifestyle plan, you will need to follow a healthy diet and stay active. If you do not maintain this healthy lifestyle, you will gain weight back and experience a relapse in the weight-related health problems listed above.

### Phases of Obesity Treatment

This graph shows what generally happens after surgery. *Created by Dr. Arya Sharma, a Canadian weight loss expert* 



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 may be:

- Not following a healthy diet
- Not exercising regularly
- Not attending your follow-up appointments
- Not looking after your physical and/or mental health needs.

### **Measuring Success**

It can be frustrating if you are following the guidelines, but you are not seeing changes on the scale. A weight loss goal does not need to be a number. **Look for milestones.** One day you may notice:

- You are not as short of breath.
- Your health conditions, such as diabetes or high blood pressure may improve.
- You feel less pain in your back, hips, knees, ankles, and feet.
- You do not need a seat belt extender.
- You are sleeping more soundly.
- Your clothes fit better or are loose.
- You have increased energy.

• You can tie your shoes.

While you are actively losing weight, weigh yourself no more than once a week. Weighing yourself every day, or several times a day, does not show your weight loss accurately and can make you frustrated. There are many important benefits to surgery other than a number on the scale.

#### Remember to celebrate all of your successes!

 Write your weight loss goals here:

# YOUR MENTAL HEALTH AND WELL BEING

When you are thinking about having bariatric surgery, our team will meet with you to talk about your history of physical, emotional, and mental health problems.

We will 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 will happen afterwards.

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 bariatric team is here to help.

#### In this section:

Depression19	9	ļ
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## **Problem-Eating Behaviours**

**Binge eating** is one of the most common problem-eating behaviours. Binge eating is when a person eats a large amount of food in a short period.

When a person binge eats, they 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. 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 bariatric team is here to help.

They may also have physical problems, such as pain or discomfort from overeating.

Other problem-eating behaviours may be restricting the amount of food you eat to help you manage your weight, intentionally vomiting after eating to make up for eating in unhealthy ways, or using laxatives and/or over-exercising to get rid of calories eaten.

Bariatric surgery will not automatically fix these problem-eating patterns. Some people continue to struggle even after having bariatric surgery.

Problem-eating behaviours can improve quickly right after having bariatric surgery. This is because most people do not feel hungry for the first 9 to 12 months after surgery. However, not feeling hungry may cause a person to eat in other unhealthy ways, such as skipping or delaying meals. When they start to experience hunger again, they are at risk for returning to problem-eating behaviours. If this happens and they do not get the proper help they need, they are at increased risk of regaining their weight.

## Depression

Depression is consistently having feelings of low mood or sadness, and/or losing interest in activities that were once interesting or enjoyable. Other symptoms may include appetite/weight changes, sleeping problems, concentration problems, unusual fatigue and low energy level, restlessness, feelings of worthlessness, and thoughts of death/suicide. 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 bariatric team is here to help.

These symptoms last for a 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.

## Substance use

Some people choose to use substances such as alcohol, tobacco products, or other recreational drugs for different reasons. Using these substances can seriously complicate the phases before and after surgery. They can prevent your body from healing after surgery and can increase your risk of developing stomach ulcers. 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 bariatric team is here to help.

After surgery, your body will be more sensitive to

certain substances, such as alcohol. Your body will absorb substances 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.

Even people that have never had substance use problems before surgery may develop these problems after surgery.

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.

## GETTING READY FOR SURGERY

To prepare for surgery, follow these guidelines, starting 6 months before surgery, up to surgery day.

	· · · · · · · · · · · · · · · · · · ·
	6 Months Before Surgery
	Stop recreational drug use22
	Stop smoking and/or using nicotine products and marijuana
$\mathbf{\vee}$	
	2 Months Before Surgery
	Stop caffeine
	Stop alcohol23
	Stop carbonated drinks24
	Attend your medical history and physical exam
	Talk to your health care team about changes to your medicines
	Start taking vitamin and mineral supplements
	Start making lifestyle changes
$\mathbf{\nabla}$	
	2 to 4 Weeks Before Surgery
	Replace meals with the Optifast <sup>®</sup> Diet
	7 Days Before Surgery
	Contact your surgeon if your health changes
	Follow instructions regarding blood thinners or anti-inflammatories
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	24 Hours Before Surgery
	Follow instructions on recreational drugs and/or regular medicines
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	At Midnight, the Night Before Surgery
	Stop your Optifast <sup>®</sup> Diet53
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	4 Hours Before Surgery
	Follow the eating and drinking restrictions
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	$\_$ Before you Come to the Hospital
	What to Bring to the Hospital

### STOP recreational drug use

Using recreational substances before and after bariatric surgery can cause physical problems with the surgery and recovery, can cause new problems, and/or worsen existing problems. To proceed with bariatric surgery safely, **you must:** 

 Stop using recreational substances for at least 6 months before surgery.

<sup>m</sup>

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Not use recreational substances
 AT ALL after surgery.

Let the bariatric team know about any substances that you are using or have recently used. We can help you to understand the possible problems they can cause with surgery and work with you to create a plan for a safe and successful surgery.

# STOP smoking and/or using nicotine products and marijuana

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, leaks, and life-threatening ulcers in the stomach pouch after surgery.

If you are taking marijuana for medical reasons, the bariatric team will review your chart and speak with your prescribing doctor about your management program. We will consider anyone on medicinal marijuana for surgery on an individual basis. To proceed with bariatric surgery safely, **you must:** 

- Stop smoking and/or using inhaled substances for at least 6 months before surgery.
- Not smoke and/or use inhaled substances **AT ALL after surgery.**

This includes marijuana, nicotine gum, e-cigarettes (vaping), cigars and similar products.

If you use any of these substances, even infrequently, talk to a member of your health care team so we can find ways to support you through the changes you need to make.

For help quitting, contact your health care provider, pharmacist, or the Smokers' Helpline (1 (877) 513-5333; <u>www.smokershelpline.ca</u>). Let them know that you are not allowed to use any type of nicotine products as well.

### STOP caffeine

Caffeine can irritate the lining of the stomach and delay recovery.

Stopping caffeine can take time. When you first stop caffeine, you may get a headache and feel tired. This is called withdrawal.

By stopping caffeine 2 months before surgery, your body will get used to not having caffeine and you will be able to prevent withdrawal symptoms during your recovery.

# STOP alcohol (includes liquor, beer, and wine)

Bariatric surgery changes the way your body digests and gets rid of alcohol. After surgery, your new stomach pouch will not able to break down alcohol. More alcohol will reach your small and large intestines, where it will be absorbed into the bloodstream very quickly.

Your body will also take a longer time to get rid of the alcohol from your bloodstream. This means that you will feel the effects of alcohol faster and longer than you are used to. You can quickly become intoxicated after a very small amount. This is not safe for many reasons.

Alcohol can also irritate the lining of the stomach and intestines and can lead to ulcers. Since bariatric surgery causes you to lose weight fast, your liver will already be working hard to get rid of the waste products and toxins your body produces. Drinking alcohol will put additional stress on the liver and can cause many problems.

#### You must:

- Stop caffeine for at least
   2 months before surgery.
- Not consume caffeine for at least
   3 months after surgery. Your
   doctor or dietitian will tell you if
   or when you can have caffeine
   again after surgery.

You may continue to have decaffeinated drinks.

#### You must:

- Stop alcohol for at least
   2 months before surgery.
- Not consume alcohol for at least 1 year after surgery.
   Your doctor or dietitian will tell you when and if you can have alcohol again.

For guidelines on consuming alcohol after surgery, see page 126.

### STOP carbonated drinks

Carbonated drinks produce gas in the small stomach pouch and many people find this painful.

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

# Attend your medical history and physical exam

At least 2 months before your surgery, you will have a complete medical history and physical exam. You will see the nurse, surgeon, and medical internist (doctor) during this exam.

# Talk to your health care team about changes to your medicines

At least 2 months before your surgery, talk to your surgeon, family doctor, and pharmacist about any medicines, vitamins, herbal products, and botanicals you take. Your doctor may ask you to stop or may change some of these medicines.

They will help you arrange how to take your medicines and vitamin and mineral supplements so that you can take them safely after surgery.

You may not be able to take some medicines in pill or capsule form. You may need to split or crush some pills for 6 to 8 weeks or longer, or for life. You may also need to open some capsules or take some medicines in liquid form. You must:

 Stop carbonated drinks for at least 2 months before surgery. Ē

• Not consume carbonated drinks **AT ALL after surgery.** 

If you take **anti-inflammatory medicines**, such as Ibuprofen, Motrin, Advil, Naprosyn and Aleve, STOP. These medicines put you at high risk for developing stomach ulcers.

*Exception:* If you take Aspirin for reasons other than antiinflammatory, speak to your doctor first before stopping.

**Tip!** A general guideline for taking pills is that if they are smaller than 1.5 cm, you may be able to swallow them whole. If you have a problem taking pills this size, talk to your pharmacist about splitting or crushing them.

# START taking vitamin and mineral supplements

After surgery, you will need to take vitamin and mineral supplements every day for the rest of your life. To prepare for this, you may have to start taking these supplements before your surgery.

- If you have already had bariatric surgery, you may already be taking vitamin and mineral supplements.
- If this is your first bariatric surgery, your dietitian or nurse may ask you to start vitamin and mineral supplements at least 2 months before surgery.

The dietitian or nurse will tell you specifically which supplements to take when you come for your first assessment visit.

## START making lifestyle changes

Weight loss surgery alone does not cure obesity. Before committing to bariatric surgery, you will need to evaluate your diet and lifestyle. You should begin making changes at least 2 months before surgery to prepare for your new lifestyle.

You will likely need to change some of your eating habits and meal planning routines to ensure optimal weight loss and good health after your surgery. Making these changes now will set you up for success after the surgery!

The following pages describe lifestyle changes you can start doing at least 2 months before your surgery. At the end, you will be able to prioritize the areas that you feel you need to work on. You will also learn how to set S.M.A.R.T. goals that help to make goal setting more effective. For more information about the vitamin and mineral supplements you will have to take after surgery for life, see pages 103 to 111.

**Remember!** Duodenal switch is not a diet. Lifestyle changes and healthy food choices must be for LIFE. To maintain long-term weight loss, you MUST follow a healthy diet LIFELONG and exercise. Ask yourself, *"Is this right for me? Can I do this for life?"* 

Let's get started making changes to your lifestyle!

#### Lifestyle change #1 - Establish a Consistent Meal Routine

After bariatric surgery, you must eat regular meals and snacks to make sure you are meeting your nutritional requirements. An erratic eating schedule, long gaps between meals, or skipping meals can result in sub-optimal weight loss, nutrient deficiencies, malnutrition or, ultimately, regaining your weight.

You need a consistent meal routine before your surgery. This is an important part in preparing for post-bariatric life.

Two months before surgery, start to follow a consistent meal routine:

- Do not skip meals.
- Eat 3 well-balanced meals every day.
- Eat your first meal within 90 minutes of waking.
- Do not go longer than 4 to 6 hours between meals.
- If it is more than 5 hours until your next meal, add a small snack between meals.
- Have a snack 2 to 2.5 hours after a meal, if needed.
- Have 1 to 1 ½ oz of protein-rich food at each snack, 3 times a day.

Examp	le	Meal	<b>Routines:</b>
-Addit P			

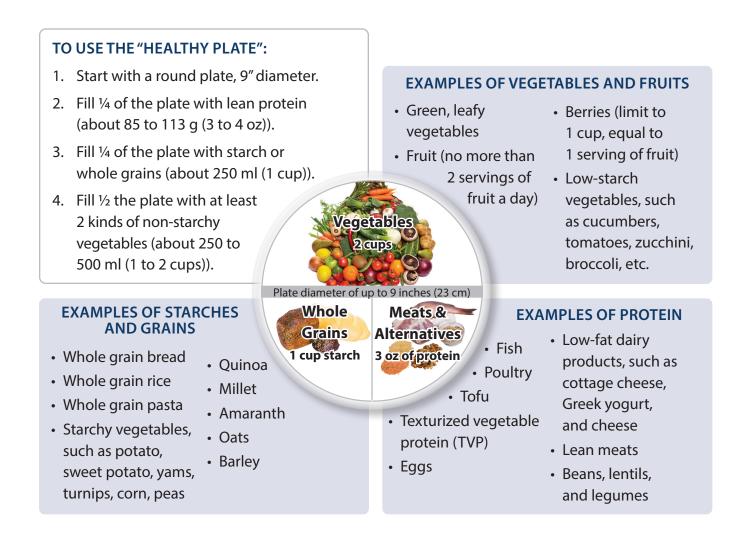
EAL ROUTINE:		10			
Rise		1	à.		Rise
Breakfast			2		Dinner
Morning snack	-9	Y	3-	· · · ·	Snack
Lunch	.8_	· _	4./		Lunch
Afternoon snack	7	6 5	2:0	•	Snack
Dinner		1.1.1	[		Breakfast
	Breakfast Morning snack Lunch Afternoon snack	Rise Breakfast Morning snack Lunch Afternoon snack	Rise Breakfast Morning snack Lunch Afternoon snack	Rise Breakfast Morning snack Lunch Afternoon snack Dinner	Rise       11       12       14       WHO WORKS I         Breakfast       10 <t< td=""></t<>

#### □ Lifestyle change #2 - Eat Well-"Balanced" Meals

A **well-balanced meal** includes foods from the different food groups and provides a variety of nutrients. After bariatric surgery, you will need to consume "balanced" meals to make sure you are getting the vitamins and minerals you need to stay healthy.

The "Healthy Plate" is a visual diagram that can help you eat well-balanced meals. Two months before surgery, start to eat this way to ensure you:

- Eat appropriate serving sizes to manage weight.
- Optimize your nutrition.
- Increase your sense of fullness.
- Stabilize blood sugars, which lessens your cravings.
- Avoid eating too much of any one food group.
- Are eating a source of lean protein at each meal, which is essential after surgery.



#### □ Lifestyle change #3 - Read the Nutrition Facts Labels

Reading and understanding labels are important ways to ensure you are meeting your nutrition needs and making healthy food choices.

#### How can a Nutrition Facts label help after surgery?

Use Nutrition Facts labels to help:

- Find out how a food fits into your diet goals
- Compare products and pick the best one for you
- Find out the serving size of a food and the amount of servings in a package
- Find out how many calories and how much fat, sugars, sugar alcohols, and fibre are in a food.

#### How do I read a Nutrition Facts label?

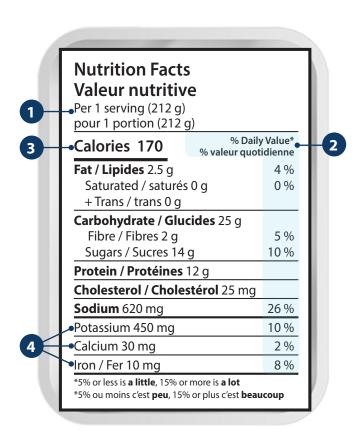


Image source: Food vector created by vectorpocket - www. freepik.com URL: https://www.freepik.com/vectors/food **Portion size:** Look at the portion size. The portion size on the label may be different from how much food you are actually going to eat.

**% Daily Value:** The % DV is a tool that helps you see if a packaged food item has a little or a lot of a specific nutrient. The percent listed refers to how much of the labelled food item contributes to your daily recommended value for that specific nutrient.

For all nutrients, **5% DV or less is a LITTLE**, and **15% DV or more is a LOT**. Use the % DV to compare food products, which can help you make the healthier, more informed food choices.

**Calories:** Low calorie foods have 40 calories or less per serving.

**Core Nutrients:** Choose products with more of these core nutrients.

1

2

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#### LIFESTYLE CHANGE #3 - READ THE NUTRITION FACTS LABELS (CONTINUED)

	Nutrition Facts Valeur nutritive Per 1 serving (212 g) pour 1 portion (212 g	e	
	Calories 170	% Daily Value* % valeur quotidienne	
5-	• Fat / Lipides 2.5 g	4 %	
	Saturated / saturés + Trans / trans 0 g	0 g 0 %	
6 –	Carbohydrate / Gluc	: <b>ides</b> 25 g	
	Fibre / Fibres 2 g	5 %	
7	Sugars / Sucres 14	g 10 %	
	Protein / Protéines 12 g		
	Cholesterol / Choles	<b>térol</b> 25 mg	
	<b>Sodium</b> 620 mg	26 %	
	Potassium 450 mg	10 %	
	Calcium 30 mg	2 %	
	lron / Fer 10 mg	8 %	
	*5% or less is <b>a little</b> , 15% or more is <b>a lot</b> *5% ou moins c'est <b>peu</b> , 15% or plus c'est <b>beaucoup</b>		

#### Test your knowledge

Is the above product high or low in fat?

 $\Box$  High  $\Box$  Low

Why?

**Fats:** Choose foods with less fat. Look for foods with less than 5% DV, or 3 g, of fat per serving. Foods are low in fat if they:

- Have less than 5% of the DV of fat.
- Have 5 g or less of fat per 99 g (3.5 oz) serving, or if fat makes up less than 30% of the calories.

Choose foods especially **low in saturated** fat and trans fat:

- Limit saturated fat to 1 g or less when selecting a food item or 15% of the calories in a main dish.
- Avoid trans fat completely, if possible.

**Carbohydrates:** Popular weight loss programs have given carbohydrates a bad reputation. However, not all carbohydrates are bad. Many have high amounts of vitamins, minerals and fibre.

CHOOSE:	AVOID:
Whole grains	Sweets and candies
• Fruits	Desserts
<ul> <li>Vegetables</li> </ul>	Soft drinks
and legumes	<ul> <li>Foods that have</li> </ul>
	more than 10 g
	of added sugar
	per serving

**Fibre:** Fibre helps to prevent constipation and can help you feel full longer. Good sources of fibre will have 4 g of fibre or more per serving. 7

#### LIFESTYLE CHANGE #3 - READ THE NUTRITION FACTS LABELS (CONTINUED)

Nutrition Facts Valeur nutritiv Per 1 serving (212 g)	-
pour 1 portion (212 g)	g)
Calories 170	% Daily Value* % valeur quotidienne
Fat / Lipides 2.5 g	4 %
Saturated / saturés + Trans / trans 0 g	50g 0%
Carbohydrate / Glu	<b>cides</b> 25 g
Fibre / Fibres 2 g	5 %
<ul> <li>Sugars / Sucres 14</li> </ul>	g 10%
Protein / Protéines	12 g
Cholesterol / Ch	<b>stérol</b> 25 mg
Sodium 620 mg	26 %
Potassium 450 mg	10 %
Calcium 30 mg	2 %
lron / Fer 10 mg	8 %
*5% or less is <b>a little</b> , 15% or *5% ou moins c'est <b>peu</b> , 15%	

**Sugars:** Choose foods with less sugars. To avoid empty calories and help make healthier food choices, limit sugar to 10 g or less per serving.

8

9

- If the label lists "sugar alcohols", they will appear below Sugars. Not all labels list sugar alcohols. Sugar alcohols count half as much as sugar toward your limit.
- For milk or yogurt containing lactose, the tolerable sugar level is typically 10 g per serving for milk and 7 g per serving for yogurt. Look for unsweetened or "no added sugar" milk and yogurt.
- Fresh whole fruit (which usually does not have a food label) is slower to leave the pouch.

#### Test your knowledge

Is the above product high or low in sugar?

 $\Box$  High  $\Box$  Low

Why?

**Protein:** Aim to eat 100 to 120 g of protein every day. However, watch for the fat content of these foods. Foods that are high in protein can also be high in fat. This food contains 12 g of protein in 212 g or 1 tray.

CHOOSE:	AVOID:
<ul> <li>Lean cuts of</li> </ul>	Fatty cuts of
red meat	red meat
<ul> <li>Skinless chicken</li> </ul>	<ul> <li>Chicken and</li> </ul>
breast	turkey with the
<ul> <li>Vegetarian</li> </ul>	skin on it
sources of	<ul> <li>Battered and</li> </ul>
protein, like tofu	fried meat
and legumes	<ul> <li>High-fat products</li> </ul>
<ul> <li>Low-fat products</li> </ul>	

#### Humber River Health

#### LIFESTYLE CHANGE #3 - READ THE NUTRITION FACTS LABELS (CONTINUED)

#### How do I read the Ingredient List?

In addition to checking the **Nutrition Facts** label, get in the habit of reading the **Ingredient List**. This list tells you what the food is made of, which is important if you have a food allergy or intolerance. Ingredients are listed in order by weight. The first ingredient is highest in weight.

# How do I check for sugars in packaged foods without a Nutrition Facts label?

**Sugar:** Look at the ingredient list and find 'sugar'. If sugar is one of the first 3 ingredients on the list, do not eat that food, as they are too high in sugar. You might see sugar called by many names on a food label, such as:

Sucrose	Maltose	Invert sugar	• High fructose	• Fruit juice
Dextrose	• Honey	Cane sugar	corn syrup	concentrate
• Fructose	• White sugar	• Maple sugar	Molasses	Barley malt
• Glucose	Brown sugar	Corn syrup	<ul> <li>Brown rice syrup</li> </ul>	Dextrin

**Sugar-free Foods:** Sugar-free foods and beverages are usually sweetened with **sugar alcohols** or **sugar substitutes**.

**Sugar alcohols** are a type of carbohydrate. Your body only partly absorbs sugar alcohols, so they are lower in calories than regular sugar. They are in sugar-free products like gum, mints, candies, ice cream, chocolates and protein bars. Sugar alcohols are safe, but eating too much of a food containing sugar alcohol could cause gas, bloating, or diarrhea. They are listed in the ingredients list under any of the following names:

<ul> <li>Sorbitol</li> </ul>	Isomalt	<ul> <li>Palatinit</li> </ul>	Mannitol	<ul> <li>Lactilol</li> </ul>
Polyols	• Xylitol	Malitol	• Erythritol	

**Sugar substitutes** are natural sweeteners or chemical sweeteners. They provide very few calories and do not have an effect on blood sugar. They are listed in the ingredients list under the following names:

<ul> <li>Sucralose (Splenda<sup>®</sup>)</li> </ul>	<ul> <li>Acesulfame Potassium</li> </ul>	<ul> <li>Cyclamate</li> </ul>
<ul> <li>Aspartame (Equal<sup>®</sup>,</li> </ul>	(Ace-K®)	(Sucaryl <sup>®</sup> , Sugar Twin <sup>®</sup> ,
Nutrasweet <sup>®</sup> )	<ul> <li>Neotame (NutraSweet<sup>®</sup>)</li> </ul>	Sweet N'Low®)
<ul> <li>Saccharine (Hermesetas<sup>®</sup>)</li> </ul>	<ul> <li>Steviol Glycosides (Stevia<sup>®</sup>)</li> </ul>	



GETTING READY FOR SURGERY

#### Lifestyle Change #4 - Plan your Meals

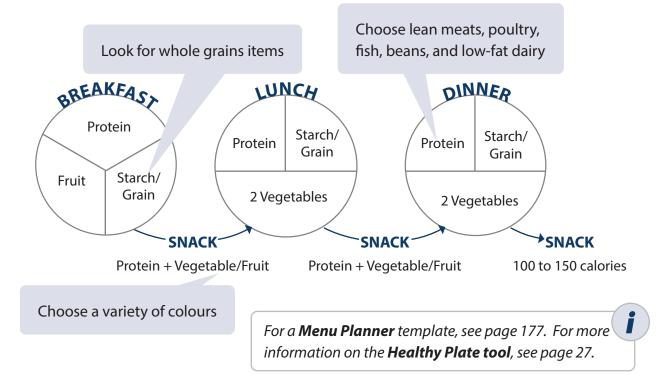
Planning meals in advance will help you stay on track with your meal routine and overall weight management goals. It helps you manage your time better, makes preparing meals easier, and prevents you from making poor food choices when you are busy. It can help turn a hectic week into one that is nearly stress-free.

To simplify meal planning, break it down into four steps: Plan, Purchase, Prepare, and Pack.

#### 1 Plan:

Start by planning 1 or 2 days' worth of meals and snacks at a time. Make sure that before you go to sleep at night, you know what you are going to eat the next day. Eventually, you will be able to work up to planning a weeks' worth of meals.

- Keep track of your chosen meals with a menu planner template or on a whiteboard.
- Once you have chosen your meals, go through your pantry, fridge, and freezer to see what ingredients you already have. Create a grocery list for the ingredients that you need to buy. Organize your list into sections (Fruits & Vegetables, Meat/Poultry, Dairy, etc.).
- Try 1 new recipe a week to avoid boredom and keep you creative. Remember to plan for leftovers to take for lunches the next day. You can browse the internet for recipes or visit your local library or bookstore for cookbooks.
- Use the "Healthy Plate" tool to plan well-balanced meals throughout the day! The following is an example of what a day of eating balanced meals using the "Healthy Plate" would look like.



BREAKFAST IDEAS			
Choose 1 or 2 Protein Foods:			
1 to 2 poached or scrambled eggs	28 g to 57 g (1 to 2 oz) lean ham		
125 ml (½ cup) cottage cheese	125 ml (½ cup) low-fat plain Greek yogurt		
🔲 15 to 30 ml (1 to 2 tbsp) nut butter			
Choose 1 or 2 Grains/Starch Foods:			
1 to 2 pieces toast (whole grain)	175 ml (¾ cup) oatmeal or		
1 whole wheat English muffin	high-fibre cereal		
3 to 4 Ryvita <sup>®</sup> crackers	28 g to 43 g (2 to 3 tbsp) Bran Buds®		
Choose 1 or 2 Vegetables/Fruits:			
1 small pear, apple, or orange	125 ml (½ cup) strawberries, canned fruit		
2 to 3 slices tomato	(in water), diced melon, blueberries		
	☐ ½ banana		
Choose 1 Healthy Fat:			
7.5 ml (½ tbsp) margarine (non-hydrogenated)	7 nuts (almonds)		
	28 g (2 tbsp) ground flax seed		
<b>Breakfast example:</b> 125 ml (½ cup) oatmeal wi			
(¼ cup) skim milk stirred in. Top with cinnamon,	14 g (1 tbsp) huts and seeds, and ½ a bahana.		
LUNCH	IDEAS		
Choose 1 or 2 Protein Foods:			
2 to 4 slices deli meat	125 ml (½ cup) black beans		
57 g to 85 g (2 to 3 oz) canned tuna,	Egg salad (1 to 2 eggs)		
chicken breast, etc.	☐ 75 g (2 ½ oz) Tofu		
125 ml (½ cup) cottage cheese			
Choose 1 or 2 Grains/Starch Foods:			
5 to 8 Triscuits®	1 small (6") whole wheat tortilla or pita		
3 to 4 Ryvita <sup>®</sup> crackers	🔲 85 ml (½ cup) pearl barley		
1 slice toast			
Choose 1 or 2 Vegetables/Fruits:			
1 small pear, apple, or orange	🔲 250 ml (1 cup) garden salad		
☐ 85 ml (⅓ cup) pineapple	125 ml (½ cup) steamed vegetables		
5 to 6 cucumber slices	250 ml (1 cup) raw vegetables		
Choose 1 Healthy Fat:			
2 to 3 slices avocado (½ of fruit)	15 ml (1 tbsp) vinaigrette dressing		
14 g (1 tbsp) nuts or seeds			
Lunch example: Fill 1 small whole wheat tortilla wrap with 20 g (1/4 cup) black beans,			
57 g (2 oz) chicken breast, 15 ml (1 tbsp) salsa, ½ of an avocado. Sprinkle with lettuce and			
cheese and serve with 250 ml (1 cup) of garden salad.			

DINNER IDEAS			
Choose 1 or 2 Protein Foods:			
125 ml (½ cup) chili with beans or lean ground beef/turkey	<ul> <li>85 g (3 oz) baked/poached fish</li> <li>125 ml to 250 ml (½ to 1 cup) beans/lentils</li> </ul>		
125 ml (½ cup) chicken stew	85 g (3 oz) veggie burger		
85 g (3 oz) baked/poached chicken, pork, beef, lamb	☐ 75 g (2 ½ oz) Tofu		
Choose 1 or 2 Grains/Starch Foods:			
5 to 8 Triscuits®	1 small (6") whole wheat tortilla or pita		
3 to 4 Ryvita <sup>®</sup> crackers	☐ ½ sweet potato		
1 slice toast	🔲 85 ml (¼ cup) pearl barley		
Choose 1 or 2 Vegetables/Fruits:			
1 small pear, apple, or orange	📃 250 ml (1 cup) garden salad		
□ 85 ml (⅓ cup) pineapple	125 ml (½ cup) steamed vegetables		
5 to 6 cucumber slices	250 ml (1 cup) raw vegetables		
Choose 1 Healthy Fat:			
2 to 3 slices avocado (1/8 of fruit)	15 ml (1 tbsp) vinaigrette dressing		
14 g (1 tbsp) nuts or seeds	5 ml (1 tsp) olive oil, canola oil (monounsaturated)		
Dinner example: 85 g (3 oz) poached salmon with lemon, olive oil, and herbs, with			
125 ml (½ cup) quinoa, 125 ml (½ cup) asparagus, and 125 ml (½ cup) sautéed red pepper.			

SNACK IDEAS			
You may need a snack if it is more than 5 hours between your meals. Well-planned snacks, using ideas below, help manage your hunger and prevent you from overeating later in the day. The best snacks have carbohydrates to fuel your body and protein to manage your hunger.			
Choose 1 Carbohydrate Food:			
<ul> <li>250 ml (1 cup) raw vegetables</li> <li>250 ml (1 cup) low-sodium vegetable soup</li> <li>250 ml (1 cup) frozen berries</li> <li>125 ml (½ cup) canned fruit (in water)</li> <li>1 medium fruit</li> <li>1 small homemade low-fat, high-fibre muffin</li> </ul>	<ul> <li>2 to 4 high-fibre crackers (Ryvita®, Wasa®, Triscuits®)</li> <li>½ a whole wheat pita or 1 small whole wheat tortilla</li> <li>125 ml (½ cup) high-fibre cereal (Bran Buds® with Psyllium, Spoon Size Shredded Wheat®)</li> </ul>		
Choose 1 Protein Food:			
<ul> <li>1 hard-boiled egg</li> <li>125 ml (½ cup) chickpeas, kidney beans, navy beans, black beans, baked beans, split peas, or lentils</li> <li>250 ml (1 cup) low-fat plain or artificially sweetened yogurt</li> <li>125 ml (½ cup) 1% cottage cheese</li> <li>10 to 12 dry-roasted almonds</li> </ul>	<ul> <li>85 ml (<sup>1</sup>/<sub>3</sub> cup) pistachios (with shell)</li> <li>30 ml (2 tbsp) dry-roasted sunflower or pumpkin seeds</li> <li>30 g (1 oz) skim milk cheese</li> <li>85 ml (<sup>1</sup>/<sub>3</sub> cup) hummus</li> <li>30 ml (2 tbsp) peanut butter or nut butter</li> <li>250 ml (1 cup) skim or 1% milk</li> </ul>		
Snack examples:			
<ul> <li>1 small container of high protein yogurt (less than 100 calories, check label)</li> <li>3 slices of deli ham, chicken, or turkey (28 g or 1 oz each) - rolled up</li> </ul>	<ul> <li>10 almonds</li> <li>60 ml (¼ cup) low-fat cottage cheese with 60 ml (¼ cup) unsweetened applesauce</li> <li>125 ml (½ cup) low-fat, low-sugar</li> </ul>		
<ul> <li>60 ml (¼ cup) low-fat tuna salad on</li> <li>3 whole wheat crackers</li> </ul>	yogurt with 60 ml (¼ cup) blueberries or raspberries		
<ul> <li>125 ml (½ cup) fresh veggies, dipped in 30 ml (2 tbsp) hummus or Greek yogurt dip</li> </ul>	<ul> <li>4 slices honey ham with 10 ml (2 tsp) honey mustard, rolled in lettuce leaf</li> </ul>		
<ul> <li>1 hard-boiled egg (soft and mashed)</li> </ul>	<ul> <li>1 slice deli ham, turkey or chicken, rolled</li> </ul>		
<ul> <li>½ small apple (skin off) and 1 slice of reduced-fat cheese</li> <li>60 ml (¼ cup) low-fat cottage cheese</li> </ul>	<ul> <li>with 1 slice low-fat cheese</li> <li>2 medium dill pickles, zucchinis, or cucumber spears, each wrapped in 1 slice</li> </ul>		
and 3 whole wheat crackers	of deli ham		

#### LIFESTYLE CHANGE #4 - PLAN YOUR MEALS (CONTINUED)

#### Purchase:

Once you have planned your meals and prepared your grocery list, it is time to go shopping.

- Only buy items on your list. This helps prevent buying extra items that you do not need, saving you money and extra calories!
- Use flyers and coupons to buy foods that are in season and on sale. However, keep your healthy eating goals in mind! Avoid buying high-fat or high-sugar foods just because they are on sale.
- Buy frozen fruit and vegetables as they are great foods to keep on hand to prepare quick and easy meals.



- Read labels carefully.
  - Note the portion size listed on the package when you are comparing products. Not all products use the same serving size. For example, you may see a cereal box stating 100 calories per ½ cup compared to another cereal box stating 100 calories per 1 cup.
  - Aim to buy products with less than 10 g of sugar per serving and less than 5% daily value, or 3 g, of fat per serving.
- Read the ingredients. Labels list ingredients in order from the most to the least, so if sugar is listed in the first few ingredients, stay away! Not sure if there is sugar? If an ingredient ends in "-ose" (such as fructose, sucrose), it is a sugar.

For information on reading nutrition labels and types of sugars on ingredient lists, see pages 28 to 31.

#### LIFESTYLE CHANGE #4 - PLAN YOUR MEALS (CONTINUED)

### Prepare:

To get your meals on the table, identify your barriers or challenges in preparing meals. This may include not having enough time, feeling tired, having unpredictable schedules, or simply not knowing how to cook. If any of these barriers apply, you need to come up with some ways that you can overcome these challenges. You also need to ask yourself what will be different after surgery.

### What are your barriers?

- I don't know how to cook.
- I'm too tired.
- I can't stand to cook.
- Fast foods taste better.
- My family's schedule is unpredictable.
- I don't have time.

Duodenal surgery alone is unlikely to overcome these barriers.

You can:

- Prepare meals in advance, on a day that you have more free time. Separate meals into portions and keep them in the fridge or freezer.
- Browse some cookbooks at your local library, borrow books from a friend, or search for recipes online to find healthy, tasty options that you can easily prepare.
- Use your slow cooker and save time by buying healthy convenience foods such as rotisserie chickens, bagged salads, or pre-cut fruits and vegetables.

### Pack:

Remember to plan for meals away from home. Here are some tips to make eating meals away from home easier:

- Buy a lunch bag, ice packs, and reusable storage containers.
- Pack your lunch the night before.
- Have your breakfast plates, bowls, and cutlery ready for the morning.
- Have some foods that are more convenient on hand to "grab and go", such as fruit cups and applesauce cups, low-fat yogurt, and cheese-strings, or light Babybel<sup>®</sup> cheeses.



### □ Lifestyle Change #5 - Keep a Food Journal to Track your Food Intake

There is no denying the power of food journals. Research shows that people who keep food journals lose more weight and are more successful at maintaining their weight loss. A food journal is the only way to know exactly what you are eating.

Think of your food journal as a guide to help you make decisions about what you eat. It is a great investigational tool to help you learn more about yourself, your habits, patterns, challenges, and successes. It can help you identify your emotional and mindless eating behaviours, which we will discuss in *Lifestyle Change #6 - Be Aware of your Triggers and Cues for Emotional Eating*.

### How do I keep a food journal?

Start recording the following information:

- What and how much you ate or drank.
- What time you ate or drank.
- When your episodes of hunger or cravings were; how dramatic they were; if you were able to manage the hunger or cravings.
- Which emotions, thoughts, or concerns you may be having.
- Which triggers you can identify that are linked to food choices and behaviours.

Once you have all that information, you can start to notice trends. Try to figure out:

- When are you hungriest?
- What are your cues and triggers?
- What strategies did you use to help yourself?
- What would you do differently next time you are in that situation?

Use the information to guide your decisionmaking and help you make better food choices. **Tip!** To get the most out of your food journal, make sure you are:

- Accurate: Weigh and measure your food as often as possible.
- **Detailed:** A half-completed food record does not give you much information.
- **Consistent:** Stick to it for at least a few weeks so that you can start seeing trends in the data.

For a sample Food Journal and a **Food Journal** template you can fill out, see pages 179 to 180.

If keeping track of your food using your phone or tablet works better for you than handwriting, explore using an app. Good examples of online food journals are:

My Fitness Pal https://www.myfitnesspal.com

Baritastic App http://www.baritastic.com



### Lifestyle Change #6 - Be Aware of your Triggers and Cues for Emotional Eating

### Why do I eat?

Humans need to eat so our bodies and brains function properly, but sometimes we eat for reasons other than actual hunger. **Emotional eating** is a term that refers to eating when we feel certain emotions, including:

- Anger
   Frustration
   Loneliness
   Tiredness or
   Tense
   boredom
- Stress
   Happiness
   Rushed
   boredom

We might also eat because we are at a social occasion, on vacation, or we "see food".

### What is mindful eating?

Our modern way of life has us racing from one task to the next. Often, we are not aware of what we are doing in the moment, including what we are eating.

Have you ever sat down in front of the television with a bag of chips and become so caught up in the show that you didn't realize you ate the whole bag? Do you think about how your stomach feels before you eat and as you progress through a meal? Do you stop eating when you are full? Do you eat when you are not hungry?

Becoming aware of why you eat is very important. This is called **mindful eating**. Mindful eating is paying close attention to what you eat. Identify your emotional and mindless eating habits by filling out an **Emotional Food Journal**. Use the **Emotional** Food Journal template on page 181

### Tips for mindful eating

### Slow Down

- Sit down and focus on your food. Avoid distractions like the TV, computer, or driving.
- Set a timer. Plan to take 30 minutes for a meal. Aim to eat half of your meal by the 15-minute mark.
- Chew each bite 20 to 25 times.
- Put your fork, spoon, or chopsticks down between each bite.
- Eat with chopsticks or a baby spoon to get smaller bites.

### **Notice Your Food**

To notice your food, ask yourself:

- How much am I eating? Weigh and measure your food to learn portion sizes.
- What are the colours of each food?
- What is the texture of each food?
- What are the smells?
- What does the food feel like in my mouth?
- How does the food taste? Salty? Bitter? Starchy? Rich?
- Which bite is most enjoyable?

### LIFESTYLE CHANGE #6 - BE AWARE OF YOUR TRIGGERS AND CUES FOR EMOTIONAL EATING (CONTINUED)

### Tips for mindful eating (CONTINUED)

#### **Decrease Distractions**

- Eat in only one place at home and only one place at work (p.s., not at your desk!).
- Turn off the television and talk radio.
- Close your eyes while you eat each bite to fully notice the taste, smell, and feel.
- Journal about any distressing thoughts before you sit down to eat. Set them aside after you have written them down.

### **Notice Your Body**

- How do you feel before you eat? How can you tell you are hungry? What sensations do you experience?
- Notice how you feel after each bite.
- How can you tell when you are full and satisfied?
- Before each bite, ask yourself, "Do I really want this next bite, or am I mindlessly eating it because it is in front of me?"

### What is a hunger scale?

A **hunger scale** can help you differentiate between types of hunger you are experiencing to ensure that you are eating due to physical hunger and not because of emotional hunger or cravings ("mouth hunger"). Eating regularly will help prevent you from feeling really hungry or really full. Make sure your meals are 4 to 5 hours apart, with snacks 2 hours in between. Start monitoring your hunger on a daily basis, before and after surgery.

1	2	3	4	5	6	7	8	9	10
Starvi	ing	Hungry	y	Satisfied		Full		:	Stuffed

**Stage 1 to 2:** At this stage, it can be hard to control how much you eat, which can lead to overeating or binge eating. Avoid getting to this stage by separating meals by 4 to 5 hours and having small protein-rich snacks in between meals.

**Stage 3 to 4:** We want to start eating at stage "3" or "4" and stop at around stage "5" or "6". Eating when you are hungry and stopping when you are satisfied will help you control your portion sizes. **Stage 6 +:** If your hunger is registering above a "6", you are NOT hungry - you do not need to eat. If you find you are often eating at this stage, you need to ask yourself, "Why? How am I feeling? Am I bored?"

#### LIFESTYLE CHANGE #6 - BE AWARE OF YOUR TRIGGERS AND CUES FOR EMOTIONAL EATING (CONTINUED)

### What are coping strategies?

To prepare for bariatric surgery, you need to evaluate your eating habits honestly, and notice if you are eating for reasons other than hunger. If you find that you are not hungry but still want to eat, using **coping strategies** like the examples below, can help you change the way you deal with emotions. After using them, see if the urge to eat goes away. Can you think of other coping strategies you can use?

#### **EXAMPLE COPING STRATEGIES**

- Keep snack foods that are "trigger foods" out of the house.
- Learn relaxation techniques. Instead of eating to relax, listen to music or practice deep breathing.
- Try engaging in an enjoyable activity, such as reading, knitting, puzzles.
- To cope with feelings of hopelessness, call a family member or support person.
- During periods of stress or in social situations, plan ahead to eat carrots or fat-free cookies, instead of cookies.
- Think about the long-term consequences of overeating on your general health.
- Distract yourself by thinking about work, travel plans, or other issues, instead of eating when lonely.

### Other coping strategies:

You will learn more about emotional eating in **Psychosocial Perspectives After Surgery** on page 133 to 139.

### □ Lifestyle Change #7 - Do Regular Exercise and Activity

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 to breathe better
- You to build muscle
- You to 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.

### Prioritize your Lifestyle and Behaviour Changes: Set S.M.A.R.T. Goals

Now that you have read the different lifestyle and behaviour changes you can make, prioritize the changes that you are ready to make. Setting S.M.A.R.T. goals is an effective way to help you meet your goals.

Step 1: Write down your goal in as few wo	
My goal is to:	
Step 2: Make your goal detailed and SPEC	CIFIC. Answer who/what/where/how/when.
HOW will you reach this goal? List at least 3	3 action steps you'll take (be specific):
1.	
2.	
3.	
Step 3: Make your goal is MEASURABLE.	Add details, measurements and tracking details.
I will measure/track my goal by using the fo	ollowing numbers or methods:
I will know I've reached my goal when:	
I will know I've reached my goal when:	
	at additional resources do you need for success?
	at additional resources do you need for success? Things I need to learn more about:
Step 4: Make your goal ATTAINABLE. What	
Step 4: Make your goal ATTAINABLE. What Items I need to achieve this goal:	Things I need to learn more about:
<b>Step 4: Make your goal ATTAINABLE. Wha</b> Items I need to achieve this goal: How I'll find the time:	Things I need to learn more about:
Step 4: Make your goal ATTAINABLE. What Items I need to achieve this goal: How I'll find the time: Step 5: Make your goal RELEVANT.	Things I need to learn more about:
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Step 4: Make your goal ATTAINABLE. What Items I need to achieve this goal: How I'll find the time: Step 5: Make your goal RELEVANT. List why you want to reach this goal:	Things I need to learn more about:
Step 4: Make your goal ATTAINABLE. What Items I need to achieve this goal: How I'll find the time: Step 5: Make your goal RELEVANT. List why you want to reach this goal:	Things I need to learn more about: People I can talk to for support:

# □ Manage your Goals with a Lifestyle Change Checklist

Use this tool to help manage your diet and lifestyle goals below:

LIFESTYLE CHANGE	DATE GOAL STARTED	DATE GOAL COMPLETED	COMMENTS
Eat 3 meals per day, including breakfast, lunch, dinner and snacks.			
Limit eating out to 1 or 2 times a week.			
Do not drink with meals.			
Stop eating when you are no longer hungry.			
Put your fork down between bites.			
Chew food 20 to 25 times per bite.			
Take small bites.			
Start meal planning.			
Eliminate carbonated drinks.			
Eliminate caffeine.			
Eliminate alcohol.			
Eliminate juice.			
Eliminate simple sugars.			
Limit snacks/nibbles to 3 per day.			
Eat protein at each meal and snack.			
Limit fried foods and high-fat condiments.			
Begin regular physical activity.			
Record food and beverage intake and physical activity.			
Clean out your pantry of "junk" food.			

### ☐ Think of Other Lifestyle Considerations Before Surgery

Bariatric life requires motivation and long-term commitment to bariatric recommendations. Even if you want to lose weight, are there other circumstances in your life that may prevent you from achieving and adhering to your goals? It is a good idea to take some time to **THINK** about your life.

### Can I commit to following the recommendations after surgery?

Consider the following statements before you have your surgery.

THINK	AGREE OR DISAGREE?	WHY OR WHY NOT?
<ol> <li>This is the right time for me to have bariatric surgery.</li> </ol>	Agree	
Ask yourself:		
<ul> <li>Am I having family problems? Divorce? Separation? Empty nest syndrome?</li> <li>Am I considering getting pregnant? It is recommended that women of childbearing age avoid pregnancy for at least 18 months after surgery.</li> <li>Do I have good support systems in place?</li> <li>How do my friends and family feel about the surgery? Will they support me?</li> <li>Will my employer be supportive, especially if my recovery may take 4 to 6 weeks after surgery?</li> <li>Do I have the financial means? (see page 46)</li> <li>How will I feel at holidays and celebrations when I won't be able to eat like every one else?</li> </ul>		
2. I am committed to following the recommendations that my bariatric surgery team gave to me to maintain my weight loss.	<ul><li>Agree</li><li>Disagree</li></ul>	
3. I am committed to taking vitamin and mineral supplements for the rest of my life.	<ul><li>Agree</li><li>Disagree</li></ul>	
4. I am committed to engaging in regular physical activity for the rest of my life.	<ul><li>Agree</li><li>Disagree</li></ul>	

### THINK OF OTHER LIFESTYLE CONSIDERATIONS BEFORE SURGERY (CONTINUED)

### Can I afford the costs associated with surgery?

There are some financial aspects of bariatric surgery that you are responsible for. It is important to review your finances and make sure you are able to cover the cost of your out-of-pocket expenses.

The following are estimated costs associated with bariatric surgery. There may be other expenses to consider, including hiring additional help during the recovery period if needed.



### **Optifast:** \$110 per week Duration: 2 to 4 weeks Clothing (total: \$220 to \$440) (indirect cost): \$50 or more **Prevacid:** \$80 per month **Gas/Hotel/Parking:** Duration: 6 months \$\$ (total: \$480) **Tinzaparin: Scales/Measuring Tools:** Depends on weight \$50 or more < 110 kg = \$ 89110 to 160 kg = \$189 **Multivitamins**/ > 160 kg = \$260**Minerals/Protein:** Duration: 8 days \$80 per month or \$1000 per year Duration: for life

### ESTIMATED COSTS ASSOCIATED WITH BARIATRIC SURGERY

For more information, see **Appendix A. Estimated Costs for Bariatric Surgery at HRH** on page 151.

# 2 to 4 Weeks Before Surgery...

### Replace Meals with the Optifast® Diet

### What is the Optifast<sup>®</sup> diet?

Optifast® (Optifast® 900) is a meal replacement product that is low in carbohydrates, very low in fat, and high in protein. The diet consists of having 4 to 5 servings of Optifast<sup>®</sup> each day in place of your normal meals.

This type of diet will help you lose some weight before surgery. This will help make the surgery easier and safer to do, as well as shrink the amount of fat around the liver.

Your surgeon may start you on Optifast<sup>®</sup> at about 2 to 4 weeks before your surgery, or earlier, depending on your BMI. It will cost you about \$110/week to be on this diet.

Note: If you have diabetes, let your doctor know before you start Optifast<sup>®</sup>. Your doctor may need to adjust your diabetes medicines or insulin. For more information, see **What** should I do if I have diabetes and I am taking Optifast<sup>®</sup>? on pages 51 to 52.

### How do I take Optifast<sup>®</sup>?

- 1. Drink 4 to 5 packages of Optifast<sup>®</sup> (mixed with water) each day for 2 to 4 weeks before surgery. Your surgeon or dietitian will let you know the exact amount you should drink each day.
- 2. To keep hydrated, drink a minimum of **2 L (8 cups) of water** and other calorie-free, clear fluids each day (this amount is *in addition to* the water you mix in your Optifast<sup>®</sup>). Calorie-free, clear fluids include decaffeinated coffee/tea (do not add milk, cream, or sugar), broth, sugar-free drinks (such as Crystal light<sup>®</sup>), and sugar-free Jell-O<sup>®</sup>/diet Jell-O<sup>®</sup>.
- 3. If needed, you may also eat the **following vegetables** only, up to a maximum of 500 ml (2 cups) a day:
  - Lettuce
- Cauliflower

Cucumber

- Spinach
- Broccoli
- Green pepper
- Cabbage

Celery

DO NOT eat or drink any other foods or fluids while on the Optifast<sup>®</sup> diet.

\*\* If you would like to add dressing to your vegetables, only use vinegar or lemon juice.

At midnight, the night before surgery, STOP taking Optifast<sup>®</sup> and eating the allowed **vegetables.** You may continue to drink caloriefree, clear fluids until 4 hours before surgery.

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### Can I add anything to change the flavour or add variety to Optifast<sup>®</sup>?

Optifast<sup>®</sup> comes in 2 flavours - chocolate and vanilla. You may add any of the following to Optifast<sup>®</sup> to **change the flavour**:

- Decaf coffee (brewed or instant coffee crystals)
- Sugar-free syrups or flavour extracts such as mint, berry, maple, or banana
- Zero-calorie drinks such as Crystal Light® or Mio.®

You can also **add variety** to the Optifast<sup>®</sup> diet with the following recipes.

Chocolate Raspberry Shake	
280 ml to 375 ml (10 to 12 oz) Water	1 package chocolate Optifast <sup>®</sup>
500 ml (2 cups) crushed ice	1 package raspberry sugar-free drink crystals
How to prepare: Blend until smooth.	

280 ml to 375 ml (10 to 12 oz) water

500 ml (2 cups) crushed ice

1 package chocolate Optifast®

5 ml (1 tsp) rum extract 5 ml (1 tsp) banana extract 1 package artificial sweetener

How to prepare: Blend until smooth.

### **Orange Creamsicle™ Shake**

280 ml to 375 ml (10 to 12 oz) water

500 ml (2 cups) crushed ice

1 package vanilla Optifast<sup>®</sup>1 to 2 drops orange extract

How to prepare: Blend until smooth.

### Hot Chocolate

250 ml (8 oz) hot water (not boiling)

1 package chocolate Optifast®

1 to 2 drops coconut extract (or almond, cherry, or mint extract)

How to prepare: Blend until smooth.

### Can I add anything to change the flavour or add variety to Optifast<sup>®</sup>? (CONTINUED)

#### **Root Beer Float**

280 ml to 375 ml (10 to 12 oz) water

0.6 ml (½ tsp) root beer extract

1 package vanilla Optifast<sup>®</sup> Pinch of cloves

**How to prepare:** Blend until smooth. Put in the freezer for 1.5 to 2 hours. Take it out of the freezer and blend again until slushy.

Black Forest Chocolate Pudding	
175 ml (6 oz) water	5 ml (1 tsp) rum extract
1 package chocolate Optifast®	1 package artificial sweetener
30 ml (2 tbsp) sugar-free cherry Kool Aid® powder	
How to prepare: Blend until smooth.	

### What can I do to prevent the side effects of taking Optifast®?

**Hunger:** A very low carbohydrate diet, like your Optifast<sup>®</sup> diet, will cause your body to go into "ketosis". This means your body has started to create ketones. After 3 to 4 days, these ketones will make you feel less hungry. However, if you eat extra calories, this can stop ketosis and make you feel hungrier. To prevent hunger:

- Only have 4 to 5 packages of Optifast<sup>®</sup> a day (your surgeon or dietitian will let you know the exact amount you should drink each day.
- Drink Optifast<sup>®</sup> at regular meal times.
- You may want to avoid sitting with others when they eat.

**Headache:** To prevent a headache:

- Drink all your fluids. You should drink 2 L (8 cups) of calorie-free clear fluids every day. This amount **does not include** the water you mix with your 4 to 5 servings of Optifast<sup>®</sup>.
- Speak to your pharmacist about over-the-counter pain relief medicines.

### Bad breath that smells like alcohol: To prevent bad breath:

• Use sugar-free mints.

### What if I have constipation or diarrhea while taking Optifast<sup>®</sup>?

Since Optifast® has very little fibre in it, you may have constipation or diarrhea while taking Optifast®.

#### If you have constipation:

- Try increasing your fluids up to 3 L (12 cups) each day.
- Add Benefibre<sup>®</sup> powder to your Optifast<sup>®</sup> drink.
- You can also try using a fibre supplement, such as Benefibre<sup>®</sup> chewables or Metamucil<sup>®</sup> 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 medicines for constipation such as Colace<sup>®</sup>, Senekot<sup>®</sup>, or Milk of Magnesia<sup>®</sup>.

#### If you have diarrhea:

- It is still important to drink at least 2 L (8 cups) of calorie-free, clear fluids every day.
- Try a fibre supplement such as Benefibre<sup>®</sup> or Metamucil<sup>®</sup> 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 do not have any pre-existing bowel concerns, you may take Imodium<sup>®</sup> if needed. **Talk to** your health care provider before taking Imodium<sup>®</sup>.

### What should I do if I have diabetes and I am taking Optifast<sup>®</sup>?

Optifast<sup>®</sup> is a low carbohydrate diet. This means most people lose weight when taking Optifast<sup>®</sup>. As you lose weight, you need to closely manage your diabetes as well. You will also need to adjust your diabetes medicine as you will need less medicine to keep your blood sugar in your target range.

**Key Points:** To help manage your blood sugar as you get ready for surgery, you:

 Must check your blood sugar 3 to 4 times a day and record the results on a blood sugar record. Bring your record to each follow up visit with your nurse and dietitian.

For a **blood sugar record** template, see page 183.

- Will need to adjust your medicine because you are eating less food each day.
- May need to work closely with the diabetes educator to manage your diabetes.

### If you take insulin:

- If you take **long-acting insulin**, such as **Hum N, NPH, Lantus, Levimir, or Toujeo**, initially take <sup>2</sup>/<sub>3</sub> of what you are taking now. For example, if you normally take 90 units, take 60 units instead.
- If you take **meal-time insulin**, such as **Humalog**, **Novorapid or Apidra**, initially take half of what you are taking now. For example, if you normally take 90 units, take 45 units instead.
- If you have **episodes of low blood sugar under 4.0 mmol/L**, continue to lower the amount of insulin you take by 20% until your blood sugars are within target. For example, if you normally take 20 units, take 16 units instead. If your blood sugar is still below 4.0 mmol/L, reduce your insulin 20% again (for example, from 16 units to about 13 units).

### If you take pills for diabetes (oral hypoglycemic):

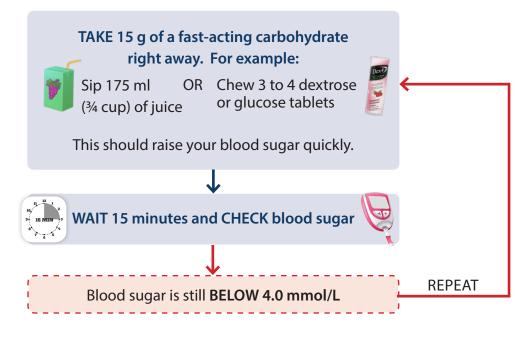
- If you take **Metformin, Januvia or Onglyza**, continue to take the same amount and check your blood sugar regularly.
- If you take **Glyburide**, **Gliclazide or Gluconorm**, take ½ of what your are taking now. For example, if you normally take 10 mg (2 times a day), take 5 mg (2 times a day) instead.
- If you take Invokana, Forxiga, or Jardiance, STOP taking this medicine.

Talk to your diabetes health care provider about guidelines to use as you lose weight. If you need help adjusting your diabetes medicines while on Optifast<sup>®</sup>, please call your family doctor.

### What do I do if my blood sugar is low while on the Optifast® Diet?

Treat the low blood sugar first. This means you will have break your Optifast<sup>®</sup> diet to treat the low blood sugar, **but it is important to treat it right away.** 

#### If your blood sugar is below 4.0 mmol/L:



Repeat these steps until your blood sugar is in your target level.

If you are having trouble keeping your blood sugar above 4.0 mmol/L, have a snack that contains both carbohydrate and protein, such as ½ can of Boost Diabetic supplement. Your diabetes educator or dietitian can give you more examples of carbohydrate and protein snacks to have.

The following are guidelines to follow starting 7 days before your surgery. If these instructions differ from what your surgeon or anesthesiologist provided, always follow their specific instructions.

# 7 Days Before Surgery...

### Contact your surgeon if your health changes

If your health changes or you get a cold or fever (at or above 38.5°C or 101.3°F), call your surgeon as soon as possible.

### Follow instructions regarding blood thinners or anti-inflammatories

If you are on blood thinners or anti-inflammatories, stop taking them as your surgeon or anesthesiologist has instructed.

# 24 Hours Before Surgery...

### Follow instructions on recreational drugs and/or regular medicines

Do not smoke, drink alcohol, or take recreational drugs at least 24 hours before surgery.

Take or stop medicines, as your surgeon or anesthesiologist has instructed.

# At Midnight, the Night Before Surgery...

### Stop your Optifast Diet®

**STOP** taking Optifast<sup>®</sup> and eating the allowed vegetables.

 You may continue drinking calorie-free, clear fluids (no red or blue dye), including water, Gastrolyte<sup>®</sup>, Hydralyte<sup>®</sup>, Pedialyte<sup>®</sup>, or Gatorade<sup>®</sup>, up until 4 hours before surgery.

DO NOT eat, drink, or chew any other food, fluids, candy, or gum.

# 4 hours Before Surgery...

### Follow the eating and drinking restrictions

Starting 4 hours before surgery, NOTHING to eat, chew, or drink.

### **IMPORTANT:**

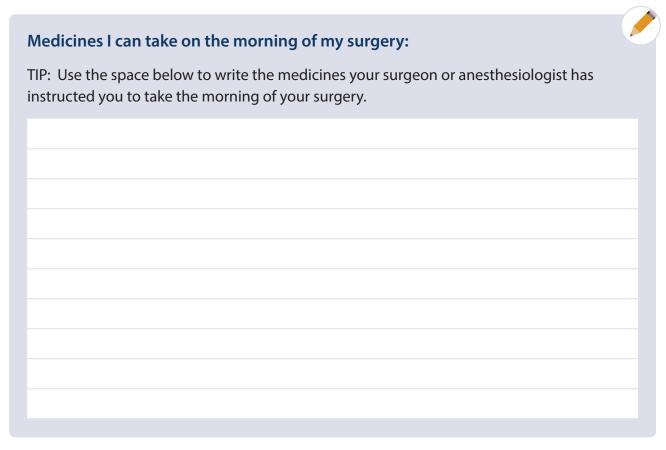
Please follow these eating and drinking instructions carefully.

Taking food or drink incorrectly before surgery is very dangerous and can lead to vomiting and choking.

We may also have to cancel your surgery.

# Before You Come to the Hospital...

Take your medicines, as your surgeon or anesthesiologist has instructed, with a small sip of water.



Shower and brush your teeth. Do not use powders, deodorant, creams, perfume, makeup, or nail polish.

Wear loose, comfortable clothing and shoes. Do not wear hair pins, hair pieces, or artificial nails.

What to Bring to the Hospital
Your Ontario Health Card, a photo identification card, and private insurance cards, if you have any.
All the medicines you are currently taking, including over-the-counter medicines, herbals, supplements, in original containers.
All the paperwork from your surgeon's office and copies of any heart test results from your doctor.
Your CPAP machine or any oral appliances for sleep apnea.
Any mobility aids or equipment as instructed (such as a walker, crutches, brace, ice machine).
You may wear your dentures, eyeglasses, or contact lenses, but bring the containers to store them. You will need to remove your dentures and/or contact lenses before your surgery.
Your favourite flavour gum. You can chew it after your surgery to help you with your nausea. It will also help your intestines start moving sooner after surgery.
If staying overnight: An overnight bag, with sleepwear, comfortable shoes, and toiletries (toothbrush, toothpaste, comb, hairbrush, electric shaver, feminine supplies). Leave the bag with your family member or friend before your surgery. They can bring it to you after your surgery.
This book, a pen or pencil, and a notebook.
Leave all valuables, such as cash, credit cards, jewelry, and expensive clothing at home.
The hospital is not responsible for personal belongings.

# WHAT TO EXPECT AT THE HOSPITAL

Your surgeon's office will let you know the time of your surgery in advance.

On the day of your surgery, **please arrive at the hospital 2 hours before the start time**.

### My surgery is scheduled for:



**At:** Humber River Health 1235 Wilson Ave., Toronto, ON M3M 0B2

You may have 1 designated family member or friend accompany you. Do not bring small children with you on the day of your surgery.

### In this section:

When you Arrive at the Hospital.... 57

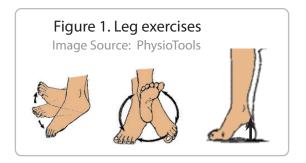
After Your S	Surgery 5	57
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# When you Arrive at the Hospital

- Take the Central Elevators to floor 2. Follow the signs to "Surgical Registration" to register.
- Your family member or friend can provide their cell phone number to receive live updates during your surgery.
- If language is a barrier for you, please let us know and we can provide you with over-the-phone or video interpretation.
- The nursing staff will prepare you for surgery and will review your medical history, medicines, allergies, and past health problems.
- The surgeon and anesthesiologist will speak to you before you go into the operating room to confirm everything and answer any other questions.

# **After your Surgery**

- You will wake up in the Post-Anesthetic Care Unit (PACU or "Recovery Room") after surgery.
  - Here, nurses will monitor your pain, heart rate, blood pressure, breathing, and surgical site.
  - They will also ask you to practice deep breathing, coughing, and leg exercises (see Figure 1) to help your lungs and circulation.

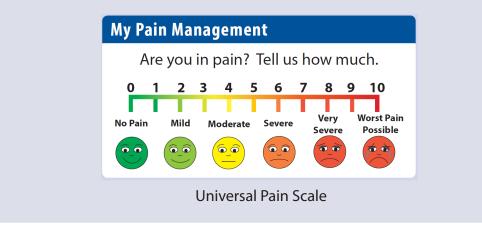


- The surgeon may meet with your family member or friend in the waiting room to update them.
- When you are stable, we will bring you to your inpatient bed.
- Once you are ready, we will start you on the clear fluids diet.

### Managing your pain while in the hospital:

Managing your pain is important for a successful recovery.

- As part of your care, your nurse and surgeon will regularly ask you if you have pain.
- We will ask you to rate your pain on a scale from 0 to 10, with 10 being the worst. We may use other pain scales with faces or pictures.
- There are many different medicines to treat pain. We may give them to you at the same time. We may also offer a nerve block.
- It is important to tell us when and where it hurts, or if you cannot sleep or do other things, like get out of bed, because of pain. Please talk openly to us about how bad your pain is, if your pain is getting worse, or if the medicine is not helping.



# At Discharge

Expect to be at the hospital for 24 hours after surgery. The nurses will prepare you for discharge and provide you with verbal and written teaching to follow, including:

- What medicines to take.
- What to expect and how to care for yourself after your bariatric surgery.
- What new equipment or aids you have, if any, and how to use them.

You will not be able to leave the hospital alone or drive for 24 hours after you are discharged from the hospital. Have a family member or friend accompany you home, either in a car or taxi, and stay with you for the next 24 hours.

# CARING FOR YOURSELF AFTER SURGERY

This section provides instructions on how to care for yourself after surgery.

### In this section:

Diet and Nutrition
Bathing and Incision Care
Pain Control
Medicines61
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Exercise and Activity

# **Diet and Nutrition**

Right after surgery, start to:

- Follow the Eating Guidelines After Surgery, described on pages 66 to 96.
- Eat a minimum of 100 to 120 g of protein every day to speed wound healing, preserve lean body mass, enhance fat-burning metabolism, and reduce hair thinning. Focus on protein foods and protein supplements to meet this requirement. For more details, see *Getting Enough Protein After Surgery*, starting on page 97.
- Take multivitamin/multi-mineral supplements every day for the rest of your life. For more details, see *Getting Enough Vitamins and Minerals After Surgery*, starting on page 103.

# **Bathing and Incision Care**

- Do not take a bath or swim until your incisions heal. You can talk to your family doctor about this during a follow-up visit.
- You may shower 4 days after surgery, or when your surgeon advises. When you shower, cover the incisions to keep them dry.
- Keep the steri-strips on your incisions clean and dry for 7 to 10 days, depending on your surgeon's instructions. They will fall off on their own. If any steri-strips fall off, leave them off.

Look at your incisions every day. Contact your family doctor or the Bariatric Clinic if you have:

- Severe swelling, bruising, or redness that is spreading around the incisions. This may be a sign of bleeding or an infection.
- You may have some numbress 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.
- It is normal to have some swelling around the incisions. This takes a few weeks to go away.
- 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.

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# **Pain Control**

- Your surgeon will prescribe you with a liquid pain medicine.
- If you have pain, take the liquid pain control medicine as instructed by your surgeon. Pain should decrease over time.

Call your surgeon if your pain:

- Is not relieved by the medicine
- Does not go away over a few weeks
- Suddenly increases.

# **Medicines**

- Your surgeon and members of the health care team will tell you when you can start taking certain medicines after surgery. Each person's plan of care for medicines is different.
- At each clinic visit, your health care team will also assess how you should take your medicine.
  - You may need to split or crush some medicines for about 4 weeks or longer or for the rest of your life. You can mix the medicine with a small amount of unsweetened applesauce, water, or other fluids to help it go down. Most people can swallow medicine whole after about a month.
  - Take 1 pill at a time. Wait before taking another medicine to make sure it goes down. Drink fluids after taking a pill to help you swallow.
- Talk to a member of your care team when you have questions or concerns.

### Non-Steroidal Anti-Inflammatory Drugs (NSAIDS)

 After surgery, you can NEVER take NSAIDS again. This includes ibuprofen (examples Advil<sup>®</sup>, Motrin<sup>®</sup>), acetylsalicylic acid (example ASA), COX-2 inhibitors (example Celebrex<sup>®</sup>), Naproxen, and Aleve<sup>®</sup>. Taking NSAIDS will put you at high risk for developing stomach ulcers.

After surgery, if a health care provider you are seeing wants you to take NSAIDs, contact the Bariatric Clinic first.

# Ulcer Prevention Medicine

- For 6 months after surgery, you will take a special medicine to help prevent stomach ulcers. Your surgeon will prescribe this to you.
- Take this medicine 30 minutes before breakfast and 30 minutes before dinner.

### MEDICINES (CONTINUED)

### Blood Pressure Medicine

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

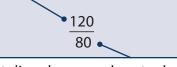
Call the health care provider who looks after your blood pressure, such as your family doctor, nurse practitioner, or cardiologist if you notice:

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

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

Blood pressure is written as 2 numbers. There is a top number and a bottom number:

systolic: when your heart contracts and pumps blood forward



diastolic: when your heart relaxes

In this example, the blood pressure is 120 over 80.



# Medicines for Mental Health and Seizures

 If you take medicines to manage mental health and/or seizures, you must closely monitor your symptoms after surgery. The surgery can change how your body absorbs some medicines.

### 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 medicine or change doses on your own.

### Medicines to Prevent Blood Clots

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.

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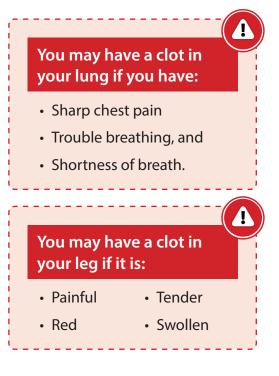
- A blood clot in your brain can cause a stroke.
- A blood clot in your heart can cause a heart attack.
- A blood clot in a lung is called a pulmonary embolism.
- A blood clot in your leg is called a deep vein thrombosis.

### MEDICINES (CONTINUED)

# Medicines to Prevent Blood Clots (continued)

You will be taking a medicine called an **anticoagulant** or **blood thinner**. This medicine prevents a blood clot from forming or getting bigger.

- You will need to take this medicine by injection for 8 days after surgery.
- The best place to inject is into your abdomen (tummy area). Make sure you do not inject it into the same place each time.
- You may need to have the injections longer or you may given a pill to take instead. Your health care team will decide which type of blood clot medicine is best for you.



# **Exercise and Activity**

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

- For 6 to 8 weeks after surgery:
  - Do not lift or carry anything over 4 kg (10 lb), such as a grocery bag, suitcase, laundry basket, vacuum cleaner, pet, or child, until you check with your surgeon.
  - Do not do any strenuous exercise until your surgeon says you can.
- Start with short walks indoors or outdoors, a few times a day.
  - You will feel tired so take breaks to rest, 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 (such as a Fitbit<sup>®</sup>) to wear and measure your progress.
- Talk to your surgeon 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 surgeon before 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. Talk to 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 4 to 6 weeks.
- When you return to work depends on what you do and how you feel. Talk to your surgeon at your follow-up visits about when you can go back to work or school.

# **Sexual Activity and Pregnancy**

- You can resume sexual activity when you feel able. However, do not to get pregnant until your weight is stable and you are following a healthy lifestyle. This is no earlier than 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 (not by mouth) 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. If you do get pregnant, you will need to check and follow your vitamin and minerals levels to ensure proper growth of the baby. An obstetrician who deals with high risk pregnancies should monitor your pregnancy.

If you become pregnant at any time, or think you may be pregnant, contact the Bariatric Clinic. We will refer you to an obstetrician to assess for a high risk pregnancy.

# **Follow-up Appointments**

After surgery, you will have the following appointments:

At	1 MONTH	3 MONTHS	6 MONTHS	12 MONTHS	THEN, ONCE A YEAR FOR UP TO 5 YEARS
Bariatric Clinic Appt.	$\checkmark$	~	~	~	✓
Blood Test		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

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

- Your incision is red, swollen, painful, bleeding
- Your incision has yellow, green or smelly discharge
- You have a fever at or above 38.3°C (100.9°F)
- Vomiting that lasts more than 3 hours
- Dizziness that does not go away

### Call 9-1-1 and go to the nearest Emergency Department if you have:

- Leg pain or swelling
- Shortness of breath
- Chest or shoulder pain

#### Do not drive yourself!

# EATING GUIDELINES AFTER SURGERY

The following are guidelines for the dietary stages after your surgery. Following these recommendations will help you tolerate food better and prevent nausea, vomiting, malnutrition, or poor weight loss. It also will prevent any damage to your pouch. This section outlines each diet stage in detail.

**Note:** Your surgeon will prescribe Prevacid<sup>®</sup>. Take this first thing in the morning for the first 6 months after surgery.

Wait 30 minutes after consuming the Prevacid<sup>®</sup> before you eat your first meal.

Remember to renew your prescription after the first 3 months.

### In this section:

Summary of Diet Stages	
after Surgery	67
Clear Fluids: Day 1 and 2	68
Full Fluids: Weeks 1 and 2	69
Soft Foods: Weeks 3, 4, and 5	74
Diet for Life: Weeks 6	
and Beyond	83
General Cooking Tips	93
Key Eating Habits	94
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Portion Control for the	
First 6 Months	96

# **Summary of Diet Stages After Surgery**

STAGE	START ON	DURATION	GO TO PAGE
Clear Fluids	Day 1	In hospital, for 1 to 2 days	71
Full Fluids	Week 1	Start when you get home, for 1 week	72 to 76
	Week 2	Start after Week 1, for 1 week	
Soft Foods	Week 3	Start after Week 2, for 1 week	77 to 85
	Week 4	Start after Week 3, for 1 week	
	Week 5	Start after Week 4, for 1 week	
Week 6	Diet for Life	Start after completing the first 5 weeks, LIFELONG	86 to 95
<ul> <li>In General:</li> <li>Over a 6-week period, you will progress slowly from clear fluids to a soft diet.</li> <li>During the first 4 weeks, you will need to drink protein supplements to get your recommended amount of daily protein.</li> <li>At the beginning, your stomach will hold about 60 to 125 ml (¼ to ½ cup).</li> </ul>			
<ul> <li>At the beginning, your stomach will hold about 60 to 125 ml (<sup>4</sup>/<sub>4</sub> to <sup>4</sup>/<sub>2</sub> cup).</li> <li>At 8 weeks, you will be able to eat about 250 ml (1 cup) of solid food at each meal.</li> </ul>			

# Clear Fluids: Days 1 and 2



Start Date: On the same day, following surgery.

Duration: For 1 to 2 days, while in hospital.

### **Food Options:**

- Sugar-free/diet Jell-O<sup>®</sup>
- Sugar-free popsicles
- Beef, vegetable, or chicken broth
- Water or water with zero calorie artificial sweeteners

### **Goals:**

- The medical team will make sure that your digestive system is working properly.
- Stay hydrated by getting 2 L (8 cups) of clear fluids each day.
- Sip about 15 ml (1 tbsp) of clear fluids every 15 minutes.

# Full Fluids: Weeks 1 and 2



Start Date: After you get home on day 2 or 3 after surgery.

Duration: For 2 weeks (14 days)

Goals:

- Eat/drink 120 g of protein each day.
  - Drink 2 L (8 cups) of fluid each day (this includes water, milk and protein drinks, or broth).

Start taking your chewable or liquid vitamin and mineral supplements.

Start taking your protein shakes.

### How long will I need to have full fluids?

You will start full fluids once you are able to tolerate clear fluids. This is usually **on day 2 or 3 after surgery**. You should be able to tolerate full fluids before you leave the hospital. You will continue with full fluids for 2 weeks (14 days) after duodenal switch surgery.

### What are full fluids?

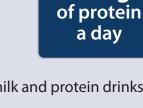
Full fluids are fluids and foods that are easy to swallow. You do not generally need to chew full fluids.

During this stage, you will focus on fluids that are milk-based, high in protein, low in sugar, and low in fat. These full fluids will help you meet your **minimum goal of 120 g of protein per day**. Most of this protein will come from your protein supplements (shakes). The rest will come from high-protein milk & alternatives, such as the ones listed in the full fluids diet guide on the next page.

# How do I consume full fluids?

- Sit down and focus while you eat/drink.
- Take your time and eat slowly. Take about **60 to 90 minutes to eat a meal**.
  - Sip about 30 ml (2 tbsp or 1 oz) of full fluids, every 15 minutes.
  - By the end of your meal, you should be able to drink a total of 125 to 175 ml (<sup>1</sup>/<sub>2</sub> cup to <sup>3</sup>/<sub>4</sub> cup) of full fluids.
  - If you feel pain or discomfort when you eat, stop eating and take a break. Try again later.
- While on full fluids, you can continue to drink clear fluids.

Tip! Track your fluid and protein intake using the *Fluid and Protein Record* on page 185.



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### Full Fluids Diet Guide – Weeks 1 and 2

FOOD GROUP	FOODS ALLOWED	FOODS TO AVOID
Milk & Alternatives (high protein)	<ul> <li>Milk (2%, 1%, skim)</li> <li>Lactose-reduced milk (1% or skim)</li> <li>Fortified soy milk (plain/unsweetened)</li> <li>Cottage cheese (low-fat)</li> <li>Ricotta cheese (low-fat)</li> <li>Yogurt or Greek yogurt (smooth, no added sugar, without chunks, 2% fat or less)</li> <li>Cream soup (low-fat and strained; made with milk, not cream)</li> </ul>	<ul> <li>Chocolate milk</li> <li>Flavoured soy milk (with 10 g or more of sugar per serving)</li> <li>Milkshakes</li> <li>Smoothies</li> <li>Cream</li> <li>Yogurt with pieces of fruit/nuts or seeds</li> <li>All other milk &amp; alternatives not listed in foods allowed.</li> </ul>
Vegetables & Fruits	<ul> <li>Vegetable juice</li> <li>Tomato juice</li> <li>Unsweetened fruit purées</li> </ul>	<ul> <li>Sweetened fruit purées</li> <li>All other vegetables &amp; fruits not listed in foods allowed.</li> </ul>
Grain Products	<ul> <li>Cream of Wheat<sup>®</sup></li> <li>Oatmeal (with less than 10 g of sugar per serving)</li> <li>Cream of Rice<sup>®</sup></li> <li>Steel-cut oats</li> <li>Oat Bran<sup>®</sup> hot cereal</li> </ul>	<ul> <li>Sugary varieties of instant oatmeal</li> <li>All other grain products not listed in foods allowed.</li> </ul>
Protein Supplements	<ul> <li>Protein drink (with 20 to 40 g of protein and <i>less than</i> 5 g of carbohydrates per serving)</li> <li>Protein powder (mixed with water or added to food)</li> <li>For more information about protein supplements, go to pages 97 to 102.</li> </ul>	<ul> <li>Protein drinks (with <i>more than</i> 5 g of carbohydrates per serving)</li> <li>Protein bars</li> <li>Meal-replacement drinks, like Boost<sup>®</sup> and Ensure<sup>®</sup></li> </ul>

#### FOOD GROUP **FOODS ALLOWED** FOODS TO AVOID Juice **Beverages** Water • Crystal light<sup>®</sup>, MiO<sup>®</sup>, diet Kool-Aid<sup>®</sup> Lemonade Gatorade Zero Coffee Decaffeinated coffee or tea • V8<sup>®</sup> Splash and Fusion Non-carbonated Nestea Zero<sup>®</sup> Iced tea Alcohol Carbonated drinks Caffeinated drinks • Regular sports drinks • Energy drinks Sugar-free Jell-O<sup>®</sup> • Avoid all other desserts, Desserts, sweets, and others not listed Sweets, and • Sugar-free popsicles Others in foods allowed Artificial sweeteners • Pudding with no sugar added or artificially sweetened • No fats or oils allowed • Avoid all fats and oils Fats & Oils

### FULL FLUIDS DIET GUIDE – WEEKS 1 AND 2 (CONTINUED)

# Full Fluids Diet Sample Menu - Weeks 1 and 2

Below is a possible full fluids menu for a day. You may change the type of fluids to whatever you like from the full fluids list but, **remember to have 2 to 4 protein drinks (depending on how much protein is in a drink) and a total of 2 L (8 cups) of fluids a day.** 

**Note:** This sample menu contains 2 protein drinks, as the Premier Nutrition<sup>®</sup> brand is high in protein. If you are using another protein drink, you may have to add 1 or 2 more drinks to this menu depending on the amount of protein each drink contains.

### FULL FLUIDS MENU SAMPLE

Tips:

- Have 3 small meals and 3 small snacks to keep you nourished (this includes the protein drinks).
- Focus on the techniques of eating to prevent vomiting or discomfort.
- Consume fluids at room temperature for the first week to prevent cramping or pain.
- Focus on high protein to help you heal. Always eat high protein foods FIRST.
- Sip on water throughout the day.

During the Morning	<ul> <li>335 ml (1 <sup>1</sup>/<sub>3</sub> cup) of Premier Nutrition protein drink</li> <li>125 ml (<sup>1</sup>/<sub>2</sub> cup) Milk</li> <li>250 ml (1 cup) Water</li> </ul>
During the Afternoon	<ul> <li>335 ml (1 <sup>1</sup>/<sub>3</sub> cup) of Premier Nutrition protein drink</li> <li>125 ml (<sup>1</sup>/<sub>2</sub> cup) no sugar added/artificially sweetened pudding</li> <li>125 ml (<sup>1</sup>/<sub>2</sub> cup) Milk</li> <li>125 ml (<sup>1</sup>/<sub>2</sub> cup) Water</li> </ul>
During the Evening	<ul> <li>125 ml (½ cup) Strained, cream soup</li> <li>125 ml (½ cup) Yogurt</li> <li>125 ml (½ cup) Water</li> </ul>

# Full Fluids Diet Recipes

#### Vanilla-Raspberry Heaven

1 scoop Vanilla protein powder (or other flavoured protein powder that you like) 250 ml (1 cup) Skim, 1%, 2% milk or soy milk <sup>1</sup>/<sub>2</sub> package Crystal Light raspberry flavour (OR 5 ml sugar-free raspberry extract OR any flavour that you like)

How to prepare: Mix in shaker or blender with ice.

#### **Protein Drink**

1 scoop Flavoured protein powder that you like	1 to 2 ice cubes
250 ml (1 cup) Skim, 1%, 2% milk or soy milk	2 to 3 drops Flavoured extract that you like

How to prepare: Blend

5 ml (1 tbsp) peanut butter powder uch as PB2)

Protein Smoothie with a Boost	
1 to 2 scoops Vanilla, chocolate, or unflavoured protein powder (with 20 to 40 g protein) 125 ml (½ cup) Skim, 1%, 2% milk or soy milk	100 g of yogurt (1 container) (with less than 10 g of sugar and less than 2% of fat) OR 15 to 30 ml (1 to 2 tbsp) Greek yogurt (for added protein)

How to prepare: Mix in blender.

High Protein Banana Peanut Butter Smoothie	
1 to 2 scoops Banana flavoured protein powder (with 20 to 40 g protein) 250 ml (1 cup) Skim, 1%, 2% milk or soy milk	15 ml (1 tbsp) peanut butter powder (such as PB2)
How to prepare: Mix in blender.	

# Soft Foods: Weeks 3, 4, and 5



Start Date: Usually 2 weeks after surgery.	
Duration: For 3 weeks (21 days)	120 g
Goals:	of protein a day
Eat 120 g of protein each day.	
The focus of this stage is on soft protein foods that are easy t This should cause you the least amount of discomfort. You ca from the list for the previous weeks.	
Drink 2 L (8 cups) of fluids per day, sipped between meals.	
Blend all foods to a baby food or applesauce consistency.	
Eat protein foods first, followed by fruits and vegetables, then	grains.
Avoid spicy foods, as well as very hot or very cold foods. They cause discomfort.	may
Try only one new food at each meal, so that you know what yo	ou can tolerate.

# How long will I need to have soft foods?

After having full fluids for the first 2 weeks, introduce a soft foods diet. Start on week 3, after duodenal switch surgery, and do it for a minimum of 3 weeks. For some people, this stage may take longer than 3 weeks because everybody heals differently and has different tolerances.

# What are soft foods?

Soft foods are foods blended to a baby food or applesauce consistency.

Focus on **protein** foods that are easy to chew and digest. During weeks 3 to 5, **your goal is to get a minimum of 120 g protein a day** from food sources (such as milk & alternatives, and meat, fish, poultry (chicken, turkey) & alternatives), but you may still need to add 2 to 3 protein supplements each day.

During this stage, you will be adding meats to your diet. You will be able to tolerate moist meats (such as canned fish, slow-cooked stews, or soups) better than dry or tough meats. To improve tolerance, **moisten meats with small amounts of gravy or broth when blending.** 

PURÉED/BLENDED SOFT FOODS	PORTION SIZE	PROTEIN (g)
Chicken, fish, turkey, eggs	30 ml (2 tbsp)	7 g
Cottage cheese/ricotta cheese (fat free or 1%), tofu, yogurt	30 ml (2 tbsp)	4 g
Cheese, fat-free or low-fat	28 g (1 oz or 1 slice)	7 g
Milk (1% or skim)	125 ml (½ cup)	4 g
Protein shake		Check label

#### Protein Content of some Soft (Puréed/Blended) Foods

# How do I consume soft foods?

- To minimize discomfort, continue to eat slowly and chew very well.
  - 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.
- Pay close attention to your **portion sizes**.
  - At first, you will eat very small amounts of food about 30 to 45 ml (2 to 3 tbsp) of each item on your plate (or about 60 ml (¼ cup) of solid food).
  - Over time, the pouch will stretch and will allow you to eat larger portions. Restrict your portions to about 125 to 250 ml (1/2 to 1 cup) of food at one time.
- Stop eating as soon as you feel full. If you eat too much, you may feel:
  - Nauseous or want to throw up
  - Pressure or discomfort in your throat
  - Pressure or fullness in the centre, below your rib cage.
- To meet your goal of 120 g of protein a day:
  - Plan to eat 3 meals, plus a morning and afternoon snack every day.
  - Always eat your protein foods first.
- 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 fluids before or during meal times as they may fill you up and leave you unable to eat your meal.

If you feel any nausea, pressure, or fullness, stop eating, even if you have not finished your meal. Try to eat again later.

For help with meeting your daily protein goal, refer to pages 97 to 102.

Use the **Fluid and Protein Record** starting on page 185 to track your fluid and protein intake.

# Soft Foods Diet Guide – Week 3

FOOD GROUP	FOODS ALLOWED	FOODS TO AVOID
Milk & Alternatives Meat Fish	<ul> <li>Milk (skim, 1%, 2%)</li> <li>Soy milk – plain (with less than 10 g of sugar per serving)</li> <li>Soft cheese (cheese strings, Babybel®, Laughing Cow®)</li> <li>Cream soup</li> <li>Yogurt or Greek yogurt (smooth, 4% or less milk fat, less than 10 g of sugar per serving)</li> <li>Cottage cheese (4% or less milk fat)</li> <li>Poultry (soft moist)</li> </ul>	<ul> <li>Homogenized milk</li> <li>Cream</li> <li>Soy milk (with 10 g or more sugar per serving)</li> <li>Yogurt with pieces of fruit, seeds, or nuts</li> <li>Hard cheese</li> <li>Fried or barbecued meat</li> </ul>
Meat, Fish Poultry, & Alternatives	<ul> <li>Poultry (soft, moist)</li> <li>Beef, pork (ground, lean or extra lean)</li> <li>Fish filets (fresh/frozen)</li> <li>Tuna, salmon (canned, water- packed)</li> <li>Pureed legumes (such as, hummus)</li> <li>Lean deli meats (limit to 2 times a week)</li> <li>Eggs</li> <li>Egg salad (no hard vegetables such as celery and onion)</li> <li>Peanut butter (smooth)</li> <li>Soft tofu</li> </ul>	<ul> <li>Fried or barbecued meat</li> <li>Fried eggs</li> <li>Fried tofu</li> <li>Skin of chicken, turkey, or other</li> <li>Sausages, wieners</li> <li>Bacon</li> <li>Fish with bones</li> <li>Peanut butter (chunky)</li> <li>Nuts and seeds</li> </ul>
Protein Supplements	<ul> <li>Pre-mixed Protein Supplements (with 20 to 30 g of protein per serving (example, Premier Nutrition<sup>®</sup>))</li> <li>Protein Powder (with 20 to 30 g of protein per serving (whey isolate or soy isolate)) mixed with milk or water</li> </ul>	<ul> <li>Protein supplements (with more than 10 g of sugar per serving)</li> <li>Protein bars</li> </ul>
Vegetables & Fruits	<ul> <li>Vegetable juice</li> <li>Tomato juice</li> <li>Unsweetened fruit purées</li> </ul>	<ul> <li>Sweetened fruit purées</li> <li>All other vegetables &amp; fruits not listed in foods allowed.</li> </ul>

#### FOOD GROUP **FOODS ALLOWED FOODS TO AVOID** Cooked cereals such as oatmeal or • Bread, bagels, toast Grain **Products and** cream of wheat (with less than 10 g of Rice **Starches** sugar per serving) Pasta, noodles Soda crackers or Melba toast All other cereals Potato skins French fries Water Carbonated drinks Beverages Low-calorie drinks (such as, Crystal Light<sup>®</sup>, Alcohol sugar-free Kool-Aid<sup>®</sup>, Gatorade G2<sup>®</sup>) Caffeinated drinks • No added sugar fruit juice (125 ml or <sup>1</sup>/<sub>2</sub> cup a day)<sup>®</sup> Desserts, No sugar added jam, jelly Agave Sweets, and • Pudding (no sugar added or artificially Honey Others sweetened) Molasses Sugar-free Jell-O<sup>®</sup> • Regular jam, jelly Sugar-free popsicles Ice cream Artificial sweeteners Popcorn Rice pudding Tapioca pudding • Baked goods (such as, muffins, pastries, cookies) Chips Candies All other desserts, sweets, and others not listed in foods allowed Fats & Oils Use small amounts of these choices: Hydrogenated margarine Butter Lard, shortening Avocado Coconut, palm oil Non-hydrogenated margarine, healthy oils • All other fats & oils not listed in foods allowed (such as, olive, canola), mayonnaise

#### SOFT FOODS DIET GUIDE – WEEK 3 (CONTINUED)

# Soft Foods Diet Guide – Week 4

Remember to eat protein foods FIRST to meet your 120 g a day requirement.

This week, 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 TO AVOID
Milk & Alternatives	Same as week 3	Same as week 3
Meat, Fish Poultry, & Alternatives	Same as week 3	<ul> <li>Same as week 3</li> </ul>
Protein Supplements	• Same as week 3	• Same as week 3
Vegetables & Fruits	<ul> <li>Fruit (fresh, soft)</li> <li>Canned fruit (water- packed)</li> <li>Vegetables (soft and well-cooked)</li> </ul>	<ul> <li>Fruit with seeds or tough skin (such as, cherries, oranges, watermelon strawberries, raspberries, blackberries)</li> <li>Canned fruit packed in juice or syrup</li> <li>Dried fruit Raw or stringy</li> <li>Vegetables (such as, celery, snow peas, asparagus)</li> </ul>
Grain Products and Starches	<ul> <li>Limit these choices to small servings so that you can meet your protein goal:</li> <li>Cereal (with less than 10 g of sugar per serving)</li> <li>Mashed potatoes</li> <li>Couscous</li> <li>Quinoa</li> </ul>	<ul> <li>Bread, bagels, toast</li> <li>Rice</li> <li>Pasta, noodles</li> <li>Baked potato with skin</li> <li>French fries</li> </ul>
Beverages	Same as week 3	Same as week 3
Desserts, Sweets, and Others	• Same as week 3	• Same as week 3
Fats & Oils	Same as week 3	Same as week 3

# Soft Foods Diet Guide – Week 5

Remember to eat protein foods FIRST to meet your 120 g a day requirement.

This week, 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 TO AVOID
Milk & Alternatives	• Same as week 3	Same as week 3
Meat, Fish Poultry, & Alternatives	• Same as week 3	Same as week 3
Protein Supplements	• Same as week 3	Same as week 3
Vegetables & Fruits	Same as week 4	Same as week 4
Grain Products and Starches	<ul> <li>Whole wheat toast</li> <li>Whole wheat pita bread</li> <li>Whole wheat tortillas, wraps</li> <li>Other whole-grain crackers</li> <li>Baked or oven-roasted potatoes or sweet potatoes</li> </ul>	<ul> <li>Bread</li> <li>Bagels</li> <li>Rice</li> <li>Pasta, noodles</li> <li>French fries</li> </ul>
Beverages	Same as week 3	Same as week 3
Desserts, Sweets, and Others	Same as week 3	Same as week 3
Fats & Oils	• Same as week 3	Same as week 3

# Soft Foods Diet Recipes

#### **High Protein Blended Soups**

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

- minestrone
- navy bean
- cream of spinach

- lentil
- cream of tomato
- potato soup

**How to prepare it:** Add unflavoured protein powder containing 10 to 20 g of protein, or skim milk powder to each portion of soup. Let the soup cool before adding protein powder or it may clump. Strain, if needed.

President's Choice (PC) Blue Menu Tomato and Roasted Red Pepper Soup		
1 can PC Blue Menu Tomato and Roasted Red Pepper Soup	1 can white kidney beans or white navy beans Spices to taste such as basil, oregano, pepper	
How to prepare it:		
1. Cook soup until beans are soft.		
2. Add 30 to 45 ml (2 to 3 tbsp) of Greek yogurt when cooled to boost protein and make the soup creamier.		
2. Loove as is an bland if desired		

3. Leave as is or blend if desired.

#### Spaghetti Squash Supreme

1 spaghetti squash Special protein sauce (see next recipe) Ground chicken, turkey, or beef (browned) Soft vegetables, such as mushrooms, zucchini, pepper, onion, garlic or spinach

#### How to prepare it:

- 1. Cut spaghetti squash lengthwise down the middle. Scrape out seeds and pulp.
- 2. Microwave squash for about 6 to 8 minutes or cook in 350° oven, 20 minutes face down, then 10 minutes face up.
- 3. Separate strands by running fork through squash from end to end.
- 4. Mix cooked meat and vegetables into sauce. Pour over top of squash noodles.

#### SOFT FOODS DIET RECIPES (CONTINUED)

#### **Special Protein Sauce**

1 to 2 cans white navy beans or kidney beans	Any soft, cooked, steamed or microwaved
2 cans of no salt added diced tomatoes	vegetables
Spices of your choice such as pepper,	Onion
oregano, basil, bay leaf	Garlic

#### How to prepare it:

- 1. Add everything to blender and blend. Cook in slow cooker.
- 2. This sauce boosts protein and adds vegetables in your meals. Use as a pasta sauce, add it to beef stew, use as a base for chili, mix it into meatloaf or meatballs, or pour it over chicken.
- 3. Make this sauce in large batches and portion into containers. Refrigerate or freeze.

Crustless Spinach Quiche (makes 8 small portions)		
10 ml (2 tsp) vegetable oil	2 whole eggs	
1 medium onion, chopped	85 ml (⅓ cup) cottage cheese (4% or less	
1 package (10 oz) frozen chopped spinach,	milk fat)	
thawed and drained	1.25 ml (¼ tsp) cayenne pepper	
375 ml (1 ½ cups) shredded cheddar cheese	Pinch salt	
4 egg whites	Pinch nutmeg	

#### How to prepare it:

- 1. Pre-heat oven to 375°. Coat a 9-inch pie pan with vegetable cooking spray.
- 2. 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.
- 3. Sprinkle cheese in pie pan. Top with onion and spinach mixture.
- 4. 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.
- 5. Let stand 5 minutes before cutting and serving.

#### SOFT FOODS DIET RECIPES (CONTINUED)

Spanish Omelette (makes 2 portions)	
15 ml (1 tbsp) drained/chopped roasted red	125 ml (½ cup) liquid egg substitute
pepper or ½ red pepper (diced)	1 slice mozzarella cheese cut into strips
30 ml (2 tbsp) chopped tomato	7.5 ml (1½ tsp) fresh cilantro chopped
2.5 ml (1/2 tsp) fresh minced garlic	30 ml (2 tbsp) fresh salsa
3 to 4 button mushrooms, cleaned and chopped	Fresh strawberries
30 ml (2 tbsp) ham diced	

#### How to prepare it:

- Coat a 6-inch non-stick omelette 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.
- 2. 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.
- 3. Using a rubber spatula, carefully lift the sides of the omelette 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.
- 4. Immediately add the cheese and cilantro to the bottom half of the omelette followed by the sauté mixture. Gently fold the top half of the omelette over the bottom half and carefully slide onto a serving plate.
- 5. Top the omelette with salsa and garnish with strawberries.

EATING GUIDELINES AFTER SURGERY: DIET FOR LIFE

# Diet for Life: Week 6 and Beyond





<u>12</u>0

of protein

a day

Start Date: Usually 5 weeks after surgery.

**Duration:** Lifelong

**Goals:** 

Follow this new diet plan for the rest of your life.

Eat 120 g of protein each day.

- Eat protein foods first, so you can meet your protein requirements.
  - Certain foods are not always tolerated until several months after surgery.
     These foods are listed in the **Proceed with Caution** column in the Diet for Life Guide.

Tip! Track your fluid and protein intake using the Fluid and Protein Record on page 185

# Diet for Life Guide – Week 6 and Beyond

FOOD GROUPS	FOODS ALLOWED	PROCEED WITH CAUTION (may not be tolerated)	FOODS TO AVOID
Milk & Alternatives	<ul> <li>Milk (skim, 1%, 2%)</li> <li>Soy milk – plain or unsweetened (with less than 10 g of sugar per serving)</li> <li>Yogurt or Greek yogurt (smooth, 2% or less milk fat, and less than 10 g of sugar per serving)</li> <li>Cottage cheese (2% or less milk fat)</li> <li>Soft cheese (e.g., cheese strings, low-fat Babybel<sup>®</sup>)</li> <li>Hard cheese (20% or less milk fat)</li> </ul>		<ul> <li>Cream</li> <li>Chocolate milk</li> <li>Yogurt (with 10 g or more sugar per serving)</li> </ul>
eat, Fish Poultry, & Alternatives	<ul> <li>Poultry (chicken, turkey)</li> <li>Lean meat with visible fat cut off</li> <li>Fish - canned, frozen or fresh</li> <li>Eggs <ul> <li>Peanut butter</li> </ul> </li> <li>Legumes <ul> <li>Tofu</li> </ul> </li> </ul>	<ul> <li>Red meat, such as steak, roast beef, pork, lamb – limit to 2 times a week</li> <li>Plain or lightly salted nuts or seeds (¼ cup or 60 ml a day maximum)</li> </ul>	<ul> <li>Breaded or fried meats, fish or poultry (chicken, turkey)</li> <li>Meat with visible fat</li> <li>Bacon, sausages, wieners</li> <li>Nuts with coating or backy accessing</li> </ul>
Meat, Fish P	<b>Tip!</b> Try moist cooked meat and poultry		heavy seasoning
Protein Supplements	Your goal is to get protein from food sources, but you may use pre-mixed protein shakes, protein powder, or protein bars to help meet your protein needs. For criteria to follow when choosing protein supplements, go to page 98.		

#### DIET FOR LIFE GUIDE – WEEK 6 AND BEYOND (CONTINUED)

FOOD GROUPS	FOODS ALLOWED	PROCEED WITH CAUTION (may not be tolerated)	FOODS TO AVOID
Vegetables & Fruits	<ul> <li>Fruit and vegetables - fresh, frozen, or canned in water</li> </ul>	<ul> <li>Raw vegetables</li> <li>Fruit and vegetables with tough skin or fibrous, such as celery, apples, cabbage, dried beans, peas, corn</li> <li>Mushrooms</li> <li>Lettuce</li> <li>Fruit juice</li> </ul>	<ul> <li>Canned fruit with added sugar</li> <li>Fried vegetables</li> <li>Dried fruits (high in sugar)</li> <li>Tip! Read the label on dried fruits for sugar content</li> </ul>
Grain Products and Starches	<ul> <li>Toasted breads, toasted flat breads</li> <li>Tortilla</li> <li>Toasted English muffins</li> <li>Cooked cereals, such as oatmeal or cream of wheat (with less than 10 g of sugar per serving)</li> <li>Crackers and Melba toast (whole grain)</li> <li>Tip! Try different grains, like quinoa, couscous, barley.</li> </ul>	<ul> <li>White bread or rolls or whole grained bread not toasted</li> <li>Rice</li> <li>Pasta, noodles</li> </ul>	<ul> <li>Bagels</li> <li>Croissants</li> <li>Muffins</li> <li>Scones</li> <li>High sugar cereals</li> </ul>
Soups	<ul> <li>Soup made with meat and vegetables</li> <li>Cream soup made with milk</li> </ul>		• High-fat cream soups

#### DIET FOR LIFE GUIDE - WEEK 6 AND BEYOND (CONTINUED)

FOOD GROUPS	FOODS ALLOWED	PROCEED WITH CAUTION (may not be tolerated)	FOODS TO AVOID
Beverages	<ul> <li>Water</li> <li>Low-calorie drinks (such as, Crystal Light<sup>®</sup>, sugar-free Kool- Aid<sup>®</sup>, Gatorade G2<sup>®</sup>)</li> <li>No added sugar fruit and/or vegetable juice (½ cup or 125 ml a day)</li> </ul>	<ul> <li>Caffeine - do not consume until 3 months after surgery</li> <li>Sweetened beverages (Vitamin water, hot drinks, and iced drinks)</li> </ul>	<ul> <li>Carbonated drinks</li> <li>Alcohol</li> </ul>
	<b>Tip!</b> Try water with Crystal Light <sup>®</sup> .		
Desserts, Sweets, and Others	<ul> <li>Sugar-free Jell-O<sup>®</sup></li> <li>Sugar-free popsicles</li> <li>Artificial sweeteners</li> </ul>	<ul> <li>Highly seasoned or spicy foods</li> <li>Sugar alcohols</li> <li>Popcorn</li> </ul>	<ul> <li>Honey, jam, jelly, syrup</li> <li>Pies, pastries, donuts</li> <li>Ice cream</li> <li>Puddings, custards sweetened with sugar</li> <li>Candy</li> <li>High-fat and/or high- calorie baked goods</li> <li>Fried snacks like chips, Cheesies, corn chips</li> </ul>
Fats & Oils	Use small amounts of these choices: • Butter • Non-hydrogenated margarine • Canola oil • Olive oil • Vegetable oil • Mayonnaise • Avocado		• High fat salad dressing

# Diet for Life Menu Ideas and Recipes

## Breakfast Ideas and Recipes

BREAKFAST IDEAS: Choose 1 food from each food group to create a balanced breakfast.		
Choose 1 Protein Food:		
<ul> <li>1 to 2 eggs</li> <li>125 ml (½ cup) cottage cheese</li> <li>60 g (2 oz) lean ham</li> <li>22.5 ml (1½ tbsp) protein powder</li> </ul>	<ul> <li>125 ml (½ cup) plain or artificially sweetened yogurt or Greek yogurt (choose 4% milk fat or less)</li> <li>15 to 30 ml (1 to 2 tbsp) peanut butter or other nut butter as tolerated</li> </ul>	
Choose 1 Vegetable/Fruit:		
1 small ripe pear or apple	125 ml (½ cup) canned peach	
2 to 3 tomato slices	☐ 125 ml (½ cup) diced melon	
125 ml (½ cup) strawberries	☐ 125 ml (½ cup) blueberries	
1/2 small banana		
Choose 1 Grain/Starch:		
1 slice of whole grain toast	🔲 180 ml (¾ cup) high-fibre cereal	
🔲 1 whole wheat English muffin	🔲 180 ml (¾ cup) oatmeal	
3 to 4 Ryvita crackers		

#### **Peanut Butter and Fruit Wrap**

1 small 6" whole wheat tortilla

1/2 banana or thinly sliced apple with cinnamon

15 to 30 ml (1 to 2 tbsp) peanut butter

**How to prepare:** Spread peanut butter on wrap. Top with banana or apple with cinnamon and roll. Cut into bite sizes if desired. Keep refrigerated.

#### **Yogurt Parfait**

125 ml (½ cup) blueberries

30 to 45 ml (2 to 3 tbsp) bran buds OR 60 ml (¼ cup) oats 125 ml (½ cup) plain or artificially sweetened Greek yogurt or a mix of plain yogurt with flavoured yogurt

How to prepare: Mix ingredients together.

#### DIET FOR LIFE BREAKFAST IDEAS AND RECIPES (CONTINUED)

#### **Cheesy Wrap**

1 small 6" whole wheat tortilla

Baby spinach leaves with stems removed

Cheese string or slice of cheese under 20% milk fat

**How to prepare:** Spread baby spinach leaves on centre of wrap. Top with cheese. Roll and wrap in paper towel. Microwave for about 10 to 20 seconds.

#### **Nutty Oatmeal**

180 ml (¾ cup) oatmeal cooked in hot water or milk

15 to 30 ml (1 to 2 tbsp) peanut butter, almond butter, or other nut butter

**How to prepare:** Stir peanut butter, almond butter, or nut butter into oatmeal. Wait for nut butter to melt. You can add cinnamon and top with fruit of your choice.

#### A Cheesy Change

125 ml (1/2 cup) cottage cheese

3 to 4 Ryvita<sup>®</sup> crackers, Melba toast, or 1 slice of whole grain toast

1 can diced peaches

**How to prepare:** Mix cottage cheese with diced canned peaches. Spread on Ryvita crackers, Melba toast or 1 slice of whole grain toast.

#### **McHome**

1/2 whole wheat English muffin

1 scrambled or boiled egg

1 slice tomato

Dijon mustard

1 to 2 slices lean ham

**How to prepare:** Top 1/2 of the whole wheat English muffin with Dijon mustard, tomato slice, lean ham, and a scrambled or boiled egg.

## Lunch Ideas and Recipes

LUNCH IDEAS: Choose 1 food from each food group to create a balanced lunch.		
Choose 1 Protein Food:		
🔲 60 ml (¼ cup) hummus	☐ 85 ml (⅓ cup) egg salad	
30 ml (2 tbsp) peanut butter or other nut butter (as tolerated)	125 ml (½ cup) beans, such as baked, black, kidney	
🔲 60 to 90 g (2 to 3 oz) canned tuna/salmon	🔲 60 to 90 g (2 to 3 oz) diced chicken	
125 ml (½ cup) cottage cheese		
Choose 1 Vegetable/Fruit:		
cucumber slices	3 to 4 avocado slices (% of an avocado)	
1 small apple	$\square$ 125 ml (½ cup) raw or steamed vegetables	
30 to 60 ml (2 to 4 tbsp) tomato bruschetta	(fresh or frozen)	
250 ml (1 cup) chopped garden salad	85 ml (⅓ cup) pineapple	
Choose 1 Grain/Starch:		
5 to 8 Triscuits	1 small 6" whole wheat tortilla	
3 to 4 flatbread crackers	🔲 85 ml (⅓ cup) pearl barely	
2 to 3 slices toasted baguette	$\Box$ ½ to 1 small whole wheat pita	
1 slice whole grain bread		

# Fajita Time1 small 6" whole wheat tortilla15 ml (1 tbsp) sour cream (4% or less milk fat)125 ml (½ cup) black beans30 g (1 oz) shredded cheese30 ml (2 tbsp) salsaDiced lettuce and tomato

How to prepare: Fill tortilla and roll or fold in half and warm in microwave if desired.

#### Pizza Pizzazz

1 whole wheat English muffin

Tomato sauce

60 to 90 g (2 to 3 oz) diced chicken or ham Shredded cheese

Pineapple

**How to prepare:** Top whole wheat English muffin with tomato sauce, pineapple, diced chicken or ham, and shredded cheese. Broil until cheese is melted.

#### DIET FOR LIFE LUNCH IDEAS AND RECIPES (CONTINUED)

#### Egg Salad Sandwich

85 ml (⅓ cup) egg salad

Light salad dressing

3 to 4 flatbread crackers (such as Ryvita®)

250 ml (1 cup) chopped garden salad

6 to 8 chopped almonds

**How to prepare:** Top flatbread crackers with egg salad. Enjoy with garden salad topped with light salad dressing and almonds.

85 ml (1/3 cup) cooked pearl barley

125 ml (1/2 cup) chicken stew

125 ml (1/2 cup) cooked vegetables

How to prepare: Add cooked pearl barley and cooked vegetables to chicken stew.

# Dinner Ideas and Recipes

DINNER IDEAS: Choose 1 food from each food group to create a balanced dinner.		
Choose 1 Protein Food:		
☐ 125 ml (½ cup) lentils	90 g (3 oz) grilled or baked fish	
$\square$ 125 ml (½ cup) chili with beans or	90 g (3 oz) lean pork or lean beef (as tolerated)	
ground beef	🔲 90 g (3 oz) veggie burger (about ½ small	
125 ml (½ cup) turkey stew	burger)	
90 g (3 oz) grilled or baked chicken breast		
Choose 1 Vegetable/Fruit:		
125 ml (½ cup) mixed vegetables	🔲 125 ml (½ cup) green beans	
125 ml (½ cup) carrots	🔲 125 ml (½ cup) zucchini	
125 ml (½ cup) tomato and cucumber salad	125 ml (½ cup) cooked mushrooms	
	125 ml (½ cup) broccoli	
Choose 1 Grain/Starch:		
☐ ½ small sweet potato	60 ml (¼ cup) whole wheat couscous	
🔲 60 ml (¼ cup) quinoa	1 small whole wheat roll	
60 ml (¼ cup) scalloped potato (low fat recipe)	4 to 8 oven baked potato fries	

#### DIET FOR LIFE DINNER IDEAS AND RECIPES (CONTINUED)

Fish and Chips	
90 g (3 oz) Fish seasoned with lemon pepper, garlic, and pepper	125 ml (½ cup) carrots 4 to 8 oven baked potato fries
How to prepare: Serve fish with steamed carro	ts and oven-baked potato fries.

#### BBQ Chicken

90 g (3 oz) chicken breast

125 ml (1/2 cup) green beans

BBQ sauce

<sup>1</sup>/<sub>2</sub> small sweet potato

**How to prepare:** Brush chicken breast with BBQ sauce and grill. Serve with green beans and sweet potato.

#### Chili

250 ml (1 cup) chili with mushrooms

60 ml (¼ cup) whole wheat couscous or quinoa

Parmesan cheese

How to prepare: Serve chili over couscous or quinoa. Sprinkle with parmesan cheese.

#### Next Day Chili

125 ml (½ cup) chili

15 to 30 ml (1 to 2 tbsp) salsa

250 ml (1 cup) romaine lettuce

30 g (1 oz) shredded cheese

How to prepare: Put chili on romaine lettuce with salsa and shredded cheese.

#### **Burger Delight**

1/2 small veggie burger patty

125 ml (1/2 cup) tomato and cucumber salad

1 small whole wheat roll

**How to prepare:** Enjoy veggie burger on a small whole wheat roll. Top with tomato and cucumber salad.

#### DIET FOR LIFE DINNER IDEAS AND RECIPES (CONTINUED)

Vegetarian Bean Chili	
30 ml (2 tbsp) vegetable oil	1 can 540 ml (19 oz) red kidney beans
1 large chopped onion	1 can 540 ml (19 oz) black beans
2 cloves minced garlic	1 can 540 ml (19 oz) chick peas
15 ml (1 tbsp) chili powder	1 green, red or yellow pepper diced
5 ml (1 tsp) each of cumin	250 ml (1 cup) sliced mushrooms
5 ml (1 tsp) dried oregano	15 ml (1 tbsp) cider vinegar
1 can 796 ml (28 oz) diced tomatoes	2.5 ml (½ tsp) cinnamon
	Pinch of salt and fresh ground black pepper

#### How to prepare:

- 1. In a large saucepan or pot, heat oil over medium to high heat. Sauté onion and garlic until softened.
- 2. Stir in chili powder, cumin, oregano and tomatoes with juice. Add beans, peppers, mushrooms, vinegar, salt, cinnamon, and pepper.
- 3. 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.
- 4. Serve with a small whole wheat roll or slice of whole grain bread to balance the meal.

# **General Cooking Tips**

Make sure your food is moist and tender after surgery by using the cooking methods and tips below:

- Braise, boil, steam, poach, or simmer food.
- Use sauces, such as mild salsa or low fat gravy.
- Use a slow cooker, crock pot, or pressure cooker.

- Cook with tomato juice, stock, broth, or low fat cream soups.
- Avoid grilling, barbecuing, roasting, or pan frying your food.

Use healthier options to reduce fat and sugar when cooking:

IF A RECIPE CALLS FOR	TRY THIS HEALTHIER OPTION AS A SUBSTITUTE INSTEAD
Butter, margarine, shortening, or oil in cookies, cakes, muffins, and quick breads	<ul> <li>Replace up to ½ of the fat with mashed fruit or vegetables, such as unsweetened applesauce or puréed pumpkin.</li> <li>Reduce the overall fat called for by ¼ to ⅓.</li> <li>In yeast breads, replace up to ¼ of the fat ricotta cheese.</li> </ul>
Eggs	• Use 2 egg whites or just under 125 ml (½ cup) egg substitute for each whole egg.
Cream for cream soup	• Use 1% or 2% milk, instead of cream.
	Thicken soups using puréed potatoes, carrots, lentils or tofu.
Full-fat hard cheese	• Use reduced fat (< 20% MF) cheese.
Full-fat cream cheese	<ul> <li>Use fat-free or low-fat cream cheese or use low-fat cottage cheese puréed until smooth.</li> </ul>
Regular ground beef	• Use lean or extra lean ground beef and drain off the fat with a strainer after browning.
Fruit packed in syrup	Choose fruit packed in its own juices or water.
Syrup (as a topping)	Use puréed fruit, such as unsweetened applesauce.
White, brown, or icing sugar in baking	<ul> <li>Reduce the sugar by ¼ to ⅓.</li> <li>Use extracts, such as vanilla, almond, maple.</li> <li>Replace sugar with Splenda<sup>®</sup>: <ul> <li>250 ml (1 cup) white sugar = 250 ml (1 cup) Splenda<sup>®</sup></li> <li>250 ml (1 cup) brown sugar = 125 ml (½ cup) Splenda<sup>®</sup></li> </ul> </li> </ul>

# **Key Eating Habits**

Always follow these key healthy eating habits to avoid discomfort, pain, and vomiting, and help with weight loss:

- Sit at the kitchen or dining room table to eat.
- Avoid distractions, such as television, computer, or work while eating.
- Take 30 to 60 minutes to eat a meal.
- Always eat protein first.
- Keep food moist to help with tolerance.
- Cut food into pea-sized bites.
- Chew every bite 20 to 25 times and eat slowly.
- Put your fork, spoon, or chopsticks down between bites.
- Pay attention to taste. Note taste and flavour of food.
- 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**



#### Drink enough fluids:

- Drink at least 2 L (8 cups) of fluids a day. You will need to sip on fluids throughout the day.
- Start slowly and increase the amount you drink as you tolerate fluid. Listen to your body.
- Drink fluids between meals. Drinking during your meals can make you feel full too quickly, which could cause you to vomit.
- Do not drink fluids with meals once you are eating solid food. Soup and cereal are fine even though they are a combination of liquid and solids.

#### Get enough protein:

Getting enough protein helps promote the loss of body fat, preserves lean body mass or muscle, and helps with healing right away.

- At each meal, always have your protein first so that you meet your daily requirements. Your goal is to have at least 120 g of protein each day.
- To calculate the amount of protein you need to have per meal/snack, divide your daily requirement of protein into the number of meals and snacks you have in a day. For example, if you eat 3 meals and 3 snacks a day, you should eat 20 g of protein at every meal and snack to reach a total of 120 g of protein (120 g protein ÷ 6 meals/snacks = 20 g of protein).
- Take your vitamins and minerals, and any other supplements your surgeon prescribed, EVERY DAY, for LIFE:
  - For the first few months, you may have to crush or split pills, if needed. Most people can swallow pills whole after about 3 months.

For at least 8 weeks after surgery, measure and keep track of the amount of fluid you have each day using the **Fluid and Protein Record** on page 185.

For more information on how to meet your daily protein requirements, read **Getting Enough Protein after Surgery**, starting on page 97.

For more

information on vitamins and minerals you must take, read **Getting Enough Vitamins and Minerals after Surgery**, starting on page 103.

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# Portion Control for the First 6 Months

Paying attention to portion size is important when it comes to weight loss or maintenance. Some people buy snacks with low calorie counts and then, without realizing, they might eat 2 to 3 servings in one sitting.

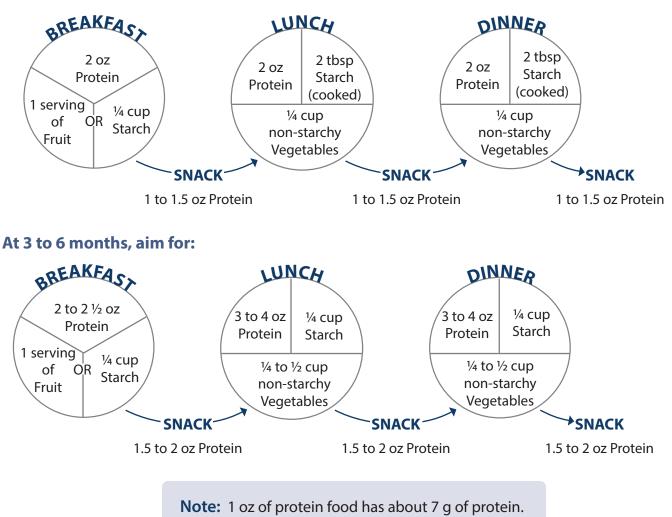
If you're not accounting for these extra calories, it's easy for your weight to start to sneak back up. Even if it's healthy food, if you're consistently eating large portions, you may not see the weight loss results you were expecting.

Use food scales, measuring cups, and measuring spoons as often as possible, because this is the most reliable way to ensure you are not overeating.

# How much should I eat at meals?

Use the "Healthy Plate" model to guide meal balance.

#### At 1 to 2 months, use protein shakes OR aim for the following:



# GETTING ENOUGH PROTEIN AFTER SURGERY

After bariatric surgery, you will need a minimum of 120 g of protein every day to speed wound healing, preserve lean body mass, enhance fat-burning metabolism, and reduce hair thinning.

For the first 3 months, diet alone will not meet all your protein needs. You will need to take protein supplements during these 3 months to help meet your daily protein needs.

As you lose weight, your protein needs may change. This is something that you can discuss with your dietitian at follow-up appointments.

#### In this section:

How do I choose a protein supplement?98
How do I use protein supplements to make my own protein shake? 99
How many protein shakes do I need in a day?101
How do I make sure I am getting enough protein from solid foods?102
How can I sneak in extra protein?102

# How do I choose a protein supplement?

Protein supplements are available in either pre-made ready-to-drink protein shakes or protein powder (that you can use to make your own protein shake). When choosing a protein supplement, make sure the protein powder or pre-made ready-to-drink shake has:

- 100% whey protein isolate or soy protein isolate, both of which are lactose free, OR calcium caseinate as the first ingredient (avoid collagen-based protein!)
- 20 to 40 g of protein per serving
- 5 g or less of carbohydrate per serving. Do not choose protein powder or shakes that have more than 5 g of carbohydrate per serving



Choosing a Protein Supplement:		
My protein goal after weight loss is: to grams each day.		
Protein drink:		
The first ingredient is:		
The amount of protein is g mixed with oz of fluids.		
Ask yourself:		
<ul> <li>Does this drink have at least 20 to 40 g of protein per serving?</li> </ul>		
<ul> <li>Does this drink have less than 5 g of carbohydrate per serving?</li> </ul>		
Do I like the taste of this drink?		
<ul> <li>Have I tried mixing it in different ways or temperatures?</li> </ul>		
<ul> <li>How much of this drink will I need to meet my protein goal?</li> </ul>		

• 5 g or less of fat per serving.

# How do I use protein supplements to make my own protein shake?

When using protein powder to make your own protein shake:

- Read and follow the directions on the label carefully.
- Mix the protein powder with water, milk, or soy milk (less than 10 g of sugar for each serving). Do not mix with juice as this will provide too many calories and sugar.

**Tips:** To fight flavour fatigue:

- Use sugar-free syrups or extracts to add flavour.
- Blend a teaspoon of smooth natural peanut butter or ¼ banana into your protein drink.
- Drink protein drinks when they are cold or blend them with ice.
- Make your drinks with fat-free or low-fat milk, or unsweetened plain soy milk.
- Buy an unflavoured protein powder or shake and mix it into your soups, stews, hot cereal, or with sugar-free Kool-Aid<sup>®</sup> or Crystal Light<sup>®</sup>.

# Protein Shake Recipes

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

The following are protein shake recipes that you can make when you start eating soft foods (at 3 weeks). **Remember – Do not add any fruit until Week 3.** 

Strawberry Banana Shake	
1 scoop protein powder	Do not add the following fruit until week 3:
125 ml (½ cup) milk frozen into ice cubes	4 whole unsweetened frozen strawberries
125 ml (½ cup) plain yogurt	2 in (5 cm) banana
2.5 ml (½ tsp) vanilla	
1 package artificial sweetener, if desired	
How to prepare: Blend together until smooth	۱.

#### PROTEIN SHAKE RECIPES (CONTINUED)

#### Peach Shake

1 scoop protein powder

125 ml (1/2 cup) milk frozen into ice cubes

125 ml (1/2 cup) plain yogurt

2.5 ml (1/2 tsp) vanilla

1 package artificial sweetener, if desired

60 ml (¼ cup) chopped unsweetened

frozen peaches

Do not add the following fruit until week 3:

How to prepare: Blend together until smooth.

#### Tips:

- 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.

# How many protein shakes do I need in a day?

# During the Full Fluids Stage:

- During the first 2 weeks, most of your protein will come from protein drinks. The rest of your protein will come from food sources.
- Your goal is to **have at least 120 g of protein in a day**. To figure out how many protein supplements or shakes you will need to drink per day, look at how much protein it has per serving.
  - If your shake has 30 to 40 g of protein per serving, you need to drink at least 2 to 3 shakes every day to meet your protein needs.
  - If your shake has 20 to 30 g of protein per serving, you need to drink at least 3 to 4 shakes every day to meet your protein needs.
- Ask your dietitian if you are not sure how many protein shakes to drink. Let your dietitian know how much protein is in your protein shake or the protein powder you buy so they can help you meet your protein needs.

# During the Soft Foods Stage:

- Continue to aim for at least 120 g of protein each day.
- During week 3 of your diet, start cutting down on your protein supplements.
- As you move through weeks 3, 4 and 5, start getting more protein from food sources.

# During the Diet for Life Stage (lifelong):

• Starting week 6, the goal is to have 120 g of protein each day, mostly from food sources.

**Remember:** For ALL STAGES, always keep track of your protein intake from both foods and protein supplements.

- Use *Appendix B. Food Sources of Protein* on page 152 to help you figure out how much protein you are getting from different food sources.
- To keep track, use the *Fluids and Protein Record template* on page 185 or use a website or app such as My Fitness Pal (<u>www.myfitnesspal.com</u>).
- Bring your food records to all your follow-up appointments after surgery.

# How do I make sure I am getting enough protein from solid foods?

For at least 3 months after bariatric surgery, you will be drinking 1 to 3 protein shakes a day to help meet your daily protein needs. As your lifestyle program progresses, the goal is to consume less protein shakes.

By the end of 3 to 6 months, you should be getting all of your protein from solid food.

To make sure you get the amount of protein you need each day, we recommend eating the following amount of protein at each meal:

Breakfast: 15 to 20 g

Morning Snack: 10 to 15 g

Lunch: 25 to 30 g

Afternoon Snack: 10 to 15 g

Dinner: 25 to 30 g

Bedtime Snack: 10 to 15 g

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

#### 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.

For the protein content of common foods, see **Appendix B. Food Sources of Protein**, on page 152.

# How can I sneak in extra protein?

- Fortify your milk with non-fat dry milk powder.
- Add an egg white to your egg.
- Add unflavoured protein powder to your soup, hot cereal, or stew.
- Use Greek yogurt or cottage cheese as a base for dips and dressings.
- Eat more moist protein with soup, stew, chili, and meat cooked in a slow cooker.
- Try to drink up to 500 ml (up to 2 cups) of milk or plain, unsweetened soy milk a day. This gives you fluids and protein at the same time.

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# GETTING ENOUGH VITAMINS AND MINERALS AFTER SURGERY

After a duodenal switch, your body will not be able to absorb all the vitamins and minerals from your food as well as it did before.

At the beginning, you may not see signs that you are lacking these vitamins and minerals, but eventually these deficiencies will cause serious and life-threatening problems.

You will not be able to meet all your nutritional needs from food alone. You will need to take vitamin and mineral supplements for the rest of your life.

After duodenal surgery, you must:

- Take vitamins and minerals for life. These vitamin and mineral supplements will allow you to stay healthy and maintain optimal health.
- Get blood tests done and attend all your follow-up appointments (2 to 3 weeks after your blood tests). This is the only way that we can know if you have a deficiency.

#### In this section:

Multivitamin and Mineral	
Supplements	.105
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When do I take my vitamin and	
mineral supplements?	.111

# Starting the day you come home from the hospital, and FOR THE REST OF YOUR LIFE, you must take the following EVERY DAY:

- 1. Adult Multivitamins and Minerals
- 2. Vitamin A
- 3. Vitamin E
- 4. Vitamin K
- 5. Vitamin D
- 6. Calcium citrate with added Vitamin D
- 7. Vitamin B12
- 8. Vitamin C
- 9. Iron

#### Important!

- You may also need to take other vitamin or mineral supplements before or after surgery, based on your blood work. 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.
- You have the option of taking vitamin and mineral supplements in the form of tablets, liquid, and chewables. Liquids and chewables may be easier to tolerate immediately after surgery. If you take tablets, remember to split them into a few pieces to make them easier to swallow.

For a summary of these recommendations, see **Appendix F. Vitamin and Mineral Supplementation Summary**, on page 164.

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#### 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 medicines you take.
- If you take other medicines, ask your pharmacist to help you design a schedule for all of your pills. You may not be able to take some medicines with vitamin and mineral supplements.
- Set the alarm on your cell phone or a pop-up reminder on your computer.
- Put all your supplements in a pill container.
- Put supplements in places you go to at certain times.
- Take supplements when you do certain daily tasks, such as eating meals or going to bed.

# **Multivitamin and Mineral Supplements**

Choose a multivitamin and mineral supplement with a full range of vitamins and minerals, containing iron, zinc, copper, selenium, and folic acid. Look at the label to see the list of ingredients and the amounts in each chewable or tablet.

DO NOT take children's, gummy, men's, time-release, or extended-release multivitamins.

OPTION 1	OPTION 2
<ul> <li>Multivitamin (such as, Kirkland<sup>®</sup>, Equate<sup>®</sup>,</li> <li>Centrum<sup>®</sup>) - 2 tablets a day</li> </ul>	<ul> <li>Opurity<sup>®</sup> Bypass Optimized Multivitamin</li> <li>1 tablet a day</li> </ul>

# Vitamin A

#### SUPPLEMENT

Vitamin A - 10,000 IU a day

# How to take it:

• Vitamin A is a fat-soluble vitamin. It is available as a gel cap. Take 10,000 IU of Vitamin A a day.

# Why you need vitamin A:

• To promote healthy vision, immune function, and reproduction.

# Where you can vitamin A in your diet:

• Sources of vitamin A in your diet include liver, fish, fish oils, eggs, meat, dairy, leafy green vegetables, orange and yellow vegetables, tomato products, fruits.

# Vitamin E

#### SUPPLEMENT

Vitamin E - 400 IU a day

# How to take it:

• Vitamin E is a fat-soluble vitamin. It is available as a gel cap. Take 400 IU of Vitamin E a day.

# Why you need vitamin E:

• It is an important antioxidant and helps protect cells from free radicals.

# Where you can vitamin E in your diet:

• Sources of vitamin E in your diet include avocados, sunflower seeds, almonds, walnuts, hazelnuts, wheat germ, peanut butter, safflower oil, and vegetable oils. There is also a significant amount in green leafy vegetables, tomatoes, asparagus, and broccoli.

# Vitamin K

#### SUPPLEMENT

Vitamin K - 300 mcg a day

# How to take it:

• Vitamin K is a fat soluble vitamin. Take 300 mcg of Vitamin K a day.

# Why you need vitamin K:

• This vitamin plays an important role in blood clotting, as well as the health of your bones and heart.

# Where you can vitamin K in your diet:

• There are 2 types of vitamin K - vitamin K1 and K2. Vitamin K1 is mostly found in leafy greens. Vitamin K2 is found in animal products, as well as through fermented foods, some meats, and hard cheeses.

# Vitamin D

#### SUPPLEMENT

Vitamin D - 1,000 IU, 2 times a day (for a total of 2,000 IU a day)

# How to take it:

• Take Vitamin D with the Calcium Citrate supplement (see pg 108). The calcium citrate supplement will give you an additional 400 to 800 IU of vitamin D a day, depending on the pill or liquid you buy.

# Why you need vitamin D:

- For normal growth and healthy bones, teeth, and nails.
- To help your body absorb calcium and phosphorous.
- To prevent softening of the bones (osteomalacia) and osteoporosis (decreased bone density).

# Where you can vitamin D in your diet:

• Sources of vitamin D in your diet include fortified milk products, eggs, liver and fish liver oils.

# **Calcium Citrate with Vitamin D Supplement**

Choose a calcium supplement that 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.

#### SUPPLEMENT

Calcium citrate with added Vitamin D - 600 mg, 3 to 4 times a day

# How to take it:

- The above supplement will give you a total dose of 1800 to 2400 mg of calcium a day. Your doctor or dietitian will tell you the total amount of calcium you should have a day. However, you can only take 600 mg at a time because your body cannot absorb more than this at one time.
- The above supplement will also give you about 400 to 800 IU of vitamin D a day (depending on the pill or liquid you buy). This may not be enough for you. Your doctor or dietitian will tell you if you need to take extra vitamin D.
- 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 you take them at the same time, you reduce the absorption of each.
- Talk to your pharmacist if you are on other medicines. You may not be able to take some medicines at the same time as your calcium citrate with vitamin D supplement.

# Why you need calcium:

- To develop and maintain healthy bones, nails and muscles.
- To help in blood clotting and heart nerve functions.
- To prevent bone loss, bone fractures, and osteoporosis (decreased bone density).

# Where you can find calcium in your diet:

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

### **B12 Supplement**

There are 3 options for this supplement:

OPTION 1	OPTION 2	OPTION 3
B12 oral pill - 1000 mcg once a day by mouth	B12 sub-lingual tablet - 1000 mcg once a day under the tongue	B12 injection - 1000 mcg once a month by your family doctor

### How to take it:

• If the vitamin B12 you are taking by mouth is not enough to prevent low Vitamin B12, you may need to have intramuscular (into the muscle) injections.

### Why you need vitamin B12:

- For energy and nervous system function.
- To help your body produce red blood cells and use folic acid.
- To help break down carbohydrates and fats and help build proteins.
- To prevent anemia and neurological disorders. Symptoms of anemia include looking pale and feeling weak, tired, dizzy, and short of breath.

### Where you can find vitamin B12 in your diet:

• Sources of vitamin B12 in your diet include meat (organ meat), eggs, fish, legumes, cheese, and yogurt.

### Vitamin C

#### SUPPLEMENT

Vitamin C - 500 mg, once a day

### How to take it:

• Vitamin C is a water-soluble vitamin. Take Vitamin C with your iron supplement. Vitamin C helps your body absorb the iron.

### Vitamin C (continued)

### Why you need vitamin C:

• It is an important antioxidant and helps protect cells from free radicals, helps in wound healing and helps the immune system work well.

### Where you can find vitamin C in your diet:

• Sources of vitamin C include citrus fruits, strawberries, tomatoes, potatoes, kiwi, green peppers, and brussel sprouts.

### Iron

Your multivitamin/multimineral supplement contains some iron, however you will still need to take an additional iron supplement. There are 3 options when choosing an additional iron supplement:

OPTION 1	OPTION 2	OPTION 3
Ferrous sulfate - 300 mg,	☐ Feramax <sup>®</sup> - 150 mg,	Triferexx <sup>®</sup> - 150 mg,
once a day	once a day	once a day

### How to take it:

- Taking this extra iron may upset your stomach. Talk to your dietitian or doctor if this causes a problem for you.
- Take iron with the Vitamin C supplement. Vitamin C helps your body absorb the iron.

### Why you need iron:

- To help make healthy red blood cells that carry oxygen to all of the cells in your body.
- To prevent anemia, a weakened immune system, and problems with your neurological system. Symptoms of anemia include looking pale, and feeling weak, tired, dizzy and short of breath.

### Where you can find iron in your diet:

- 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.
- When you eat foods containing iron, it is important to have a source of vitamin C to improve the absorption of iron.

### When do I take my vitamin and mineral supplements?

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

You will need to take some of your vitamin and mineral supplements separately because some of the different nutrients interact with each other and affect their absorption. For example, **do not** take multivitamin-minerals at the same you take your calcium supplement. They can block each other from being absorbed.

To help you know when it is time to take each supplement, your healthcare team will create a **supplement schedule** based on your blood tests and overall needs after surgery.

This schedule may change based on the results of your blood tests. **Arrange to have your blood tests done about 2 to 3 weeks before you come for your 3, 6, 12-months, and yearly follow-up appointments in 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.

ТІМЕ	SUPPLEMENTS TO TAKE
Breakfast	• Multivitamin
	• Vitamin B12 (1000 mcg)
Morning Snack	Calcium citrate (600 mg)
	• Vitamin D (1000 IU)
	• Vitamin A (10,000 IU)
Lunch	Calcium citrate
	• Vitamin D (1000 IU)
	• Vitamin E (400 IU)
Afternoon Snack	• Multivitamin
Dinner	Calcium citrate (600 mg)
	• Vitamin K (300 mcg)
Bedtime	• Iron + Vitamin C (500 mg)

The following is an example of a **Supplement Schedule:** 

## COMMON NUTRITIONAL PROBLEMS AFTER SURGERY

(III)

After duodenal switch bariatric surgery, nutritional complications can happen because of changes to your diet and digestive tract. The following are possible complications and ways to prevent them.

**Tip!** If you need more help with these problems after surgery, speak to a health care professional, such as your family doctor, surgeon, pharmacist, or dietitian.

#### A note about pregnancy

Avoid pregnancy for the first 18 months after surgery. Pregnancy during this time could cause complications and nutritional deficiencies for you and your baby and may result in birth defects.

Rapid weight loss increases fertility so even if you had problems getting pregnant before surgery, you should still be careful to prevent pregnancy. Make sure to speak with the nurse about appropriate birth control after bariatric surgery.

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### Diarrhea

After duodenal switch surgery, the number and consistency of your bowel movements (poops) will change. You may have softer or loose bowel movements. Some people experience diarrhea for a few months after surgery and many people will continue to experience loose bowel movements over the long-term. Some people also have stools that are foul smelling.

#### You may get diarrhea if you:

- Have a bacterial or viral infection
- Choose high-fat, high-sugar food or beverages
- Eat too fast, or eat and drink at the same time

#### To prevent diarrhea:

• The amount of fat in your diet can affect your stool, so avoid very greasy foods.

#### To treat diarrhea:

- Drink at least 2 L (8 cup) of fluids a day to rehydrate. This can include water, broth, soup, or sugar-free sports drinks (for example, G2<sup>®</sup>), diet Jell-O<sup>®</sup>, decaffeinated tea, or decaffeinated coffee.
- You may need to add foods that thicken stool to your diet such as bananas, unsweetened applesauce, or oatmeal, if tolerated. Talk to your dietitian.
- Avoid spicy foods, fried foods, regular coffee, regular tea, carbonated beverages, cola, and alcohol.
- You may need to take a fibre supplement to help thicken your stool.

# Call the Bariatric Clinic or your surgeon if: • You have 6 to 8 (or more) loose bowel movements every day for more than 3 days. You may need treatment to reduce or stop the diarrhea.

### Constipation

Missing a bowel movement does not mean you have constipation. True constipation happens when stool is small, hard, dry, or difficult to pass. Some people may struggle with constipation for the first month or two.

#### You may become constipated if you:

- Do not drink enough fluids during the day
- Take pain control medicines like Tylenol #3
- Take medicines such as narcotics, pain killers, and others
- Take supplements such as iron and calcium
- Eat less food, especially high-fibre foods
- Are not physically active
- Have an obstruction in your GI tract

# Signs and symptoms you may be constipated include:

(III)

- No regular bowel movements for 3 or more days
- Leaking stool, resembling diarrhea
- Stomach ache or cramps
- Bloated abdomen (belly)
- A feeling of fullness or discomfort
- Passing excess gas or belching (burping)
- Nausea or vomiting.

- Have irritable bowel syndrome (IBS) Colon spasms slow the movement of the intestines, allowing stool to harden. Often, people with IBS switch between constipation and diarrhea.
- Often ignore the urge to go If you do not use your digestive muscles, they will eventually stop moving. The stool then sits in your colon, hardens, and becomes painful to pass.

#### To prevent constipation:

- Drink 8 or more glasses (2 L or more) of non-caffeinated fluids each day.
- Eat more fibre-containing foods (such as bran, fruits, vegetables, stewed prunes, figs).
- Take a calcium citrate supplement containing magnesium.
- Try probiotics.
- Avoid caffeine (it may dehydrate you, which raises your risk for constipation).
- Keep normal bowel habits. For example, do not delay BMs.
- Get physical activity every day.

#### To treat constipation:

- If you do not have a soft bowel movement after 2 days, start adding 125 ml (1/2 cup) of prune juice to your meal plan. Then, drink warm water, decaffeinated coffee, or decaffeinated tea.
  - You can do this 1 to 2 times a day to help.

#### CONSTIPATION (CONTINUED)

#### To treat constipation (continued):

- If you are still constipated or have pain when you have a bowel movement, your dietitian may want you to add a 100% inulin fibre supplement, such as Benefibre<sup>®</sup>, Metamucil Simply Clear<sup>®</sup>, Fiberiffic<sup>®</sup>, or similar generic product. **Do not use laxatives that contain psyllium, such** as Metamucil<sup>®</sup>.
  - Start by adding a small amount in your diet, such as 5 ml (1 tsp), once a day. Slowly increase to 5 to 10 ml (1 to 2 tsp), 1 to 2 times a day, until your stool is soft and your intestines move every 1 to 3 days. **Do not add too much too fast, as this will lead to an increase in gas, which can cause problems and pain.**
  - If you are not drinking 2 L (8 cups) of fluid a day, do not use a 100% inulin fibre supplement. You need to drink this amount of fluid for the fibre supplement to work. Otherwise, taking the fibre supplement will make you more constipated.



### Dehydration

Dehydration means that you do not have enough water in your body to function well.

#### To prevent dehydration:

- Drink at least 2 L (8 cups) of fluid a day.
- Sip fluids all day long. Buy a sports bottle and keep filling it and drinking.
- · Limit caffeinated drinks, such as coffee or tea.
- Drink more fluids if you are very active or sweat excessively.

#### To treat dehydration:

- If you are vomiting or have diarrhea, drink more fluids.
- If you have nausea, suck on ice chips or sugar-free popsicles.

# Signs and symptoms you may be dehydrated include:

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- Dark urine
- Making less urine
- Nausea
- Dry mouth and tongue
- Feeling tired all of the time
- Feeling dizzy
- Lower back pain
- Feeling irritable

Contact your surgeon if: • Nausea and vomiting persists. Call 9-1-1 or go to the nearest Emergency Department if: • You are experiencing severe dehydration symptoms. You may need to come to the hospital and receive fluids through your veins.

### **Gas and Bloating**

Gas and bloating is common during the first few weeks after surgery. Intestinal **gas** usually happens when the colon is breaking down undigested food, such as plant fibre. Gas can also form when your digestive system does not completely break down certain components in foods, such as gluten or the sugar in dairy products and fruit.

If you do not pass gas through belching or flatulence, it can build up in the stomach and intestines and lead to **bloating**. With bloating, you may also have abdominal (belly) pain that can vary from mild and dull, to sharp and intense. Passing gas or having a bowel movement may relieve the pain.

#### You may get gas and bloating if you:

- Are taking antibiotics or other medicines that change your intestinal bacteria.
- Eat gas-causing foods like legumes, beans, lentils, melons, broccoli, cauliflower, eggs, and foods containing sugar alcohols.
- Drink carbonated beverages.
- Eat too quickly, drink through a straw, chew gum, or other actions that cause you to swallow air.
- Have irritable bowel syndrome (IBS).
- Have lactose intolerance or other conditions where the intestines are not able to digest and absorb certain components of food.
- Have a gastrointestinal infection, blockage, or disease.
- Are constipated as food waste stays in your colon longer, it has more time to ferment.
- Have an inflamed stomach lining (gastritis) or a Helicobacter pylori infection (that causes some stomach ulcers). These usually lead to chronic belching.

#### To prevent gas and bloating:

- Avoid or reduce the amount of gas-producing foods you eat, such as:
  - Beans or legumes
     Cabbage
     Foods containi
  - Lettuce
     Onions
  - Broccoli

- Onions
- Cauliflower
- Milk and milk products
- Brussel sprouts
- Sugar alcohols in sugarfree foods (such as sorbitol, mannitol, xylitol)
- Foods containing added sugars
- Fruits (such as apples, peaches, and pears)
- Whole wheat bread
- Avoid carbonated drinks. They release carbon dioxide gas.
- Skip the gum. When you chew gum, you swallow more often than normal. Part of what you are swallowing is air.

#### GAS AND BLOATING (CONTINUED)

#### To prevent gas and bloating (continued):

- Eat slowly and chew food well. Drink slowly or sip on fluids. Do not drink too much at once. Taking your time can help you swallow less air.
- Avoid skipping meals.
- Avoid using straws.
- Get moving. It may help to take a short walk after eating.

#### To treat gas and bloating:

• Try an over-the-counter remedy. Some products such as (chewable) Lactaid<sup>®</sup> can help digest lactose. Beano<sup>®</sup> helps reduce the amount of gas you produce.

### **Kidney Stones**

After bariatric surgery, there is an increased risk of developing kidney stones, especially if you already have a history of kidney stones. You will work with your health care team to determine your risk based on your health history and lifestyle.

Urine is normally made of water and substances such as calcium and oxalate. However, crystals can form in the kidney when:

# Signs and symptoms you may have kidney stones include:

- Severe back pain, if the stones stay in the kidney.
- Groin pain, if the stones move down the ureter.
- Blood in your urine.
- There are higher than normal amounts of these substances in the urine, OR
- The amount of water in the urine is low, which makes the urine concentrated.

As more substances build up around the crystals, they get bigger and become kidney stones.

Kidney stones may stay in the kidney or move down the ureter and leave the body in the 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.

#### To prevent kidney stones:

- Drink the recommended amount of fluids for each stage of your diet. See **Eating Guidelines After Surgery** (p. 69 to 100).
- Eat the recommended amount of protein for each stage of your diet. See **Eating Guidelines After Surgery** (p. 69 to 100).
- Follow a low oxalate diet if your dietitian tells you to. Avoid these high oxalate foods:

• Beets	• Greens	• Soy, tofu
<ul> <li>Black tea, coffee, soda</li> </ul>	• Leeks	<ul> <li>Spinach</li> </ul>
• Celery	Peanuts	<ul> <li>Sweet potatoes</li> </ul>
Cocoa, chocolate	Prunes	Wheat germ
<ul> <li>Dried beans</li> </ul>	• Quinoa	Wheat bran

• Take all of your recommended supplements every day. 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.

Some kidney stones are too big to pass out in urine. They may block the flow of urine from the kidney to the bladder. You will need to have surgery to remove the kidney stones causing the blockage.

### Lactose Intolerance

#### To prevent lactose intolerance:

- Limit lactose-containing foods or drinks.
- Try lactose-reduced milk or plain, unsweetened soymilk.
- Use whey protein isolate protein supplements instead of whey protein concentrates.
- Take Lactaid<sup>®</sup> pills or drops before having milk and dairy products.

If the following signs and symptoms happen after consuming milk and dairy products, you may have lactose intolerance:

- Bloating
- Gas
- Cramping
- Diarrhea

### Malnutrition

Your body may find it difficult to get all of the nourishment it needs now that you are eating a smaller amount of food. You may also be experiencing vomiting or diarrhea, which can cause you to lose nutrients.

You will need more protein after surgery for healing. However, you may find it difficult to eat enough protein if you are intolerant to the meat, if you are eating dry or tough meat, or if you are only eating a small amount of food, in general.

#### To prevent malnutrition:

- Never skip meals.
- Only eat the most nutritious foods.
- Take protein supplements! This is essential for the first 3 months after surgery. For protein shake criteria, see page 98.
- Take multivitamin and mineral, calcium, and vitamin B12 supplements.
- To prevent vomiting, stop eating when you are full.
- Focus on eating techniques.

### Lack of Appetite

Most people do not feel hungry for the first 9 to 12 months after surgery. A poor or decreased appetite is common after surgery.

#### To improve your appetite:

- Be sure to have nutritious foods at each meal and snack.
- Set a clock or timer to remind you to eat.

### **Nausea and Vomiting**

For the first couple of weeks after surgery, it is common to have an upset stomach or nausea. This can be caused by the surgery, eating too much or too fast, certain smells, and your pain medicine. Nausea caused by the surgery can last a few days to a few weeks. This should go away over time.

Eating too much will also put pressure on and distend the surgical area, which can cause vomiting. If you are throwing up too much, you can become dehydrated and change the nutrients in your body. It may also cause problems with your incision healing. This is not healthy.

#### To prevent nausea and vomiting:

- Take small bites of food and sip on fluids slowly. Chew your food very well.
- Take your time meals should take a minimum of 30 to 45 minutes in the long-term.
- Eat small portions of food.
- Avoid lying down after eating.
- Keep your food and fluids 30 minutes apart. Avoid drinking with meals.
- Wait several days after eating a new food that has caused nausea and vomiting to try again.
- Avoid beverages that are cold, caffeinated, or carbonated.
- If you think your pain medicine is making you nauseous, contact your surgeon to change the medicine.

### Low Blood Sugar (Hypoglycemia)

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

If you have any of the symptoms listed on the right, you need to check your blood sugar. The diabetes care provider will give you a blood testing meter and show you how to use it if you do not already have one. The diabetes care provider will also tell you when to test your blood sugar.

#### To prevent low blood sugar:

- Never skip meals.
- Do not go more than 4 hours without eating food, especially if you are physically active.
- Choose balanced meals, with carbohydrate and protein choices.
- If you are doing vigorous physical activity for more than 1 hour, eat a small snack with a carbohydrate and protein of choice.

# Signs and symptoms you may have low blood sugar include:

- Sweating
- Headache
- Dizziness
- Clammy skin

Feeling tired

Blurred visionFeeling hungry

Slurred speech

Feeling shaky

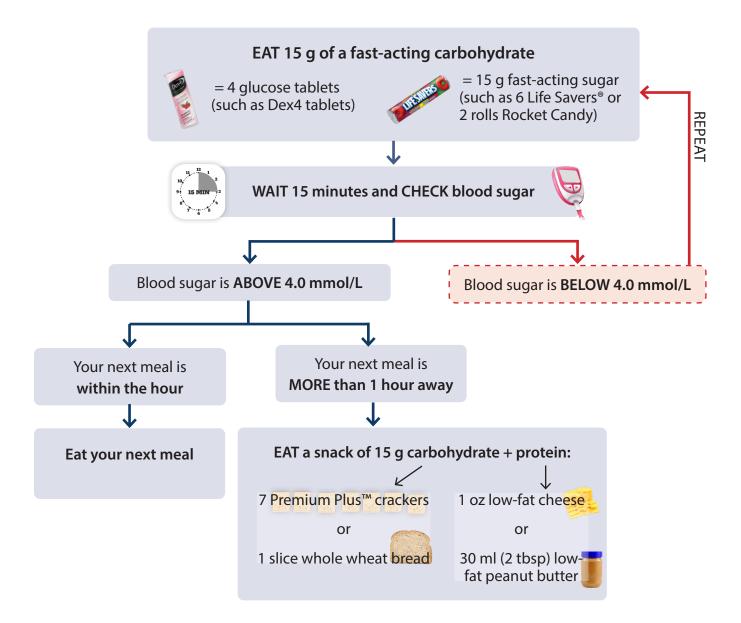
Mood change

- Call 9-1-1 or go to the nearest Emergency Department if you are:
- Confused
- Disoriented, or
- Having a seizure

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

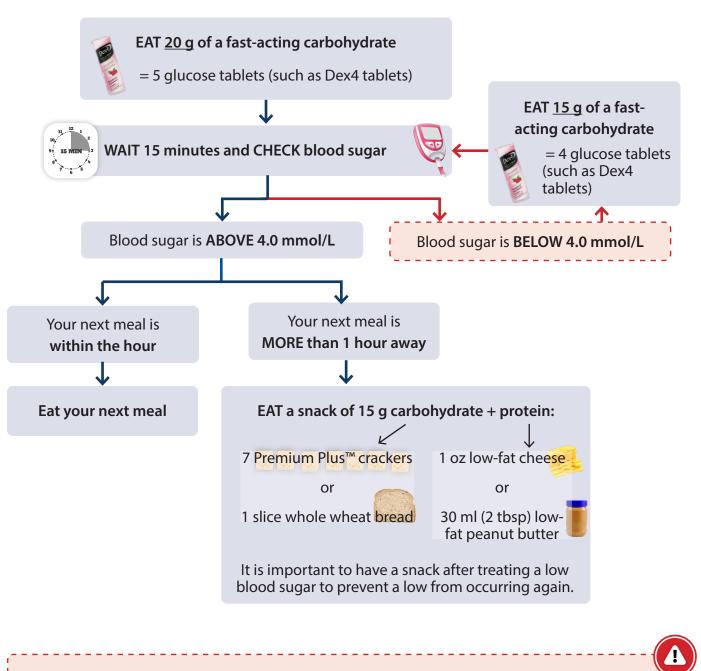
#### LOW BLOOD SUGAR (HYPOGLYCEMIA) (CONTINUED)

**If you are experiencing any hypoglycemia symptoms or your blood sugar is BELOW 4.0 mmol/L,** treat this low blood sugar by following these steps:



#### LOW BLOOD SUGAR (HYPOGLYCEMIA) (CONTINUED)

#### To treat SEVERE hypoglycemia (blood sugar BELOW 2.8 mmol/L):



At this level, you may experience a loss of consciousness, poor coordination, and unusual behaviour. If this happens, you will need someone to help you get your blood sugar level back up. **If you are UNCONSCIOUS, your family and friends must call 9-1-1.** 

If you had severe hypoglycemia before, ask your doctor about using glucagon in the future.

### **Strictures**

A stricture is when the small opening between your pouch and small intestine is too tight.

#### You may get a stricture if:

• The new connection between the stomach pouch and small intestine forms scar tissue as it heals. The scar tissue makes the opening of the connection narrow.

# Signs and symptoms you may have a stricture include:

- Difficulty swallowing liquids or food
- Persistent nausea and/or vomiting, even if you are following the proper eating techniques
- Increased saliva or mucous, or your saliva is white, sticky, and foam-like
- Pain with swallowing
- Regurgitation of food or liquids

If you think you may have a stricture, contact your surgeon or health care professional. You may need to go to the hospital emergency department.

The surgeon may be able to fix the stricture by a procedure done in Endoscopy. The surgeon will pass a tube with a small balloon on the end down your esophagus through the scar. They will then inflate the balloon to stretch the scar wide enough for food and liquid to go through. The surgeon will then remove the tube and balloon.

### Hair Thinning or Loss

Hair thinning or loss can happen during rapid weight loss. This is common between 3 to 9 months after surgery, usually due to rapid weight loss. Your hair regrows as your body recovers.

#### To promote hair re-growth:

- Eat nutritious meals and follow the diet plan.
- Get enough protein and water every day.
- Take the recommended vitamin and mineral supplements.

## ALCOHOL AFTER SURGERY

m

(III)

#### **Before surgery:**

• Abstain from alcohol and other substances for at least 6 months before bariatric surgery.

#### **After Surgery:**

- For the first year after bariatric surgery, do not drink alcohol.
- After the first year, we recommend very little intake, if any, for the rest of your life.

#### About Blood Alcohol Concentration (BAC) Limits in Canada

In Canada, the maximum legal BAC for fully licensed drivers is 80 mg of alcohol in 100 ml of blood or "0.08".

Driving with BAC over 0.08 is a criminal offence.

Do not drive or operate heavy equipment after you consume alcohol even a small amount.

#### In this section:

What happens to alcohol in my new digestive system?......127

What are the risks of drinking alcohol after duodenal switch surgery?....127

### How does a normal digestive system metabolize alcohol?

In a normal digestive system, the stomach metabolizes (or breaks down) the alcohol with an enzyme called, "alcohol dehydrogenase". This process is called "first pass gastric alcohol metabolism".

There are some conditions that affect alcohol breakdown in the stomach. Being a female, older, or using medicines such as H2 blockers and aspirin can reduce metabolism in the stomach, increasing blood alcohol levels and its effects.

### What happens to alcohol in my new digestive system?

With duodenal switch, more than 85 % of the stomach is bypassed during digestion, including the pylorus. Alcohol now passes directly from the stomach pouch, via gravity, into the intestines, without getting broken down.

Due to the large surface area of the intestines, alcohol is now rapidly absorbed into the blood, increasing the alcohol levels in the blood (blood alcohol concentration or BAC).

### What are the risks drinking alcohol after my surgery?

Based on current studies, drinking alcohol after duodenal switch surgery, can cause patients to:

- Absorb alcohol into the blood faster.
- Have higher peak alcohol levels in the blood (or BAC).
- Get rid of alcohol from the blood slower (for both men and women) (that is, it takes the patient longer to reach zero or no alcohol levels in blood).
- Raise their risk of developing Alcohol Use Disorder or AUD (which includes alcoholism).

#### About Alcohol Use Disorder or AUD

AUD is a pattern of alcohol use that includes:

- · Problems controlling your drinking
- Being preoccupied with alcohol
- Continuing to use alcohol even when it causes problems
- Having to drink more to get the same effect, or
- Having withdrawal symptoms when you rapidly decrease or stop drinking.

Some patients may gradually develop AUD several years after their gastric bypass surgery. A study also noted that patients with a family history of alcohol abuse have a higher chance of developing alcohol dependence after surgery, even if the patient had no history of excessive alcohol use.

## LIFESTYLE RECOMMENDATIONS AFTER SURGERY

The following "rules" will help you to use your new "tool" and adjust to your new lifestyle more effectively. They will also help you avoid complications and optimize your weight loss.

Bariatric surgery is not a quick fix. It is a tool that only works when combined with permanent diet and lifestyle changes.

Remember, long-term success is dependent upon how you use your "tool"!

#### **Rules of the Tool**

- 1. Eat 3 meals and 2 to 3 snacks a day.
- 2. Eat well-balanced meals.
- 3. Aim for 100 to 120 g of protein a day.
- 4. Eat small portions. Weigh and measure your food!
- 5. Stop eating when you are full!
- 6. Introduce new foods, one at a time.
- 7. Chew your food well.
- 8. Take 60 minutes to eat each meal, and 30 minutes to eat each snack.
- 9. Do not drink with your meals.
- 10. Use moist cooking methods.
- 11. Take vitamin and mineral supplements as prescribed, for LIFE.
- 12. Drink at least 2 L (8 cups) of fluids a day.
- 13. Avoid high-fat and high-sugar foods. Read labels!
- 14. Avoid high-calorie foods and beverages.
- 15. Avoid carbonated beverages, caffeine, alcohol, and drinking from straws.
- 16. Engage in physical activity, as tolerated, on a regular basis.
- 17. Make a commitment for a lifestyle change.

### Rule 1. Eat 3 meals and 2 to 3 snacks a day

Bariatric surgery reduces the amount of food you can eat at one time. If you eat less than 3 meals a day, you will have trouble meeting your nutritional needs.

### Rule 2. Eat well-balanced meals

Due to the small amount of food you can eat after surgery, it is essential that you choose healthy foods at each meal and snack.

- A well-balanced meal includes protein, carbohydrates, and vegetables.
- Also include a source of protein in your snacks.
- Use low-fat cooking methods and avoid high calorie sauces and condiments.

### Rule 3. Aim for 100 to 120 g of protein a day

Eat enough protein following bariatric surgery.

- Remember to eat the protein portion of your meal first.
- If you find it hard to meet the recommended amounts of protein solely through food, then drink a protein shake.

### Rule 4. Eat small portions. Weigh and measure your food!

Right after surgery, your stomach can hold about 30 ml to 60 ml (2 to 4 tbsp), depending on the consistency of the food.

- The pouch naturally stretches, so you may be able to increase the amount of food you eat at a meal. However, remember to limit portion size to help prevent overstretching the pouch or vomiting.
- Measure and weigh your food to make sure you are not overeating. Try eating meals on a salad plate for the "less-is-more" appearance.

### Rule 5. Stop eating when you are full

This may be easier said than done. People may have different perceptions about what "full" is.

• Stop eating as soon as you feel mild pressure or fullness in the area just beneath the rib cage. Overeating can cause overstretching of the pouch and vomiting.

### Rule 6. Introduce new foods, one at a time

After surgery, food tolerance varies from person to person. Try one new food at a time, and chew thoroughly before swallowing.

- If a food causes discomfort, don't eat it. As time passes, you may be able to eat this food.
- Foods and liquids that commonly cause discomfort include bread, pasta, rice, meat, raw vegetables, and milk.
- Food textures that are not tolerated well include dry, tough, sticky, or stringy foods.

### Rule 7. Chew your food well

Chew foods thoroughly to prevent nausea, vomiting and blockage of the pouch. Chewing food well also moistens it and starts the digestive process.

- Begin by cutting food into "pea"-sized pieces.
- Then, chew the food until it is a "mushy" or "paste" consistency.
- Chew every bite of food 20 to 25 times.

# Rule 8. Take 60 minutes to eat each meal, and 30 minutes to eat each snack

Eating slowly will help prevent overeating and vomiting.

- Take 60 minutes to eat each meal, even when the portions are small.
- It takes about 15 to 20 minutes for your brain to recognize fullness. Eating quickly can cause you to overeat.
- Do not spend longer than 60 minutes at a meal. Stop eating if you become full before you have finished your meal.

### Rule 9. Do not drink with your meals

Stop drinking 30 minutes before your meal and wait 30 minutes after a meal to resume drinking.

- Drinking right before a meal will prevent you from being able to eat the nutritious food that you need.
- Drinking with a meal can turn the meal into a "soupy" consistency that will cause the pouch to empty too quickly and affect your hunger. You may take a sip of water if needed for dry foods.

### Rule 10. Use moist cooking methods

Foods that are dry, tough, and stringy are not well-tolerated after surgery.

- Use moist cooking methods to ensure your food is soft.
- Avoid dry cooking methods such as barbecuing, pan frying, baking, and grilling.

# Rule 11. Take vitamins and mineral supplements as prescribed, for LIFE

Bariatric surgery affects how you absorb certain vitamins and minerals that are vital for proper body function. Deficiencies can cause major medical problems, which may not show up until years after surgery. Most problems are caused by patients failing to take the recommended supplements. Some of the effects can be permanent.

### Rule 12. Drink at least 2 L (8 cups) of fluids a day

It is important that you drink enough fluid to prevent dehydration. This can be challenging with the small pouch capacity. Dehydration is also the main cause of constipation after surgery.

- Carry a water bottle with you throughout the day and sip fluids continuously.
- The majority of the fluids you drink should be low or no-calorie.

### Rule 13. Avoid high-sugar and high-fat foods. Read labels!

Eating high-fat and high-sugar foods may cause a number of problems. First, they are typically high calorie foods with little nutritional value. Refined sugars may affect insulin and glucose levels in your body, which can prevent weight loss and create hunger.

• You may use artificial sweeteners as a sugar replacement. Some people report that the use of artificial sweeteners makes them feel hungrier. If this happens to you, avoid artificial sweeteners.

### Rule 14. Avoid high-calorie foods and beverages

High-calorie foods and beverages will slow down your weight loss or may prevent you from losing weight.

- Two types of food can add significant calories to your diet. "Crispy" foods and foods that "melt in your mouth" take up a much smaller volume after you eat them, which allows you to eat a much larger portion. "Crispy" foods include potato chips, pretzels and crackers. Foods that "melt in your mouth" include ice cream, chocolate and white breads and pastries.
- Avoid high calorie beverages such as smoothies, specialty coffees, juices, hot chocolate, and alcohol.

# Rule 15. Avoid carbonated beverages, caffeine, alcohol, and drinking from straws

- Avoid carbonated beverages and straws after surgery. The bubbles can stretch the pouch when it warms and expands in the pouch. Drinking from a straw can introduce air into your pouch and cause discomfort or pain.
- Avoid caffeine for 3 months after surgery. Caffeine can irritate the pouch and increase your risk for ulcers. After 3 months, drink beverages containing caffeine sparingly (limit to 250 ml to 500 ml (1 to 2 cups) per day).
- Avoid alcohol for 1 year after surgery. Alcohol can increase your risk for ulcers. Alcohol is absorbed rapidly into the bloodstream after surgery, which may result in feeling intoxicated with small amounts of alcohol. This can lead to poor decision making around food choices. (See the previous section on *Alcohol after Surgery* on page 126)

### Rule 16. Engage in physical activity, as tolerated, on a regular basis

Exercise is an important part of any successful weight loss and maintenance program. Besides helping with weight loss, it provides many other medical benefits. You should find exercising is easier as you lose weight and have increased energy.

- Aim to have 30 minutes of physical activity each day. This can be as simple as taking three 10-minute walks.
- Choose activities that you enjoy doing.

### Rule 17. Make a commitment for a lifestyle change

You must commit to lifelong diet and lifestyle changes if you want to maintain your weight loss. This involves:

- Choosing healthy, low-fat, nutritious foods.
- Changing your activity level and exercising.
- Making changes to deal with any obstacles or challenges that may interfere with your success.



## PSYCHOSOCIAL PERSPECTIVES AFTER SURGERY

### Your Mental Health and Well-Being

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 and 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.

### **Medicine and Mental Health**

If you take medicine to manage your mental health, you must closely monitor your symptoms after surgery. The surgery can change how your body absorbs some of the medicines.

Call your family doctor or health care provider if you notice changes in your symptoms of mental health.

# Do not stop any medicines or change doses on your own.

### In this section:

Your Mental Health and Well-Being	.133
Medicine and Mental Health	.133
Emotional Eating and Coping	.134
Mindful Eating: Conquering Emotional Eating	.137
Self Care	.138
Body Image	.138
Support Systems	.139

### **Emotional Eating and Coping**

### What is emotional eating?

Using food from time to time as a pick me up, a reward, or to celebrate isn't necessarily a bad thing. But when eating is your primary emotional coping mechanism - when your first instinct is to look for a snack whenever you're upset, angry, lonely, stressed, exhausted, or bored - you get stuck in an unhealthy cycle where you never address the real feeling or problem.

Individuals don't always eat simply to satisfy hunger. People also turn to food for comfort, stress relief, or as a reward. Unfortunately, emotional eating doesn't fix emotional problems.

#### ARE YOU AN EMOTIONAL EATER?

- Do you eat more when you're feeling stressed?
- Do you eat when you're not hungry or when you're full?
- Do you eat to feel better (such as when you're sad, mad, bored, anxious)?
- Do you reward yourself with food?
- Do you regularly eat until you've stuffed yourself?
  - Does food make you feel safe? Do you feel like food is a friend?
  - Do you feel powerless or out of control around food?
- Has eating at a certain time of day become a habit for you? (for example, you snack at 9:00 p.m. daily)

### What is the difference between emotional and physical hunger?

EMOTIONAL HUNGER	PHYSICAL HUNGER
Comes on suddenly	Comes on gradually
<ul> <li>Feels like it needs to be satisfied instantly</li> </ul>	• Can wait
Craves specific comfort foods	<ul> <li>Is open to options - lots of things sound good</li> </ul>
<ul> <li>Isn't satisfied with a full stomach</li> </ul>	<ul> <li>Stops when you're full</li> </ul>
<ul> <li>Eating to satisfy emotional hunger triggers feelings of guilt, powerlessness, and shame.</li> </ul>	<ul> <li>Eating to satisfy physical hunger doesn't make you feel bad about yourself.</li> </ul>

#### EMOTIONAL EATING AND COPING (CONTINUED)

### What are the common causes of emotional eating?

**Stress:** Ever notice how stress makes you hungry? It's not just in your mind. When stress is chronic, as it so often is in our chaotic, fast-paced world, it leads to high levels of the stress hormone, cortisol. **Cortisol** triggers cravings for salty, sweet, and high-fat foods - foods that give you a burst of energy and pleasure. The more uncontrolled stress in your life, the more likely you are to turn to food for emotional relief.

**Hiding emotions:** Eating can be a way to temporarily silence uncomfortable emotions, including anger, fear, sadness, anxiety, loneliness, resentment, and shame. While you're numbing yourself with food, you can avoid the emotions you'd rather not feel.

**Childhood habits:** Think back to your childhood memories of food. Did your parents reward good behaviour with ice cream, take you out for pizza when you got a good report card, or serve you sweets when you were feeling sad? These emotionally-based childhood eating habits often carry over into adulthood.

**Boredom or feelings of aloneness:** Do you ever eat simply to give yourself something to do, to relieve boredom, or as a way to fill a void in your life? You feel unfulfilled and empty, and food is a way to occupy your mouth and your time. In the moment, it fills you up and distracts you from underlying feelings of purposelessness and dissatisfaction with your life.

**Social influences:** Getting together with other people for a meal is a great way to relieve stress, but it can also lead to overeating. It's easy to overindulge simply because the food is there or because everyone else is eating. You may also overeat in social situations out of nervousness. Or, perhaps your family or circle of friends encourages you to overeat, and it's easier to go along with the group.

### What can I do?

Most emotional eaters feel powerless over their food cravings. When the urge to eat hits, it's all you can think about. You feel an almost unbearable tension that demands to be fed, right now!

Because you've tried to resist in the past and failed, you believe that your willpower just isn't up to snuff. But the truth is that you have more power over your cravings than you think.

#### KEEP AN EMOTIONAL FOOD JOURNAL

One of the best ways to identify the patterns behind your emotional eating is to keep track with a **Emotional Food Journal**.

Every time you overeat or feel compelled to reach for your version of comfort food, take a moment to figure out what triggered the urge. If you reflect, you'll usually find an upsetting event that kicked off the emotional eating cycle.

#### EMOTIONAL EATING AND COPING (CONTINUED)

#### □ KEEP AN EMOTIONAL FOOD JOURNAL (continued)

Write it all down in your Emotional Food Journal:

- What you ate (or wanted to eat)
- What happened to upset you
- How you felt before you ate
- What you felt as you were eating, and
- How you felt afterward.

Over time, you'll see a pattern emerge. Once you identify your emotional eating triggers, the next step is to identify healthier ways to feed your feelings.

### ESTABLISH HEALTHY LIFESTYLE HABITS

- **Make daily exercise a priority**. Physical activity does wonders for your mood and your energy levels, and it's also a powerful stress reducer.
- **Make time for relaxation**. Give yourself permission to take at least 30 minutes every day to relax, decompress, and unwind. This is your time to take a break from your responsibilities and recharge your batteries.
- **Connect with others**. Don't underestimate the importance of close relationships and social activities. Spending time with positive people who enhance your life will help protect you from the negative effects of stress.

### GET ENOUGH SLEEP

Lack of sleep has a direct link to stress, overeating, and weight gain.

There are two hormones in your body that regulate normal feelings of hunger and fullness. **Ghrelin** stimulates appetite, while **leptin** sends signals to the brain when you are full. When you don't get the sleep you need, your ghrelin levels go up, stimulating your appetite so you want more food than normal. Your leptin levels go down, meaning you don't feel satisfied and want to keep eating. So, the more sleep you skip, the more food your body will crave.

As well as making it harder to fight food cravings, feeling tired can also increase your stress levels, leading to more emotional eating.

To control your appetite and reduce food cravings, try to get plenty of rest - about 8 hours of quality sleep every night.

#### EMOTIONAL EATING AND COPING (CONTINUED)

#### ALTERNATIVES TO EMOTIONAL EATING

- If you're depressed or lonely, call someone who always makes you feel better, play with your dog or cat, or look at a favorite photo or cherished memento.
- If you're anxious, expend your nervous energy by dancing to your favorite song, squeezing a stress ball, or taking a brisk walk.
- If you're exhausted, treat yourself with a hot cup of tea, take a bath, light some scented candles, or wrap yourself in a warm blanket.
- If you're bored, read a good book, watch a comedy show, explore the outdoors, or turn to an activity you enjoy (woodworking, playing the guitar, shooting hoops, scrapbooking, etc.).

### Mindful Eating: Conquering Emotional Eating

Mindful eating means paying attention to what you are eating, when you're eating it, before it's all gone! It also means learning to listen to your body and knowing when you are hungry and when you are full. Reconnecting with and listening to your body and feelings of fullness and hunger are the first steps to addressing emotional eating tendencies.

#### Tips!

- Assess your hunger cues how hungry are you?
- Engage in self talk. Focus on feelings, not judgments (that is, "I am not hungry, I am just feeling stressed/happy/sad/bored/excited/ anxious/tired/depressed").
- Eat at the table; avoid distractions while eating (such as TV, computer, work).
- Look at your food.
- Eat slowly.
- Put your fork, spoon, chopsticks down in between bites.
- · Assess your feelings of comfortable fullness.
- Set up a support system!

### Self Care

There are lots of fun things to do that can help to nurture yourself. Make sure that you are giving yourself a mental health break at least once a week. The goal would be for 1 to 2 times daily. Here are some ideas:

- Scrapbook, make cards
- Woodworking
- Puzzles
- Candle making
- Poetry
- Collect coins/stamps
- Knit, crochet, sew, rug hooking
- Watch movies

Photography

Ceramics

Soap making

instrument

Read

· Listen to music,

learn to play an

Have a manicure/

pedicure/facial

- Volunteer at school, shelter, church
- Walk
- Play with your companion animals
- Colouring books for adults
- Visit an art gallery or museum

- Garden/visit a greenhouse
- Board games, Crosswords
- Build model cars
- Jewelry making
- Redesign your room
- Talk on the phone
- Internet searches
   re: interests

### **Body Image**

It is important to have a healthy body image after bariatric surgery, as there may be issues with excess skin.

Body image is defined as, "A subjective picture of one's own physical appearance, established both by self-observation and by noting the reactions of others."

#### **QUESTIONS TO CONSIDER:**

- How satisfied are you with your body image?
- How invested are you in having your body image define your self-worth?
- Do you avoid mirrors?
- Do you work hard at concealing your body by wearing baggy clothing?
- Are you accurate in how you estimate your body size?

Body image is linked closely to self-esteem. It is normal for your sense of body image to change over time. A negative body image does affect how we feel about ourselves and how we connect with others.

#### BODY IMAGE (CONTINUED)

### What can I do to build a healthy body image?

- 1. Pay attention to the words you use when discussing yourself with others or engaging in self-talk.
- 2. Work on being more mindful of your thoughts and words.
- 3. Do things for you on a regular basis (for example, buy a new body lotion, get a massage).

Ultimately, if you find your body image is so negative that it is disrupting your everyday activities, speak to your family doctor and call the clinic to book an appointment with one of our social workers.

### Support Systems

When considering bariatric surgery, having a healthy support system can help you on your journey.

There are 2 types of support systems:

**Personal:** A personal support system would include family, close friends, colleagues.

**Professional:** A professional support system would include your family doctor, the bariatric team, and psychiatrist/psychologist, if present.



For information about HRH's Bariatric Surgery Support Groups, see **Appendix G** on page 166.

Having a consistent, reliable source of support is an important component of preparing for bariatric surgery. You will have the opportunity to receive both subjective and objective support.

For example, having access to the bariatric team will allow you to receive information based on our clinical experience, from both research and working with many individuals who have had bariatric surgery.

Your personal support network can also include people in a support group you may attend. It is nice to hear from people who have actually had the surgery and can give you their thoughts. Moreover, it is nice to know that you are not alone.

There may be days you may be frustrated or scared. This is when your support networks will come into play.

## ACHIEVING LONG-TERM WEIGHT MANAGEMENT SUCCESS AFTER SURGERY

Bariatric surgery is a tool to help you with your weight loss. Surgery on its own does not cause weight loss, or weight maintenance.

To achieve long term success, it is important that you make healthy food choices and maintain a healthy lifestyle.

#### In this section:

What are the top 10 things I can do to keep myself healthy?.....141

Which skills do I need to manage my weight for life?.....142

# What are the top 10 things I can do to keep myself healthy?

- **Plan your meals.** Plan out what you will eat for the next day, or even for the next week. Write out a meal schedule and get all of the groceries you need for those meals.
- 2

**Keep a food journal.** Write down what you eat at each meal. Research shows that people who record their meals lose more weight than people who do not.

- **3** Attend your appointments with the registered dietitian, and bring this book with you. Keeping your appointments with the bariatric team is very important.
- **Eat breakfast every day.** Research shows that eating breakfast is an important tool for weight loss and maintenance.
- **5** Eat 3 well-balanced meals a day. This will help your body meet its nutritional needs. Eat a meal every 4 to 6 hours.
- 6 Eat 2 to 3 small snacks a day. This keeps your body fueled between meals. However, it is important not to overeat.
- 7 Measure your meals and use portion control. Even though your small pouch will help with portion control, it is still possible to overeat. Measure out your meals so you know how much you should be eating.
- 8 Drink at least 2 L (8 cups) of low-calorie fluid each day. It is important to keep your body hydrated. Some drinks can be high in calories. Avoid extra calories by drinking low-calorie fluids throughout the day.
- 9 Be physically active for at least 30 minutes a day. Physical activity is important for your overall health. Aim for 30 minutes above and beyond your daily activities.
- **10** Join a support group. Meet with other people that have had the surgery. Sharing your experiences and ideas is important for your weight loss journey.

**Remember!** Once you have completed the bariatric program, remember to visit your family doctor once a year to complete blood work.

### Which skills do I need to manage my weight for life?

Successful long-term weight loss requires permanent lifestyle changes.

If you go back to your old eating habits, you will start to regain your weight. It may start out as only a few pounds per year, but that can add up to a significant weight gain if the pattern continues.

### Meal Planning

The most important thing you need to do is to make sure that your environment is set up for success. Think back to the tools you used when you first had surgery. If you find that you are starting to gain weight, use your measuring cups and food scales, make your meal plans and grocery lists, and start keeping a food journal again.

Sticking with your meal routine, eating balanced meals, and ensuring you're making healthy food choices is very difficult if you don't have healthy food ingredients on hand. Meal planning, even if only for 1 to 2 days in advance, is a key skill to help you maintain your weight loss.

### Tips for Meal Planning:

- Try one new recipe a week to stay creative in the kitchen and avoid boredom.
- Plan for leftovers to take for lunches the next day.
- Keep items on hand for easy grab-and-go snacks.
- Organize your week to ensure you have the time
- Make sure you have a grocery list to help avoid buying unwanted items.
- Practice your label reading skills at the grocery store. Make your selections wisely.
- Fill your cart with fresh or frozen fruits and vegetables, low fat dairy, lean protein, and whole grains.
- Use the plate model when planning meals.

#### Easy Meal Ideas:

- Tuna melt on a whole grain English muffin with a bowl of vegetable soup
- A small (6") whole grain wrap filled with black beans, salsa and low-fat cheese, with a side salad
- Grilled cheese sandwich on 1 slice of whole grain bread with raw vegetables
- · Fish tacos with side salad
- Homemade whole wheat pita pizzas made with low fat cheese & vegetable

#### MEAL PLANNING SKILLS (CONTINUED)

#### **Easy Snack Ideas:**

Choose 1 carbohydrate and 1 protein to create a healthy snack

CARBOHYDRATE CHOICES	PROTEIN CHOICES
3 small whole grain crackers	60 ml (¼ cup) low-fat cottage cheese
🗌 2 Melba toast	1 low-fat string stick or Babybel®
🗌 ½ banana, pear, or apple	cheese
1 to 2 large whole grain crackers	60 ml (¼ cup) ricotta cheese
🗌 1 apple	☐ 60 ml (¼ cup) hummus
🗌 1 pear	🗌 1 egg
1 orange	☐ 85 ml (⅓ cup) edamame
15 grapes	☐ 85 ml (⅓ cup) bean salad
250 ml (1 cup) of melon	
🗌 2 medium plum	
$\square$ ½ cup of fruit canned in water	
250 ml (1 cup) berries	

### Eating Out

Eating away from home may be an important part of your social life, but it is challenging to maintain your weight when you eat out too often. Even sit-down restaurants can be hazardous to healthy eating as the choices are often high in calories, fat and sodium!

Make sure your 'meal' fits into your meal plan. It is best if you can limit eating away from home to one or fewer times per week.

### *Tips for Eating Out:*

- Share your meal with someone.
- Choose water or skim milk, instead of sweetened or carbonated beverages.
- Order a half portion or appetizer size as your main dish.
- Ask for no cheese.
- Ask for half of the meal to be put in a takeout container.
- Avoid breaded, battered, pan-fried or fried food.
- Choose baked, grilled, steamed, or broiled options.
- Ask for dressings and sauces on the side.

- Ask how the food is prepared.
- Ask the server not to bring a bread basket.
- Avoid ordering off the kids menu.
- Ask for skinless protein choices.
- Take your time eating.
- Review menus online before going to the restaurant.
- On special occasions:
  - Do not skip meals the day of the event.
  - Do not go to an event or restaurant hungry.

**Remember!** If you arrive hungry, you won't be able to make good choices and will likely overeat.

### Avoiding Over-Restriction

Real life includes the occasional chocolate, ice cream, pizza, or fries. If you try to cut out all foods you have labelled as "bad", then over time those feelings of being restricted or deprived can lead to cravings and possibly binging on a "forbidden" food.

Instead of labelling food as "bad" or "off limits", work them into your meal plan and plan for the occasional treat. However, before you eat one of these foods, ask yourself the following:

- Is it worth the calories?
- What is the smallest amount of this food I can have and still be happy?
- What is the smallest amount of this food I can have and still work towards my weight loss goals?
- Why am I craving this food? Did I skip meals or snacks? Did I eat enough at my meals? Did I balance my plate? Am I eating in response to a cue or trigger?

# FREQUENTLY ASKED QUESTIONS

### **Before Surgery**

### Should I fast before surgery?

At your pre-operative appointment, your surgeon will discuss instructions on how to prepare your bowel. It is very important that you follow these instructions.

#### At midnight, the night before surgery:

- STOP taking Optifast<sup>®</sup> and eating the allowed vegetables. You may continue drinking calorie-free, clear fluids (no red or blue dye), including water, Gastrolyte<sup>®</sup>, Hydralyte<sup>®</sup>, Pedialyte<sup>®</sup>, or Gatorade<sup>®</sup>, up until 4 hours before surgery.
- DO NOT eat, drink, or chew any other food, fluids, candy, or gum.

#### Starting 4 hours before surgery:

- **NOTHING** to eat, chew, or drink.
- You may take the medicines that your surgeon has approved, with a sip of water.

### What can I eat or drink while taking Optifast®?

For 2 to 4 weeks before surgery, you will be drinking Optifast<sup>®</sup>. The usual recommendation is to drink 4 to 5 packages a day, mixed with water.

Some people report constipation while taking Optifast<sup>®</sup>, so you may need to take fibre supplements or laxatives as your health care team recommends.

You may flavour your Optifast<sup>®</sup> drinks with flavour extracts (such as vanilla or almond), sugar-free beverage powders (such as Crystal Light<sup>®</sup>) or decaffeinated instant coffee grounds. While taking Optifast<sup>®</sup>:

- Keep drinking water or other calorie-free, clear fluids to stay hydrated.
- If you need something to chew on, you may eat no more than 500 ml (2 cups) a day of plain low-calorie vegetables, such as lettuce, celery, broccoli, bell peppers, or cucumber.
   Measure your vegetables to make sure that you are not eating more than 500 ml (2 cups) a day.

For more information on the Optifast<sup>®</sup> Diet, see pages 47 to 52.

For more information on eating and drinking restrictions, see page 53.

### **After Surgery**

### How long will I be in hospital?

Most patients stay in the hospital for 24 hours. If you have complications, we may keep you in hospital longer. You will begin Stage 1 (Clear Fluids) of your post-surgical diet in the hospital.

For information on what to expect during your hospital stay, see pages 56 to 59.

# Is it important to stay exactly within the guidelines for each stage of the diet?

**Yes!** These guidelines are in place to allow your stomach to heal correctly. It is very important to follow the stages of the diet and consume enough protein and water.

Even if you do not feel hungry for several weeks after surgery or you feel nauseated when eating (which are normal), you must still try to consume the amounts of nutrients instructed in each diet stage to allow for healing.

Even if you feel you are ready to progress to solid foods ahead of the guidelines, do not rush through the stages of the diet. This may cause early stretching of your pouch and can make you feel ill.

For information on the diet stages after surgery, see pages 66 to 96.

Speak with your dietitian if you are having a hard time tolerating some foods during each diet stage or if you feel that you are ready to progress to the next stage ahead of schedule.

### When should I start taking supplements?

Once you have had your surgery, you can begin taking your supplements.

At a minimum, you will need to take a multivitamin-mineral, a calcium supplement with Vitamin D, Vitamin B12, Vitamin A, Vitamin E, Vitamin K, Vitamin C, and iron supplements. Your health care team may discuss other supplements with you.

For information on vitamin and mineral supplement requirements, see pages 103 to 111.

### What should I look for when shopping for a multivitamin-mineral?

Look for a product that provides 100% daily value of all vitamins and minerals. **Aim for at least 18 mg of iron and 5 mg of zinc from your multivitamin-mineral** (may be between 2 doses). You will need to use women's multivitamins (even if you are not a woman) as men's and children's options do not contain enough iron. Speak with your dietitian about brands that will meet these needs.

For information on multivitamin and mineral supplements, see page 105.

### How much calcium do I need?

Aim to take **1800 to 2400 mg of calcium** in divided doses. For example, take 600 mg of Calcium Citrate 3 to 4 times a day. Look for a supplement that contains calcium citrate, as this is the most readily absorbed form.

For information on calcium citrate with vitamin D supplement, see page 108.

# Will I have to use liquid or chewable vitamin and mineral supplements for life?

Using vitamin and mineral supplements in the liquid, chewable, or tablet formats are all options after duodenal switch surgery. Depending on the size of the pill, you may need to use a pill splitter to ease with swallowing.

Liquids and chewable supplements maybe easier to tolerate for most patients.

### How much protein do I need?

Aim for 100 to 120 g of protein a day. Protein drinks and powder supplements can help to ensure that you are meeting your daily protein goal.

For information on protein requirements after surgery, see page 97 to 102.

### How much fluids do I need?

You should drink **at least 2 L (8 cups) of fluids every day**, or more, if you are exercising or sweating. Keep a bottle of fluids near you at all times to remind you to drink.

If you are experiencing **signs of dehydration**, such as a dry mouth, thirst, dizziness, nausea, or dark urine, increase your fluid intake. **If these symptoms persist, contact your surgeon for follow up.** 

### Is it OK to drink soy milk or almond milk if I am lactose intolerant?

Many duodenal switch patients develop lactose intolerance after surgery as the body loses the ability to break down lactose (the sugar present in milk and dairy products).

Lactose intolerance may cause symptoms such as abdominal pain, cramping, bloating, gas, diarrhea and nausea. If you are experiencing these symptoms after consuming milk products:

- Try lactose-free milk or unsweetened, plain soy milk. Do not choose almond milk as it contains very little protein.
- Try yogurt, cottage cheese, and cheese. Most patients who become lactose intolerant are still able to tolerate these milk products.
- Speak with your doctor about taking Lactaid<sup>®</sup> pills before consuming dairy products.

For information on lactose intolerance, see page 120.

### Is it important to take small bites of food?

Yes! You will need to take very small, pea-sized bites of all foods and be sure to chew everything very well. Chew each bite of food about 20 to 25 times to ensure that it is soft enough to be digested in your smaller stomach, and fit through the opening to your intestine.

### Will I be able to eat red meat?

Yes, however wait at least 3 to 4 months after surgery before trying to eat tough cuts of red meat, such as steak, pork, etc. You may be able to tolerate moist cooked ground red meat better, even in the Soft Diet stage (for example, chili, stews, etc.).

When you try meat, be sure to choose a lean cut. Prepare red meat using a method that will ensure that the meat is moist, such as stewing or braising, to make it easier to chew and digest thoroughly.

### How much weight should I expect to lose?

In your first year, expect to lose 60% of your excess body weight or 100 pounds. Usually, your weight loss will be faster in the first 3 to 6 months and may slow down after this. After the first 6 months, you will still continue to lose weight, but at a slightly slower pace.

Expect to lose about 70 to 80% of your excess body weight by the second year after surgery.

### When will my bowel movements be normal again?

It is normal to have 1 to 3 soft bowel movements a day after surgery, though this may change as you introduce more solid foods. You may experience bowel movements less often, or even constipation. If you experience difficulty, your surgeon may recommend a stool softener. If you experience persistent diarrhea, speak to your surgeon.

### Do I need to fast for blood work?

Please follow the instructions provided on the blood work requisition form to know if you need to fast before the blood work. You will need to do blood work:

- Before your surgery
- At 3, 6, and 12 months, and then every year up until 5 years after surgery.

### How often should I come for follow-up?

We will schedule you for follow-up visits with your bariatric health care team at 1 month after surgery, and then again at 3, 6, and 12 months.

After 12 months, you will follow-up once a year. This will continue up until 5 years after surgery.

For more information on follow up appointments after surgery, see pages 6 and 64.

# APPENDIX A. ESTIMATED COSTS FOR BARIATRIC SURGERY AT HRH

ITEMS	ESTIMATED COSTS	DURATION	COMMENTS
Optifast <sup>®</sup>	\$110/week (or \$220 to \$440 total)	2 to 4 weeks	
Prevacid®	\$80/month (or \$480 total)	6 months	Prevacid <sup>®</sup> can be covered by OHIP/ Ontario Drug Benefit covered programs. The LU CODE is 401.
Tinzaparin	\$100 to \$300	6 to 10 days	<ul> <li>Example: Tinzaparin cost for 8 days if your weight is:</li> <li>Less than 110 kg (242 lb): \$104</li> <li>Between 110 to 160 kg (242-352 lb): \$220</li> <li>Greater than 160 kg (352 lb+): \$300</li> <li>May be covered by private insurance.</li> </ul>
Multivitamins, minerals, protein	\$80/month	For life	

### Miscellaneous:

ITEMS	ESTIMATED COSTS
Scales/measuring	\$50 or more
tools	
Clothing	\$50 or more
Hotels	Holiday Inn Toronto (3450 Dufferin St., Tel: 416-789-5161)
(Call hotels directly	Toronto Plaza Hotel (1677 Wilson Ave., Tel: 416-249-8171)
to inquire. Ask for a "patient care	Montecassino Hotel & Event Centre (3710 Chesswood Dr., Tel: 416-630-8100)
rate")	Hotel Novotel Toronto (3 Park Home Ave., Tel: 416-733-2929)
Parking	Visit: https://www.findparkingnearme.ca/humber-river-hospital for current parking rates. Rates subject to change.

# APPENDIX B. FOOD SOURCES OF PROTEIN

### **Protein Content of Some Common Foods**



MEAT ALTERNATIVES	PORTION SIZE	PROTEIN (g)
Bean or split pea soup	125 ml (½ cup)	9
Dried peas and beans (kidney beans, chickpeas, lima beans)	125 ml (½ cup) after cooking or canned	8
Egg, whole	1 large	6
Egg, scrambled liquid egg substitute (Egg Beaters®)	125 ml (½ cup)	12
Hummus	30 ml (2 tbsp)	8
Lentils	125 ml (½ cup)	9
Nuts - Peanut butter, nut butters	30 ml (2 tbsp)	7
Nuts and seeds	60 ml (¼ cup)	7
Soy - Ground Soy	125 ml (½ cup)	11
Soy - Edamame (soybeans)	125 ml (½ cup)	12
Tempeh	125 ml (½ cup)	16
Texturized vegetable protein, prepared	125 ml (½ cup)	24
Tofu	125 ml (½ cup)	20
Veggie burgers (Gardenburger <sup>®</sup> , Boca Burger <sup>®</sup> )	1 patty	9

MILK AND MILK ALTERNATIVES	PORTION SIZE	PROTEIN (g)
Cheese - colby, swiss, chedder, mozzarella, gouda	1-inch cube (30 g or 1 oz)	7
Cheese slices, processed	1 slice	3
Cheese string	1 string (21 g)	б
Cheese - Mini Babybel, light	1 serving	7
Cheese - Laughing Cow <sup>®</sup> cheese wedge, light	1 serving (16 g)	б
Cheese - ricotta	125 ml (½ cup)	14
Cheese - 1% Cottage cheese	125 ml (½ cup)	15
Milk (skim, 1%)	125 ml (½ cup)	4
Milk - Soy beverage, plain	125 ml (½ cup)	3
Milk - Skim milk powder	30 ml (2 tbsp)	5
Yogurt, low fat (plain or flavoured)	100 g (½ cup)	4
Yogurt, Greek-style	6 oz	17

#### PROTEIN CONTENT OF SOME COMMON FOODS (CONTINUED)

ANIMAL PROTEIN SOURCES	PORTION SIZE	PROTEIN (g)
Chicken or turkey breast without skin	85 g (3 oz)	25
Deli meats (low-fat ham, low-fat turkey)	1 slice, 1 oz	5
Fish - Tuna, packed in water	85 g (3 oz)	20 to 22
Fish (sole, haddock, halibut, etc.)	85 g (3 oz)	21 to 23
Fish - Fatty (salmon, trout, etc.)	85 g (3 oz)	21 to 23
Ground meat extra lean (beef, chicken, pork, turkey, etc.)	85 g (3 oz)	21 to 23
Pepperette (lean)	1 piece	6
Pork tenderloin	85 g (3 oz)	21
Seafood - Shrimp, Scallops, crabmeat	85 g (3 oz)	14 to 18
Seafood - Imitation seafood	85 g (3 oz)	10
Turkey chili	125 ml (½ cup)	8

# APPENDIX C. FOOD SOURCES OF FIBRE

### **Information about Fibre**

- Fibre includes all parts of plant foods that your body can't digest or absorb. Fibre is also known as roughage or bulk.
- Fibre is found only in plant foods. The best sources of fibre include whole grains, vegetables, fruit, beans, peas, lentils, nuts and seeds.
- **Insoluble fibre** helps promote regularity and a healthy digestive system. You get this type of fibre from wheat bran, whole grains, and some vegetables.
- **Soluble fibre** helps lower blood cholesterol levels and control blood glucose (sugar) levels. You get this type of fibre from oats, barley, psyllium, oranges, dried beans, and lentils.
- A high fibre diet may also help prevent colon cancer.
- Eating high fibre foods may help you feel full for a longer time, which helps with appetite and weight control.

### How much fibre should I aim for?

- Most Canadians only get half of the fibre they need every day.
- Increase your fibre intake slowly and drink more fluids as your fibre intake increases. This will help the fibre to work better and prevent gas, bloating, and diarrhea.
- So far, there is no upper limit for fibre. Therefore a high intake of fibre from food should not be a problem for healthy people.

AGE IN YEARS	AIM FOR AN INTAKE OF GRAMS (g)/DAY	STAY BELOW
Men, 19 to 50	38	
Men, 51 and older	30	These
Women, 19 to 50	25	There is no
Women, 51 and older	21	upper
Pregnant women, 19 and older	28	limit for fibre.
Breastfeeding women, 19 and older	29	nore.

"Food Sources of Fibre" © 2012 Dietitians of Canada - Source: "Canadian Nutrient File 2015". <u>https://www.canada.ca/en/health-canada/</u> services/food-nutrition/healthy-eating/nutrient-data.html

### Fibre Content of Some Common Foods

VEGETABLES	PORTION SIZE	FIBRE (g)
Artichoke, cooked	1 medium	10.3
Baby carrot, raw	8 carrots	2.3
Broccoli, fresh or frozen, cooked	125 ml (½ cup)	2 to 2.3
Brussels sprouts, cooked	125 ml (½ cup)	3
Carrot, cooked	125 ml (½ cup)	2.2
Cauliflower, cooked	125 ml (½ cup)	1.5 to 2.6
Collards or turnip greens, cooked	125 ml (½ cup)	2.7 to 4
Corn, fresh or frozen, cooked	125 ml (½ cup)	1.7
Edamame/baby soybeans, cooked	125 ml (½ cup)	4.3
French beans, cooked	125 ml (½ cup)	8.8
Green peas, cooked	125 ml (½ cup)	3.7 to 5.6
Kohlrabi, raw	250 ml (1 cup)	5.1
Lima beans, cooked	125 ml (½ cup)	4.8
Parsnips, cooked	125 ml (½ cup)	2.7
Potato, with skin, cooked	1 medium	2.9 to 4.3
Pumpkin, canned	125 ml (½ cup)	3.8
Spinach, cooked	125 ml (½ cup)	2.3 to 3.7
Sweet potato, with skin, cooked	1 medium	3.8
Taro, cooked	125 ml (½ cup)	3.6
Yam, cooked	125 ml (½ cup)	2.8
Snap beans (green, yellow, Italian), cooked	125 ml (½ cup)	1.6
Squash (acorn, butternut), cooked	125 ml (½ cup)	1.8 to 2.1

#### FIBRE CONTENT OF SOME COMMON FOODS (CONTINUED)

FRUITS	PORTION SIZE	FIBRE (g)
Apple with skin	1 medium	3.5
Apricots, canned	125 ml (½ cup)	3.1
Apricots, fresh or dried	3 fruit (6 halves)	1.5 to 2.1
Avocado	1⁄2 fruit	6.7
Banana	1 medium	2.1
Breadfruit	125 ml (½ cup)	5.7
Cherries	20	3.4
Currant, dried	60 ml (¼ cup)	2
Figs, dried	60 ml (¼ cup)	3.7
Grapefruit (pink, red, white)	½ fruit	2.3
Guava	1 fruit	4.9
Kiwi fruit	1 large	2.7
Kumquat	5 fruit	6.2
Nectarine	1 medium	2.3
Orange	1 fruit	2.3 to 3.6
Рарауа	½ fruit	2.6
Passion fruit	2 fruit	3.7
Peach	1 medium	2.9
Pear, with skin	1 medium	5.3
Persimmon, Japanese	1 fruit	6
Plum	2 fruits	2.2
Prunes, dried and/or cooked	60 ml (¼ cup)	3.6
Raisins	60 ml (¼ cup)	2.5
Raspberries or blackberries, fresh or frozen	125 ml (½ cup)	4 to 4.2
Star fruit	1 medium	2.5

MILK AND ALTERNATIVES	PORTION SIZE	FIBRE (g)
Almond, coconut, rice beverage	250 ml (1 cup)	0.5 to 1

#### FIBRE CONTENT OF SOME COMMON FOODS (CONTINUED)

GRAIN PRODUCTS	PORTION SIZE	FIBRE (g)
Cereal - check product label for portion size		
Bran cereals	30 g	10.2 to 11.2
Bran flakes, bran flakes with raisins, wheat biscuits	30 g	3.8 to 5
Corn bran	30 g	4.4
Hot multigrain cereal, cooked	175 ml (¾ cup)	4 to 5
Oat bran, cooked	175 ml (¾ cup)	2.4 to 5.1
Wheat germ cereal, toasted	30 g (¼ cup)	4.5
Bread Products		
Bread (whole wheat, pumpernickel)	1 slice (35 g)	2.2
Bread (rye)	1 slice (35 g)	1.4
English muffin, whole wheat	½ muffin	1 .9
Muffin, oat bran	1 small	3
Pita, whole wheat	½ pita	2.4
Other Grain Products		
Barley, cooked	125 ml (½ cup)	2
Bulgar, cooked	125 ml (½ cup)	2.7
Corn bran, raw	20 g (¼ cup)	15.8
Cracker, rye	3 crackers	7.5
Pasta, egg noodles, cooked	125 ml (½ cup)	1
Pasta, white, cooked	125 ml (½ cup)	1.3
Pasta, whole wheat, cooked	125 ml (½ cup)	2.4
Pasta, spinach, cooked	125 ml (½ cup)	2.4
Psyllium fibre husks	15 ml (1 tbsp)	3.4
Quinoa, cooked	125 ml (½ cup)	2.7
Rice (brown, wild), cooked	125 ml (½ cup)	1.5 to 2
Rice bran, raw	20 g (¼ cup)	4.2
Wheat bran, raw	30 g (¼ cup)	11.4
Wheat germ, raw	30 g (¼ cup)	3.5

#### FIBRE CONTENT OF SOME COMMON FOODS (CONTINUED)

MEAT AND ALTERNATIVES	PORTION SIZE	FIBRE (g)
Legumes (dried beans, peas, and lentils)		
Baked beans (plain, with wieners, with pork), canned	175 ml (¾ cup)	7.7 to 10.3
Beans (small white, yellow, cranberry, adzuki, black, pinto, kidney, navy, Great Northern, white, refried), cooked	175 ml (¾ cup)	8.6 to 13.8
Chickpeas/garbanzo beans, cooked	175 ml (¾ cup)	5.5
Hummus	60 ml (¼ cup)	3.7
Lentils, cooked	175 ml (¾ cup)	6.2
Peas (black-eyed, pigeon), cooked	175 ml (¾ cup)	8.3
Soybeans, mature, cooked	175 ml (¾ cup)	8.0
Nuts and Seeds		
Almonds, whole	60 ml (¼ cup)	3.6 to 4
Chia seeds, dried	15 ml (1 tbsp)	3.7
Coconut meat, dried, shredded	125 ml (½ cup)	7.8
Flaxseed (whole, ground)	15 ml (1 tbsp)	3
Nuts (hazelnuts, macadamia, pine, pistachio), without shell	60 ml (¼ cup)	3.1 to 3.3
Pumpkin or squash seeds	60 ml (¼ cup)	3.7
Soy nuts, roasted	60 ml (¼ cup)	2.3
Sunflower seeds, without shell	60 ml (¼ cup)	3.6
Miscellaneous		
Textured vegetable protein (TVP)	24 g (¼ cup) dried granules	4

# APPENDIX D. FOOD SOURCES OF IRON

### Information about Iron

- Iron is a mineral that is important for good health.
- Iron carries oxygen to all parts of your body.
- Low iron levels can leave you tired, pale-looking, and irritable.

### How much iron should I aim for?

AGE IN YEARS	AIM FOR AN INTAKE* OF MILLIGRAMS (mg)/DAY	STAY BELOW*
Men, 19 and older	8	45
Women, 19 to 50	18	45
Women, 51 and older	8	45
Pregnant women, 19 and older	27	45
Breastfeeding women, 19 and older	9	45
* This includes sources of iron from food and supplements.		

 Vegetarians need almost twice the daily recommended amount of iron compared with non-vegetarians.
 Iron from plant-based foods is not absorbed as well by our bodies as animal food sources.

### **Iron Content of Some Common Foods**

You can find iron in both animal and plant foods.

- Animal sources (called "heme iron") include meat, fish, and poultry (chicken, turkey). Our bodies easily absorb this type of iron.
- Plant sources (called "non-heme iron") include dried beans, peas, lentils, and some fruits and vegetables.
- In Canada, grain products like flour, pasta, and breakfast cereals are fortified with iron. Our bodies better absorb this type of iron when taken along with meat/chicken/fish or a source of vitamin C.
   Vitamin C-rich foods include citrus fruits and juices, cantaloupe, strawberries, broccoli, tomatoes, and peppers.

The tables on the following pages will show you which foods are sources of iron.

"Food Sources of Iron" © 2016 Dietitians of Canada - Source: Health Canada, "Canadian Nutrient File 2015". <u>https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/nutrient-data.html</u>

#### IRON CONTENT OF SOME COMMON FOODS (CONTINUED)

VEGETABLES AND FRUIT	PORTION SIZE	IRON (mg)
Apricots, dried	60 ml (¼ cup)	1.6
Asparagus, raw	6 spears	2.1
Beets, canned	125 ml (½ cup)	1.6
Edamame/baby soybeans, cooked	125 ml (½ cup)	1.9 to 2.4
Green peas, cooked	125 ml (½ cup)	1.3
Hearts of palm, canned	125 ml (½ cup)	2
Kale, cooked	125 ml (½ cup)	1.3
Lima beans, cooked	125 ml (½ cup)	2.2
Potato, with skin, cooked	1 medium	1.3 to 1.9
Prune juice	125 ml (½ cup)	1.6
Snow peas, cooked	125 ml (½ cup)	1.7
Spinach, cooked	125 ml (½ cup)	2 to 3.4
Tomato purée	125 ml (½ cup)	2.4
Tomato sauce	125 ml (½ cup)	1.2
Turnip or beet greens, cooked	125 ml (½ cup)	1.5 to 1.7

GRAIN PRODUCTS	PORTION SIZE	IRON (mg)
Cereal, dry, all types	30 g (check product label for serving size)	4 to 4.3
Cracker, soda	6 crackers	1.5 to 2.3
Cream of wheat, all types, cooked	175 ml (¾ cup)	5.7 to 5.8
Granola bar, oat, fruits and nut	1 bar (32 g)	1.2 to 2.7
Oat bran cereal, cooked	175 ml (¾ cup)	2
Oatmeal, instant, cooked	175 ml (¾ cup)	4.5 to 6.6
Pasta, egg noodles, enriched, cooked	125 ml (½ cup)	1.2

MILK AND ALTERNATIVES	PORTION SIZE	IRON (mg)
Yogurt, soy	175 ml (¾ cup)	2.1

#### IRON CONTENT OF SOME COMMON FOODS (CONTINUED)

MEAT AND ALTERNATIVES	PORTION SIZE	IRON (mg)
Meat and Poultry		
Beef, various cuts, cooked	75 g (2.5 oz)	1.4 to 3.3
Chicken, various cuts, cooked	75 g (2.5 oz)	0.4 to 2
Duck, cooked	75 g (2.5 oz)	1.8 to 7.4
Ground meat (beef, lamb), cooked	75 g (2.5 oz)	1.3 to 2.1
Ground meat (turkey, chicken, pork), cooked	75 g (2.5 oz)	0.7 to 0.8
Lamb, various cuts, cooked	75 g (2.5 oz)	1.3 to 2.1
Moose or venison, cooked	75 g (2.5 oz)	2.5 to 3.8
Pork, various cuts, cooked	75 g (2.5 oz)	0.5 to 1.5
Turkey, various cuts, cooked	75 g (2.5 oz)	0.3 to 0.8
Organ Meats		
Kidney, beef, veal, pork, cooked	75 g (2.5 oz)	2.3 to 4.4
Kidney, lamb, cooked	75 g (2.5 oz)	9.3
Liver, beef, cooked*	75 g (2.5 oz)	4.9
Liver, chicken, turkey, lamb, cooked*	75 g (2.5 oz)	6.2 to 9.7
Liver, pork, cooked*	75 g (2.5 oz)	13.4
*Pregnant women should limit intake of liver to one	serving per week.	
Fish and Seafood		
Clams, canned	75 g (2.5 oz)	2
Crab, cooked	75 g (2.5 oz)	0.6 to 2.2
Fish (mackerel, trout, bass), cooked	75 g (2.5 oz)	1.4 to 1.7
Octopus, cooked	75 g (2.5 oz)	7.2
Oysters, cooked	75 g (2.5 oz)	3.3 to 9
Sardines, canned	75 g (2.5 oz)	1.7 to 2.2
Seafood (shrimps, scallops, lobster), cooked	75 g (2.5 oz)	0.2 to 0.4
Tuna, light, canned in water	75 g (2.5 oz)	1.2
Meat Alternatives		
Beans (white, kidney, navy, pinto, black, roman/ cranberry, adzuki), cooked	175 ml (¾ cup)	2.6 to 4.9
Lentils, cooked	175 ml (¾ cup)	4.1 to 4.9
Pumpkin or squash seeds	60 ml (¼ cup)	1.4 to 4.7
Soybeans, mature, cooked	175 ml (¾ cup)	6.5
Tofu, cooked	150 g (¾ cup)	2.4 to 8

#### IRON CONTENT OF SOME COMMON FOODS (CONTINUED)

MEAT AND ALTERNATIVES	PORTION SIZE	IRON (mg)
Meat Alternatives		
Almond butter	15 ml (1 tbsp)	1.1
Baked beans, canned	175 ml (¾ cup)	2.2
Egg, cooked	2 large	1.2 to 1.8
Hummus	60 ml (¼ cup)	1.5
Meatless, luncheon slices	75 g (2.5 oz)	1.4
Meatless (sausage, chicken, meatballs, fish sticks),	75 g (2.5 oz)	1.5 to 2.8
cooked		
Nuts (cashews, almonds, hazelnuts, macadamia,	60 ml (¼ cup)	1.3 to 2.2
pistachio nuts), without shell		
Peas (chickpeas/ garbanzo beans, black-eyed,	175 ml (¾ cup)	1.9 to 3.5
split), cooked		
Sesame seeds, roasted	15 ml (1 tbsp)	1.4
Tempeh/fermented soy product, cooked	150 g (¾ cup)	3.2
Miscellaneous		
Blackstrap molasses	15 ml (1 tbsp)	3.6
Yeast extract spread (marmite or vegemite)	30 ml (2 tbsp)	1.5

## APPENDIX E. GASTRIC BYPASS FOOD **GUIDE PYRAMID**



#### **Grains/Starches** (2 servings a day) **1 serving equals:**

125 ml (<sup>1</sup>/<sub>2</sub> cup) oatmeal 125 ml (<sup>1</sup>/<sub>2</sub> cup) dry cereal 1 small corn tortilla 60 ml (¼ cup) brown rice or pasta 1 slice whole wheat/rye bread

#### Healthy Fats (4 servings a day) **1** serving equals:

5 ml (1 tsp) oil 15 ml (1 tbsp) salad dressing 14 g (1 tbsp) nuts/seeds 30 ml (2 tbsp) guacamole

1/8 avocado 7.5 ml (½ tbsp) mayonnaise

#### Fruit (2 servings a day) 1 serving equals:

125 ml (<sup>1</sup>/<sub>2</sub> cup) canned fruit 1 medium fruit <sup>1</sup>/<sub>2</sub> large fruit

Vegetables (2 servings a day) 1 serving equals:

125 ml (<sup>1</sup>/<sub>2</sub> cup) raw vegetables 125 ml (<sup>1</sup>/<sub>2</sub> cup) cooked vegetables

#### Protein (8 to 10 servings a day) **1** serving equals:

28 g (1 oz) poultry, fish or lean meat 60 ml (¼ cup) of low-fat cottage cheese or ricotta cheese 125 ml (<sup>1</sup>/<sub>2</sub> cup) of legumes 175 ml (6 oz) non-fat/low-fat yogurt

1 whole egg or 2 egg whites 60 ml (¼ cup) egg substitute 125 ml (4 oz) non-fat Greek yogurt 250 ml (8 oz) skim milk 28 g (1 oz) low-fat cheese

# APPENDIX F. VITAMIN AND MINERAL SUPPLEMENTATION SUMMARY

After your duodenal switch, you will need to take the following supplements **lifelong**. The recommended doses for the **vitamin and mineral supplements you must take every day** are summarized below.

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

**Disclaimer:** Follow the blood work schedule provided to you. The dose you take may be slightly different from the ones listed here and we can adjust your dosing based on your blood work results.

SUPPLEMENT	RECOMMENDED DOSE	ADDITIONAL NOTES
1. Multivitamin and Mineral Supplement	Depends on the multivitamin/ mineral you choose to take: Multivitamin (such as Kirkland®, Equate®, Centrum®, Jamieson®): Take 1 tablet, 2 times a day OR Opurity® Bypass Optimized multivitamin: Take 1 tablet a day	<ul> <li>Choose a complete multivitamin and mineral supplement that contains iron, zinc, copper, selenium, and folic acid.</li> <li>DO NOT take children's, 'gummy', 'extended release', 'time release', or men's multivitamins. These are NOT recommended.</li> </ul>
2. Vitamin A	Take 10,000 IU, once a day	
3. Vitamin E	Take 400 IU, once a day	
4. Vitamin K	Take 300 mcg, once a day	
5. Vitamin D	Take 1,000 IU, 2 times a day (For a total of 2,000 IU a day)	<ul> <li>Take Vitamin D with the calcium citrate supplement. The calcium citrate supplement will give you an additional 400 to 800 IU of vitamin D a day, depending on the pill or liquid you buy.</li> </ul>

SUPPLEMENT	RECOMMENDED DOSE	ADDITIONAL NOTES
6. Calcium Citrate with Vitamin D	Take 600 mg, 3 to 4 times a day (For a total of 1,800 to 2,400 mg a day)	<ul> <li>DO NOT take calcium citrate at the same time as the iron supplement or multivitamins containing iron.</li> <li>Always take these supplements</li> <li>2 hours apart.</li> </ul>
7. Vitamin C	Take 500 mg, once a day	<ul> <li>Take Vitamin C with the iron supplement.</li> </ul>
8. Iron	The dose depends on the iron supplement you choose to take: Take 300 mg ferrous sulfate, once a day OR Take 1 capsule Feramax® 150, once a day OR Take 1 capsule Triferexx® 150, once a day	<ul> <li>Your multivitamin/multi-mineral supplement contains some iron; however, you will still need to take an additional iron supplement every day.</li> <li>Take the iron supplement with the Vitamin C supplement.</li> <li>DO NOT take iron at the same time as the calcium supplement. Always take these supplements 2 hours apart.</li> <li>DO NOT take iron with milk, milk products, calcium, caffeine products, or antacids.</li> </ul>
9. Vitamin B12	The dose depends on the B12 supplement you choose to take: Take a 1,000 mcg oral pill, once a day OR Take a 1,000 mcg sublingual tablet dissolved under your tongue, once a day OR Take a 1,000 mcg injection from your family doctor, once a month	

# APPENDIX G. SUPPORT GROUPS AT HRH

### BARIATRIC SURGERY SUPPORT GROUP Life after weight loss surgery...

The support group can provide the moral support needed to face the various challenges that may arise before and after surgery.

A social worker from Humber River Health will facilitate the group through the Ontario Telemedicine Network (OTN) system.

Topics discussed include:

- Emotional eating
- Mindful eating
- Relapse prevention
- Body image
- Techniques on handling stress
- And many other topics!

#### This support group will be held at:

Humber River Health Bariatric Clinic 1235 Wilson Ave., Toronto, ON Located at the South Entrance, Level 1, Portal of Care C.



If you have any questions, please call the Humber River Health Bariatric Social Worker at (416) 242-1000 ext. 23328

### EATING EXPLORED: A Skills and Therapy Based Group

- Do you feel you are an emotional eater?
- Do you want to learn about your eating patterns?
- Do you have challenges controlling your food cravings?
- Do you need motivation to optimize your weight loss journey?
- Do you want to learn some key strategies to promote healthy eating patterns?





#### THERAPEUTIC INTERVENTIONS:

Integrated approach of Cognitive Behavioral Therapy (CBT) and Dialectical Behavioral Therapy (DBT).

**TOPICS:** Motivation, Coping, Mind Over Mood, Mindfulness, Body Image, Interpersonal Effectiveness, and Relapse Prevention

For more information and to sign up for this skills and therapy based group, please call the Humber River Health Bariatric Clinic at (416) 242-1000 ext. 23316

# APPENDIX H. HELPFUL RESOURCES

### Websites

#### OBESITY HELP

www.obesityhelp.com

An interactive website that allows you to track your weight loss goals and interact with other members through blog posts. You will need to become a member to access these resources. Membership to this website is free.

#### **MY FITNESS PAL**

#### www.myfitnesspal.com

A free website that allows you to track the food you eat and your exercise. You do not need a membership to use this site.

#### CANADIAN PHYSICAL ACTIVITY GUIDELINES csepguidelines.ca

This website allows you to download the Canadian Physical Activity Guidelines.

### Books

#### THE COMPLETE WEIGHT-LOSS SURGERY GUIDE & DIET PROGRAM (Sue Ekserci and Dr. Laz Klein)

This book is written by the registered dietitians and surgeons of the Humber River Health 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.

#### WEIGHT LOSS SURGERY COOKBOOKS FOR DUMMIES (Brian Davidson, David Fouts, Karen Meyers)

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

#### EATING WELL AFTER WEIGHT LOSS SURGERY (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.

#### RECIPES FOR LIFE AFTER WEIGHT-LOSS SURGERY (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.

### Smartphone Applications/ Podcasts

#### **MYFITNESSPAL OR LOSE IT!**

These free apps allows you to track your food and daily activity. The database contains food from restaurants and grocery stores.

#### BARITASTIC

This free app allows you to track your journey, goals, set reminders, and upload photos and notes.

#### EAT, CHEW, REST

This free app has an adjustable timer that will help you eat slower during meals and snacks.

#### EAT SLOWER

This free app will help you eat slower during meals and snacks. There is an adjustable timer that is set between bites.

# EATING MINDFULLY: EAT, DRINK & BE MINDFUL

This free app will help you eat mindfully. You can track your hunger level before and after meals.

#### SPARK PEOPLE

This app has a diet and fitness tracker. To download this app, you must pay a fee.

# WEIGHT LOSS SURGERY PODCAST (Reeger Cortell, NP)

This free podcast allows you to listen to conversations about bariatric surgery with health professionals and patients.

### **Community Resources**

There are valuable community resources that can help you continue to manage your weight and work towards your goals.

#### BARIATRIC MEDICAL WEIGHT LOSS PROGRAMS

Medical Weight Loss is a non-surgical, medically supervised treatment program that helps patients lose weight safely. The programs focus on developing lifestyle skills that promote healthy eating habits and physical activity.

Ontario has the following Medical programs. Ask your family doctor about referring you to one in your area:

- Humber River Health
- Hotel Dieu Hospital Kingston

- Sudbury Regional Hospital
- The Ottawa Hospital
- Windsor Regional Hospital
- Guelph General Hospital
- Hamilton General Hospital
- Thunder Bay Regional Health Sciences

#### FAMILY HEALTH TEAMS

Family Health Teams are primary health care organizations that include a team of family physicians, nurse practitioners, registered nurses, social workers, dietitians, and other professionals who work together to provide primary health care for their community. They ensure that people receive the care they need in their communities, as each team is set-up based on local health and community needs.

For a list of Family Health Teams in your area visit: <u>http://www.health.gov.on.ca/en/pro/programs/fht/fht\_progress.aspx</u>

#### COMMUNITY HEALTH CENTRES

Community Health Centres are interprofessional teams that respond to people's individual health issues. All services are carefully tailored to respond to the diverse needs of the communities they serve.

For a list of Community Health Centres in your area visit: <u>http://www.health.gov.on.ca/en/</u> common/system/services/chc/locations.aspx



Surgical Program

# Questions for my Bariatric Team

My questions are:		

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#### My questions are:

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Surgical Program

# My Nutrition and Lifestyle Goals

#### My nutrition and lifestyle goals are:

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My nutrition and lifestyle goals are:

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Surgical Program

# **My Weight Loss Progress**

VISIT	DATE	WEIGHT	BMI	WEIGHT LOSS
Initial Assessment				
Reassessment				
1-month follow up				
3-month follow up				
6-month follow up				
12-month follow up				
2-year follow up				
3-year follow up				
4-year follow up				
5-year follow up				

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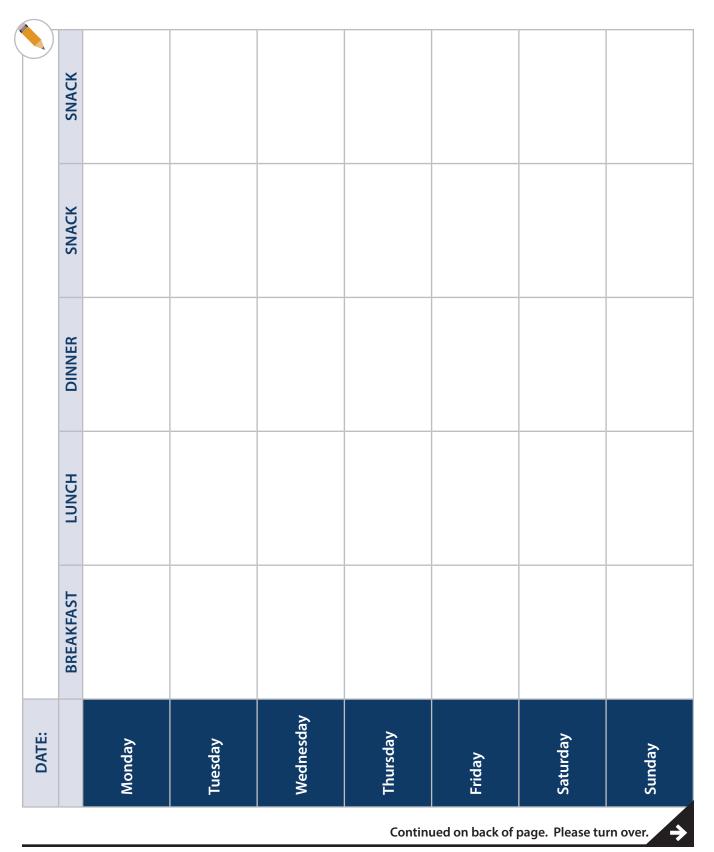
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Surgical Program

# **My Menu Planner**



Sunday	Saturday	Friday	Thursday	Wednesday	Tuesday	Monday		DATE:
							BREAKFAST	
							LUNCH	
							DINNER	
							SNACK	
							SNACK	

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Surgical Program

# **My Food Journal**

DATE:FOODTIME OF DAYFOODBreakfast	AMOUNT	
BreakfastTime:Morning SnackTime:LunchTime:Afternoon SnackTime:DinnerTime:	AMOUNT	TYPE/BRAND/DETAILS
Time:Morning SnackTime:LunchTime:Afternoon SnackTime:DinnerTime:		
Morning SnackTime:LunchTime:Afternoon SnackTime:DinnerTime:		
Time:LunchTime:Afternoon SnackTime:DinnerTime:		
Time:LunchTime:Afternoon SnackTime:DinnerTime:		
Lunch         Time:         Afternoon Snack         Time:         Dinner         Time:		
Time:Afternoon SnackTime:DinnerTime:		
Afternoon SnackTime:DinnerTime:		
Time: Time:		
Dinner Time:		
Time:		
Evening Spack		
Evening Spack		
Time:		
Supplements TakenMultivitamin/r 600 mg Calciu a day)Understand 	nultimineral m citrate (3 to 4 times	<ul> <li>Vitamin B12</li> <li>Other:</li> <li>Other:</li> </ul>
How I felt today:		

DATE:	Monday May 17, 2021				
TIME OF DAY	FOOD	AMOUNT	TYPE/BRAND/DETAILS		
Breakfast	Fruit smoothie	125 ml (½ cup)	Skim milk		
		125 ml (½ cup)	Frozen strawberries		
Time: 9:00-9:30 a.m.		30 ml (2 tbsp)	Whey isolate protein powder		
9:00-9:50 a.m.		1 packet	Splenda <sup>®</sup> sweetener		
Morning Snack					
Time:					
Lunch	Turkey sandwich	1 slice	Dempsters® whole wheat bread		
		5 ml (1 tsp)	Dijon mustard		
Time:		1 slice	Tomato		
12:20-12:50 p.m.		3 slices	Schneiders® deli turkey		
	Milk	250 ml (1 cup)	Skim		
Afternoon Snack	Cheese	1 piece	Original Babybel <sup>®</sup> (red)		
Time: 3:00-3:05 p.m.					
Dinner	Chicken	120 g (4 oz)	Pan fried, boneless, skinless breast		
	Olive oil	15 ml (1 tbsp)	Bertoli®, extra virgin		
Time:	Soy sauce	5 ml (1 tsp)	China Lily <sup>®</sup> low sodium		
6:15-6:45 p.m.	Rice	125 ml (½ cup)	Steamed brown rice		
	Vegetables	250 ml (1 cup)	Steamed broccoli		
Evening Snack					
Time:					
Supplements Taken	<ul> <li>Multivitamin/multimineral</li> <li>600 mg Calcium citrate (3 to 4 times a day)</li> <li>Vitamin D:</li> </ul>		<ul> <li>Vitamin B12</li> <li>Other:</li> <li>Other:</li> </ul>		
How I felt today:					

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Surgical Program

## My Emotional Food Journal

How much did I eat?			
What did I eat?			
What did I do - eat or do something else?			
What was my mood or feeling at the time?			
When did I get the urge to eat (date and time)?			

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			When did I get the urge to eat (date and time)?
			What was my mood or feeling at the time?
			What did I do - eat or do something else?
			What did I eat?
			How much did I eat?

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Surgical Program

## My Blood Sugar Record

DATE	BREAI	KFAST	LUN	NCH	DIN	NER	
	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	EVENING

Before Meals: 4.0 to 7.0 mmol/L

2 Hours after Meals: 5.0 to 10.0 mmol/L

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DATE	BREA	KFAST	LUN	NCH	DIN	NER	
	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	EVENING

Before Meals: 4.0 to 7.0 mmol/L 2 Hours after Meals: 5.0 to 10.0 mmol/L

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My Fluid and Protein Record

Surgical Program

MONDAY TIME:	FLUID TYPE	FLUID AMOUNT	<b>PROTEIN TYPE</b>	PROTEIN AMOUNT
	FLUID TOTAL:		PROTEIN TOTAL:	

			1	
TUESDAY TIME:	FLUID TYPE	FLUID AMOUNT	<b>PROTEIN TYPE</b>	PROTEIN AMOUNT
	FLUID TOTAL:		PROTEIN TOTAL:	

WEDNESDAY	<b>FLUID TYPE</b>	FLUID	<b>PROTEIN TYPE</b>	PROTEIN
TIME:		AMOUNT		AMOUNT
	FLUID TOTAL:		PROTEIN TOTAL:	

THURSDAY TIME:	FLUID TYPE	FLUID AMOUNT	<b>PROTEIN TYPE</b>	PROTEIN AMOUNT
	FLUID TOTAL:		PROTEIN TOTAL:	

FRIDAY TIME:	FLUID TYPE	FLUID AMOUNT	<b>PROTEIN TYPE</b>	PROTEIN AMOUNT
	FLUID TOTAL:		PROTEIN TOTAL:	

SATURDAY TIME:	FLUID TYPE	FLUID AMOUNT	<b>PROTEIN TYPE</b>	PROTEIN AMOUNT
	FLUID TOTAL:		PROTEIN TOTAL:	

SUNDAY	FLUID TYPE	FLUID	<b>PROTEIN TYPE</b>	PROTEIN
TIME:		AMOUNT		AMOUNT
	FLUID TOTAL:		PROTEIN TOTAL:	

	1			
TIME:	FLUID TYPE	FLUID AMOUNT	<b>PROTEIN TYPE</b>	PROTEIN AMOUNT
	FLUID TOTAL:		PROTEIN TOTAL:	

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