



# Weight Loss Surgery

## Patient Information Guide

**Medical Disclaimer:** The information provided on this guide is intended for patients enrolled in the NSH Bariatric Surgery Program. The information should ONLY be used in consultation with the NSH Bariatric Surgery team.

## Halifax Obesity & Weight Loss Surgery Clinic

The Halifax Obesity Network is a site designed to support those challenged with chronic obesity, Nova Scotia Health (NSH) Weight Loss Surgery (WLS) patients, and Health Care Professionals working with patients challenged with Chronic Obesity.

Obesity Canada has published and posted the 2020 Obesity Clinical Practice Guidelines found here: <https://obesitycanada.ca/guidelines/>

Our WLS Program incorporates the 2020 guidelines and attempts to operationalize components of these guidelines with a one-page referral document called the Pathway to Bariatric Surgery.

Nova Scotia has the second highest prevalence of chronic obesity and Type 2 Diabetes with comorbid obesity in Canada. Recognizing this, NSH is committed to addressing the obesity epidemic through:

- Support for Behavior / Lifestyle Modification
- Incorporation of Obesity Canada Guidelines Recommendations
- Medical Management of Obesity
- Weight Loss Surgery

### **Bariatric Surgery Consult**

Please have your primary care provider submit a *Pathway to Bariatric Surgery* form on your behalf.

The current wait times for Bariatric Surgery (for Weight Loss) are available on the Nova Scotia Wait Times Website. We are working to increase our capacity to have patients seen sooner.

The Halifax Obesity Network is unable to respond to concerns regarding expected wait times for Weight Loss Surgery. Both NSH and the Nova Scotia Department of Health and Wellness have programs that deal with wait time concerns. Please have patients with wait time questions contact these programs.

### **Obesity and WLS Clinic**

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## WLS General Information

### What is obesity? How can weight loss surgery (WLS) help?

In recent years, we have slowly begun to understand obesity as a disease – a chronic disease that requires medical attention. We now believe that obesity is a complex condition with genetic, environmental, cultural, and psychological causes. It is a mistake to “blame” extreme obesity on a simple lack of willpower. In Canada alone, obesity affects one in four individuals in the general population. For many people with this devastating illness, diets alone rarely produce lasting results.

For people with the most extreme forms of obesity, WLS may offer hope of significant, lasting weight loss. The surgery provides the extra help that many people with extreme obesity need. It creates changes in the digestive system that help patients alter their eating habits. This becomes part of a comprehensive, life-long health plan that includes other components such as regular exercise, healthy food choices, and close, ongoing monitoring by members of a health care team.

### Do I have severe obesity?

Surgical treatment for obesity is not for everyone who is overweight. It is usually reserved for people who have so-called “severe obesity.”

We use a tool called body mass index (BMI) to measure the level of obesity. You can use the chart on the next page to find your BMI.

Find your height, in inches, in the left column. Move across and find a weight closest to your own. If your weight is lower than all of the values shown next to your height, your BMI is less than 35. If you find a weight close to yours in the row next to your height, the number at the top of that column is your BMI.

Examples:

- Someone who is 66 inches tall and weighs 309 pounds has a BMI of 50.
- Someone who is 72 inches tall and weighs 250 pounds has a BMI of less than 35.

### BMI chart, for BMI 36-54

BMI	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Height (inches)	Body Weight (pounds)																			
58	167	172	177	181	186	191	196	201	205	210	215	220	224	229	234	239	244	248	253	258
59	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267
60	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276
61	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285
62	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295
63	197	203	208	214	220	225	231	237	242	248	254	259	265	270	278	282	287	293	299	304
64	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314
65	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324
66	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334
67	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344
68	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354
69	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365
70	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376
71	250	257	265	272	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386
72	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397
73	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408
74	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420
75	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431
76	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443

### What does the BMI number mean?

The BMI takes both height and weight into account, so it gives a more accurate picture of body size than weight alone. In general, we use the following categories of BMI when we talk about body weight:

- Underweight = <18.5
- Normal weight = 18.5-24.9
- Overweight = 25-29.9
- Obesity = BMI of 30 or greater
  - Class I Obesity = 30-35
  - Class II Obesity = 35-40
  - Class III Obesity = >40

In our program, we use the BMI to help us decide if someone may benefit from WLS. The surgery is not usually performed on someone with a BMI of less than 40, though there are important exceptions. For example, if there are serious medical problems related to weight, the surgery may be considered in someone with a BMI between 35 and 40. *(The surgery is not done on anyone whose BMI is less than 35.)*

**BMI = weight in pounds x 705/height in inches squared**

1. What is your weight in pounds? Write your answer \_\_\_\_\_
2. Multiply your answer in #1 by 705. Write your answer \_\_\_\_\_
3. What is your height in inches? Write your answer \_\_\_\_\_
4. Multiply the answer in #3 by itself. Write your answer \_\_\_\_\_
5. Divide the answer in #2 by the answer in #4. This is your BMI.

**Unit Conversions**

cm to m: ÷ by 100	inches to cm X by 2.54
cm to inches X 0.4	inches to feet ÷ by 12
lbs to kg: ÷ by 2.2	kg to lbs: X 2.2

**Why is it so important to treat severe obesity?**

Obesity is now the second leading cause of preventable death in Canada. The only preventable condition that kills more people than obesity is cigarette smoking. It is estimated that about 30,000 people a year die from obesity and obesity-related disease.

Extremely obese people have a shorter lifespan than non-obese people. Medical conditions associated with obesity include diabetes, high blood pressure, heart disease, sleep apnea, stroke, arthritis, and several types of cancer. Psychological effects can be equally devastating and include shame, guilt, and depression.

**What is weight loss surgery?**

Weight loss surgery changes the way your digestive system works by closing off parts of the stomach. Making the stomach smaller means that you feel full after eating a small amount of food. Operations that reduce stomach size are known as *restrictive operations* because they restrict the amount of food the stomach can hold.

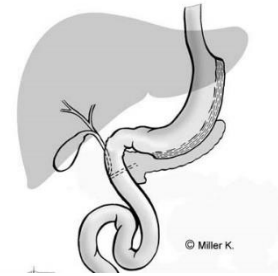
Some operations combine restriction with a partial bypass of the small intestine (the intestines are where food and nutrients are absorbed into the body). By creating a detour around part of the intestine, less food is absorbed. Operations that use this mechanism to enhance weight loss are called *malabsorptive operations*.

There are a number of different restrictive and malabsorptive operations being done. Here at NSH, we are doing a restrictive procedure called the “sleeve gastrectomy”, also called the gastric sleeve resection. Other types of weight loss surgeries are not done here. These include the laparoscopic adjustable gastric band procedure (LAGB) (stomach band, a restrictive operation), the Roux-en Y gastric bypass, the biliopancreatic diversion (a malabsorptive operation), and the duodenal switch (a malabsorptive operation).

**Laparoscopic procedure:** When the laparoscopic technique is utilized, several small incisions are made in the abdomen. A laparoscope connected to a video camera is inserted through one of the incisions. The physician is then able to perform the procedure by viewing the internal organs on a television monitor.

Compared to the open procedure requiring a large surgical incision, when the laparoscopic approach is utilized, the post-operative recovery is shorter, and the patient is less likely to develop certain complications (e.g., hernia). However, laparoscopic surgery is technically more complex, and it is extremely important that a highly trained, qualified laparoscopic weight loss surgeon perform the procedure.

**Gastric Sleeve procedure:** The laparoscopic gastric sleeve resection is a technique which has been performed for the last decade. During this procedure, several small incisions are made in the patient's abdomen, and using a laparoscope for guidance, the surgeon resects a portion of the stomach. Weight loss occurs because the smaller stomach will only allow the patient to consume small amounts of food at a time. This procedure is **not reversible**.



Gastric sleeve resection has been shown to produce significant weight loss. This procedure is less invasive, fewer serious complications are seen, and patients experience an improvement in obesity related health issues. Complications, which may occur with sleeve surgery, include:

- Postoperative bleeding (1-5% of patients)
- Gastrointestinal leak (1-3% of patients)
- Deep vein thrombosis (1-2% of patients)
- Splenectomy (1% of patients)
- Pulmonary embolus (0.5% of patients)
- Death within 30 days (< 0.5% of patients)

### **Isn't that a drastic way to lose weight?**

Weight loss surgery is a major decision. It is not a quick fix, and requires a lifelong commitment to diet, exercise, and medical follow-up. This surgery is a consideration only for patients who meet strict clinical criteria.

Obesity and obesity related illnesses such as hypertension, type 2 diabetes, stroke, cardiovascular disease, and several forms of cancer, are increasing at alarming rates. Following weight loss surgery, patients experience improvement in obesity related illnesses, and the risk of early death is diminished. For seriously obese patients who have been unsuccessful

in nonsurgical weight loss methods such as diets, medications, behavior modification, or exercise programs, weight loss surgery may be a life-saving intervention. In other words, for many patients, the potential risks from not having the surgery may be greater than the risks from possible complications of having the procedure.

## How would weight loss surgery help me lose weight?

These operations help you lose weight in two main ways:

- **Smaller stomach** –You are given a new, small “pouch” that serves as your stomach. A much smaller stomach means that you feel full with a small amount of food. Secondly, this new stomach is less resistant to stretching.
- **Decreased appetite** – The portion of the stomach removed is responsible for producing hunger hormones (ghrelin) and thus after surgery you will experience decreased hunger.

These changes, in combination with an overall plan of diet and exercise, can increase your chances of losing weight.

## How much weight will I lose if I have the operation?

The rate and amount of weight loss is different for everyone and depends in part on the type of surgery you have, your food choices following surgery, and how much exercise you can maintain. Patients usually lose approximately 50% to 70% of their excess body weight, in up to 5 years with the gastric sleeve procedure. This is approximately 1/3 (33%) of current weight. Weight loss occurs rapidly right after surgery – up to six pounds per week at first. A somewhat slower rate of loss continues for 12-24 months in most cases. Remember, no two patients are the same, and weight loss may be slower. The goal after the first few months following this surgery is to lose around 1 to 2 pounds a week. The rate of weight loss is not always steady, some months you will lose more weight than others.

Weight loss is not guaranteed, and weight regain is possible, especially if a healthy lifestyle is not maintained. All patients need to follow a sensible diet and get regular exercise to maintain weight loss long term.

Remember, our goal in performing this surgery is to help you get rid of the excess body weight that puts you at risk for serious medical problems. The goal is not to make you thin. Some people believe that after weight loss surgery, they should be able to reach the extremely low (and sometimes unhealthy) body sizes that are emphasized in our society. Some patients do achieve a healthy BMI of 25 or less after this surgery; however, most patients will remain “overweight” after surgery by the BMI criteria. It is important that you have realistic expectations about what can be achieved through this surgery. We encourage our patients to focus primarily on how they feel and the steps they can take to improve their overall physical and emotional health, rather than focusing on body appearance. By paying careful attention to diet and exercise, and using vitamins and/or supplements as prescribed, most patients in our program are pleased with the weight loss they are able to achieve.

## What happens to my skin once I lose so much weight?

There is often some degree of loose skin after weight loss, depending on age and amount of weight lost. Areas that might be affected are the abdomen, trunk, upper arms, breasts, and thighs. Plastic surgery can be considered after weight loss has been stable for approximately one year. It is important to understand that plastic surgery cannot reverse all the changes to

skin caused by skin stretching. Plastic surgery is done for health reasons such as skin rashes, ulcers, and persistent infections, not for an improved appearance.

### **I have heard I can lose my hair after the surgery!?**

Hair loss can be associated with any surgery, rapid weight loss, as well as emotional stress. It is more commonly noticed in women and is usually seen approximately 3 months after surgery and can last 3 to 6 months. Fortunately, post-op hair loss does not come out in clumps, it is more of a thinning, and it is usually temporary. Eating a healthy diet with plenty of protein (at least 60 to 80 grams of protein per day) and taking your multivitamin and mineral supplement will help.

### **What factors would be considered in deciding if weight loss surgery is right for me?**

As noted above, most patients who enter our program have a BMI of 40 or greater. Other factors that suggest surgery may be a good option include:

- BMI greater than 35 and a serious medical condition related to weight, such as diabetes, sleep apnea or heart disease.
- BMI greater than 40 with or without a serious medical condition.
- BMI less than 60.
- Age between 19 and 65 years (with some exceptions)
- A long history of obesity, with many failed attempts at weight loss
- No current issues with drug or alcohol abuse or smoking. You must be a non-smoker for at least 6 months prior to surgery.
- No eating disorders such as Binge Eating, Bulimia or Anorexia.
- No serious psychiatric illness, such as problems that would impair someone's ability to follow a program of lifetime diet management and follow-up.

### **Contraindications to surgery**

There are some circumstances where the risk of the surgery may outweigh the potential benefits. For example, weight loss surgery may be contraindicated for patients with severe pulmonary disease, unstable coronary artery disease, and other conditions which may seriously compromise anesthesia, wound healing, and safe weight loss. Women who are pregnant, planning to become pregnant within two years or are currently breastfeeding would not be considered for WLS. Additionally, patients, who are unable to understand basic principles of the procedure or follow postoperative instructions, would not be considered as suitable candidates. You must quit smoking for at least 6 months prior to surgery to decrease your surgical and post-surgical risks. Here at NSH, we also require our patients to abstain from illegal substances prior to surgery.



## What kind of diet do I have to follow after surgery?

It is important to understand that **all patients who have weight loss surgery must be committed to following a carefully prescribed program of healthy eating and exercise.**

This is a **lifelong commitment** designed to help you achieve and maintain weight loss as safely as possible. Because the surgery reduces the size of your stomach, it is important to make sure you select the right foods and fluids in the appropriate amounts to ensure proper nutrition following the operation. There are also many eating techniques one must learn to aid in digestion (eating slowly and chewing thoroughly).

There are five diet stages after surgery. You will receive information on choosing low sugar, low fat, and high protein foods to optimize your weight loss and health.

A very brief description of the five diet stages is given here.

**Stage 1** is sips of water only. You are on this stage for 1 day or less in hospital.

**Stage 2** is clear fluids that are non-carbonated and decaffeinated. You are on this stage for 1 day or less in hospital.

**Stage 3** consists of high protein and low-fat fluids. You are on this stage for 4 weeks.

**Stage 4** consists of pureed, soft foods that are high in protein. Portion control and proper chewing of food are important parts of this phase. You are on this stage for 4 weeks.

**Stage 5** – At 8 weeks after surgery, you begin Stage 5. This is the stage you will stay on for life with an emphasis on small balanced meals and snacks, adequate fluids and protein, along with a daily multivitamin and mineral supplement.

If you are going to have weight loss surgery, you will meet with the WLS team and dietitian before your operation and as scheduled throughout the recovery period. Follow-up is essential to achieving success. You will be provided with detailed nutrition information and guidance with your food choices. Some of the things you will learn about in detail include:

- **Fluid** – More than half of a healthy body consists of fluid. After your surgery, with your new smaller stomach, it will be necessary for you to take in small sips and drink every hour you are awake. Your dietitian will talk about watching for signs of dehydration, including headache, dry mouth, low urine output, and constipation. Once you are on stages 4 and 5, you must drink fluids between meals, not with meals.
- **Protein** - Your body needs protein to build and repair tissues, maintain healthy hair, skin and muscle, aid in digestion and in weight loss. Your dietitian will review how much and which types of protein (dairy, meat, fish, poultry, and soy) are the best choices for you after surgery.
- **Carbohydrates** – Carbohydrates such as whole grains, vegetables, fruit & legumes are a good source of energy, fiber, vitamins, and minerals. Initially, some of these foods will be limited & modified in consistency (liquid, soft, cooked). As you progress in your diet plan, your dietitian will discuss the best sources of carbohydrates to include in your diet & the importance of controlling the portion.

- **Fat** – Fat provides energy, helps to absorb, and transport vitamins A, D, K and E, plays a role in maintaining healthy nervous and immune systems, and helps you have healthy skin, hair, and nails. Not all fats are alike, and you will learn which types of healthy and essential fats to include in your diet.
- **Vitamins and minerals** – After WLS you will need to take a multivitamin and mineral supplement for the rest of your life. Depending on your food intake & your blood work reports, you may also be advised to take other additional nutritional supplements.

Your WLS team will guide you throughout the entire process. By learning what to eat and drink, and in what amounts, you will be able to choose the right foods to help maintain a healthy weight. Your small stomach pouch affects the amount you can take in at one time and the types of food you can comfortably eat. For many people, this means the ability to eat large amounts of food is lost forever. Some people will not be able to tolerate certain raw vegetables, bread, pasta, rice or red meat after the surgery.

It is important to understand that in the months and years following surgery, overeating is still possible and can cause your small stomach pouch to stretch. **The surgery does not protect you from re-gaining weight if you take in a large number of calories from unhealthy food choices, frequent snacking/grazing, and large meals or not being active on a regular basis.** However, the surgery does help most patients to keep overall calorie intake in check, resulting in weight loss and the maintenance of a healthier body weight.

### **If I follow a healthy eating plan, is that all that is needed to lose weight?**

We believe there are three factors related to long-term successful weight loss:

1. **Diet and Nutrition** –Your weight loss and the maintenance of your weight loss are primarily the result of taking in fewer calories following the weight loss surgery. You must habitually choose healthier foods in smaller portions such as lean proteins, whole grains, fruits, and vegetables & low-fat dairy products. You will need to limit high fat and high sugar foods, processed foods and alcohol.
2. **Exercise** – Regular exercise is extremely important for success. This means continuous activity for at least 30 – 60 minutes a day, 7 days a week. We suggest walking, either in a pool if you need the support, or on a soft surface such as a treadmill. In addition, resistance exercises such as light weights and resistance bands will help with weight loss and toning. Even if you haven't exercised in many years, some sort of safe plan will be important from the start.
3. **Psychological Coping** – The weight loss surgery will have dramatic effects on many areas of your life. Your long-term success depends very much on how these changes impact you as a person. Dealing with a dramatic change in the shape of your body includes:
  - what it means to develop a new “body image”
  - adjustments in lifestyle that are needed in order to follow nutrition and exercise routines
  - discovering that people treat you differently as you approach a smaller weight
  - the reactions of family and friends to the changes that take place after surgery

## How will I feel after the surgery? How long will I be in the hospital?

In general, patients who have a gastric sleeve procedure stay in hospital only 2 days. Occasionally, patients may have to stay longer. Your recovery from this surgery is like that of any patient undergoing an abdominal operation. You will have some discomfort, but this is usually well controlled with medication. We try to make sure patients are up and about on the day of surgery, but most people do not return to their full schedules for about 4 weeks. If you decide to have the operation, you will receive more detailed information about what to expect.

## What are the risks and complications of this surgery?

As with any surgery, there are risks associated with weight loss surgery. The overall risk of complications is about 10%. There is a small risk of death, which varies based on your general health. Nationally, the risk of death is about 1% or less. If you decide to proceed with surgery, your doctor will explain the general risks of abdominal surgery, as well as the specific risks associated with the procedure you will be having. Your individual risk depends on your age, gender, and your overall health.

Some of the risks that will be discussed include:

- **General Complications:** Weight loss surgery carries many of the same risks as any other abdominal operation. These risks include dehydration, wound problems, difficulty swallowing food, infections, nausea, blood clots, bleeding, and abdominal hernia.
- **Gallstones** – During rapid weight loss, a person's risk of developing gallstones is increased. Gallstones can develop in more than 1/3 of obese patients who have WLS. Gallstones are clumps of cholesterol and other matter that form in the gallbladder. Medications such as Ursodiol (Actigall), when taken for 6 months following surgery, can reduce the chance of gallstone formation.
- **Vitamin/Mineral Deficiency** – All weight loss surgery patients require a multivitamin-mineral supplement for life due to the significant reduction in food intake. Requirements for other supplements will depend on your food intake and your lab results; your dietitian will advise you on what supplements are best for you. Most vitamin and nutrition deficiencies can be avoided with regular monitoring of blood tests and the appropriate intake of these supplements.

As noted above, other complications or failure to achieve desired weight loss may occur. Ask your doctor to explain more about complications associated with your operation.

## What kind of follow-up care will I need?

You will need to be committed to long term follow-up including having regular blood work and attending appointments. During the first year after surgery there will be a number of appointments for education and continued monitoring for safe weight loss. Your surgeon will contact your 4-6 weeks after surgery. You will also have a 3-month and 6-month post-operative

appointment with the program Nurse Practitioner and Registered Dietitian. You will need to take a daily multivitamin and mineral supplement and possibly other supplements for the rest of your life. Blood tests are done one month after surgery, at least three times within the first year and annually after that to assess your health & nutritional status.

### **Does the surgery ever fail? Is there a chance I won't lose weight, or that I will gain my weight back?**

Most patients lose weight following WLS. However, in the years following surgery, it is common to re-gain *some* lost weight. A few patients will re-gain it all. Your food choices, activity level, and lifestyle after surgery will have a great effect on how much weight you lose AND for how long you will be able to maintain your weight loss.

It is important to understand that there is no guarantee that your weight loss will be significant or permanent. For some people, unhealthy eating patterns during the years following surgery will stretch the pouch and they may gain back all of their weight. Although this is uncommon, it can happen.

A small stomach pouch cannot protect you from absorbing a large number of calories if you snack frequently between meals. Snacking or grazing on potato chips, crackers, pretzels, nuts, and cookies are the most common causes of weight re-gain after WLS.

Remember, WLS can increase your chance of losing weight by altering the way your body digests food. Making the correct food choices and getting the proper exercise will be as important as ever. You will need to establish healthy eating and lifestyle habits after surgery and sustain these changes for the rest of your life in order to ensure long-term success.

### **What are my responsibilities as a weight loss surgery patient?**

- 1. Arrive on time for all scheduled appointments.**
- 2. Have blood work done prior to your appointments.**
- 3. Inform the WLS team of any health concerns & of your progress.**
- 4. Stop smoking.** Smoking increases your risk of serious or life-threatening complications with surgery, including leaks, ulcers, heart attack and DVT (blood clots). We will not operate on any patient using tobacco in any form. We ask that you quit for 6 months prior to your surgery and may require a urine or blood sample to test for the presence of nicotine in your system if we suspect that you are continuing to use tobacco.
- 5. Continue to try to lose weight.** A weight loss of 10 to 20 pounds before surgery will make your surgery safer and your recovery easier. It makes a big difference, and failure to lose weight during the pre-operative period may actually exclude you from surgery.

- 6. Start to exercise.** Anything you can do to increase your physical activity is important. Walking, swimming, dancing – find something that you can do every day for at least 30 – 60 minutes. If you have knee or back problems that make some exercises difficult, try water aerobics or just walking 10 minutes 3 times per day. Seated arm exercises can also help you burn calories and improve muscle tone. Exercise is a great way to burn some calories, get you better prepared for surgery, and help speed your post-op recovery.
- 7. Educate yourself.** Weight loss surgery is a tremendous tool to help improve your health, but you need to know how to use this valuable tool. Study the information and understand how your life will change after surgery. Use the online resources and talk to post-op patients to find out as much as you can about life after surgery. Understand the risks and complications of surgery and think about questions you may have. Know what foods to eat after surgery and design your plan of action. Write down any questions you may have so you don't forget and ask a member of the team.
- 8. Establish your support network.** You must have a support person to help you through this process. This is very important, and we want you to bring them to the information session with you.

### **If I am a woman of childbearing age, will I be able to have a baby after weight loss surgery?**

In general, we recommend that you wait at least **2 years** before attempting to become pregnant. Your body needs time to adjust to the changes in your digestion brought about by the surgery. Becoming pregnant before this adjustment is complete puts a strain on you and on a developing fetus.

Before becoming pregnant, make sure you have a complete physical exam with your primary care doctor or obstetrician, and discuss with him/her how you will ensure that you take in proper nutrition during pregnancy. We also recommend that you see our dietitian prior to pregnancy, if possible, for preconception nutrition planning. Once you become pregnant, nutritional follow-up continues to be essential to facilitate healthy weight management for you and growth and development for your baby. You will require the right amount of fluid, calories, protein and fat, and vitamins/supplements to ensure a safe and healthy pregnancy and birth.

### **I think I might be interested in this surgery. What happens next?**

The first step is for your doctor to refer you for WLS. Please use the *Pathway to Bariatric Surgery* referral form. Once your referral has been received, you may not hear from the program for several months or longer. However, during this time you should read about WLS, start making lifestyle & food habit changes, so that when you are contacted, you will be well on your way to being ready.

The first appointment will be a group of 50 patients. You will be asked to complete health information forms. The nurse practitioner, dietitian, psychologist, & surgeon will then speak about WLS. You will have opportunity to ask questions. If you feel that this surgery is

appropriate for you, you will then be scheduled for an individual appointment with the nurse practitioner, dietitian & psychologist within the year. See *Frequently Asked Questions* and *Pre-Surgery Clinic Appointment* documents on this website. A second appointment will be with the surgeon.

### **Where can I find additional information about weight loss surgery?**

We recommend that you find out as much as you can about this surgery before you proceed. The more questions you ask, the better informed and prepared you will be if you decide to proceed with surgery.

The Internet has a great deal of information available on weight loss surgery and other weight loss treatments for severe obesity. At some sites, you can “meet” and “talk” with patients who have already had one of these operations. This is a good opportunity to ask about things like diet changes, and overall success with weight loss. Ask recovering patients if they would make the same decision again. If so, why? If not, why not?

However, please be aware that, as with all health information on the Internet, not all of the information is accurate, and not all sites are sponsored by reliable sources. When evaluating a web site, make sure you get some background on the site you have found. For example, find out if the information was posted by a reputable organization and when it was last updated. These are two important steps you can take to help make sure you have found a reliable source of information.

## Vertical Sleeve Gastrectomy (VSG)



The Vertical Sleeve Gastrectomy procedure (also called Sleeve Gastrectomy, Vertical Gastrectomy, Greater Curvature Gastrectomy, Parietal Gastrectomy, Gastric Reduction, Longitudinal Gastrectomy and even Vertical Gastroplasty) is most performed surgery worldwide worldwide. This forum is titled “VSG forum” to include the two most common terms for the procedure (vertical and sleeve). The earliest forms of this procedure were conceived of by Dr. Jamieson in Australia (Long Vertical Gastroplasty, Obesity Surgery 1993), and by Dr. Johnston in England in 1996 (Magenstrasse and Mill operation - Obesity Surgery 2003). Dr Gagner in New York refined the operation to include gastrectomy (removal of stomach) and offered it to high-risk patients in 2001. Several surgeons worldwide have adopted the procedure and have offered it to low BMI and low risk patients as an alternative to laparoscopic banding of the stomach.

It generates weight loss by restricting the amount of food (and therefore calories) that can be eaten by removing 85% or more of the stomach without bypassing the intestines or causing any gastrointestinal malabsorption. It is a purely restrictive operation. It is currently indicated as an alternative to the Lap-Band® procedure for low weight individuals and as a safe option for higher weight individuals.

### Anatomy

This procedure generates weight loss solely through gastric restriction (reduced stomach volume). The stomach is restricted by stapling and dividing it vertically and removing more than 85% of it. This part of the procedure is not reversible. The stomach that remains is shaped like a very slim banana and measures from 1-5 ounces (30-150cc), depending on the surgeon performing the procedure. The nerves to the stomach and the outlet valve (pylorus) remain intact with the idea of preserving the functions of the stomach while drastically reducing the volume. By comparison, in a Roux-en-Y gastric bypass, the stomach is divided, not removed, and the pylorus is excluded. The Roux-en-Y gastric bypass stomach can be reconnected (reversed) if necessary. Note that there is no intestinal bypass with this procedure, only stomach reduction. The lack of an intestinal bypass avoids potentially costly, long-term complications such as marginal ulcers, vitamin deficiencies and intestinal obstructions.

### Comparison to prior Gastroplasties (stomach stapling of the 70-80s)

The Vertical Gastrectomy is a significant improvement over prior gastroplasty procedures for a number of reasons:

1. Rather than creating a pouch with silastic rings or polypropylene mesh, the VG resects or removes the majority of the stomach. The portion of the stomach which is removed is responsible for secreting Ghrelin, which is a hormone that is responsible for appetite and hunger. By removing this portion of the stomach rather than leaving it in-place, the level of Ghrelin is reduced to near zero, actually causing loss of or a reduction in appetite (Obesity Surgery, 15, 1024-1029, 2005). Currently, it is not known if Ghrelin levels increase again

after one to two years. Patients do report that some hunger and cravings do slowly return. An excellent study by Dr. Himpens in Belgium (Obesity Surgery 2006) demonstrated that the cravings in a VSG patient 3 years after surgery are much less than in Lap-Band® patients and this probably accounts for the superior weight loss.

2. The removed section of the stomach is actually the portion that “stretches” the most. The long vertical tube-shaped stomach that remains is the portion least likely to expand over time and it creates significant resistance to volumes of food. Remember, resistance is greatest the smaller the diameter and the longer the channel. Not only is appetite reduced, but very small amounts of food generate early and lasting satiety (fullness).
3. Finally, by not having silastic rings or mesh wrapped around the stomach, the problems which are associated with these items are eliminated (infection, obstruction, erosion, and the need for synthetic materials). An additional discussion based on choice of procedures is below.

### **Alternative to a Roux-en-Y Gastric Bypass**

The Vertical Gastrectomy is a reasonable alternative to a Roux-en-Y Gastric Bypass for a number of reasons:

1. Because there is no intestinal bypass, the risk of malabsorptive complications such as vitamin deficiency and protein deficiency is minimal.
2. There is no risk of marginal ulcer which occurs in over 2% of Roux-en-Y Gastric Bypass patients.
3. The pylorus is preserved so dumping syndrome does not occur or is minimal.
4. There is no intestinal obstruction since there is no intestinal bypass.
5. It is relatively easy to modify to an alternative procedure should weight loss be inadequate or weight regain occur.
6. The limited two year and 6-year weight loss data available to date is superior to current Banding and comparable to Gastric Bypass weight loss data (see Lee, Jossart, Cirangle Surgical Endoscopy 2007).

### **First stage of a Duodenal Switch**

In 2001, Dr. Gagner performed the VSG laparoscopically in a group of very high BMI patients to try to reduce the overall risk of weight loss surgery. This was considered the ‘first stage’ of the Duodenal Switch procedure. Once a patient’s BMI goes above 60kg/m<sup>2</sup>, it is increasingly difficult to safely perform a Roux-en-Y gastric bypass or a Duodenal Switch using the laparoscopic approach. Morbidly obese patients who undergo the laparoscopic approach do better overall in their recovery, while minimizing pain and wound complications, when compared to patients who undergo large, open incisions for surgery (Annals of Surgery, 234 (3): pp 279-291, 2001). In addition, the Roux-en-Y gastric bypass tends to yield inadequate weight loss for patients with a BMI greater than 55kg/m<sup>2</sup> (Annals of Surgery, 231(4): pp 524-528. The Duodenal Switch is very effective for high BMI patients but unfortunately it can also be quite risky and may be safer if done open in these patients. The solution was to ‘stage’ the procedure for the high BMI patients.

The VSG is a reasonable solution to this problem. It can usually be done laparoscopically even in patients weighing over 500 pounds. The stomach restriction that occurs allows these patients to lose more than 100 pounds. This dramatic weight loss allows significant improvement in health and resolution of associated medical problems such as diabetes and sleep apnea, and therefore effectively “downstages” a patient to a lower risk group. Once the patients BMI is lower



(35-40) they can return to the operating room for the “second stage” of the procedure, which can either be the Duodenal Switch, Roux–en-Y gastric bypass or even a Lap-Band®. Current, but limited, data for this ‘two stage’ approach indicate adequate weight loss and fewer complications.

Vertical Gastrectomy as an only stage procedure for Low BMI patients (alternative to Lap-Band® and Gastric Bypass). The Vertical Gastrectomy has proven to be quite safe and quite effective for individuals with a BMI in lower ranges. The following points are based on review of existing reports:

- Dr. Johnston in England, 10% of his patients did fail to achieve a BMI below 35 at 5 years and these tended to be the heavier individuals. The same ones we would expect to go through a second stage as noted above. The lower BMI patients had good weight loss (Obesity Surgery 2003).
- In San Francisco, Dr Lee, Jossart and Cirangle initiated this procedure for high risk and high BMI patients in 2002. The results have been very impressive. In more than 700 patients, there were no deaths, no conversions to open and a leak rate of less than 1%. The two-year weight loss results are similar to the Roux en Y Gastric Bypass and the Duodenal Switch (81-86% Excess Weight Loss). Results comparing the first 216 patients are published in Surgical Endoscopy. Earlier results were also presented at the American College of Surgeons National Meeting at a Plenary Session in October 2004 and can be found here: [www.facs.org/education/gs2004/gs33lee.pdf](http://www.facs.org/education/gs2004/gs33lee.pdf).
- Dr Himpens and colleagues in Brussels have published 3-year results comparing 40 Lap-Band® patients to 40 Laparoscopic VSG patients. The VSG patients had a superior excess weight loss of 57% compared to 41% for the Lap-Band® group (Obesity Surgery, 16, 1450-1456, 2006).

**Low BMI individuals who should consider this procedure include:**

1. Those who are concerned about the potential long term side effects of an intestinal bypass such as intestinal obstruction, ulcers, anemia, osteoporosis, protein deficiency and vitamin deficiency.
2. Those who are considering a Lap-Band® but are concerned about a foreign body or worried about frequent adjustments or finding a band adjustment physician.
3. Those who have other medical problems that prevent them from having weight loss surgery such as anemia, Crohn’s disease, extensive prior surgery, severe asthma requiring frequent steroid use, and other complex medical conditions.
4. People who need to take anti-inflammatory medications may also want to consider the Vertical Gastrectomy. Unlike the gastric bypass where these medications are associated with a very high incidence of ulcer, the VSG does not seem to have the same issues. Also, Lap-Band® patients are at higher risks for complications from NSAID use.

All surgical weight loss procedures have certain risks, complications, and benefits. The ultimate result from weight loss surgery is dependent on the patients’ risk, how much education they receive from their surgeon, commitment to diet, establishing an exercise routine and the surgeon’s experience. As Dr. Jamieson summarized in 1993, “Given good motivation, a good operation technique and good education, patients can achieve weight loss comparable to that from more invasive procedures.”

## **Advantages and Disadvantages of Vertical Sleeve Gastrectomy**

### ***Vertical Sleeve Gastrectomy Advantages***

- Reduces stomach capacity but tends to allow the stomach to function normally so most food items can be consumed, albeit in small amounts.
- Eliminates the portion of the stomach that produces the hormones that stimulates hunger (Ghrelin).
- Dumping syndrome is avoided or minimized because the pylorus is preserved.
- Minimizes the chance of an ulcer occurring.
- By avoiding the intestinal bypass, almost eliminates the chance of intestinal obstruction (blockage), marginal ulcers, anemia, osteoporosis, protein deficiency and vitamin deficiency.
- Very effective as a first stage procedure for high BMI patients (BMI > 55 kg/m<sup>2</sup>).
- Limited results appear promising as a single stage procedure for low BMI patients (BMI 30-50 kg/m<sup>2</sup>).
- Appealing option for people who are concerned about the complications of intestinal bypass procedures or who have existing anemia, Crohn's disease and numerous other conditions that make them too high risk for intestinal bypass procedures.
- Appealing option for people who are concerned about the foreign body aspect of Banding procedures.
- Can be done laparoscopically in patients weighing over 500 pounds, thereby providing all the advantages of minimally invasive surgery: fewer wound and lung problems, less pain, and faster recovery.

### ***Vertical Sleeve Gastrectomy Disadvantages***

- Potential for inadequate weight loss or weight regain. While this is true for all procedures, it is theoretically more possible with procedures that do not have an intestinal bypass.
- Higher BMI patients will most likely need to have a second stage procedure later to help lose the rest of the weight. Remember, two stages may ultimately be safer and more effective than one operation for high BMI patients. This is an active point of discussion for bariatric surgeons.
- Soft calories such as ice cream, milk shakes, etc. can be absorbed and may slow weight loss.
- This procedure does involve stomach stapling and therefore leaks, and other complications related to stapling may occur.
- Because the stomach is removed, it is not reversible. It can be converted to almost any other weight loss procedure.
- Considered investigational by some surgeons and insurance companies.

## **Vertical Sleeve Gastrectomy (VSG) - Frequently Asked Questions**

### ***How big will my stomach be after surgery?***

The size of your stomach will vary depending on the surgeon. All surgeons use a tube to guide them when stapling the stomach. This tube size can vary from as small as 32 French Bougie (1-2 ounces) to as large as 64 French Bougie (6-8 ounces). This is a very important question to ask when considering this surgery, since those patients with larger pouches may have less weight loss.

***Is removing the stomach safe?***

This type of stomach removal has been performed with the Duodenal Switch procedure since the mid 1980's. It does involve stapling, just like in the gastric bypass, and has similar risks. Interestingly, patients do not ever return asking for their stomach back, but many do wonder if it is possible to reduce the size of it again.

***Will I need to take vitamins?***

Vitamin deficiencies are rare with this procedure because there is no intestinal bypass. However, the procedure is very restrictive, so most surgeons recommend that patients take a multivitamin, calcium and possibly a B12 vitamin after surgery.

***Will I regain weight?***

All patients undergoing weight loss surgery are at risk for weight regain. None of the operations can prevent this. Those patients who maintain good dietary habits and exercise patterns are more likely to keep the weight off than those who do not exercise and who snack frequently.

***What will my diet be like after surgery?***

The diet will progress over the first year. It usually starts with 2-4 weeks of liquid protein drinks and water. Patients gradually progress to thicker food items and by two months are able to eat seafood, eggs, cheese, and other regular foods. The diet generally recommended is low calorie (500 per day), high protein (70gm per day), low fat (30 gm per day) and low carbohydrates (40 gm per day). The calorie intake increases over the first year and by 12 months many patients have achieved their goal weight and consume between 900 and 1500 calories per day. This final calorie intake depends on level of activity, age, and gender (men can usually consume more calories and maintain their weight).

This information has been provided courtesy of Laparoscopic Associates of San Francisco (LAPSF). Please visit the Laparoscopic Associates of San Francisco.

## WLS Frequently Asked Questions

### **What types of Weight Loss Surgeries are offered at the Nova Scotia Health Authority (NSHA) in Halifax?**

Laparoscopic Sleeve Gastrectomy is the weight loss surgery being performed at the NSH. We do not provide other weight loss surgeries at this time.

### **What is Sleeve Gastrectomy?**

Sleeve Gastrectomy is a procedure whereby 80% of the stomach is removed leaving a small, sleeve (like a shirt sleeve) shaped stomach.

### **Is Sleeve Gastrectomy reversible?**

No. It is irreversible.

### **Do you do Bypass surgeries or Banding/Lap Band?**

Not usually. Sleeve Gastrectomy happens for 90% of our patients.

### **If I have had weight loss surgery in the past—can I be referred to NSH to have this surgery?**

No. At this point we are only seeing patients who have not had previous weight loss surgeries.

### **How does Sleeve Gastrectomy work?**

80% of the stomach is removed. With the smaller stomach, you feel full faster after eating a small amount of food. In addition, many of the hormones which stimulate hunger are removed with the surgery resulting in fewer cravings and feelings of hunger. The surgery is only a weight loss tool; the real work involves lifelong commitment to healthy eating, exercise and behavior changes which will support weight loss and healthy weight.

### **Is there a charge?**

No. If patients meet the MSI approved criteria-MSI covers the costs of surgery.

### **What is the process for being referred for surgery?**

See your Family Doctor/Nurse Practitioner. Family Doctors and Nurse Practitioners will then send off a consult. The process is outlined on our Halifax Obesity Network website under the eLearning Preparation for Bariatric Surgery tab.

### **What is the Fax number that healthcare teams can use to contact you?**

Fax (902) 425-8292

### **How do I know that my consult has been sent/received?**

Do not call. Patients can check with their family physicians' offices to determine if consults have been received.

### **Who are appropriate patients for weight loss surgery?**

Those challenged with the following:

BMI >40

BMI >35 with accompanying chronic disease (for example Type 2 diabetes, high blood pressure, high cholesterol)

BMI < 60

Failure of medical management over a long period of time to control weight

Hypertension or obesity related cardiomyopathy

Abnormal Glucose Tolerance or Type 2 diabetes

Reflux Esophagitis

Severe sleep apnea

Disabling arthritis, chronic low back pain, osteoarthritis, impending knee replacement surgery candidate

Breakdown of skin secondary to excess pannus with ongoing cellulitis or recurrent abscess

End stage obesity syndrome requiring hospitalization

Pseudotumor cerebri

Hyperphagic syndromes

Steatohepatitis and cirrhosis

Hyperlipidemias

Other syndromes

### **How does the process work?**

Go the Halifax Obesity Network website and watch the posted videos and follow eLearning Preparation for Bariatric Surgery posted info.

### **Does anyone get prioritized because they are more unwell than others?**

No. Many people have multiple challenges. Getting seen by the team happens when you have completed the steps posted in the eLearning Preparation for Bariatric Surgery with your GP/NP and they indicate that you are ready to be seen by the Bariatric Surgery Team.

**How many patients are interested in/have been referred for Weight Loss Surgery at this point?**

More than 2000. Referrals are received from NS and PEI.

**Who are the members of the Obesity/Weight Loss Surgery Team?**

Dr Jim Ellsmere Head Surgeon and Program Director, Kara Evers Nurse Practitioner and Program Coordinator, Jenna Crown Registered Dietitian, Dr. Tom Ransom Endocrinologist, Dr. Richard Spence Surgeon, Dr. Riley Stewart Surgeon, Dr. Ahmed Jad Surgeon, and Dr Rhys Kavanagh Surgeon

**If I pay, can I get this done quicker at this program?**

No. This is a publicly funded program.

**What are the youngest and oldest age requirements for weight loss surgery?**

Over age 17 and younger than 65.

**Do people have to eat a particular way post weight loss surgery?**

Yes. Go to the Halifax Obesity Network website and review the eLearning Preparation for Bariatric Surgery Program.

**Do you offer programs for people challenged with obesity not interested or not appropriate for surgery?**

Not at this time. You may wish to refer to the Obesity Care Clinic in Cape Breton.

**Will you continue your Strides for Obesity annual walk?**

Yes. The next Strides for Obesity Walk will take place in October 2024. Please refer to the website *Strides for Obesity* for more information.

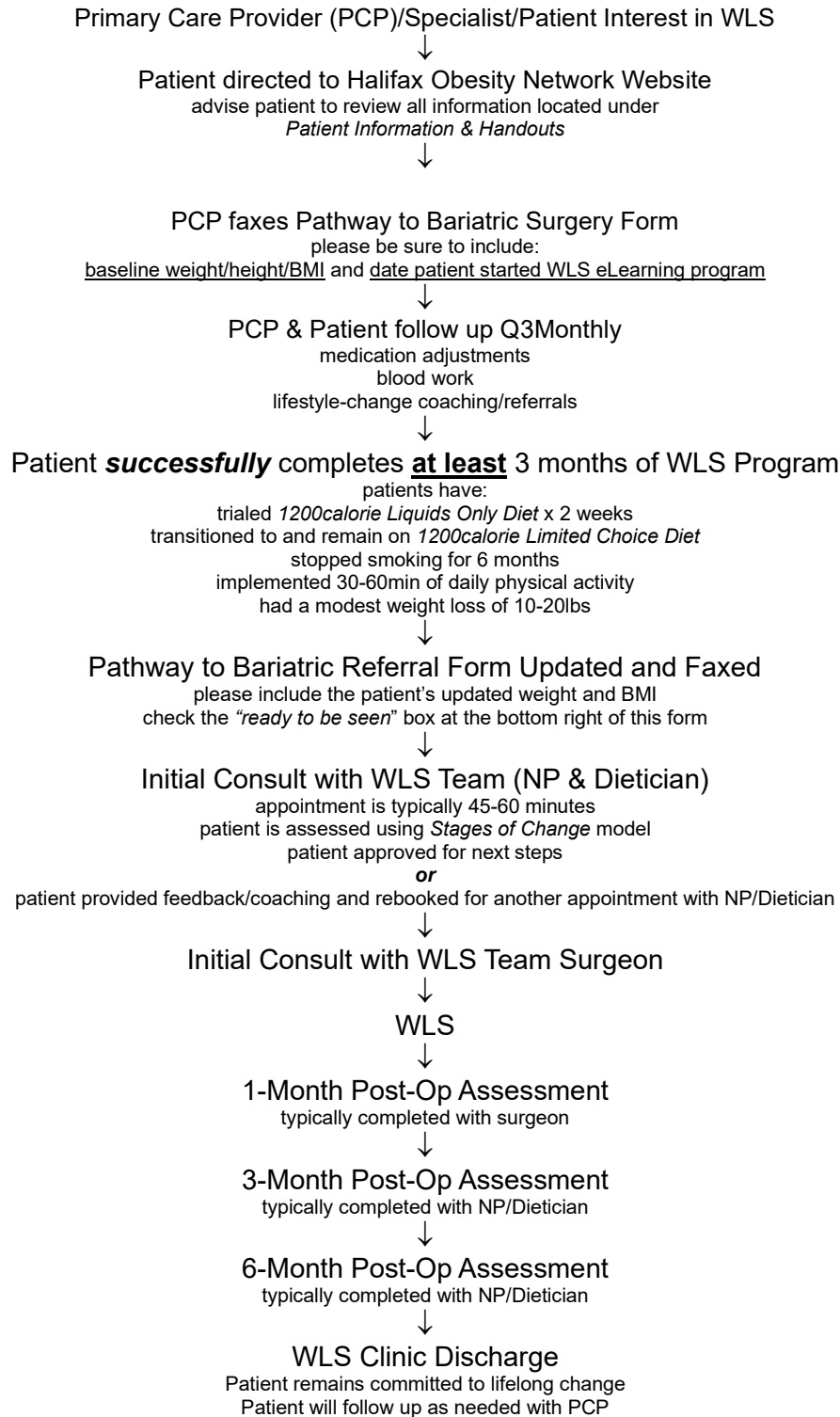
**If I have weight loss surgery out of province or country will the NSH Halifax Obesity Network Weight Loss Surgery Team follow me?**

No. You should arrange follow up with your surgery team, your family provider, or Virtual Care NS.

**What if I have an emergency after surgery (severe pain in my abdomen, dehydration, excessive vomiting)?**

Go to your local emergency department.

# Weight Loss Surgery (WLS) Referral Process



# Pathway to Bariatric Surgery

Please complete **ALL** sections and fax completed document to 902-425-8292

Patient Name:  
Health Card Number:  
DOB:

Onset of Obesity: <age 10, 11-19, >age 19

**WLS Program Start Date:** \_\_\_\_\_  
(date patient began WLS eLearning Program)

The following orders are to direct GPs and NPs who are working with patients to prepare for Weight Loss Surgery (WLS) in NSH Primary Care areas.

### Baseline Clinical data:

Weight (lbs.): \_\_\_\_\_  
Height (feet): \_\_\_\_\_  
BMI: \_\_\_\_\_  
BP: \_\_\_\_\_  
Waist circumference (inches): \_\_\_\_\_

Labs: (at least once and Q 3m as appropriate)  
*Include: CBC, glucose, A1c, Creatinine, CRP, HDL, LDL, Triglycerides, Ca+, AST, ALT, Alk Phos, GGT, Vitamin B12, TSH*  
**\*Copy to Kara Evers NP, Fax 902-425-8292**

### Co-morbidities:

- Diabetes/Prediabetes
- HTN
- Dyslipidemia
- Sleep Apnea (C-Pap Y or N)
- Reflux
- Chronic pain
- Awaiting Hip or Knee Replacement
- Asthma/COPD
- Chronic skin infections
- History of MI or Stroke
- Depression/ History of Depression
- Thyroid disease
- Fatty Liver Disease
- Cholecystectomy
- Other \_\_\_\_\_

**Smoker:** Yes or No

If Yes—Smoking cessation plan needed as patients must be smoke free for **6 months** prior to WLS.

### Psychological Assessment:

- Motivated for behavior change
- Not motivated for behavior change
- Emotional/stress/boredom eating
- History of suicide attempts
- History of physical abuse
- History of sexual abuse
- History of eating disorder (binge eating)
- History of skipping meals
- History of drug or alcohol abuse

### Obesity Medication Management

#### Considerations:

- Saxenda with WLS Program Diets
- Xenical with WLS Program Diets
- Contrave with WLS Program Diets
- Wegovy with WLS Program Diets

### Instructions for Patients ready to begin WLS Program:

- Go to the Halifax Obesity Network and assemble a binder with information posted on the website under the category Information/Handouts
- Watch posted videos on the website of the Bariatric Surgery Team
- Book appointments with GP/NP for assessment Q3m
- Connect with community supports as appropriate. (psychologist, personal trainer, physiotherapist, dietitian, nurse)
- Complete labs Q 3m

### Communication with WLS Team:

- Ready to be seen.** My patient has followed the WLS eLearning Program (diets, physical activity, and lifestyle change) for three consecutive months.

\_\_\_\_\_

Date

\_\_\_\_\_

Physician/NP Name (Print)

\_\_\_\_\_

Physician/NP Signature



## WLS e-Learning Expectations for Patients

Welcome to the Primary Care e Learning Program. The following document will be your guide in getting started. The following is a list of things you should accomplish before meeting with the Bariatric Surgery Team:

- Meet with your GP/NP and review the “Pathway Document” and complete baseline blood work.
- Go to the tab on this website titled “Weight Loss Surgery Information and Handouts (Binder Information)” and print out all posted material.
- Create a binder and review this information frequently.
- Print copies of the 1200 cal. diets and follow them as outlined:
  - 2 consecutive weeks of the 1200cal Liquids Only Diet. It should be followed as close as possible to the sample provided and must include 60-80grams of daily protein.
  - 3 months minimum of the 1200cal Limited Choice Diet. This should also be followed as close as possible to the sample provided and must include 60-80g of daily protein.
  - You should always be on either the 1200cal Liquids Only Diet or the 1200cal Limited Choice Diet once you begin the program. This will help you to break old habits and routines.
  - Bread products, rice, pasta, potatoes, fast food, and junk food are all removed.
- Take a Multivitamin and 1000IU of Vitamin D daily.
- Journal food intake, grams of protein, and total fluids daily for at least 3 months. It may also be helpful to capture emotions in relation to eating, exercise, boredom, etc.
- Exercise daily. Find something that works for you and build you activity to a target of 30-60 minutes daily. You may want to connect with a Physiotherapist or Personal Trainer in your community for assistance.
- Remove “trigger foods” from you diet/home/routine.
- Design a list of things that you could do when bored or stressed that do not involve food and practice this.
- If you smoke, you will need a strategy for quitting. You must be smoke-free for **6 months** prior to your surgery. This includes cannabis.
- Aim for weight loss greater than 20 lbs. prior to your surgery.
- Consider connecting with a Dietician or Psychologist in your community for extra support.
- Bring a current detailed medication list to all clinic appointments. Include prescription medications, vitamin, herbal medications, and over-the-counter medications.
- Bring all journals (Food, Exercise, Things to do when bored), blood sugar records, and you Weight Loss Surgery Binder to all clinic appointments.
- Complete blood work as requested before all clinic appointments.

## Pre-WLS Clinic Appointment

Your Pre-WLS Clinic Appointment is a one-hour individual appointment where you will meet the Weight Loss Surgery (WLS) team's Nurse Practitioner and Dietitian. The purpose of this appointment is to determine if WLS is appropriate for you. The team will be interested in hearing about the lifestyle changes that you have made since your initial referral. It is important to come to your pre-surgery appointment prepared. The following list is a reminder of **patient responsibilities**:

1. Assemble a Weight Loss Surgery Binder, study it, and bring it with you to your appointment.
  - a. Go to the *Halifax Obesity Network* website and print off and study the information under the *Weight Loss Surgery Information and Handouts* tab on the website. You are expected to bring this binder with you to ALL appointments.
  - b. Complete the *Patient Health History* and have it with you for your intake appointment.
  - c. If you are an emotional eater, come up with behavior modification plans for changing this behavior. Write it down and bring this plan with you.
2. Quit smoking. You must be smoke free for 6 months prior to your surgery. Work with your primary care provider for smoking cessation options.
3. Trial 2 weeks of the 1200cal Liquids Only Diet prior to your intake appointment. Include whey protein powder, Boost, Ensure High Pro, Premier Protein, and Carnation Instant Breakfast to ensure you tolerate them.
4. Improve overall eating habits as follows:
  - Eat 3 healthy meals daily.
  - Decrease caffeine, carbonated beverages, and alcohol.
  - Remove all junk food from your diet, home, car, and office.
  - Stop chewing gum.
5. Achieve a weight loss of at least 10-20 pounds.
6. Build your activity level to 30-60 minutes daily. Record your activities.
7. If you have diabetes, record blood glucose levels, and bring this to all appointments.
8. Bring a list of all your medications, both prescription and over the counter (names, doses, times), to your appointments.
9. Bring a food record. Calculate how many grams of protein, calories and how many cups of water you consume each day using one of the recommended apps.
10. Be sure to have your blood work done at least one week prior to this appointment and as requested.

# WLS Patient Health History

## Personal Information

Date:

Name:

Health Card Number (and expiry date):

DOB:

Age:

Address:

Phone (work): (home):

Do you give permission for the team to leave voice mail messages?

E-Mail address:

Family Doctor / Nurse Practitioner / Physician's Assistant:

## Health Assessment

Height:

Weight:

BMI:

Waist Circumference:

How long have you been challenged with your weight? Age 10 or <, 11-19, >19 (circle)

List three diets you have tried in the past:

On which diet did you lose the most weight?

How much weight did you lose?

Have you had Weight Loss Surgery before?

## Physical Health History (check all that apply)

- High Blood Pressure
- Enlarged Heart
- Prediabetes or Type 2 Diabetes
- Reflux
- Sleep Apnea
  - Do you use a c-pap or other device? Yes or No
- Disabling arthritis, chronic low back pain, osteoarthritis
- Awaiting knee or hip replacement
- Skin breakdown secondary to excess weight (where?)
- High cholesterol or triglycerides
- MASLD (fatty liver)
- Thyroid disease
- Asthma or other breathing challenges
- History of heart attack, angina, or stroke

**Mental Health History** (check all that apply)

- |  |                |                  |
|--|----------------|------------------|
| <input type="checkbox"/> Depression                          | On medication? | Who follows you? |
| <input type="checkbox"/> Anxiety                             |                |                  |
| <input type="checkbox"/> ADHD                                |                |                  |
| <input type="checkbox"/> History of suicide attempts         |                |                  |
| <input type="checkbox"/> History of physical abuse           |                |                  |
| <input type="checkbox"/> History of sexual abuse             |                |                  |
| <input type="checkbox"/> History of binge eating             |                |                  |
| <input type="checkbox"/> History of anorexia                 |                |                  |
| <input type="checkbox"/> History of bulimia                  |                |                  |
| <input type="checkbox"/> History of skipping meals           |                |                  |
| <input type="checkbox"/> History of drug or alcohol abuse    |                |                  |
| <input type="checkbox"/> Other syndromes (please list) _____ |                |                  |

**Surgical History** (please list and include year of surgery):

Do You Have a Gall Bladder? Yes or No

**Medication History**

Name Of Medication	Dose	When You Take It	What It Is For
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			

**Allergies** (please list):

### Food History

Describe what you eat on a typical day (meals, snacks, liquids)

Breakfast	Mid Afternoon Snack
Mid-Morning Snack	Supper
Lunch	Evening Snack

- Do you drink juice?                      How much?
- Do you drink pop?                      Diet or Regular?                      How much?
- Do you chew gum?                      How often?
- Do you drink alcohol? How much?                      How often?
- How many times a week do you eat out or buy take out?
- Do you eat when stressed?
- Do you eat when bored?
- What foods do you eat too much?
- Do you drink coffee?                      With milk, cream, sugar, black (circle all that apply)
- Do you drink milk?                      How much?
- Do you eat breakfast?
- Do you have food allergies?

### Psychosocial History

What do you think are 3 significant contributing factors to your obesity?

- 1.
- 2.
- 3.

- Do you exercise?
- If yes, list what you do:
- If no, explain why not:
- Do you smoke?                      Cigarettes, cigars, cannabis (circle all that apply)
- How much?
- Do you work?
- What is your job/where do you work?
- Do you have a health plan?                      What is the name of your insurance company?
- Who are the supportive people in your life?
- Do they support your decision for Weight Loss Surgery?
- What are the stressors in your life?

### Program Preparation

Have you been on the Halifax Obesity Network Website?  
Have you assembled a binder?  
Have you studied it?  
Have you completed the quiz?  
Why do you want this surgery?

Please check one of the following:

- Yes, I want this surgery.  
 No, I do not want this surgery at this point.

Things I plan to do before the next clinic:

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Other info we should know:**

## Pre-WLS 1200cal Liquids Only Diet

**Medical Disclaimer:** The information provided on this website is intended for patients enrolled in the Nova Scotia Health Weight Loss Surgery Program. The information should **ONLY** be used in consultation with the Nova Scotia Health Weight Loss Surgery Team.

A liquid diet consisting of full nutritious fluids is to be followed for 2 weeks when you are being considered for WLS Surgery, again for the 2 weeks prior to your surgery, and finally for 4 weeks following your surgery. Review your binder for protein goals (60-80 grams/day) and fluid goals (minimum of 8 cups total fluids). **Please note this is only a sample menu.**

### Example Day of 1200cal Liquids Only Diet

<b>Breakfast</b>	1 cup hot cereal (oatmeal or cream of wheat) 1 cup skim milk ½ cup unsweetened orange juice <i>or</i> Smoothie made with 1 cup skim milk, 1 cup whole berries, and 1/2 scoop of protein powder	296cal + 14g pro    263cal + 18g pro
<b>Snack</b>	1 cup applesauce <i>or</i> 1 sugar-free pudding cup	100cal + 0g pro  90cal + 1g pro
<b>Lunch</b>	1 cup tomato soup made with skim milk <i>or</i> 1 bottle (235ml) Regular Ensure	216cal + 9g pro  235cal + 9g pro
<b>Snack</b>	1 cup cottage cheese <i>or</i> 1 bottle (325ml) Premier Protein Shake	150cal + 22g pro  120cal + 22g pro
<b>Supper</b>	1 cup fish chowder or another blended soup with chicken, fish, meat, and veggies <i>or</i> Smoothie made with 1 cup skim milk, 1 small banana, and 1/2 scoop of protein powder	290cal + 9g pro  260cal + 18g pro
<b>Snack</b>	1 cup low-fat yogurt <i>or</i> 1 cup Carnation Breakfast Essentials	100cal + 19g pro  233cal + 15g pro

**When it comes to the Liquid Diet, here are some options for you to consider:**

**Hot cereals** - oatmeal, cream of wheat (you can add milk, applesauce, cinnamon...whatever you like as long as there are no lumps and you don't have to chew)

**Smoothies** - there are several listed on our high protein recipes page, or you can create your own (the key is to keep your protein to 30grams or less per serving...you can add frozen or fresh fruit/vegetables, yogurt, peanut butter, protein powder, juice, milk, almond/soy/lactose free milk, or just water)

**Soups** - homemade or store bought (the key here is to make sure they do not include rice, pasta, or potato and to puree them...you may need to add more broth to thin the consistency a bit). I have done this diet and had things like pureed turkey vegetable soup, curried squash and apple soup, spicy bean and chickpea soup.

**Meal replacement shakes** - there are several examples of commercially available products listed on the protein sources handout

**Other** - Jello, pudding, applesauce, custard, yogurt - as long as these are sugar free or reduced sugar

Your job is to choose foods that you like/tolerate and to create your own daily menu and ensure that you are getting 1200 calories and 60-80grams of protein daily. Make sure that you are using one of the recommended apps to help you do this.

- Drink at least 8 cups (64 oz or 2L) fluid every day - includes meal replacements, water, and soup.
- Keep daily food, fluid & activity log (track calories, grams of protein, cups of fluid and minutes of exercise).
- Weigh yourself once a week and record weight.
- Take a daily adult complete multivitamin-mineral supplement and 1000 IU Vitamin D.



### Additional Examples and Ideas

<b>Breakfast</b>	<b>Strawberry-Banana Green Smoothie</b> ½ a frozen banana 1 cup spinach ¼ cup non-fat plain Greek yogurt ½ cup skim milk 6 frozen strawberries	290cal + 18g pro
	<b>Berry Kefir Smoothie</b> ½ cup frozen mixed berries 1 cup plain kefir ½ a frozen banana 1 tsp almond butter ½ tsp vanilla extract	264cal + 18g pro
	<b>High Protein PB&amp;J Smoothie</b> ½ cup frozen mixed berries 1 tbsp powdered peanut butter ½ scoop vanilla protein powder 1 cup skim milk 2 tbsp rolled oats	203cal + 16g pro
	<b>Mango Raspberry Vanilla Protein Smoothie</b> ¼ cup frozen mango ¼ cup frozen raspberries 1 cup skim milk ½ scoop vanilla protein powder	228 cal + 27g pro
<b>Lunch + Dinner</b>	<b>High Protein Egg Drop Soup</b> 1 cup chicken broth 1 scoop unflavoured protein powder 1 egg ¼ cup spinach 1 green onion, chopped (optional)	276cal + 30g pro
	<b>High Protein Butternut Squash Soup</b> ½ lb butternut squash ½ onion, diced 1 tsp ginger, minced Salt and pepper for taste 2 scoops unflavoured protein powder 1 tsp garlic powder 1 tsp paprika Salt + pepper to taste	151cal + 21g pro (per 1 cup serving)

	<p><b>Chicken Curry Lentil Soup</b>          1 onion, diced          2 medium carrots, diced          4 cups chicken broth          1 cup red lentils, rinsed          1 lb skinless chicken breast          2 tsp ground cumin          ½ tsp curry powder          ¼ tsp garlic powder          Salt + pepper to taste</p>	<p>234cal + 23g pro          (per 1 cup serving)</p>
	<p><b>High Protein Tomato Soup</b>          1 can (28oz) crushed tomatoes          1 can (14oz) diced tomatoes          ¼ cup skim milk          ¼ cup parmesan cheese          1 scoop unflavoured protein powder          1 tsp Italian seasoning          1 tsp garlic powder          Salt + pepper to taste          Fresh basil (optional)</p>	<p>157cal + 24g pro          (per 1 cup serving)</p>
	<p><b>High Protein Cauliflower Garlic Soup</b>          1 head cauliflower, cut into florets          2 tsp minced garlic          2 cups vegetable broth          1 cup unsweetened coconut milk          4 scoops unflavored protein powder          Salt + pepper to taste          4 tbsp nutritional yeast</p>	<p>219cal + 27g pro          (per 1 cup serving)</p>

## Pre-WLS 1200cal Limited Choice Diet

**Medical Disclaimer:** The information provided on this website is intended for patients enrolled in the Nova Scotia Health Weight Loss Surgery Program. The information should **ONLY** be used in consultation with the Nova Scotia Health Weight Loss Surgery Team.

This is a balanced low-calorie diet with limited choice or variety. It is **not** a low carbohydrate or a high protein diet. It will be effective in helping you to achieve weight loss by divorcing old habits/routines. You **must** be monitored by a Dietitian, Nurse Practitioner or Doctor while on this diet. You should aim for 1200 calories and between 60-80 grams of protein daily.

### Example of a day of 1200calorie Limited Choice Diet

<b>Breakfast</b>	1 liquid Meal Replacement Premier Protein (325ml) <b>or</b> ¼ cup low-fat Greek yogurt with 1/3 cup All Bran Buds	160cal + 30g pro 148cal + 12g pro
<b>Snack</b>	1 banana with 1 tbsp peanut butter	145cal + 4g pro
<b>Lunch</b>	Smoothie Protein Power Orange Frosty (see <i>High Protein Recipes</i> for more examples)	148cal + 24g pro
<b>Snack</b>	3Tbsp hummus with carrots, cucumbers, cauliflower	150cal + 4g pro
<b>Supper</b>	4 oz chicken, fish, lean pork, or beef (no skin, oil, or coating) 1 cup salad greens with 1 cup chopped raw vegetables 1 tbsp low fat salad dressing 1 cup cooked vegetables (no potato, peas, or corn) with ½ tsp margarine	435cal + 28g pro
<b>Snack</b>	1/2c cooked oatmeal with ½ cup applesauce and cinnamon	127cal + 0g pro

### Additional Limited Choice Ideas

<b>Breakfast</b>	<b>Easy Breakfast Box</b> 2 soft-cooked eggs ¼ cup unsweetened applesauce	182cal + 12g pro
	<b>Spinach + Feta Scrambled Egg Whites</b> 1 cup egg whites ½ cup chopped spinach 1 tbsp crumbled feta cheese 1 tsp light margarine Salt + pepper to taste	166cal + 28g pro
	<b>Chocolate Peanut Butter Protein Smoothie</b> 1 cup skim milk ½ a banana 2 tbsp powdered peanut butter 1 tbsp unsweetened cocoa powder ½ scoop chocolate protein powder 4 ice cubes	170cal + 20g pro
	<b>Meal Prep Breakfast Bowls</b> 1 tbsp salsa 1 tbsp black beans 2 scrambled eggs 1 tbsp cheddar cheese, shredded ¼ cup chopped spinach	246cal + 16g pro
<b>Snacks</b>	<b>Apple Pie Cottage Cheese Bowl</b> ¼ cup cottage cheese ¼ cup baked apple without skin 1 tsp cinnamon	58cal + 12g pro
	<b>Greek Yogurt + Almond Butter Parfait</b> ¼ cup fat-free Greek yogurt 1 tsp almond butter 100g chopped strawberries	90cal + 8g pro
<b>Lunch</b>	<b>Tuna Salad Lettuce Wraps</b> ½ can tuna 1 tbsp fat-free mayonnaise ¼ cup chopped cherry tomatoes ¼ cup chopped cucumber 3 large romaine lettuce leaves ¼ tsp garlic powder Salt + pepper to taste	125cal + 15g pro
	<b>Meal Prep Protein Boxes</b> 2oz grilled chicken breast 1 low-fat string cheese 3oz baby carrot sticks	146cal + 25g pro

<b>Dinner</b>	<p><b>Lemon Dill Salmon + Carrots</b>            4oz broiled salmon            1 tsp lemon juice            100g steamed carrots            1 tsp light margarine            ¼ tsp dillweed            Salt + pepper to taste</p>	290cal + 25g pro
	<p><b>Baked Haddock + Cauliflower Rice</b>            4oz baked haddock            1 tsp lemon juice            ½ cup steamed cauliflower rice            1 tsp light margarine            ¼ tsp garlic powder            Salt + pepper to taste</p>	172cal + 20g pro
	<p><b>Shrimp Marinara Zoodles</b>            4oz shrimp            ½ cup cooked zucchini noodles            ¼ cup tomato sauce            ¼ tsp red pepper flakes            ¼ tsp garlic powder            Salt + pepper to taste</p>	242cal + 29g pro
	<p><b>Chicken Salad Bell Pepper Boats</b>            1 bell pepper cut in 4 slices            4oz blended grilled chicken breast            2 tsp fat-free mayonnaise            ¼ cup chopped celery            ¼ tsp garlic powder            ¼ tsp paprika            Salt + pepper to taste</p>	317cal + 36g pro
	<p><b>Asian Chicken Salad</b>            4oz grilled chicken            ½ cup shredded cabbage            ½ cup shredded purple cabbage            100g carrot, finely chopped            ½ a bell pepper, finely chopped            1tbsp chopped toasted almonds            1 tsp rice vinegar            1 tsp sriracha            Salt + pepper to taste</p>	321cal + 35g pro

<b>Breakfast Ideas:</b>	calories	protein
¼ cup low-fat Greek yogurt with 1/3 cup All Bran Buds and berries	127cal	12g
1/2c cooked oatmeal, ½ cup applesauce, cinnamon, ½ scoop protein powder	127cal	24g
Vegetable Omelet with 1 ounce melted cheese	210cal	22g
Protein Power Orange Frosty (see <i>High Protein Recipes</i> for more examples)	148cal	24g
Egg scramble cups (see <i>High Protein Recipes</i> for more examples)	35cal	28g

<b>Snack Ideas:</b>	calories	protein
Sugar free Jell-O Pudding cup	50cal	2g
1 banana with 1 tbsp peanut butter	145cal	4g
3Tbsp hummus with carrots, cucumbers, cauliflower	150cal	4g
1 oz string cheese 5 grapes	105cal	7g
2 oz. deli turkey 1 oz LF string cheese 1 Tbsp mustard	145cal	17g
½ cup non-fat cottage cheese with cinnamon	90cal	14g
Baked apple with cinnamon, ½ cup sugar-free low-fat vanilla frozen yogurt	160cal	6g
1 cup cut melon, 20 almonds	220cal	7g

<b>Supper/Lunch Ideas:</b>	calories	protein
Low-carb tuna melt with ½ cup tuna mixed with 2 tablespoons non-fat mayo, topped with 1 ounce shredded cheddar, toasted on a portobello mushroom	250cal	25g
Chicken salad lettuce wraps with 3 ounces grilled chicken breast, ½ medium diced apple, diced celery, 2 tablespoons non-fat mayo, ½ ounce walnuts on lettuce leaves	290cal	25g
3 ounces lean ground turkey burger; mustard, sugar-free relish, ketchup; lettuce leaves, tomato slices; served with coleslaw	310cal	23g
Salad with romaine lettuce, tomatoes, cucumbers, 3 ounces grilled chicken, 1 ounce parmesan cheese, 2 tablespoons balsamic vinaigrette	300cal	30g
Eggplant Bake with ½ large eggplant in slices covered with ¼ cup fat-free ricotta, ½ cup tomato sauce, and 1 ounce mozzarella	240cal	14g
4 ounces grilled chicken breast with pasta sauce: 1 medium sweet potato cut into “fries” brushed with 2 teaspoons olive oil and baked	310cal	28g
½ cup fat-free refried beans in roasted green pepper halves, topped with 1 ounce melted cheddar cheese	250cal	14g

Vegetable Chili with Beans with 1 ounce melted cheddar, 1 cup steamed cauliflower	150cal	23g
3 oz. salmon 1 cup spinach ¼ cup cucumber & tomato 2 Tbsp balsamic vinegar	175cal	22g
2 cups mixed green salad (can add peppers, tomatoes, cucumbers) 1/2 tuna canned in water, or sliced turkey (3 oz.) and cheese (1 oz. low-fat) or cubed tofu (grilled) 2 tbsp. low-calorie salad dressing	200cal	20g
3 oz. herbed pork loin 2 oz sweet potato	175cal	24g
Taco salad with lettuce, avocado, tomato, shredded cheese, green onions, salsa, low fat yogurt, and black beans or ground beef	315cal	30g
lean roast beef, chicken or turkey or veggie burger wrapped in lettuce with tomato, mustard or 1 tsp. reduced-fat mayonnaise and 1 cup mixed green salad with 2 tbsp. low calorie salad dressing	300cal	28g

- Drink at least 8 cups (64 oz) fluid every day - includes meal replacements.
- Take one adult complete multivitamin-mineral and 1000 IU Vitamin D supplement every day.
- Certain medications may need to be adjusted by your doctor as you lose weight.

**Note** – A “Meal Replacement” refers to products such as Ensure, Ensure Hi-Pro, Glucerna, Boost, Boost Hi-Pro, Diabetic Boost, Carnation Breakfast Essentials, Premier Protein, Breakfast Anytime, or Slimfast drinks. You can also use no-name brands or drugstore brands such as Shopper’s Life brand meal replacement. Check the label; it **must** say “meal replacement”. In the above plan, these replace your entire meal & evening snack.

## 14-Day to WLS Prep Diet

**Medical Disclaimer:** The information provided on this website is intended for patients enrolled in the Nova Scotia Health Weight Loss Surgery Program. The information should ONLY be used in consultation with the Nova Scotia Health Weight Loss Surgery Team.

This 2-week liquid diet helps prepare you for your up-coming surgery. It also gets you ready for how you will be eating in the early days after your operation. This is the same diet that you have practiced for your initial intake appointment. During these days, it is important that you take your chewable multivitamin and Vitamin D supplement. However, you will not take it on the day of your surgery or during your hospital stay.



**The first 13 days** - the diet includes thirteen days of full (nutritious) fluids, followed by one day of clear fluids (see example below). Full nutritious fluids are fluids that pour like milk, are high in protein and nutrients and low in sugar. Some examples include whey protein powder, Boost, Ensure High Pro, Premier Protein, and Carnation Instant Breakfast. Clear fluids are fluids that you can see through. During these eight days, you will not eat any solid foods.

**The day before your surgery** - NO solid food after midnight before surgery. You are encouraged to drink clear liquids up until 3 hours before your surgery. A clear liquid could include: water, pulp-free transparent juice (apple, cranberry-NOT ORANGE JUICE), sports drinks, and black tea or coffee WITHOUT MILK OR CREAM.





## Full Fluids – Foods Suggested and Foods to Avoid

Aim for an intake between 60-80 grams of protein and between 800-1200 calories.

	<p><b>Full fluids include:</b></p> <p>Beverages:</p> <ul style="list-style-type: none"> <li>• Low sugar, decaffeinated, non-carbonated fluid (Water, Crystal Light, Wyler's light, Fruit 2 O, sugar free Kool Aid, Minute Maid Light, Tropicana Light, Propel, Welch's Low Cal, Diet Ocean spray)</li> </ul> <p>Protein supplements:</p> <ul style="list-style-type: none"> <li>• protein powder smoothie (fruit can be added)</li> <li>• Commercial complete meal replacements (Ensure High Pro, Carnation Instant Breakfast, Boost, Glucerna, Premier Protein)</li> </ul> <p>Dairy Products:</p> <ul style="list-style-type: none"> <li>• Skim or 1% milk, Skim or 1% Lactaid, unsweetened soy or rice milk (good for lactose intolerance)</li> <li>• Smooth low fat, light yogurt (no chunks) - less than 1% MF</li> <li>• Sugar free, fat free pudding, low fat, sugar free custard</li> <li>• Part skim ricotta cheese or low-fat cottage cheese, pureed (add a little milk if too thick)</li> </ul> <p>Soup (canned or homemade):</p> <ul style="list-style-type: none"> <li>• Strained or blended low fat cream soups</li> <li>• Pureed, broth-based soups</li> </ul> <p>Other Nourishment:</p> <ul style="list-style-type: none"> <li>• Thin (able to pour) low sugar hot cereals (Cream of Wheat)</li> <li>• Sugar free ice pops (Popsicles)</li> <li>• Unsweetened applesauce</li> <li>• Sugar free gelatin (Jell-o, Hunt's, store brand)</li> <li>• Dried skim milk powder (Carnation, store brand: 8g PRO/1/3 cup)</li> </ul>
	<p><b>DO NOT eat/drink the following:</b></p> <ul style="list-style-type: none"> <li>• Caffeinated drinks such as tea, coffee, colas</li> <li>• Carbonated beverages (pop and sparkling water)</li> <li>• Solid and semi solid foods that require chewing (such as food with chunks)</li> <li>• Alcohol</li> </ul>

## Clear Fluids - Foods Suggested and Foods to Avoid

**The day before surgery** drink only clear fluids, that is, only fluids you can see through. You cannot use protein powder, milky or cloudy fluids at this time. Drink lots of fluid throughout the day. You may drink both unsweetened and regular clear juices the day before surgery to provide you with some calories for energy. Drink enough to keep you well hydrated. The following are samples of clear fluids:

	<p><b>Clear fluids you may drink include:</b></p> <ul style="list-style-type: none"> <li>• Water (plain or with added lemon slices, Crystal Light, Kool-Aid, Real Lemon crystals)</li> <li>• Clear broth (chicken, beef, vegetable)</li> <li>• Jell-O</li> <li>• Sports drinks (Gatorade)</li> <li>• Decaffeinated black tea or coffee</li> <li>• Pulp-free, transparent juice (apple, cranberry, grape)</li> <li>• Clear popsicles</li> </ul>
	<p><b>DO NOT drink the following fluids:</b></p> <ul style="list-style-type: none"> <li>• Caffeinated drinks such as tea, coffee, colas,</li> <li>• Energy drinks (Rockstar, Monster, Red Bull, etc)</li> <li>• Orange juice</li> <li>• Cloudy fluids (Ensure, Boost, tomato soup, etc.)</li> <li>• Carbonated beverages (pop and sparkling water)</li> <li>• Alcohol</li> <li>• Milk, soy or nut milk, cream</li> </ul>

## Progress Tracking Apps

It is important to be consistent and accurate when tracking your nutritional intake. There are a number of different apps currently available. You should find one that is easy to use, suits your budget, and encourages you to track regularly.

### Baritastic



- Tracks weight and biometrics
- Allows you to journal
- Provides reminders for fluid intake, exercise, medications
- Includes checklists for different stages of your surgery

### MyFitnessPal



- Tracks weight
- Monitors calorie intake
- Monitors macronutrients such as protein, fat, and carbs
- Allows you to scan food barcodes

### Apple Fitness+



- Tracks exercise routines
- Measures biometrics like steps and heart rate
- Tracks weight and weight loss

### MyNetDiary Calorie Counter



- Tracks carbs, protein, macronutrients
- Helps you set goals
- Monitors weight trends

### Cronometer



- Easy tracking of calories and micro- and macronutrients
- Encourages healthier eating habits
- Offers a forum and a Facebook page

# Healthy Eating Strategies

## Emotional Strategies

- Positive Self Talk
  - Write down and memorize some scripts for when you're faced with a food temptation:
  - Why are you worth it?
  - What obstacles have you already overcome?
- Avoid Decision Fatigue
  - If you've had a demanding day, you are emotionally exhausted and it can be tricky to make healthy food decisions... have a meal plan, have veggies cut up in the fridge, don't have tempting treats readily accessible. Planning ahead can be the antidote to decision fatigue.
- Nurture VS. Nourish
  - How can you reward yourself without food?
  - How can you console yourself without food?

## Spiritual Strategies

- Meditation
  - Remind yourself what you are grateful for.
  - Remind yourself that you are worth it, worth the effort of changing your dietary lifestyle.
- Mindfulness - pause, breathe and be mindful
- Prayer

## Physical Strategies

- Size Matters
  - Choose lunch or salad plates instead of dinner plates
  - Use smaller forks and spoons
  - Buy economy-sized packaging but transfer to smaller serving containers
- (Don't) Eat with Your Eyes
  - When possible, eat foods with "evidence" (don't hull strawberries before serving)
  - Place cut up veggies, hard boiled eggs etc. at eye level in fridge.
  - Keep trigger foods in hard-to-reach cupboard above the fridge or in basement freezer
  - At dinner time, keep the salad bowl on table, leave the rest of dishes on the counter
- Distract Yourself
  - How can you physically remove yourself from tempting situations?
  - How can you occupy your hands & mouth when you're used to snacking?

- Hungry? Or Thirsty?
  - Keep a 2-litre water pitcher on counter and challenge yourself to finish it by end of day.
  - Have a dedicated water bottle that travels with you.
  - Try adding lemon, cucumber, mint leaves, frozen berries to your water glass.
  
- Kitchen Clean Out
  - De-clutter your fridge door, then put a pic/quote/stop sign on it to cause you pause before opening it up to look for something to eat.
  - Organize the inside of your fridge and kitchen cupboards so the healthier choices are more accessible.
  
- Create a Fresh Mouth Feel
  - Brush your teeth after meals.
  - Floss
  - What foods can you eat last that will not leave you craving more?

# Problem Solving

**What is your emotional eating problem?** (Be accurate & specific)

**What are some possible solutions to your problem?**

**Name two solutions you are willing to try this month.**

1 \_\_\_\_\_

2 \_\_\_\_\_

**Who is going to help hold you accountable and how will they support you?**

Solution #1:

Solution #2:

**Review:** What did you do & what happened? (Include how many times you tried the solutions)

**What next?**

The solution worked → Continue with same solution

The solution(s) did not work → Modify and try again.

Go back to STEP 2

OR

Go back to STEP 1 and re-determine the **actual** problem or leave the problem for now and try to solve it again at a later time when you are more ready.

# What is your story?

## What is your message to yourself?

Having a self-talk “script” of your health journey and health goals can be a powerful tool when you find yourself in potential compromising food situations.

Remind yourself of your:

- personal health goals
- desire to do something in the future like attend a grandchild’s wedding
- desire to avoid a repeat of a past negative health experience like a hospital admission

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# What are your one-liners?

## What is your message to others?

What are some assertive “one-liners” you can say to friends/family/co-workers who may suggest it’s okay to cheat, give in, indulge with them?

You can be assertive, non-apologetic, AND kind.

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## Protein Source Information

Protein is a major key to success!

Protein contains the essential building blocks of the human body. It is beneficial in that it helps to delay hunger and aids with weight loss.

### Effects of Insufficient Protein

- Muscle loss
- Poor immune function
- Poor wound healing
- Lack of energy
- Hair loss

### Food Sources of Protein

- Animal Sources: meat, fish, chicken, eggs
- Dairy Products: milk, cheese, and yogurt
- Plant Sources: legumes (dried beans, peas, lentils) and soy

*\*Animal sources of proteins are more concentrated & higher quality*

### Supplemental Protein

- Many patients find it difficult to meet their daily protein needs with only food sources of protein.
- Protein supplements (protein powder) or meal replacements (Ensure High Pro, Boost High Pro, Premier Protein, Glucerna, Diabetic Boost, Carnation Instant Breakfast) can be helpful in helping you to meet your needs.

***\*Protein bars are not recommended as part of this program.***

### Choosing a Protein Powder

- Choose whey isolate or isolate concentrate blend rather than concentrates as they are more nutritious, and patients seem to enjoy the taste better.
- If you are lactose intolerant, choose soy-based protein powder.
- You can purchase protein powder at GNC, grocery stores, Costco, Walmart, Popeye's
- Some places such as GNC will allow you to return the product if you do not like the taste. Also, some supplement stores such as Life & Sport and Popeye's will offer a sample before you purchase it. Check stores in your area.
- Places like Canadian Protein carry vegan protein options as well as egg white protein for those with dairy allergies.



### Not all Liquid Meal Replacements are Created Equal

- Read labels carefully to understand nutritional content such as serving size, carbohydrates, fat, protein, and calories.
- Here is a comparison of some of the chocolate flavored nutritional shakes currently available in stores.
- Most nutritional shakes are between 235-237ml which is 1 cup – serving sizes can vary between products.

### BOOST Products

Product Name	Serving	Carbs	Fat	Protein	Calories
Original Nutritional Drink	237ml	37g	6g	10g	240
High Protein Nutritional Drink	237ml	28g	6g	20g	250
Plus Nutritional Drink	237ml	45g	14g	14g	360
Women Nutritional Drink	237ml	14g	7g	15g	180
Breeze Nutritional Drink	237ml	54g	0g	9g	250

### ENSURE Products

Product Name	Serving	Carbs	Fat	Protein	Calories
High Protein	235ml	31g	6g	12g	225
Regular	235ml	35g	16.7g	9.4g	235
Protein Max with 1g sugar	330ml	6g	1.5g	14g	150
Protein Max	235ml	44.2g	11g	20g	350
High Protein 50% less sugar	235ml	19g	2g	16g	160

### PREMIER PROTEIN Products

Product Name	Serving	Carbs	Fat	Protein	Calories
Protein Shake	325ml	5g	3g	30g	160

### SPERRI (Plant-Based) Products

Product Name	Serving	Carbs	Fat	Protein	Calories
Protein Shake	330ml	39g	11g	16g	330

### PRESIDENT'S CHOICE Products

Product Name	Serving	Carbs	Fat	Protein	Calories
Ultra Shake Meal Replacement	237ml	41g	4g	10g	240

### CARNATION BREAKFAST ESSENTIALS Products

Product Name	Serving	Carbs	Fat	Protein	Calories
Original Nutritional Drink	237ml	4g	4g	10g	240
High Protein Nutritional Drink	237ml	27g	6g	15g	220
Light Start Nutritional Drink	237ml	16g	4g	13g	150

### FAIRLIFE Products

Product Name	Serving	Carbs	Fat	Protein	Calories
Nutrition Plan (Lactose Free)	340ml	4g	2.5g	30g	150

### “Meatless” vs Meat Protein

There has been an increase in the marketing and availability of “meatless” meat substitutes.

“Meatless” protein is often made from pea or legume protein.

Here is a comparison of a currently available grocery store “meatless” product and ground beef.

### “Meatless” Ground Beef

Ingredients	Serving	Carbs	Fat	Protein	Calories
water, pea protein, canola oil, coconut oil, rice protein, cocoa butter, yeast, mung bean protein, methylcellulose, potato starch, sugars, potassium chloride, yeast extract, beet juice, salt, sunflower lecithin, vinegar, concentrated lemon juice, carrot powder, vitamins and minerals	100g/3.5oz	4g	17g	18g	250

### Ground Beef

Ingredients	Serving	Carbs	Fat	Protein	Calories
Lean beef	100g/3.5oz	0g	11g	27g	220

## Protein Rich Foods

Use the following chart to help guide your food choices to maximize your protein intake. Have one of the following foods as part of each meal/snack.

**Goal:** between 60 – 80 grams each day

### Meat and Chicken:

Protein Source	Amount	Protein Grams
Beef (Roast or steak)	3 oz	25
Beef (Hamburger – lean)	½ cup crumbled	18
Chicken	3 oz	28
Chicken thigh	2	24
Chicken (ground)	½ cup	14
Turkey	3 oz	28
Turkey (ground)	½ cup	23
Pork	3 oz	23
Deli ham	2 slices	11
Deli turkey breast	2 slices	8

*\*Rule of thumb: 1oz = 7g protein/ 3oz (21g) = the size of a deck of cards*

### Fish:

Protein Source	Amount	Protein Grams
Salmon (Filet)	3 oz	19
Salmon (canned)	½ cup	17
Tuna (canned)	½ cup	20
Fish (all other varieties)	3 oz	21
Shrimp	½ cup	16
Scallops	½ cup	16

*\*Rule of thumb: 1oz = 7g protein/ 3oz (21g) = the size of a deck of cards*

### Meat Alternatives:

Protein Source	Amount	Protein Grams
Peanut butter	1 Tbsp	4 (90 calories)
Nuts	¼ cup	6 (200 calories)
Chickpeas	¾ cup	18
Kidney beans	¾ cup	12
Lentils	¾ cup	13
Baked beans (Canned)	¾ cup	10
Bean or split pea soup	1 cup	18
Chili	1 cup	18
Hummus	¼ cup	5
Edamame (Soybeans)	½ cup	12
Tofu (Soft)	3 oz (½ cup)	6
Tofu (Firm)	3oz (½ cup)	10
Textured vegetable protein	½ cup dry	24
Meatless ground meat	1/3 cup	16
Egg, whole	1 (¼ cup)	6
Egg, yolk only	1	3
Egg, white only	1	3

### Milk and Milk Alternatives:

Protein Source	Amount	Protein Grams
Milk (Skim, 1%)	1 cup	8
Soy beverage, plain	1 cup	6
Yogurt, low fat (plain or flavoured)	100 g (1/3 cup)	4
Greek yogurt (Plain)	100 g (1/3 cup)	8
Cheddar cheese	1" cube (30 g/1oz/4tbsp)	7 (116 calories)
Cheese slices, processed, regular	1 slice	3
Cheese slices, processed, light	1 slice	4
Mozzarella, regular	1" cube (30 g)	6
Mozzarella, light	1" cube (30 g)	7
Mini Babybel, regular	1 serving (20 g)	4
Mini Babybel, light	1 serving (20 g)	6
Laughing Cow cheese wedge, regular	1 serving (16 g)	5
Laughing Cow cheese wedge, light	1 serving (16 g)	6
Black Diamond cheese strings	1 string (21 g)	6
Cottage cheese, 1%, or 2%	½ cup	14
Ricotta cheese, whole or part-skim	¼ cup	7
Skim milk powder	2 Tbsp	5

## Bariatric-Friendly Shopping List

It is important to eat a wide variety of foods. Remember that you must continue to base your meals around protein but also include carbohydrates and fiber in the form of fruit, vegetables, legumes, and whole grains. This is not an exhaustive list, but rather a guide to help you in making nutritious choices.

### Fresh Fruit:

Apples  
Bananas  
Pears  
Peaches  
Nectarines  
Plums  
Kiwi  
Oranges  
Cherries  
Grapefruit  
Lemons, Limes  
Grapes  
Pomegranate  
Pineapple  
Mango  
Berries  
Melon

### Fresh Vegetables:

Lettuce  
Dark green leafy vegetables  
Fresh Herbs  
Asparagus  
Broccoli  
Brussel sprouts  
Green beans  
Cauliflower  
Cabbage  
Carrots, parsnips  
Celery  
Onions  
Garlic  
Squash  
Eggplant

Sweet potato  
Zucchini  
Tomatoes  
Cucumber  
Bell Peppers  
Mushrooms

### Meat and

#### Alternatives:

Chicken/Turkey (lean skinless cuts)  
Pork (lean cuts)  
Beef  
Salmon  
Tuna  
Mackerel  
Trout  
Cod  
Haddock  
Tilapia  
Snapper  
Oysters  
Clams  
Shrimp  
Lobster  
Scallops  
Crab  
Wild game  
Tofu  
Tempeh  
Hummus

### Dairy and

alternatives:  
Unsweetened yogurt

Low fat milk (Skim, 1%, Lactose Free)  
Low-fat Cottage Cheese  
Part skim or reduced fat cheese  
Fortified Soy or nut beverages (unsweetened)  
Eggs, egg substitute, egg whites  
Margarine

### Pantry Items:

Canned vegetables  
Canned tomatoes  
Low sodium broth  
Broth cream, or tomato-based soups  
Marinara Sauce  
Canned tuna, chicken, or salmon  
Canned beans  
Dried lentils/beans  
Canned fruit (packed in water or its own juice)

Nut butter (peanut, almond, etc.)  
Plain Oats (Steel cut, large flake, instant)  
Cream of wheat  
High-fibre cereals  
Meal  
Replacement Shakes  
Skim milk powder, protein powder  
Dried fruit (no sugar added)  
Nuts (unsalted mixed)  
Seeds (hemp, chia, flax, pumpkin, sunflower)  
Popcorn Kernels  
Olive or Canola oil  
Low fat dressings  
Dried herbs and spices

### Frozen Foods:

Frozen vegetables  
Edamame  
Frozen fruit  
Frozen un-breaded fish or skinless

## Protein-Focused Recipes

Recipes contained here are based on 24 grams of protein per scoop/serving of protein powder. Nutritional breakdown is only an estimate. It is always best to read the nutrition fact label.

### Fruity High Protein Shake

½ cup of fruit-fresh or frozen (slightly thawed)  
½ cup pomegranate or blueberry juice  
1 scoop protein powder unflavored

Put all ingredients into blender. Blend until smoothie consistency is reached!  
Makes one serving.  
Nutrition information per serving: 207 calories; 24 grams protein.

### Iced Latte

1 cup decaffeinated coffee, chilled  
1 scoop Protein powder, Vanilla or unflavored  
4 ice cubes

Place all ingredients in blender. Blend until smooth. Makes one serving.  
Nutrition information per serving: 120 calories; about 24 grams protein; 2 grams fat

### Vanilla Yogurt Smoothie

1 cup plain, fat free yogurt  
1 scoop Protein powder, Vanilla or unflavored  
¼ cup milk, skim

Place all ingredients in blender. Blend until smooth. Makes one serving.  
Nutrition information per serving: 272 calories; 24 grams protein; 2 grams fat.

### Vanilla Yogurt

1 cup plain, fat free yogurt  
1 scoop Protein powder, Vanilla or unflavored

Stir protein powder into yogurt. Makes one serving.  
Nutrition information per serving: 250 calories; 32 grams protein; 2 grams fat.

### Protein Power Orange Frosty

½ cup orange juice, 100%  
1 scoop Protein powder, Vanilla or unflavored  
4 ice cubes

Put all ingredients into blender. Blend on high for 45 seconds. Makes one serving.  
Nutrition information per serving: 148 calories; 24 grams protein; 2 grams fat.

### **Vanilla Shake**

½ cup milk, skim  
¼ cup yogurt, plain, fat free  
1 scoop Protein powder, Vanilla or unflavored  
4 ice cubes

Put all ingredients into blender. Blend on high for 45 seconds. Makes one serving.  
Nutrition information per serving: 195 calories; 30 grams protein; 2 grams fat.

### **Cottage Cheese Ice Cream**

2 cups low-fat cottage cheese  
1 tablespoon of maple syrup or honey

Blend all in a high-speed blender or food processor until smooth. If using frozen fruit, add that in and blend once more. Transfer the cottage cheese ice cream mixture into a lined pan and freeze for an hour or until frozen. Let the ice cream sit at room temperature for 10 minutes before scooping and serving. Makes 2 servings.

Nutrition information per serving: 217 calories; 26 grams protein; 3 grams fat.

Flavor Options:

Peanut butter. Swirl 1-2 tablespoons of peanut or almond butter into the ice cream before freezing.

Strawberry cheesecake. Blend 1/4 cup of strawberries with the cottage cheese.

Chocolate. Add 1-2 tablespoons cocoa powder.

Vanilla. A little vanilla extract can add a subtle, sweet flavor to your ice cream.

Banana. Add 1 ripe banana to keep the mixture extra rich and creamy and easier to scoop

### **Hot Cocoa**

1 cup milk, skim  
1 scoop Protein powder, Vanilla or unflavored  
1 packet hot cocoa, sugar free

Heat milk in microwave on high power for 90 seconds or until desired temperature is reached.

Stir in protein powder and hot cocoa until dissolved. Makes one serving.

Nutrition information per serving: 231 calories; 32 grams protein; 2 grams fat.

### **Eggnog**

1 scoop Protein powder, Vanilla or unflavored  
1 cup of skim milk  
¼ cup egg substitute  
1 Tbsp Instant pudding, vanilla, sugar free, dry  
½ tsp. vanilla extract

Put all ingredients into blender. Blend on high for 45 seconds. Chill, and then stir prior to serving. Makes one serving.

Nutrition information per serving: 183 calories; 39 grams protein; 2 grams fat.

### **Apple Smoothie**

½ cup milk, skim  
¼ cup yogurt, plain, fat free, no added sugar  
¼ cup applesauce, no added sugar  
1 scoop Vanilla or unflavored protein powder  
pinch nutmeg and cinnamon  
¼ tsp. vanilla extract  
4 ice cubes

Put all ingredients into blender. Blend on high for 45 seconds. Makes one serving.  
Nutrition information per serving: 221 calories; 32 grams protein; 0 grams fat.

### **Apple Shake**

<sup>3</sup>/<sub>4</sub> cup milk, skim  
½ cup applesauce, no added sugar  
1 scoop Vanilla or unflavored protein powder  
pinch cinnamon  
pinch nutmeg  
4 ice cubes

Put all ingredients into blender. Blend on high for 45 seconds. Makes one serving.  
Nutrition information per serving: 237 calories; 30 grams protein; 2 grams fat

### **Fruit Freeze**

½ cup skim milk  
1 scoop Vanilla or unflavored protein powder  
5 strawberries, frozen, no added sugar  
2 peaches, frozen, no added sugar  
¼ cup pineapple, canned, packed in juice

Put all ingredients into blender. Blend on high for 45 seconds. Makes one serving.  
Nutrition information per serving: 263 calories; 28 grams protein; 2 grams fat; 217 mg sodium,  
308 mg calcium.

### **Oatmeal Magic**

¼ cup oatmeal  
½ cup Greek yogurt  
1 small, diced apple  
¼ cup fresh blueberries  
¼ cup sliced strawberries  
2 tbsp Maple syrup  
Sprinkle of cinnamon  
8 plain whole almonds diced and added

Cover all with almond milk and let sit overnight in the fridge in a mason jar  
Warm and eat or eat cold.



**Mango Smoothie**

½ cup Plain Greek Yogurt  
½ banana  
½ cup frozen mango  
¼ cup skim milk  
¼ cup or less orange juice  
3 tbsp ground Flax Seed

**Green Mango Smoothie**

½ cup Plain Greek Yogurt  
½ banana  
½ cup frozen Mango  
1 cup spinach leaves  
¼ cup skim milk  
¼ cup or less orange juice  
3 tbsp ground flax seed

**Yogurt Parfait**

1 small container Greek yogurt (Plain)  
4 fresh strawberries  
2 tbsp ground flax seed  
1 -2 tsp maple syrup  
5 small coins of banana (1/2 banana). Blend all until smooth and eat with a spoon  
Stage 4 (Mashed Consistency)  
Grab and Go Banana Oatmeal Breakfast  
2 Bananas  
1 cup oatmeal  
2 tbsp mini chocolate chips and or a cut up apple (diced small)  
2 tbsp each pumpkin seeds, coconut, almonds  
1 tsp cinnamon

Mix all. Form into 8 discs. Bake on parchment paper x 20 mins. 2 per serving.

**Egg Scramble Cups**

6 eggs  
½ cup skim milk  
½ cup diced ham  
½ cup diced red and green peppers  
½ cup salsa  
½ cup cheese (feta or cheddar)

Mix all

Pour into 12 muffin cups. Bake for 15 min. Store in fridge or freeze. 2 per serving.

### **Cottage cheese and fruit**

½ cup low fat cottage cheese  
Sprinkle of cinnamon  
½ cup cut mixed fruits like strawberries, blueberries, kiwi  
8 almonds diced and sprinkled over the top

### **Oatmeal Pancakes**

2 eggs  
1 cup oatmeal  
2 bananas mashed  
1 tsp cinnamon  
¼ cup almond butter optional

Mix. Cook on a frying pan surface (spray some light olive oil on the pan first). Eat with a drizzle of maple syrup and some fresh blueberries or cut strawberries or both.  
2 servings

### **Cottage Cheese Pancakes**

1 cup rolled oats  
¾ cup liquid egg whites  
1 cup low fat cottage cheese  
2 teaspoons baking powder  
2 tsp cinnamon  
1 tsp vanilla extract (\*optional)

Combine rolled oats, cottage cheese, egg whites, baking powder, cinnamon, and vanilla in a blender.

Blend until everything is well combined (about 30 seconds). You may need to stop to scrape the sides down - you want to have a nice smooth pancake batter-like consistency.

Pre heat a non-stick pan or griddle over a medium heat and lightly coat with cooking spray.

Scoop ¼ cup of the batter on to the hot pan. Repeat, adding as many pancakes as you can without crowding the pan. Cook for about three minutes or until the edges start to bubble. Flip the pancakes and cook for another two minutes or until golden brown.

Top with fresh berries and a drizzle of maple syrup - or a schmear of nut butter.

Nutrition: This makes 2 servings

1serving | Calories: 312kcal | Carbohydrates: 38g | Protein: 30g | Fat: 4g | Saturated Fat: 1g |  
Cholesterol: 5mg | Sodium: 613mg | Potassium: 421mg | Fiber: 6g | Sugar: 8g | Vitamin A: 46IU  
| Vitamin C: 4mg | Calcium: 106mg | Iron: 2mg

### **Energy Bites**

½ cup nut butter (example peanut butter or almond butter)  
1 cup oatmeal  
¼ cup ground flax seed or chia seeds  
2 tbsp maple syrup or honey  
¼ cup unsweetened coconut  
2 tbsp mini chocolate chips  
1 tsp Vanilla or almond extract  
1 tsp Cinnamon

Form into 18 balls and store in the fridge

### **Chocolate Chickpea Muffins**

1 can chickpeas (rinse well)  
3 eggs  
¼ cup maple syrup  
2 tsp b soda  
2 tbsp olive oil  
1 tsp Vanilla  
1/3 cup cocoa

Blend all in a blender until smooth. Pour into muffin cups and bake on 350 x 15-20 mins. Place a small amount of ground rock salt on the top as they come out of the oven.

## Post WLS Diet Stages 1, 2, & 3

**Medical Disclaimer:** The information provided on this handout is intended for patients enrolled in the NSH Bariatric Surgery Program. The information should **ONLY** be used in consultation with the NSH Bariatric Surgery team.

**It is important you keep this handout as a reference and bring it with you to the hospital.**

This information has been designed to help you, your family, and your close friends start learning about nutrition for weight loss surgery. In order to be successful losing weight and keeping it off, you must learn how to modify your eating behavior permanently. The primary objective is to maintain good nutrition, facilitate safe and sustained weight loss, and nurture independence toward a healthier lifestyle.

Weight loss surgery is only part of the treatment. These diet stages are different than any other diet you may have followed in the past. It will progress through a series of five stages: the first four lasting a total of eight weeks. The Bariatric Surgery Team has designed each diet stage to provide nutrition consistent with recovery, healing, and tolerance. You will begin Stage One and proceed to Stage Three while in the hospital. You will be discharged from the hospital on Stage Three and continue that stage at home for **four weeks**. During your first appointment, four weeks after surgery, you will be evaluated to determine if it is medically safe to advance your diet and detailed Stage 4 information will be reviewed.

# Post Sleeve Gastrectomy - Diet Progression

(Progression may vary slightly with each individual)

Location and Schedule	Stage	General Description	Duration
<ul style="list-style-type: none"> <li>Starts after surgery</li> <li>IV fluids will be given until tolerating sips of water with a target of 1 oz per hour</li> </ul>	<b>1</b>	<b>Water</b> <ul style="list-style-type: none"> <li>1 oz per hour</li> <li>Sipped</li> </ul>	<b>1 day</b>
<ul style="list-style-type: none"> <li>Completed in the hospital</li> </ul>	<b>2</b>	<b>Clear Fluids</b> <ul style="list-style-type: none"> <li>Low sugar, decaffeinated, non-carbonated</li> <li>Sip slowly &amp; progress to 2-4 oz per hour</li> <li>Clear soup broth, juice, “Boost juice”, Jell-O</li> </ul>	<b>1 day</b>
<ul style="list-style-type: none"> <li>Getting ready for discharge</li> <li>You will be introduced to Stage 3 and evaluated for tolerance.</li> </ul>	<b>3</b>	<b>Full Fluids</b> <ul style="list-style-type: none"> <li>Low sugar, high protein</li> <li>Drink slowly &amp; progress to 4-8 oz per hour</li> <li>Carnation Instant Breakfast, Boost, Ensure, milk, strained creamed soup, smooth yogurt</li> </ul>	<b>4 weeks</b>
<ul style="list-style-type: none"> <li>Home</li> <li>Starts 4 weeks after surgery</li> </ul>	<b>4</b>	<b>Soft Food</b> <ul style="list-style-type: none"> <li>Slowly introduce soft or lean pureed/ground</li> <li>Scrambled egg, soft-cooked vegetables, soft-cooked fish</li> <li>No bread, rice, pasta, or raw vegetables yet</li> </ul>	<b>4 weeks</b>
<ul style="list-style-type: none"> <li>Home</li> <li>Starts 8 weeks after surgery</li> </ul>	<b>5</b>	<b>“Normal”</b> <ul style="list-style-type: none"> <li>Lean meat, fish, &amp; poultry, fresh fruit &amp; veggies, whole grains &amp; legumes, healthy fat, and low-fat dairy</li> <li>Continue with protein powder as needed to meet 60 -80g protein daily</li> </ul>	<b>Lifetime</b>

### **Goal # 1 - Fluid Intake**

2 to 4 L = 64 to 128 oz fluid = 8 to 16 cups daily

- Fluid is an essential nutrient needed every day for normal body functioning
- Drinking adequate fluids helps to prevent hunger
- Generally, women aim for 2-3 liters (64-96oz) and men 3-4 liters (96-128oz) per day
- Signs and symptoms of dehydration: unquenchable thirst, dry mouth, lightheadedness, headache, muscle cramps, ears ringing, chronic fatigue (although fatigued is normal following major surgery)
- “Catch up” on water intake is almost impossible after surgery
- Monitor your urine output to make sure you are properly hydrated
- You may not be well hydrated if:
  - Your urine is dark in color
  - Your urine has a strong odor
  - You are urinating less than four times per day and/or only in a small quantity (less than one cup)
- Normal urine color is usually darker in the morning and lighter as the day goes on
- Vitamins can darken the color of your urine
- Avoid caffeine as it will irritate your new stomach wall

### **Goal # 2 - Protein Intake**

60 to 80g protein daily

- Protein is essential for body growth, development, and healing
- Protein promotes weight loss
- Protein decreases hunger
- Aim for 60 to 80 grams per day
- It may take you one to two weeks to work up to this goal
- Your protein intake will be assessed during your first follow up appointment by the dietitian
- The point of the surgery is to promote fat loss not muscle loss and lean muscle tissue burns more calories. Protein will help to protect your muscle tissue.
- Low protein intake may contribute to hair loss or thinning.

### **Goal # 3 – Calorie Target**

600 to 800 calories daily in Stage 3

- Weight loss occurs when calories **in** minus calories **out** is negative
- Your body uses calories to conduct its daily functions and provide energy
- In the first four weeks we anticipate you will be able to consume approximately 600 to 800 calories daily
- Over time your fluid and food tolerance will improve, and your dietitian will adjust your calorie goals accordingly

# Progression of Stages 1 through 3

## Immediately Following Surgery

- You will be “NPO” which, simply means that you will not receive any food or drink by mouth for 3 hours prior to your surgery.
- You will receive intravenous fluid to keep you well-hydrated and moist swabs to prevent mouth dryness.
- You will begin Stage One when you become more alert, when it is determined that your stomach and intestines are showing signs of normal activity.

## Stage 1: Water

- Completed in hospital
- Lasts one day or less
- 1 oz (30 cc) of water per hour in a medicine cup
- Sip slowly and stop sipping if you start to feel uncomfortable



## Stage 2: Clear Fluids

- Completed in hospital
- Lasts one day or less (Stage 2 helps to stimulate digestive function)
- 2-4 oz of clear liquids per hour (non-carbonated, decaffeinated, low sugar)
- In-hospital fluid choices include water, broth, Jell-o, juice, Resource or Boost clear liquid supplement (these are NOT the regular meal replacement products)
- Use a 1 oz medicine cup to prevent gulping and drinking too fast
- Sip slowly and stop sipping if you start to feel uncomfortable

## Stage 3: Full Fluids

- Started in the hospital
- Continued at home for 4 weeks
- **Do not self-advance your diet**
- Stage 3 is only liquids with no lumps: high quality protein, low fat, low sugar.
- Protein choices can include Glucerna, Boost, Ensure, Carnation Breakfast Essentials, milk-based soups, dairy products, and protein powder
- Increase to 4-8 oz per hour to achieve 60 – 80 grams of protein and a total of 8 cups of fluid daily.
- It may take up to two weeks to achieve this.

### Vitamins and Minerals

- You will need to take a daily adult multivitamin-mineral supplement and a Vitamin D supplement for the rest of your life
- Depending on your past medical history, and blood work you may need additional vitamins and minerals.
- Your Weight Loss Surgery team will review your needs and make personalized recommendations
- Once you are home from the hospital start with one chewable multivitamin per day (Flintstones Complete, Centrum Chewable, or a comparable brand)
- One month after your surgery, progress to one adult complete supplement per day. This does not need to be chewable.
- The Weight Loss Surgery team may suggest other supplements. These recommendations will be made at your follow-up appointments based on your blood work and food intake.

### Adjustments for Diabetes

- You will be discharged from the hospital on Stage 3, but you must carefully monitor and record your blood sugar levels.
- This will provide pertinent information to your diabetic doctor and surgery team so that your medications can be adjusted accordingly.
- The goal is to prevent your blood sugar from getting too low or too high.
- Aim for safe levels (generally 4-7mmol/l).

SIGNS OF LOW BLOOD SUGAR	SIGNS OF HIGH BLOOD SUGAR
Excessive sweating, faintness Low blood sugar less than 4 Headache/irritability Pounding of heart Excessive hunger Slurred speech	Increased thirst and urination Elevated blood sugar Weakness Fatigue Loss of appetite or increased appetite

### Important Information

- Taste test Stage 3 foods such as Boost, Ensure, Carnation Instant breakfast and protein powder recipes prior to surgery
- Do not use straws in Stage 3 as they may cause gas and fill you up.
- Keep fluid by the bedside, on your desk, in your car, and in your purse/bag
- Remember flavored water, gelatin, ice pops, and broth all count towards your fluid goal
- Keep a daily journal to track your exercise, food/beverages, including fluid & protein intake. See the *Progress Tracking Apps* handout.



## Stage 3 Food & Beverage Suggestions

### Beverages

- Low sugar, decaffeinated, non-carbonated fluid
- Water, Crystal Light, Wyler's light, Fruit 2 O, sugar free Kool Aid, Minute Maid Light, Tropicana Light, Welch's Low Cal, Diet Ocean Spray

### Protein supplements

- Protein powder smoothie with fruit
- Commercial complete meal replacements
- Ensure, Carnation Breakfast Essentials, Boost, Glucerna, Premier Protein, Sperr
- See more information on protein supplements in the *Protein Sources Information* handout

### Dairy Products

- Skim or 1% milk, Skim or 1% Lactaid, unsweetened soy milk, or rice milk
- **Smooth** low fat, light yogurt (no solid pieces)
- Should contain less than 1% MF
- Sugar-free, fat-free pudding, low-fat, sugar free custard (Jell-O, Hunt's, SnackPack)
- Part skim ricotta cheese or low-fat cottage cheese, pureed
- You can add a little milk when pureeing if fluids are too thick

### Soup (canned or homemade)

- Strained or blended low-fat cream soups
- Pureed, broth-based soups
- Must not contain rice, potatoes, or noodles

### Other Nourishment

- Thin (able to pour) low sugar hot cereals (Cream of Wheat)
- Sugar free ice pops (Popsicles)
- Unsweetened applesauce
- Sugar free gelatin (Jell-O, Hunt's, SnackPack)
- Dried skim milk powder (Carnation)

## Protein Score Sheet

- Add up your protein intake every day.
- Your goal is 60-80 grams daily by the end of one or two weeks.
- Look into protein powders sold in pharmacies or health food stores.
- Choose one that has 18-24 grams of protein per scoop and no more than 120 calories.
- It is always best to read the nutrition fact label.
- The nutrition values below are estimates.

Food/Beverage	Portion	Protein (g)
water or flavored water	-	0
skim and 1% milk (Lactaid too)	1 cup	8
low fat, Light yogurt	6-8 oz	5-8
low fat, Light yogurt smoothies	8 oz	6
sugar & fat free pudding (mixed w/ milk)	4 oz	4
whipped low fat cottage cheese	4 oz	12-16
part-skim ricotta cheese	¼ cup	8
low fat cream soups, made with milk	½ cup	3
low fat broths	1 cup	1
thinned hot cereals	1 cup	3-5
sugar free ice pops	1 pop	-
unsweetened applesauce	4 oz	-
sugar free gelatin	4 oz	1
egg white powder	2 tsp	3
dried skim milk powder	1/3 cup	8
protein powder	1 scoop	20-24

## Flavor Tips

- Warm chocolate protein supplement in microwave to have a hot cocoa like drink
- Blend protein supplement with crushed ice to make a frosty
- Make your own soup and blend to a liquid (chicken vegetable, lentil soup)
- Try a homemade “Egg Drop” Soup: bring 1 cup of broth to a boil. Add ¼ cup “Just Whites” (liquid or powder) and whisk/stir well.

### **Hi-Pro Jell-O**

Use Sugar Free Jell-O

Follow directions for preparation of a 4 oz/4 servings box of Sugar Free Jell-O, any flavor

Follow package directions for dissolving Jell-O in boiling water.

Measure 1/2 cup of cold water.

Add two scoops of Unflavored protein powder to cold water, one scoop at a time, stirring slowly to dissolve.

Add ice to water with protein powder to equal one cup.

Stir protein powder with ice into dissolved Jell-O until ice has melted

Place in freezer for at least 30 minutes to chill quickly.

Important Comments:

The protein will settle somewhat toward the bottom, but the taste is unchanged.

If you like this recipe with Unflavored, you might also like it substituting the Vanilla protein powder

1 cup Jell-O as prepared has 20 grams of protein

### **Hi-Pro Yogurt**

For Plain Yogurt use Vanilla protein powder

Put about half of a 6-ounce container of yogurt or all of a 4-ounce container in a small bowl.

The first time you try this recipe, mix in 1/4 or 1/3 scoop protein powder. Stir until well blended.

If this works well, the second time you might experiment with 1/2 scoop.

### **Diet V-8 Splash**

Pour 6-8 ounces of Diet V-8 Splash in a large glass

Mix one scoop of protein powder in the Diet V-8 Splash until blended

Protein: 20 grams

### **Proteina Colada**

Mix one scoop Vanilla protein powder with 8 oz Skim Milk

Add 2 drops Imitation Pineapple Extract, and

And 2 drops Imitation Coconut Extract

Adjust to taste.

Protein: 20 grams per serving

### **High Protein Hot Cereal Recipe**

1 cup hot cereal (instant, unsweetened cream of wheat, oatmeal)

1/3 cup unflavored protein powder OR use 1/4 cup egg white powder

1/3 cup of milk

Flavorings: spice (cinnamon or nutmeg), sugar substitute (Splenda), sugar free syrup to taste

Directions: Prepare hot cereal according to package directions. Mix protein powder into 1 cup of cooked cereal, add milk to thin down to yogurt consistency. Add spice, sugar substitute, and/or sugar free syrup to taste.

# Post-WLS Stage 3 Sample Diet

## THE STAGE 3 DIET IS TO BE FOLLOWED FOR 4 WEEKS POST WLS

For 4 weeks after surgery, you will need to:

- Consume only liquids (must pour like milk – no lumps), to allow your new stomach to heal and adjust.
- Keep well hydrated with 8 or more cups of total fluids daily.
- Sip fluid every hour that you are awake.
- Consume 60 to 80 grams protein daily.
- Take a daily chewable multivitamin-mineral supplement.
- You will only be getting 600 to 800 calories daily for these first 4 weeks, so be sure everything is a nutritious choice.
- Add up your fluids and protein every day. Keep a journal of this information.

### Example: Simplified Typical Day

8AM	8 oz protein drink
9AM	4-8 oz water
10AM	4 oz or 1 small tub of yogurt
11AM	4-8oz water
NOON	8oz protein drink
1PM	4-8 oz water
2PM	8 oz 1% milk, soymilk, or reduced lactose milk
3PM	4-8 oz water
4PM	8 oz sugar free gelatin
5PM	8 oz protein drink
6PM	8 oz milk-based soup
7PM	8 oz decaf tea (if desired)

**TOTAL** Approximately 60 grams of protein and 8 to 9 cups fluid

*\*Protein intake will vary depending upon protein supplement choice.*

### Example: Detailed Typical Day

8AM	1 protein smoothie (see recipes on website)
9AM	4-8 oz water
10AM	4 oz pureed low-fat cottage cheese with applesauce
11AM	4-8oz water
NOON	1 cup of pureed fish chowder
1PM	4-8oz water
2PM	8 oz low fat, light yogurt
3PM	1 cup broth mixed with 1 scoop unflavored protein powder
4PM	8-16 oz water (over 2 hours)
6PM	Carnation Breakfast mixed with 8 oz 1% milk
8PM	8 oz crystal light

**TOTAL** Approximately 65 grams of protein and 10 cups fluid

## Post-WLS Stage 3 Sample Diet

The following is a detailed example menu of the one month of fluids you will consume **after** your surgery; also called the **Stage 3 Diet**. All liquids need to be sipped slowly. This menu contains the 60-80 grams of protein and the 8 cups of liquid that you need.

<b>Breakfast</b>	1 protein drink with at least 20 grams of protein  Options: Smoothie 1 cup Premier Protein Shake 1 cup Boost High Protein Shake 1 cup Ensure Protein Max Shake	120cal + 22g pro 250cal + 20g pro 112cal + 22g pro
<b>Throughout the Morning</b>	¼ cup of pureed low fat cottage cheese, mixed with ¼ cup applesauce 1 cup (8 oz) water	57cal + 6g pro
<b>Lunch</b>	1 cup soup made with milk  Options: cream of tomato pureed cream of chicken pureed fish chowder	110cal + 3g pro 268cal + 15g pro 203cal + 26g pro
<b>Throughout the Afternoon</b>	½ cup yogurt 2 cups water	78cal + 4g pro
<b>Supper</b>	1 protein drink with at least 20 grams of protein  Options: Smoothie 1 cup Premier Protein Shake 1 cup Boost High Protein Shake 1 cup Ensure Protein Max Shake	120cal + 22g pro 250cal + 20g pro 112cal + 22g pro
<b>Throughout the Evening</b>	2 cups skim	160cal + 16g pro

# Post WLS Diet Stages 4 & 5

## Important Tips and Eating Guidelines for Stages 4-5

### Eat slowly

It is essential that you take your time when you are eating to prevent nausea and vomiting. Use the guideline of 10 minutes per ounce of food and time yourself with a kitchen timer. Eventually your meals should take 20 - 30 minutes to consume.

### Do not drink and eat at the same time

Avoid fluids during meals, and 30 minutes before and after eating, so that you do not feel excessively full. Excessive fullness can lead to vomiting and stretching of your new stomach pouch. Between meals, focus on low-calorie, sugar-free, non-carbonated, and caffeine-free fluids to keep you well hydrated. You need at least 8 cups of fluid every day.

### Stop eating when full

Your new stomach is much smaller than your old one. This will cause you to feel full more quickly. If you are not able to finish your meal, you can always set your food aside and finish it 1-2 hours later. Use the following hunger scale as a guide to evaluate your degree of hunger and fullness. This scale will be helpful in distinguishing between true hunger and eating for other reasons like stress or boredom.

	Hunger Scale
1	"Starving", weak dizzy
2	Extremely hungry, cranky, low energy, lots of stomach growling
3	Fairly hungry, stomach growling a little
4	Starting to feel a little hungry
5	Satisfied, neither hungry nor full
6	A little full, pleasantly full
7	A little uncomfortable
8	Feeling "stuffed"
9	Extremely uncomfortable, stomach hurts
10	So full you feel sick

### Use small plates and utensils

Try using cocktail or baby fork and spoons to assist you in portion control and taking small bites. Use a salad or dessert plate rather than a dinner plate.

### Plan ahead and make every bite count

Do not wait until it is time to eat to decide what you are going to have. Meal planning will help to ensure that you are prepared for your meals and that you are making the best choice to promote weight loss, good health, and recovery from surgery.

### **Avoid distractions during meals**

It is important that you consciously focus on the meal period to foster a healthy relationship with food. Eating at the dinner table is highly encouraged to allow you to be mindful of what and how much you are eating, and to promote optimal digestion. Savour every bite and appreciate the colour, flavour, and texture of the food. Too many distractions during mealtime such as your phone, computer, or television, can result in overeating.

### **Use low-fat cooking methods**

This can include baking, broiling, grilling, steaming, or poaching. You can also try air-frying.

### **Keep foods moist**

This makes swallowing and digestion easier. Marinating can provide more moisture with cooking meat and poultry. If you feel that a piece of food is stuck, often described as a pressure/discomfort in your chest, walk around and avoid drinking fluids to “wash it down” because the water generally comes right back up.

### **Use small, individual food storage containers**

Use GladWare®, Ziplock®, Tupperware®, or Anchor® storage containers to help portion your meals and simplify cooking. Try using ice cube trays for storing homemade pureed food (1 section holds 1 oz).

### **Temperature control**

Some people are sensitive to very hot or cold liquids. Warming cold foods with your mouth before swallowing or drinking room temperature liquids may be helpful. Also, be cautious when re-introducing gassy or spicy foods.

### **Read labels**

Use these general rules:

- Low sugar equals 8 grams or less of sugar per 100 calories
- Fruit and dairy have natural sugar so 15 grams of sugar preserving is ok for these foods
- Low fat equals 3 grams or less of fat per 100 calories

### **Vitamins and minerals**

One month after surgery, you can progress from your chewable vitamin and mineral supplements to a daily adult complete supplement. You will need to take this daily supplement for the rest of your life. The WLS Team may recommend other supplements based on your blood work, so please have this completed prior to your post-surgery appointments.

## Stage 4: Soft Foods

After following Stage 3 Diet for four weeks, you will progress to Stage 4 Diet. This consists of soft (mashed and ground) foods that are similar in texture to mashed carrots and ground turkey. The goal of Stage 4 Diet is to promote continued weight loss, health eating habits, and provide proper nutrient balance with high quality protein, carbohydrates, and fats. The WLS Team will review this stage of the diet with you at your 1 month follow-up appointment. To prevent any post-surgery complications, it is very important that you **do not self-advance yourself** to Stage 4. Remember, your new stomach is healing and needs adequate time to adjust to each stage of the program diet.

**Start:** 4 weeks after surgery

**Duration:** 4 weeks

**Meal Schedule:** 4 - 6 small meals/snacks per day

**Texture:** mashed and ground

**Calories:** 700 to 1000 calories per day

**Goals:** Facilitate normal, healthy eating habits and increase variety of flavors, colors, and texture. Provide more nutrient balance with high quality protein, some carbohydrates, and healthy fat.

### Build Your Meals

As you begin to incorporate a wider variety of foods into your diet, the concept of building your meals becomes extremely important. The food guide below has been developed to help guide you in building healthy, well-balanced meals to ensure that you are eating for optimal weight loss, health, and recovery. You will notice that all the food groups shown below are not the same size and that the size of the food group decreases as you move from the base up. This demonstrates the amount of a particular food group that you will be including in your meals in comparison to the others.

### Protein

Similar to a house, your meals need a solid foundation. High protein foods, “Meat & Alternatives” and “Dairy” form the base of the food guide as they continue to be the foundation of your diet. When planning your meals, you should **always** begin with a protein source. You should continue building your meals one step at a time from the base up by adding in foods from other food groups.

### Fruit and Vegetables

Your next step after selecting a high-quality protein source is to add a vegetable or fruit choice to your meal. You will notice that the “Fruit” group is smaller than the “Vegetables” group. This is because vegetables should be chosen more often than fruit.



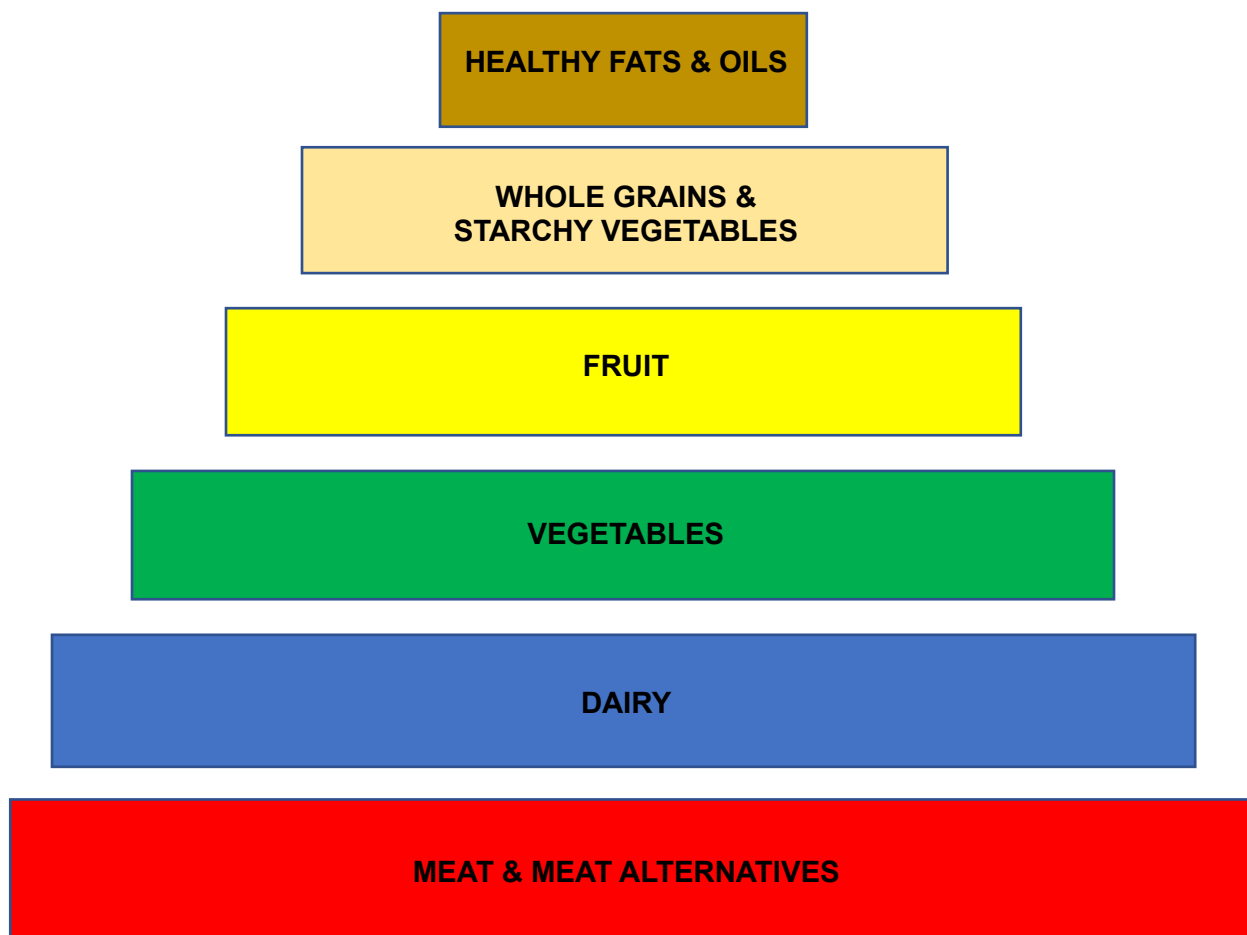
### **Whole Grain & Starchy Vegetables**

Only after you have incorporated either a vegetable or fruit choice in your meal should you have a “Whole Grain & Starchy Vegetables” choice. These foods are known to get people into trouble as portion sizes are often too large and choices from this group often include bread, rice, pasta, and potatoes which slow weight loss and result in potential weight gain. By building your meal from the base up, it will help you to control portion sizes as you will find that you will not have much room left for choices from this group.

### **Healthy Fats & Oils**

As shown below, “Healthy Fats & Oils” are included at the top of the food guide. It is important to incorporate small amounts of healthy fats in your diet.

#### **WLS Food Guide Pyramid**



**MEAT & MEAT ALTERNATIVES**

**Portion:** 1 oz to 2 oz per meal (1 oz or ¼ cup = 7 grams of protein)

**Texture:** Shredded, ground, lean, moist, tender

Always, always, always eat protein first at every meal and snack. Protein promotes weight loss and helps to prevent hunger. Our bodies do not store protein like fat and carbohydrates; therefore, you MUST ensure you get enough every day.

Start out with 1oz of high protein food and gradually increase to 2 oz per meal. It is a good idea to measure your portions using a food scale (most accurate) or measuring cups (¼ cup = approximately 1 oz). To keep track of your protein intake, remember 1 oz = approximately 7 grams of protein. You most likely will need to continue with 1-2 protein supplements a day to achieve your nutrition goals.

“Meat and Alternatives” are a good source of high-quality protein and other important nutrients including iron, zinc, magnesium, and B vitamins. Meat & Alternatives and/or dairy products should be consumed first as they are the foundation of your meal. An emphasis should be placed on low fat choices. Examples of high-quality sources of protein from the “Meat & Alternatives” group are shown below.

Source	Examples
Poultry	chicken - chicken salad, ground chicken turkey - turkey salad, ground turkey
Lean Meat	lean pork - ham salad, shaved lean deli meat lean ground beef - meatloaf, meatballs
Fish	flaky cod, haddock, salmon, and canned fish as tuna, salmon and sardines
Seafood	scallops - baked or seared crab meat initially avoid lobster or shrimp due to the tough and rubbery consistency
Egg	whole eggs/egg whites/egg substitutes - scrambled, poached, or egg salad
Soy	soy meatballs tofu diced veggie burgers
Legumes	chickpeas (hummus), kidney beans, lentils

## DAIRY

**Portion:** 1 cup milk (8 grams of protein), ½ cup cottage cheese (15 grams of protein), ½ cup of yogurt (5 - 8 grams of protein), 1 oz cheese (7 grams of protein)

Dairy products are full of bone building nutrients that help to keep your bones strong. They are also a good source of protein which will help you to meet your daily protein needs. A focus should be placed on low fat dairy products (less than 2 % milk fat). Examples of high quality and nutritious choices from the Dairy food group are shown below.

Source	Examples
Dairy	skim or 1% milk sow-fat yogurt - <100 calories per serving low-fat cottage cheese thinly sliced low-fat cheese

## VEGETABLES

**Portion:** Start with 1 to 2 tbsp. Build up to ¼ to ½ cup  
**Texture:** Soft or mashed

Vegetables supply us with fiber and important vitamins and minerals. An emphasis should be placed on bright, colourful vegetables that are packed full of nutrients such as orange (carrots) and dark green (broccoli) vegetables. You will notice that starchy vegetables such as corn, peas, and potatoes are not listed here. They are listed under the “Whole Grains and Starchy Vegetables” group.

There is a misconception that frozen and canned vegetables are less nutritious than fresh ones. Not only are they just as nutritious, but they can often be a great cost saver when fresh vegetables are out-of-season. A great cost-saving strategy is to purchase fresh vegetables when they are in-season and opt for frozen or canned choices during out-of-season months. When purchasing either frozen or canned vegetables, it is important to read the labels and avoid choices that have added sauces which can add unwanted calories. Because most canned vegetables are higher in salt, people with high blood pressure should opt for fresh or frozen.

Vegetables should be well cooked and peeled and large or hard seeds and tough stalks should be removed. Initially, you may find that vegetables cause gas, bloating and abdominal discomfort. If you are finding that this is a problem, “Beano®” (sold in supermarkets/drugstores) can be used to help with the discomfort. Avoiding large volumes at one time will also help. Examples of vegetable choices are shown below.

Source	Examples
Soft-cooked vegetables	asparagus tips, yellow and green beans, beets, broccoli, carrots, cauliflower, spinach, onions, mushrooms, peppers, zucchini, canned tomatoes
Fresh, finely chopped vegetables	celery, mushrooms, onions - to flavor tuna or crab salad

**FRUIT**

**Portion:** Start with 1 to 2 tbsp. Build up to ¼ to ½ cup

**Texture:** Soft, tender, and very ripe

Fruit will also help to supply you with fiber and important vitamins and minerals. Fresh, frozen, or canned fruit (without added sugar) may be consumed in small amounts. Focus on bright, colourful fruits as they are packed full of nutrition. If the skin of the fruit is tough (apples, pears, plums), you should peel it before eating. You should also remove any large, hard seeds.

Fruit juice should be kept to a minimum as it doesn't contain as much fibre as whole fruit and is a concentrated source of sugar. Remember, a serving of juice is ONLY a half a cup! Examples of fruit choices are shown below.

Source	Examples
Fruit	apples, unsweetened apple sauce, apricots, bananas, cantaloupes, nectarines, peaches, pears, kiwis, strawberries, watermelons  * <b>Note</b> - canned fruits must be packed in their own juice and fruit juices must be 100% fruit juice with no added sugar

**WHOLE GRAINS & STARCHY VEGETABLES**

**Portion:** Start with 1 to 2 tbsp of cereals or vegetables and build to ¼ to ½ cup; 2 to 3 crackers  
**Texture:** Soft

Grain products, particularly whole grains, are an excellent source of fibre and are full of many vitamins and minerals which are important for optimal health. Include small amounts of whole grains with your meals. Focus on choices that have at least 2 grams of fibre in them.

Avoid bread, pasta, rice, and potatoes as they have a tendency of slowing weight loss and may lead to weight gain. These foods also expand in your stomach once consumed and may cause you to vomit. Remember, the small size of your stomach requires that you make every bite count! Grazing frequently on any foods from this category may slow your weight loss progress or result in weight gain.

Source	Examples
Whole Grains and Cereals	unsweetened hot cereal - oatmeal, cream of wheat cold cereal (< 10 grams of sugar) softened with milk or yogurt low fat crackers - wheat thins
Starchy Vegetables	soft-cooked yams, squash, green peas wait until Stage 5 to introduce corn  * <b>Remember</b> - No bread, pasta, rice, or potato

**HEALTHY FATS & OILS**

**Portion:** 2 to 3 tsp daily (1 tsp = 1 serving)

Our bodies also require a small amount of fat in our diets for optimal health. However, not all fat is created equally. Including 1 to 3 tsp of healthy fats per day, found in vegetable oils and fatty fish, will help to ensure that you are meeting your fat requirements.

Saturated fats (mostly from animal sources) and trans fats (created through processing & hydrogenation) should both be limited as they are known to increase our bad cholesterol (LDL cholesterol). Examples of healthy sources of fats and oils are shown below.

Source	Examples
Fish	fresh, canned, and unbattered fatty fish - salmon, sardines, mackerel, trout
Plant Oils	canola oil, olive oil, sunflower oil, peanut oil
Tub Margarine (0 grams trans-fat)	soft non-hydrogenated margarines made with vegetable oils - Becel
Mayonnaise	light mayonnaise - Hellman's, Kraft, PC
Salad Dressing	light, non-creamy – Italian, Greek, Oil & Vinegar

## Post-WLS Stage 4 Sample Diets

Remember, you still need the following **every day**:

- 4-6 small feedings (soft or mashed plus liquids)
- 8 cups (64 oz or 2L) or more fluids
- 60 -80 grams protein
- Adult complete multivitamin-mineral supplement
- 700 – 1000 calories
- 30-60 minutes of exercise every day

The following menus have 60 -70 grams protein in 700 – 1000 calories. You will want to **slowly** introduce these soft solids

Drink an additional 5 cups of water to meet your fluid requirement and remember to take you multivitamin and mineral supplement!

### Example 1

Breakfast	1 scrambled egg (use a bit of milk to scramble)
Snack	½ cup low fat, low sugar yogurt
Lunch	¼ cup tuna mashed with 1-2 tsp of low-fat mayonnaise and spread on 2-3 plain soda crackers
Snack	1 cup (8 oz) <i>HiPro Boost, Ensure, or Carnation Breakfast Anytime</i> , or homemade blender drink with protein powder
Supper	1 cup of well-cooked/soft hearty soup with at least 11 grams protein (one & a half oz chicken or meat added) or fish chowder, made with 1% milk
Snack	1 cup milk (skim or 1%) with protein powder added (add protein powder for an extra 8 to 12 grams protein)



**Example 2**

Breakfast	small, low fat cheese omelet (1 egg or ¼ cup egg substitute + 1 oz low fat cheese) cooked in 1 tsp oil
Snack	8oz protein supplement (14-25 grams protein per serving)
Lunch	1-2 oz of tuna salad + 2-4 crackers (tuna made with minced celery + 2 tsp of light mayo)
Snack	6-8 oz low fat, light yogurt
Supper	1-2 oz diced baked chicken breast + 2-4 Tbsp mashed carrot (1 tsp margarine)
Snack	1 cup milk (skim or 1%)

**Example 3**

Breakfast	½ cup high protein oatmeal (½ scoop protein powder)
Snack	½ small ripe banana
Lunch	egg salad (1 egg or egg substitute and 2 tsp of light mayo) + 2-4 crackers
Snack	½ cup low fat cottage cheese
Supper	2 oz of soft-cooked fish, 2-4 tbsp soft-cooked vegetable (1 tsp margarine)
Snack	8oz protein supplement such as High Pro Boost or homemade protein smoothie

## Summary of Stage 4 Goals

It cannot be emphasized enough how important these goals are to your overall health and recovery after surgery. Ensure that you have a plan in place to help you consistently achieve these goals on a daily basis!

### Stay Hydrated

- Drink 2 to 4 L (64 to 128 oz fl = 8 to 16 cups) of fluids per day
- Generally, women aim for 2-3 litres (64-96oz) and men 3-4 litres (96-128oz) per day
- Watch for signs of dehydration including headache, dry mouth, low urine output (less than 4 x per day and/or only in a small quantity), dark coloured urine and/or strong urine odour
- Normal urine color is usually darker in the morning and gets lighter as the day goes on
- Your multivitamin may darken the colour of your urine
- Avoid caffeine as it may irritate your new stomach wall
- Drink fluids between meals. Don't drink fluids 30 minutes before or after meals
- REMEMBER - "Catch up" with fluids is almost impossible after surgery

### Preserve Lean Body Mass with Protein

- Aim for 60 to 80 grams of protein daily by consuming foods with high quality protein
- Texture should be shredded, ground, lean and moist (e.g., chicken salad, scrambled eggs)
- Use Boost, Ensure and/or whey protein powder for additional protein
- Always eat protein food first, then incorporate other foods
- Goal is to promote fat loss, not muscle loss! Protein helps to preserve your muscle mass

### Nutrition and Calories

- Aim for 700 to 1000 calories daily
- Eat 4 to 6 small meals/snacks per day to ensure you meet your protein needs
- Include 2 to 3 tsp of healthy fats daily
- Limit serving of carbohydrates to  $\frac{1}{4}$  to  $\frac{1}{2}$  cup of soft-cooked vegetables or fruit or  $\frac{1}{2}$  cup cereal or 2 to 3 crackers per meal.
- No bread, rice, or pasta as it can lead to vomiting and may slow weight loss
- Use small plates and utensils for portion control

### Other Important Considerations

- Eat slowly, chew foods thoroughly and avoid mealtime distractions
- Take a multivitamin and mineral supplement daily
- Review shopping guide on page 15 to help you plan ahead
- Engage in 30 - 60 minutes of daily physical activity to support weight loss and maintain lean body mass
- Keep a daily journal and be sure to track fluid and protein intake, as well as exercise, because we will be asking you these numbers at every follow-up appointment.

## Stage 5: Regular Foods

**Start:** 8 weeks after surgery

**Duration:** lifetime

**Meal Schedule:** 3 small meals and 1 to 3 snacks per day

**Texture:** regular consistency

**Calories:** females 800-122 calories/day; males 1000-1600 calories/day

**Goals:** promote normal, healthy eating habits and provide proper nutrient balance as you continue to achieve and maintain a healthier weight. Protein, fluids, and your multivitamin and mineral supplement continue to remain a priority

Stage 5 is a lifetime commitment and requires the adoption of healthy lifestyle behaviours that will support weight loss and long-term weight maintenance. A recipe for success includes regular physical activity, in addition to wise food choices that focus on nutrient dense foods to ensure that you are achieving your nutritional goals.

In Stage 5, you will continue to use the food guide outlined in Stage 4; however, foods no longer have to be soft or ground. For example, you can now include raw vegetables. It is important that you progress slowly to build a tolerance to regular foods. It is also important to remember that protein remains the foundation of your meals and should always be eaten first. You are encouraged to slowly incorporate a wider variety of foods from the other food groups. However, remember to build your meals from the base of the food guide up. This means that Whole Grains & Starchy Vegetables should ONLY be added into your meals AFTER you have incorporated Vegetables and/or Fruit.

Although your protein and fluid requirements remain the same as Stage 4, your calorie intake increases slightly in Stage 5. In Stage 5, women should aim for 800 - 1200 calories, while men should aim for 1000 - 1600 calories. This can be achieved by following the food guide and slowly increasing your portion sizes as tolerated.

### Start Slowly

- Try only one new food at a time, at home. You may find that you tolerate a particular food one day and not the next.
- You can go back to the previous stage at any time if you are having difficulty digesting Stage 5
- Your tolerance to food will improve over time.

### Avoid Old Habits

Remember, Stage 5 is for life. It is most important to avoid falling back into your old eating habits and lifestyle that existed prior to surgery such as:

- Frequent snacking and grazing (pretzels, chips, crackers)
- Unhealthy food selections such as foods high in sugar, white flour and saturated/trans fats
- Skipping meals, eating late at night, eating too fast
- Not allowing time to exercise or enjoy other activities

## Summary of Stage 5 Goals

### Stay Hydrated

- Drink 2 to 4 L (64 to 128 oz fluid = 8 to 16 cups)
- Generally, women aim for 2-3 litres (64-96oz) and men 3-4 litres (96-128oz) per day
- Continue to watch for signs of dehydration (see page 11)
- Avoid caffeine as it may irritate your new stomach wall
- Drink fluids between meals. Do not drink fluids 30 minutes before and after meals
- REMEMBER - “Catch up” with fluids is almost impossible after surgery

### Preserve Lean Body Mass with Protein

- Protein still remains a priority. Aim for 60 to 80 grams of protein daily by consuming foods with high quality protein such as meat, poultry, fish/seafood, dairy and soy
- Use Boost, Ensure and/or whey protein powder to ensure you meet your protein needs
- Always eat protein food first, then incorporate other foods

### Nutrition and Calories

- Women should aim for 800 to 1200 calories every day, while men should aim for 1000 to 1600 calories.
- Calorie needs will vary on an individual basis (e.g., daily activity level)
- Aim for 3 small meals and 1 to 3 snacks per day to ensure you meet your protein needs
- In addition to high quality protein sources, include fruit and fresh or cooked vegetables, as well as small amounts of complex carbohydrates (e.g., whole grain cereals)
- Include 2 to 3 tsp of healthy fats daily
- Continue to use small plates and utensils for portion control

### Other Important Considerations

- Eat slowly, chew foods thoroughly and avoid mealtime distractions
- If you are having difficulty tolerating foods in Stage 5, you may temporarily return to Stage 4 until your tolerance improves
- Remember to take your multivitamin and mineral supplement daily for the rest of your life
- Engage in daily physical activity to support healthy weight loss and maintain lean body mass
- Continue to keep a daily journal and be sure to track fluid and protein intake to ensure that you are consistently meeting your needs

## Stage 4 & 5 Shopping List Ideas

Plan ahead for meals and avoid frequent grazing and snacking as it can lead to weight gain. See Stage 4 and Stage 5 sample menus for meal ideas.

### **MEAT/POULTRY/FISH** (lean, moist, tender)

- Meat: Lean ground or extra-lean ground beef, poultry, lamb, and pork
- Deli Meats: Lean, shaved, or thin sliced chicken, roast beef, ham (look at the food label to select lower fat and lower sodium options)
- Poultry (skinless): Chicken, turkey
- Fish: Fresh or frozen (non-breaded), canned fish packed in water (sardines, tuna, and salmon)
- Shellfish: Scallops, crab, clams, oysters, lobster

### **MEAT ALTERNATIVES**

- Legumes: Lentils, green pea, yellow pea, navy beans
- Soy: Soy meatballs, tofu, diced veggie burgers
- Egg: Whole eggs, egg whites, or egg substitutes

### **DAIRY** (low fat and low sugar)

- Milk: Skim or 1%
- Low Fat Cheese: Less than 20% Milk Fat (MF)
- Cottage Cheese: Skim, 1% or 2% Milk Fat
- Yogurt: Skim, 1% or 2% Milk Fat

### **VEGETABLES** (fresh or frozen)

- Asparagus tips, yellow and green beans, beets,
- broccoli, carrots, cauliflower, spinach, onions,
- mushrooms, peppers, zucchini, canned tomatoes

### **FRUIT**

- Soft Fresh Fruit: Banana, mango, peach, and pear (Stage 5 includes all fresh fruit)
- Canned Fruit (no sugar added or packed in its own juice): Applesauce, peaches

**GRAINS/CEREAL** (low fat and sugar)

- Starchy Vegetables: Squash, sweet potato, corn, peas, turnip
- Hot Cereal (unsweetened): Quaker Weight Control, Cream of Wheat
- Cold Cereal (at least 2 grams of fibre and < 10 grams sugar): Fibre One, Kashi, All Bran, Shredded Wheat
- Reduced fat crackers (at least 2 grams of fibre): Wheat Thins, Ritz, Saltines, Rice cakes

**HEALTHY FAT** (unsaturated)

- Plant Oils: Olive Oil, Canola Oil, Peanut Oil
- Salad Dressing (non-creamy): Italian, oil and vinegar, Greek
- Tub Margarine (soft non-hydrogenated margarines made with vegetable oils): Becel, Country Crock
- Light Mayonnaise: Hellmann's, Miracle Whip

**COMBINATION FOODS**

- Soups: Homemade or commercial brands (Healthy Choice Soups, Campbell's Healthy Request Soups or PC Blue Label)
- Use Nutrition Label to choose lower sodium options and avoid soups with potatoes, rice, or pasta

**DESSERTS** (low fat and sugar)

- Sugar Free Fudgesicles and Ice Pops
- Sugar Free Jell-O Gelatin and Pudding Mix
- Cool Whip (non-dairy cream topping) – maximum 2 Tbsp

**SPICES**

- May use a variety of minced fresh or dried spices, herbs, and condiments (low sugar, low fat)

## Healthy Tips for Eating Out after WLS

Eating out should be a pleasurable experience. After WLS, there can be some anxiety when eating at a restaurant. By using the following tips, eating out can be fun and enjoyable.

- If possible, call ahead or check online for a menu. This way you can know if they serve foods that fit the diet stage that you are on
- First try the foods at home that you want to order from the menu. This way you will know if you can tolerate them
- Know the location of the restrooms when you arrive, in case the foods/beverages you have make you ill
- Order your meal from the appetizer menu which are often smaller portions
- Request portions be made smaller, or order kids portions of adult foods
- Ask for a take-home box right when your food arrives. Leave out only what you plan to eat and package the rest to take home
- Ask for special requests, such as dressings and gravies served on the side
- Don't hesitate to ask the server questions. Ask how the meals are prepared and opt for meals that are baked, broiled, steamed, or grilled
- Avoid any menu item that is fried or with heavy cream sauces (if in doubt, ask)
- Ask for fresh fruit instead of pies or cakes for dessert
- Ask for light salad dressings or lemon wedges to moisten your meat
- Avoid breads, pastas, rice, and potatoes
- Remember to eat slowly and to stop eating when you are full
- Purchase a small calorie/protein counter book and make an informed decision
- Try to order your meal first so that you are not influenced by others

# Post-WLS Hospital Discharge Instructions

This handout goes over some common questions or concerns you or your family may have after weight loss surgery (WLS). If you have additional questions, or do not understand something about your operation, please contact a WLS staff member.

## You may:

- Feel weak or “washed out” for up to 4 - 6 weeks. Simple tasks may exhaust you. You might want to nap often, and it is important to rest.
- Have a sore throat because of a tube that was in your throat during surgery.
- Have trouble concentrating or difficulty sleeping. You might feel somewhat depressed.

All these feelings and reactions are normal and should go away in a short time. If they do not, tell your surgeon.

## Daily Activities

- Do not drive until you have stopped taking pain medicine and feel you could respond in an emergency.
- You may climb stairs.
- You may go outside but avoid traveling long distances until you see your surgeon at your next visit.
- You may shower in 48 hours after surgery. If you have a dressing on your abdomen, you should remove it before you shower but leave white strips in place. After your shower, gently pat the incision dry. Put a new, dry dressing in place.
- Do not take a tub bath or go swimming until after your incisions are well healed (usually after your 4-week follow-up appointment with your surgeon).
- Sleeping with your head elevated may be more comfortable than lying flat. Make sure you have plenty of pillows, or a wedge pillow, so that your upper body is raised 45 degrees. Remember that uninterrupted sleep is an important part of your recovery. If you are getting thirsty at night, keep some fluid by your bed.
- Don't lift more than 10-15 pounds for 6 weeks unless your surgeon tells you otherwise. This applies to lifting children, but they may sit on your lap.
- Check with your surgeon before participating in heavy exercise.
- You may resume sexual activity 6 weeks after an “open” procedure and sooner after a laparoscopic surgery unless your doctor has told you otherwise.
- Women of childbearing age, including women who have passed through menopause within the last two years, must be sure that they do not get pregnant. This applies even if you have not had regular periods or if you believe you are not capable of becoming pregnant. It is not safe for women to become pregnant in the first two years following bariatric surgery.



## **Pain Management**

- It is normal to feel some discomfort/pain following surgery. This pain is often described as “soreness.”
- Your pain should get better day by day. If you find the pain is getting worse instead of better, please contact your surgeon.
- You will receive a prescription from your surgeon for pain medicine to take by mouth. It is important you take this medicine as directed. Do not take it more frequently than prescribed. Do not take more medicine at one time than prescribed.
- Your pain medicine will work better if you take it before your pain gets too severe.
- Talk with your surgeon about how long you will need to take prescription pain medicine. Please don't take any other pain medicine, including non-prescription pain medicine (i.e. Tylenol), unless your surgeon has said it is OK. Please note, NSAID medications such as Advil, Motrin, Ibuprofen and Aspirin are NOT recommended for 10 days before or after surgery.
- If you are not experiencing any pain, it is OK to skip a dose of pain medicine.
- To reduce pain, remember to exhale with any exertion or when you change positions.
- Remember to use your “cough pillow” for splinting when you cough or when you are doing your deep breathing exercises.

### **If you experience any of the following, please contact your surgeon:**

- ✓ sharp pain or any severe pain that lasts several hours
- ✓ pain that is getting worse over time
- ✓ pain accompanied by fever of 101F or 39C or greater
- ✓ a drastic change in nature or quality of your pain

## **Prevention of Deep Vein Thrombosis (DVT) “Blood Clot”**

- Anyone who has had surgery is at risk for a deep vein thrombosis (DVT). A DVT is a blood clot which most often forms in the leg or pelvis but can also occur in the arms. Your health care provider will discuss your risk of a DVT as it relates to your surgery.
- Until you have resumed your normal activities, try to walk 4 to 6 times a day. Walking improves circulation and will help keep your legs strong.
- In addition to walking, we recommend you do ankle exercises while in a chair or bed. The purpose of these exercises is to squeeze the veins in your legs pushing blood toward the heart. These exercises should be done at least 6 times a day and each exercise should be done in repetitions of 12 for each leg.
- Do not cross your legs while sitting. This puts pressure on the veins under the knees and slows blood flow.
- Avoid sitting for long periods. If you have a long car ride ahead, stop the car every two hours and walk around.

## Signs and symptoms of a DVT

- ✓ Leg swelling – usually in one leg only
- ✓ Tenderness in the calf muscle
- ✓ Warmth and redness in the calf muscle
- ✓ Pain in the calf muscle when walking or flexing the ankle.

***\*If these symptoms do not go away within 1 to 2 days, call your health care provider.***

## Exercise

- You should start some light exercise as soon as you can. Remember, establishing a regular exercise routine is an important part of your weight loss plan. People who put off regular exercise until they feel completely recovered generally have a harder time sticking to an exercise habit.
- Exercise helps to maintain your muscle mass and strength after surgery and with weight loss. Start slowly and gradually increase your workload.
- Don't lift anything more than 10 -15 pounds for 6 weeks unless your surgeon has told you otherwise. If you have any pain with lifting, do not lift!
- Talk to your surgeon before doing any heavy exercise.
- We recommend walking as an excellent, basic exercise. You may walk around your neighborhood or local mall.
- Many patients wonder how to get started, especially if they have not exercised in a long while. Remember, the first steps you take are in many ways the most important, even if they are small. They show that you are on your way to a healthier lifestyle. For many patients, this means walking for 5 or 10 minutes a day at first. Gradually, work your way up to at least 30 - 60 minutes once a day.

## Eating and Drinking

- You will be discharged on a full fluid or liquid ("Stage 3") diet. This diet consists of liquids that are high in protein. Please follow the instructions regarding the Stage 3 diet. Note: straws are NOT recommended.
- Your new stomach is very small compared to your old stomach. This means that you will only need to take in very small amounts of food. Over filling your new stomach may lead to nausea, vomiting and other side effects or possibly stretching it.
- If you are vomiting on Stage 3 diet, please remember to drink small amounts slowly and never gulp. Although vomiting can occur after this type of surgery, you should let your doctor know if you are not able to keep fluids down, or if you are vomiting every day or more than once in a day. Also let your doctor know if you vomit bright red or dark brown liquid.
- You will remain on this diet for 4 weeks. This is about the time of your first follow-up appointment with the surgeon, nurse practitioner and dietitian.
- At your follow-up appointment, you will be evaluated if it is medically safe to advance your diet and detailed Stage 4 information (ground, pureed, soft foods) will be reviewed with you. For healing purposes, **DO NOT self-advance your diet.** The Stage 5 diet, which will be your new, permanent eating plan, begins at 8 weeks after surgery.

## Your Surgical Incisions

- Your incisions may be slightly red around the stitches or staples. This is normal. If you see areas of redness that are spreading, please contact your surgeon.
- You may have a dry dressing over your incisions. The dressing is needed only to protect your clothes against any drainage. You should change the dressing if it gets wet. Once all drainage has stopped, you may remove the dressing.
- You may gently wash away dried material around your incisions.
- Do not remove steri-strips (thin paper strips that might be on your incisions). If they fall off on their own, that is OK.
- It is normal to feel a firm ridge along the incisions. This will go away.
- Avoid direct sun exposure to the incision areas.
- Do not use any ointments on the incisions unless you were told otherwise.
- You may see a small amount of clear or light red fluid staining your dressing or clothes. If the staining is severe or if you see bright red blood coming from any incision, please call your surgeon.
- Call your surgeon if signs of infection appear, including cloudy or foul-smelling fluid coming from any incision, or if you develop a fever of 101F or 39C or greater.
- Over the next 6-12 months, your incisions will fade and become less prominent. It is important to protect your incisions from the sun to avoid discoloring.

## Your Bowels

- Changes in your usual bowel habits are normal. These are due to changes in your diet, both volume and consistency.
- It is normal for you to be passing gas. If it becomes excessive, talk with your doctor.
- Some patients may have frequent, loose stools for the first few weeks following surgery. Others may experience constipation. See the end of this section for remedies.

## Medications

- You should not take any aspirin other anti-inflammatory products such as ibuprofen (Motrin, Aleve, or Nuprin) for 10 days before or after surgery. Read labels of all over-the-counter medications to make sure they do not contain these kinds of substances. If you are not sure if a medicine is allowed, please talk with your doctor.
- You should take all the medications you were on before the operation unless you have been told differently. **Do not stop taking any prescribed medicine without talking with the doctor who prescribed it.**
- Women of childbearing age, including women who have passed through menopause within the last two years, must be sure that they do not get pregnant. This applies even if you have not had regular periods or if you believe you are not capable of becoming pregnant. Discuss any concerns about family planning or birth control with your family doctor.
- You will go home with prescriptions for pain medicine to take by mouth. In some cases, you will have a prescription for antibiotics or other medications.
- You may be prescribed Zantac or OTC chewable Pepcid for the first 30 days to help with healing and prevent ulcers.

- If you still have your gallbladder, you may need a prescription for Ursodiol (also called Actigall) to help prevent gallstones. Gallstones can form when you lose weight quickly and this medication is recommended for 6 months after surgery to reduce your risk of developing gallstones.
- As your weight starts to drop, your need for certain medicines may change. It is very important that you stay in close contact with the doctor who prescribes your medications so that you will know if a change is needed. **Never change your medicine on your own** without talking first with your doctor.

### General recommendations for treating **blood sugar** after surgery:

- Diabetic medication may change as early as the day after surgery. You will likely be discharged from the hospital on less diabetic medication.
- **Patients with diabetes should monitor blood sugar more frequently than they did before the surgery...at least 4 times a day.**
- Check your blood sugar if you feel unwell or dizzy.
- Keep a log of your blood sugars.
- Maintain close follow up with your WLS team.

### General recommendations for **blood pressure** medication adjustments:

- Your need for blood pressure medication may change in the first few weeks or months after surgery.
- Talk with your WLS team or family doctor about your blood pressure medicines and have regular blood pressure follow-up.
- If you feel dizzy after surgery, and are drinking good amounts of fluids, have your blood pressure checked. If your blood pressure is low, call your WLS team or doctor.

### Your Emotional Well-Being

- As you know, you have had a life-altering operation. It is not unusual to have strong emotional reactions to this surgery. That is why we recommend that patients seek supports such as a support group or on-line supports as well as family and friends.
- If at any time you feel that your emotions are out of control, please call our team for help. Signs that should concern you are constant or overwhelming feelings of sadness, frequent crying, or feeling hopeless.
- If you feel unsafe at any time, call 911.

### Weight Gain During Hospitalization

- It is common to gain weight while you are in the hospital. This weight gain is likely due to IV fluids you received during your surgery.
- Avoid weighing yourself in the first week after discharge.

## Side Effects and Complications of Surgery

- Although WLS is safe and effective, complications and side effects can occur. Please be aware of the following additional symptoms that can occur.
- Follow the advice given if you experience these effects.
- If symptoms are severe, please contact your surgeon.

### Headaches or dizziness:

- Drink plenty of fluids
- Drink regular V-8 or tomato juice
- Drink bouillon
- Call for help if headaches or dizziness are severe
- Have your blood pressure checked

### Fatigue and weakness

- Make sure you are getting enough fluid and nutrition
- Keep a food record to review with your dietitian
- Make sure you are getting enough sleep
- Don't overdo your exercise routine

### Diarrhea

- Limit your diet to clear liquids for 24 hours.
- If you smoke, please try to quit smoking. Ask your primary care doctor for help if needed.
- Make sure you take in some extra fluid to replace water lost in the bowel movement. Soup broth as well as diluted cranberry or orange juice are recommended.
- Some sugar-free or "diet" products contain sugar alcohols: sorbitol or mannitol, which can cause diarrhea. Read labels and avoid these products.
- If these measures don't work in 1-2 days, call your surgeon for advice. **Do not take anti-diarrhea medicine** without first checking with your surgeon.

### Constipation

- Be sure to sip plenty of water throughout the day
- Try warm liquids in the morning
- Try 2 ounces of diluted prune juice. Mix one ounce of juice with one ounce of water.
- Keep up with your exercise routine
- If these measures do not work and you have not had a bowel movement in 4 days, call your surgeon. **Do not take a laxative** without clearing it with your WLS team first.

### Gas and Bloating

- Walking can decrease gas pain
- Try TUMS
- You could also try a medicine called simethicone (i.e., Gas X).

### Dehydration

- Keep sipping fluids every hour you are awake
- Monitor your urine volume and color
- Come to the emergency room for IV fluids if become severely dehydrated.

### Nausea

- Make sure you are drinking enough fluids
- Avoid gulping or chugging fluids, just take small sips
- Try warm fluids for comfort

### Vomiting

- Follow Stage 3 diet closely – drink small amounts slowly
- Avoid thick, chunky fluids
- Do not drink and eat together

### Hypoglycemia (low blood sugar)

- Stop what you are doing – sit down.
- Test your blood glucose level, to verify it is low.
- Consume 15 grams of carbohydrate: ½ cup juice, or 3 tsp jelly, or 3 glucose tablets
- Retest after 15 minutes. Repeat treatment if glucose is under 4.0. After you treat the low, consume some protein with a bit of carbohydrate to prevent the low from returning: ¼ cup ricotta cheese or ¼ cup blended cottage cheese with 2 Tbsp applesauce or ½ cup protein smoothie
- **If lows are happening often, call your WLS team.**

### Heartburn

- If you have a prescription for Zantac, make sure you are taking it as prescribed. If you do not have a prescription, you can get non-prescription Zantac or OTC chewable Pepcid Complete at your local pharmacy. This may help your heartburn. However, if your heartburn persists, please call your WLS team.
- Elevate the head of your bed at night.
- If none of this helps, talk with your doctor about taking prescription Prilosec or Prevacid.

### Your Appointments

- It is very important that you keep in touch with your WLS team and attend all appointments.
- Be sure to have your blood work done before your appointment and bring your WLS binder to the hospital and all appointments.

## **Remember:** in order to lose weight, not be hungry, and stay healthy...

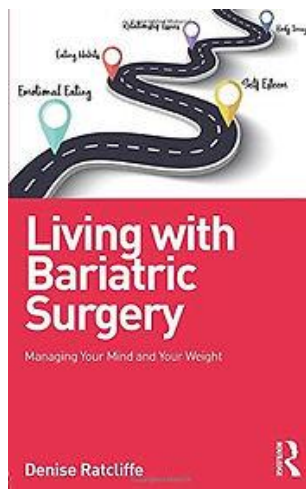
- ✓ Drink at least 64 oz (8 cups) of **FLUIDS** every day (add up milk, soup, high protein drinks, water)
- ✓ You need between 60 – 80 grams of **PROTEIN** every day (add up the protein in milk products, high protein drinks, and then add protein powder to further increase your protein to at least 60 grams)
- ✓ Take a **MULTIVITAMIN** every day. Use a chewable (not a gummy) for the first 4 weeks and then switch to an adult complete tablet forever.
- ✓ Take a Vitamin D supplement every day. Take 1000 International Units (IU).
- ✓ **EXERCISE** every day. Start slowly, doing whatever you are able, but be consistent, and build to 30 to 60 minutes or more daily.

## Recommended WLS Patient Resources

### ***Living with Bariatric Surgery: Managing Your Mind and Your Weight***

It aims to help those who are considering bariatric surgery develop a psychological understanding of their eating behaviour and the changes needed in order to make surgery successful.

It is also a great resource for those who have undergone surgery to help them adapt to the physical, psychological and relationship adjustments that occur.



### ***Regain Be Gone: 12 Strategies to Maintain the Body You Earned After Bariatric Surgery***

Regain Be Gone is a resource to help you keep weight regain at bay after bariatric surgery, helping you to:

- Face and overcome the challenges of the “maintenance phase”
- Tame the hunger monster
- Pinpoint the new or ongoing stressors in your life and how to handle them
- Turn your “no” time to “yes” time for exercise
- Stop yourself from slipping back into unhealthy habits
- Reaffirm your commitment to sustained weight loss



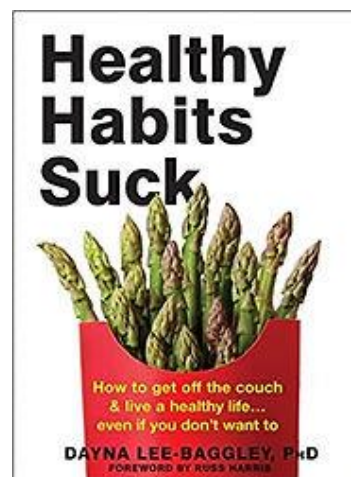
### ***The Complete Guide to Weight Loss Surgery: Your questions finally answered***

If you're planning on undergoing weight loss surgery, have recently had surgery, or are a few years out, this book is for you!

Weight loss surgery is a big deal and there's so much to know!

Our comprehensive FAQ-style guide answers 80 of the most common and crucial questions we—as WLS dietitians—get asked on a daily basis.

This book is also packed with a ton of practical tips for those tricky and sometimes overwhelming parts of life after surgery. No more guesswork. Just practical expert advice!



### ***Healthy Habits Suck: How to Get Off the Couch and Live a Healthy Life. . . Even If You Don't Want To***

With this funny, in-your-face guide, you won't find advice on how to "enjoy" exercise, or tips for making broccoli and kale taste as good as donuts and ice cream. What you will find are solid skills to help you actually do the healthy things you know you should be doing. Using these skills-based in acceptance and commitment therapy (ACT) and neuroscience—you'll learn to find the motivation you're really craving to adopt healthy habits, even if they do suck. You'll also discover how to accept self-criticism, develop self-compassion, and live a more meaningful life.

This book not only acknowledges that many healthy habits suck, it uses science to explain why we want the things we want (junk food), crave the things we crave (sugar), and dislike the things we dislike (exercise). At the end, you'll feel validated in feeling like these things are the absolute worst. But you'll also find the motivation to do them anyway.

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