

Start living your best life!



# Patient Handbook

Center for Weight Management  
and Bariatric Surgery

# Introduction

Our multi-disciplinary team at the Wentworth-Douglass Center for Weight Management and Bariatric Surgery has created this handbook to help you live your best life!

We are here to help make your weight loss journey a success, starting with education and optimization, a successful operation, and finally - your transformation!

Our surgeons perform the most advanced robotic weight loss surgeries utilizing the latest DaVinci robotic system.



# Pre-Operative Requirements Checklist

Start Weight: \_\_\_\_\_

Start BMI: \_\_\_\_\_

The checklist below is to help you track your progress through the program by including dates for each required pre-op appointment/goal.

|  | Date(s) Completed:   |
|--|--|
| Attended Information Session                         |  |
| Submit Questionnaire/Weigh In                        |  |
| Meet with Nurse Practitioner                         |  |
| Meet with Dietitian                                  |  |
| Meet with Behavioral Health Provider                 |  |
| Nutrition & Behavior Management Classes (4 required) | Class 1: _____<br>Class 2: _____<br>Class 3: _____<br>Class 4: _____ |
| Achieve Pre-op Weight Goal (if required)             |  |
| Complete Required Medical Testing                    |  |
| Meeting with Surgeon                                 |  |
| Attend Pre-Op Education Class                        |  |

# Table of Contents

|  |    |
|--|----|
| Pre-Operative Requirements Checklist . . . . .                                     | 3  |
| Meet Your Bariatric Team/Contact Information . . . . .                             | 5  |
| Background on Obesity . . . . .  | 6  |
| About the Program . . . . .  | 10 |
| Surgery Options. . . . .   | 12 |
| Roux-en-Y Gastric Bypass . . . . .   | 12 |
| Sleeve Gastrectomy . . . . .   | 13 |
| Single Anastomosis Duodeno-Ileal Bypass with Sleeve Gastrectomy (SADI-S) . . . . . | 15 |
| Steps Along Your Journey . . . . .   | 17 |
| Preparing for Your Surgery. . . . .  | 20 |
| Discharge Instructions . . . . .   | 25 |
| Potential Post-Operative Symptoms, Problems, and Solutions. . . . .                | 26 |
| Nutrition Guidelines for Bariatric Surgery. . . . .                                | 30 |
| • Pre-Operative Nutrition Requirements Checklist . . . . .                         | 30 |
| • Food Journaling . . . . .  | 31 |
| • Food Journal Template . . . . .  | 32 |
| • Understanding Food Labels . . . . .  | 33 |
| • Vitamin & Mineral Supplement Guidelines . . . . .                                | 34 |
| • Beverages & Hydration. . . . .   | 38 |
| • Portion Guide . . . . .  | 39 |
| • Protein . . . . .  | 40 |
| • Counting Protein. . . . .  | 41 |
| • Protein Supplements . . . . .  | 42 |
| • Protein Shake Recipes . . . . .  | 43 |
| • Pre-Surgery Healthy Meal Plan . . . . .  | 45 |
| • Pre-Surgery Healthy Snack List. . . . .  | 46 |
| • Pre-Surgery Bariatric Plate . . . . .  | 47 |
| • Post-Operative Diet. . . . .   | 48 |
| » Stage 1. . . . .   | 48 |
| » Stage 2. . . . .   | 49 |
| » Stage 3. . . . .   | 51 |
| » Stage 4. . . . .   | 62 |
| » Stage 5. . . . .   | 66 |
| Ensuring Success After Surgery . . . . .   | 68 |

# Meet Your Bariatric Team



**Dmytro M. Havaleshko, MD,  
FACS, FASMBS**  
Surgeon, Medical Director



**Emily Thompson, RD, CSOWM, LD**  
Bariatric Coordinator and  
Lead Bariatric Dietitian



**Cynthia N. Paciulli, MD,  
FACS, FASMBS**  
Surgeon



**Brooke Walsh, RD, LD**  
Bariatric Dietitian



**Brenda Fritz, RN, CBN**  
Bariatric Program Administrator  
& Certified Bariatric Nurse



**Lindsey Perkins, RD, LD**  
Bariatric Dietitian



**Kari Weeder, APRN**  
Bariatric Nurse Practitioner



**Melinda Vaturro, RD, LD**  
Bariatric Dietitian



**Catherine Camire, APRN**  
Bariatric Nurse Practitioner



**Patty Diengott, RN, BSN, MBSCR**  
Bariatric Triage Nurse



**Caroline King, PA-C**  
Surgical Physician Assistant



**Deborah Fitzgerald, RN, BSN**  
Nurse Navigator



**Mara Smith, PA-C**  
Surgical Physician Assistant

**Your bariatric team is located at:**  
10 Members Way, Suite 302, Dover, NH 03820

**Your bariatric team can be contacted at:**  
Phone: 603-610-8095 | Fax: 603-610-8096

MGB Patient Gateway App (available for free on Apple App Store or Google Play) or at [patientgateway.massgeneralbrigham.org](http://patientgateway.massgeneralbrigham.org).

# Background on Obesity

## Definition

Obesity in adults is defined as a BMI (body mass index) of 30 or higher. There are 3 classes of obesity:

- Class 1: BMI of 30 to less than 35
- Class 2: BMI of 35 to less than 40
- Class 3: BMI of 40 or higher

## Causes of Obesity

Obesity is a complex health issue that results from a variety of factors such as behavior, environment, and genetics.

### Behavior

Adopting healthy behavioral habits such as a balanced, nutritious eating pattern and regular physical activity helps to ensure lifelong weight control and prevention of chronic diseases such as Type 2 diabetes and heart disease. A nutritious eating pattern should include a variety of fruits, vegetables, lean protein, low-fat dairy products, and whole grains.

Our eating behaviors can affect our health, by either choosing to eat with intention (mindful eating), or eating without intention out of boredom, habit, or emotions (mindless eating). Mindful eating is an important factor to lifelong weight control and includes planning meals ahead, selecting healthy portions, and paying attention to hunger and fullness cues. Mindless eating patterns such as “binging” (eat a large amount of food quickly), or “grazing” (eat smaller amounts of food continuously throughout the day) can contribute to obesity. Simple behavior changes to our daily routines can help increase our physical activity level, such as taking the stairs instead of the elevator. In addition to our daily tasks, it is also important to exercise regularly. Examples include going to the gym, taking a walk, or swimming. Other healthy behaviors include logging and tracking exercise

patterns daily in a diary, regularly monitoring your weight, setting realistic health goals, and developing a strong social support network.

### Environment

Our environment, our routines, and the people in our environment influence our health habits and behaviors. For example, maybe your coworkers bring sweets into the office every day that you can't help but eat, but had they not brought the sweets in, you would not have thought about eating it. Our daily routines can also impact our behaviors. For example, if you work long hours in a sedentary job, making time for exercise may be difficult. Therefore, it is important to create a healthy environment to avoid high risk situations to help prevent and treat obesity and maintain weight loss.

### Biology

**Genetics:** Some people have a genetic tendency to gain weight and store fat. Not everyone with this tendency will become obese, while some people without a genetic predisposition will become obese. Treatments for genetic causes of obesity do not currently exist. However, since genetic changes in the human body occur so slowly, it cannot be responsible for the rapid onset of the obesity epidemic. Genetics cannot be changed, but environment and behavior can.

**Weight Control Center & Set Point:** Your weight is predetermined by your body's weight control center. When you begin exercising and eating less in attempts to lose weight, your body fights you by reducing your metabolic rate, stimulating release of ghrelin (hunger hormone) making you hungrier, and inhibiting weight loss. Alternatively, as your body weight increases, your body will adapt to it, identifying this as a new normal “set point”. Bariatric surgery resets this weight set point, making your body “think” it is in an overfed state, and in turn, decreases hunger and increases your metabolism. This happens immediately after surgery and



remains in effect for 12 to 18 months after surgery. The best predictor of long-term success is the amount of early post-operative weight loss.

## Health Risks

Many health problems are associated with obesity, which is referred to as a “comorbidity”. A severely obese person is 10 times more likely to die from a common disease, than someone who is not. The most common health problems related to obesity are:

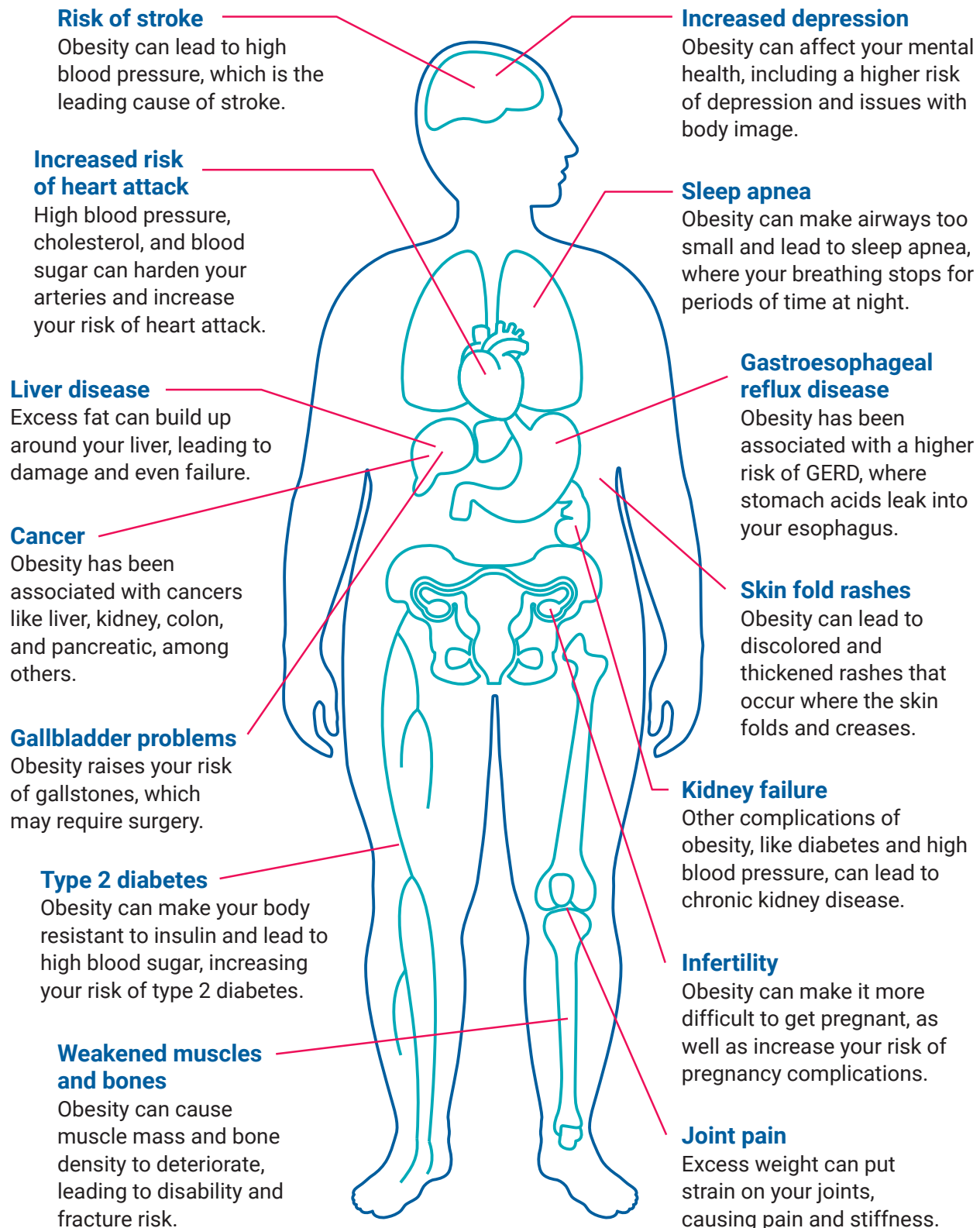
- High blood pressure
- High cholesterol
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis
- Sleep apnea
- Cancers such as breast, endometrial, colon, kidney, liver, and gallbladder

- Mental health issues such as clinical depression, anxiety, and others
- Skeletal issues such as degenerative joint disease, back pain, osteoarthritis

Significant weight loss that is maintained can reverse or markedly improve these conditions. Unfortunately, conservative measures such as diet and behavior modification alone do not usually have long-term success. Only about 5 to 10% of people who have a substantial weight loss are able to maintain it long-term. Bariatric surgery, when accompanied by dietary changes, behavior modification, and exercise has been shown to achieve a greater success rate for maintaining weight loss and improving or reversing obesity-related health problems.

Most obese patients undergoing gastric bypass with Type 2 diabetes have normal blood sugars after surgery. Those patients who have Type 1 diabetes do not achieve normal blood sugars. However, in spite of its benefits, bariatric surgery is not a cosmetic surgery or a “quick fix”. It requires lifelong dedication to be successful.

# Obesity-related Comorbidities





# Body Mass Index (BMI) Chart

| Height |       | Weight |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------|-------|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|        |       | lbs    | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 | 290 |
|        |       | kgs    | 41 | 45  | 50  | 54  | 59  | 64  | 68  | 73  | 77  | 82  | 86  | 91  | 95  | 100 | 104 | 109 | 113 | 118 | 122 | 127 | 132 |
| ft/in  | cm    |        |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4'8"   | 142.2 | 20     | 22 | 25  | 27  | 29  | 31  | 34  | 36  | 38  | 40  | 43  | 45  | 47  | 49  | 52  | 54  | 56  | 58  | 61  | 63  | 65  |     |
| 4'9"   | 144.7 | 19     | 22 | 24  | 26  | 28  | 30  | 32  | 35  | 37  | 39  | 41  | 43  | 45  | 48  | 50  | 52  | 54  | 56  | 58  | 61  | 63  |     |
| 4'10"  | 147.3 | 19     | 21 | 23  | 25  | 27  | 29  | 31  | 33  | 36  | 38  | 40  | 42  | 44  | 46  | 48  | 50  | 52  | 54  | 56  | 59  | 61  |     |
| 4'11"  | 149.8 | 18     | 20 | 22  | 24  | 26  | 28  | 30  | 32  | 34  | 36  | 38  | 40  | 42  | 44  | 46  | 48  | 51  | 53  | 55  | 57  | 59  |     |
| 5'0"   | 152.4 | 18     | 20 | 21  | 23  | 25  | 27  | 29  | 31  | 33  | 35  | 37  | 39  | 41  | 43  | 45  | 47  | 49  | 51  | 53  | 55  | 57  |     |
| 5'1"   | 154.9 | 17     | 19 | 21  | 23  | 25  | 26  | 28  | 30  | 32  | 34  | 36  | 38  | 40  | 42  | 43  | 45  | 47  | 49  | 51  | 53  | 55  |     |
| 5'2"   | 157.4 | 16     | 18 | 20  | 22  | 24  | 26  | 27  | 29  | 31  | 33  | 35  | 37  | 38  | 40  | 42  | 44  | 46  | 48  | 49  | 51  | 53  |     |
| 5'3"   | 160.0 | 16     | 18 | 19  | 21  | 23  | 25  | 27  | 28  | 30  | 32  | 34  | 35  | 37  | 39  | 41  | 43  | 44  | 46  | 48  | 50  | 51  |     |
| 5'4"   | 162.5 | 15     | 17 | 19  | 21  | 22  | 24  | 26  | 27  | 29  | 31  | 33  | 34  | 36  | 38  | 39  | 41  | 43  | 45  | 46  | 48  | 50  |     |
| 5'5"   | 165.1 | 15     | 17 | 18  | 20  | 22  | 23  | 25  | 27  | 28  | 30  | 32  | 33  | 35  | 37  | 38  | 40  | 42  | 43  | 45  | 47  | 48  |     |
| 5'6"   | 167.6 | 15     | 16 | 18  | 19  | 21  | 23  | 24  | 26  | 27  | 29  | 31  | 32  | 34  | 36  | 37  | 39  | 40  | 42  | 44  | 45  | 47  |     |
| 5'7"   | 170.1 | 14     | 16 | 17  | 19  | 20  | 22  | 24  | 25  | 27  | 28  | 30  | 31  | 33  | 34  | 36  | 38  | 39  | 41  | 42  | 44  | 45  |     |
| 5'8"   | 172.7 | 14     | 15 | 17  | 18  | 20  | 21  | 23  | 24  | 26  | 27  | 29  | 30  | 32  | 33  | 35  | 37  | 38  | 40  | 41  | 43  | 44  |     |
| 5'9"   | 175.2 | 13     | 15 | 16  | 18  | 19  | 21  | 22  | 24  | 25  | 27  | 28  | 30  | 31  | 33  | 34  | 35  | 37  | 38  | 40  | 41  | 43  |     |
| 5'10"  | 177.8 | 13     | 14 | 16  | 17  | 19  | 20  | 22  | 23  | 24  | 26  | 27  | 29  | 30  | 32  | 33  | 34  | 36  | 37  | 39  | 40  | 42  |     |
| 5'11"  | 180.3 | 13     | 14 | 15  | 17  | 18  | 20  | 21  | 22  | 24  | 25  | 27  | 28  | 29  | 31  | 32  | 33  | 35  | 36  | 38  | 39  | 40  |     |
| 6'0"   | 182.8 | 12     | 14 | 15  | 16  | 18  | 19  | 20  | 22  | 23  | 24  | 26  | 27  | 28  | 30  | 31  | 33  | 34  | 35  | 37  | 38  | 39  |     |
| 6'1"   | 185.4 | 12     | 13 | 15  | 16  | 17  | 18  | 20  | 21  | 22  | 24  | 25  | 26  | 28  | 29  | 30  | 32  | 33  | 34  | 36  | 37  | 38  |     |
| 6'2"   | 187.9 | 12     | 13 | 14  | 15  | 17  | 18  | 19  | 21  | 22  | 23  | 24  | 26  | 27  | 28  | 30  | 31  | 32  | 33  | 35  | 36  | 37  |     |
| 6'3"   | 190.5 | 11     | 13 | 14  | 15  | 16  | 18  | 19  | 20  | 21  | 23  | 24  | 25  | 26  | 28  | 29  | 30  | 31  | 33  | 34  | 35  | 36  |     |
| 6'4"   | 193.0 | 11     | 12 | 13  | 15  | 16  | 17  | 18  | 19  | 21  | 22  | 23  | 24  | 26  | 27  | 28  | 29  | 30  | 32  | 33  | 34  | 35  |     |
| 6'5"   | 195.5 | 11     | 12 | 13  | 14  | 15  | 17  | 18  | 19  | 20  | 21  | 23  | 24  | 25  | 26  | 27  | 28  | 30  | 31  | 32  | 33  | 34  |     |
| 6'6"   | 198.1 | 10     | 12 | 13  | 14  | 15  | 16  | 17  | 18  | 20  | 21  | 22  | 23  | 24  | 25  | 27  | 28  | 29  | 30  | 31  | 32  | 34  |     |
| 6'7"   | 200.6 | 10     | 11 | 12  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 32  | 33  |     |
| 6'8"   | 203.2 | 10     | 11 | 12  | 13  | 14  | 15  | 16  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 29  | 30  | 31  | 32  |     |
| 6'9"   | 205.7 | 10     | 11 | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  |     |
| 6'10"  | 208.2 | 9      | 10 | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  |     |
| 6'11"  | 210.8 | 9      | 10 | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 25  | 26  | 27  | 28  | 29  | 30  |     |

|                    |                |                   |                        |                         |                          |
|--------------------|----------------|-------------------|------------------------|-------------------------|--------------------------|
| <b>Underweight</b> | <b>Healthy</b> | <b>Overweight</b> | <b>Class I Obesity</b> | <b>Class II Obesity</b> | <b>Class III Obesity</b> |
| <18.5              | 18.8 – 24.9    | 25.0 – 29.9       | 30.0–34.9              | 35.0–39.9               | ≥40.0                    |

# About the Program

## Criteria for Bariatric Surgery Eligibility

Qualifications for bariatric surgery include:

- BMI  $\geq$  35, or more than 100 pounds overweight or BMI  $\geq$  30 with at least one or more obesity related co-morbidities such as type II diabetes (T2DM), hypertension, sleep apnea and other respiratory disorders, non-alcoholic fatty liver disease, osteoarthritis, lipid abnormalities, gastrointestinal disorders, or heart disease.
- Inability to achieve a healthy weight loss sustained for a period of time with prior weight loss efforts.

It is preferred that surgery be performed at a facility that meets high standards of quality as part of a Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) accredited center, which we received in 2019.

## Surgical Options

There are several factors to consider when deciding which procedure is best for you. It is important to

inform yourself on our surgical options by reading the content in this manual and speaking with the bariatric team to help make the best decision.

At Wentworth-Douglass Hospital, we perform the following minimally invasive, totally robotic-assisted laparoscopic surgeries:

- Roux-en-Y gastric bypass
- Sleeve gastrectomy
- Single Anastomosis Duodeno-Ileal Bypass with Sleeve Gastrectomy (SADI-S)
- Revisions of previous weight loss surgeries
- Removal of failed gastric bands

The final decision on which surgery is best will be made at your preoperative surgeon consult.

## The Bariatric Team

The National Institutes of Health (NIH), as well as the American College of Surgeons (ACS) and the American Society for Metabolic and Bariatric Surgery (ASMBS) recommend that surgery be





performed by a board-certified surgeon with specialized experience/training in bariatric and metabolic surgery, and at a center that has a multidisciplinary team of experts for follow-up care. Listed below are the members of our multidisciplinary team:

- Board-Certified Surgeons
- Obesity Medicine Physicians
- Program Administrator
- Program Coordinator
- Nurse Practitioners
- Surgical Physician Assistants
- Registered Bariatric Dietitians
  - » Board Certified Specialist in Weight Management and Obesity Medicine
- Nurse Navigator
- Metabolic and Bariatric Surgery Clinical Reviewer (MBSCR)
- Triage Nurse
- Behavioral Health Providers
- Provider Services Coordinator
- Medical Assistants
- Patient Service Representatives

## Timeline

There are a series of steps needed to prepare for safety and success after bariatric surgery. On average, it takes about three months to complete these steps. During this time, you will work with the bariatric team to become medically optimized and make lifestyle changes needed for lifelong success. During this time, weight loss is encouraged.

- Attend information session
- Complete initial weigh-in visit and submit questionnaire
- Verify your insurance coverage
- Meet with one of our nurse practitioners for medical evaluation
- Meet with one of our dietitians for nutritional evaluation
- Complete behavioral health evaluation
- Attend a series of 3 Nutrition & Behavior Management classes
- Complete preoperative lab work and diagnostic testing ordered by our nurse practitioner
- Work with PCP to ensure all age-related routine medical screenings are completed
- Meet with surgeon once medically and nutritionally cleared
- Attend preoperative class 1-2 weeks before surgery
- Surgery - and onto the journey of living your best life!

## Missed Visit Policy

Our team is committed to your success and ask that you arrive to appointments on time and provide 24 hours' notice if you need to reschedule or cancel an appointment. If you miss a scheduled appointment, you will receive a call to reschedule, and are encouraged to contact us to reschedule. You may be discharged from our practice if you miss 3 appointments within a 12-month period.

# Surgery Options

## Roux-en-Y Gastric Bypass

### Procedure Description

The Roux-en-Y Gastric Bypass operation is a surgical procedure that combines the creation of a small stomach or pouch with the construction of a bypass to a segment of the small intestine. The bypass causes reduced absorption of calories and nutrients. This procedure helps with weight loss through:

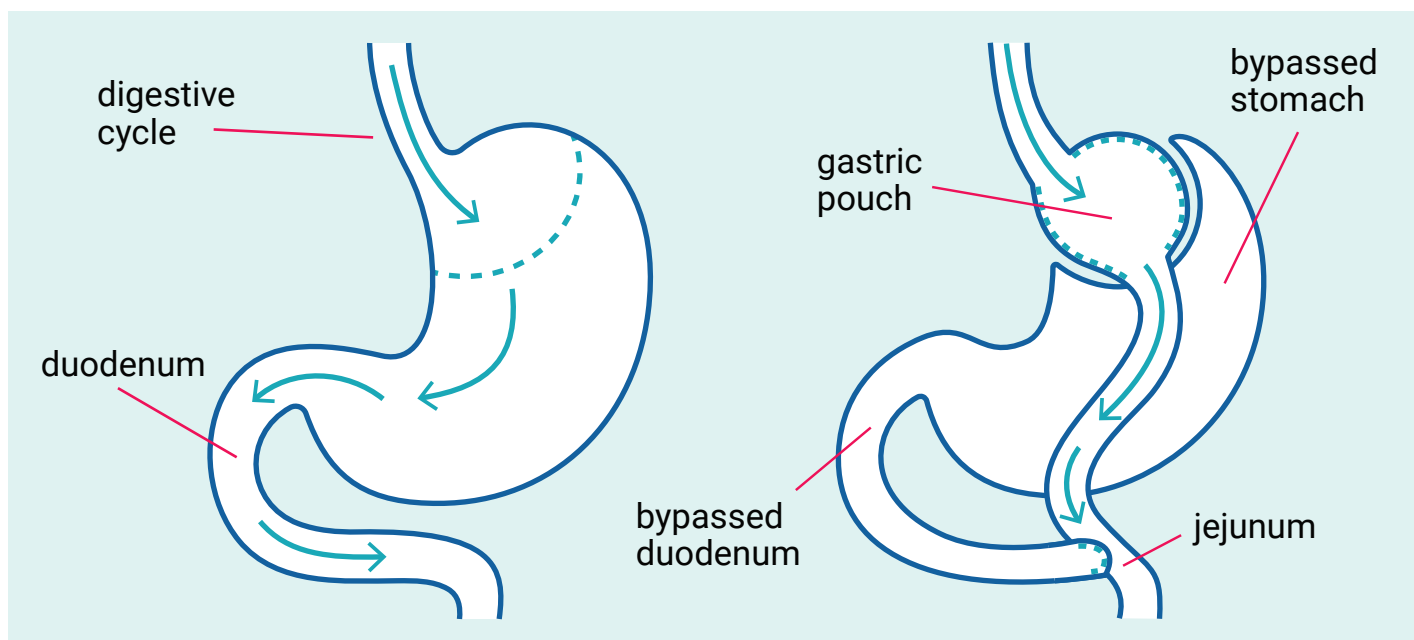
- Reduced volume of food intake
- Reduced hunger
- Decreased absorption of calories
- Changing neurohormonal axis (the way your gut communicates with your brain)
- Changing microbiome (increases the amount of healthy gut bacteria)
- Decreases insulin resistance

This surgery is performed totally robotically, by our board-certified bariatric surgeons, using the

latest Intuitive DaVinci Xi robotic system, via four small incisions. In very rare circumstances, it may need to be performed laparoscopically or as an open procedure. The hospital stay is usually 1 night. Roux-en-Y Gastric Bypass is still considered to be the “gold standard” of weight loss surgery by the American Society for Metabolic and Bariatric Surgery.

### Advantages

- Higher total average weight loss (up to 80%)
- Higher rate of comorbidity resolution (particularly Type 2 Diabetes, GERD)
- No foreign body placement
- More data and follow-up since performed longer
- Short duration of metabolic adaptation



## Disadvantages

- More advanced and technically demanding surgery
- Slightly higher rate of complications (leaks, internal hernias, marginal ulcers, gallstone disease)
- Higher risk for vitamin/mineral deficiencies
- Higher prevalence of dumping syndrome (intolerance to sugary foods)
- Higher risk of developing alcohol use disorder

## Possible Short-Term Complications

- Anastomotic leak: leakage at suture lines in the stomach and small bowel
- Deep vein thrombosis (blood clots) with potential of travelling to lungs, causing a life-

threatening pulmonary embolism, or a blood clot in the lungs

- Small bowel obstruction
- Bleeding
- Wound infection
- Dehydration

## Possible Long-Term Complications

- Stenosis or stricture at the entrance to the new stomach pouch
- Stomach ulcers
- Vitamin and mineral deficiencies
- Hernias
- Temporary hair loss (thinning of the hair, not total baldness)
- Gallstones

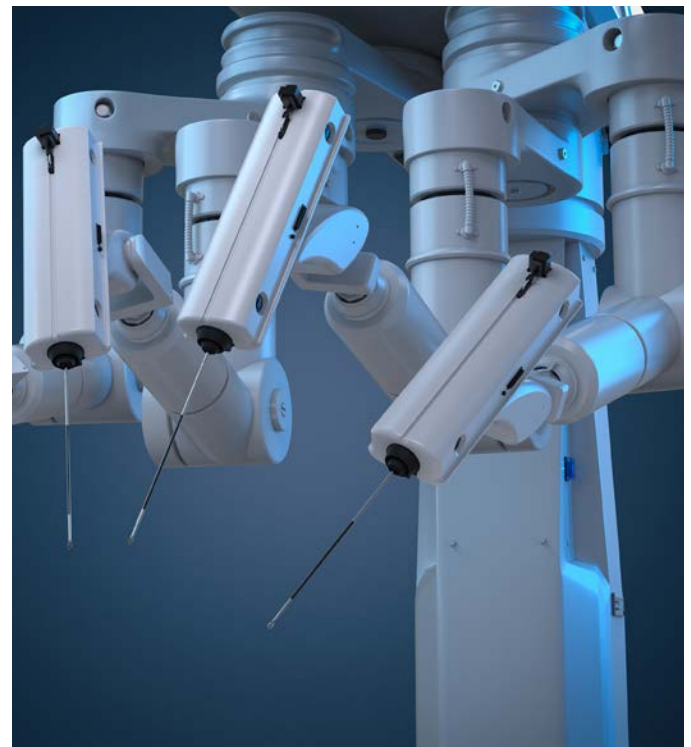
# Sleeve Gastrectomy

## Procedure Description

The sleeve gastrectomy is a surgical procedure that removes a portion of the stomach to reduce the volume of the stomach by about 85%. The portion of the stomach that is removed produces a hormone called ghrelin, which stimulates hunger. This procedure helps with weight loss through:

- Reduced volume of food intake
- Reduced hunger
- Changing neurohormonal axis (the way your gut communicates with your brain)
- Changing microbiome (increases the amount of healthy gut bacteria)
- Decreases insulin resistance

This surgery is performed totally robotically by our board-certified bariatric surgeons, using the latest Intuitive DaVinci Xi robotic system, via four small



incisions. In very rare circumstances, it may need to be performed laparoscopically or as an open procedure. The hospital stay is usually one night. Sleeve gastrectomy surgery is permanent and cannot be reversed.

## Advantages

- Less complex procedure
- No intestinal rerouting
- No foreign body placement
- Low risk of ulcers
- Low risk of internal hernias, obstruction
- Relatively comparable weight loss to gastric bypass
- Lower risk of malabsorption and vitamin deficiencies
- Short duration of metabolic adaptation

## Disadvantages

- Not adjustable
- Not reversible
- Possible stricture

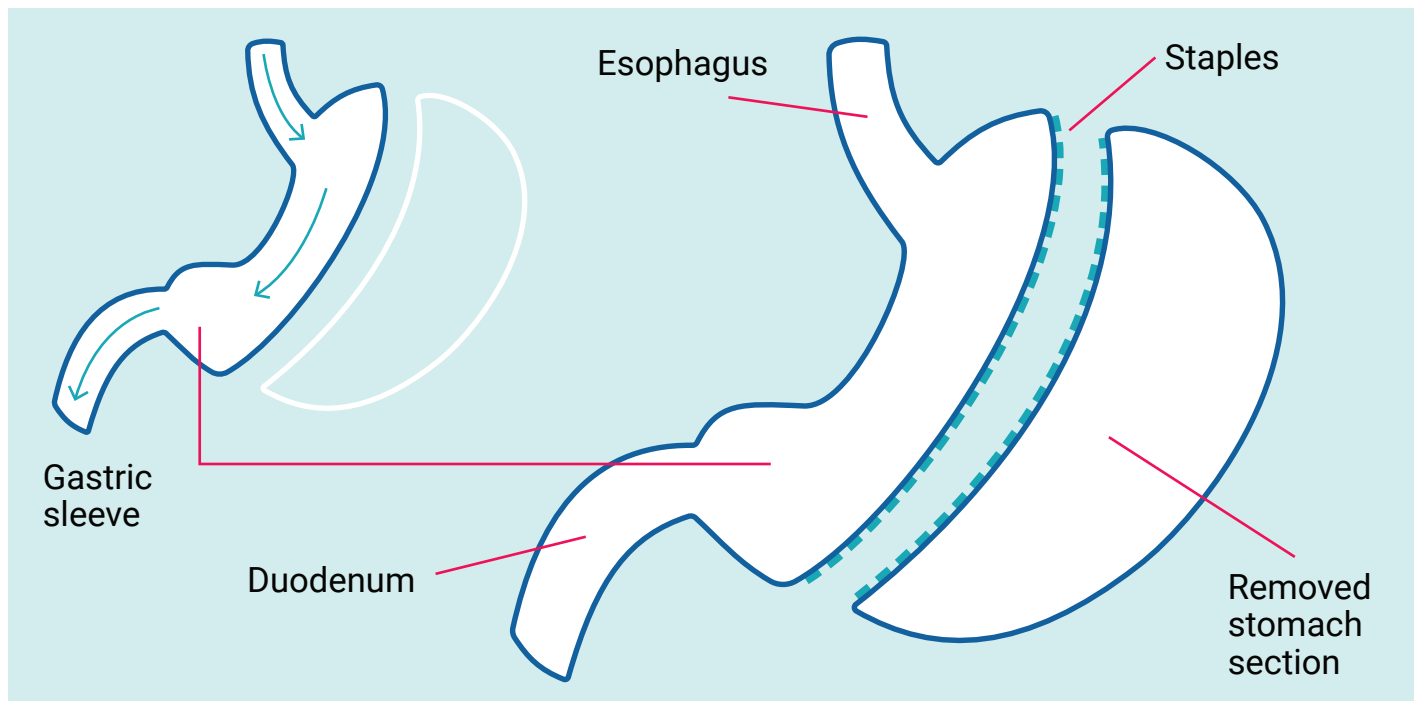
- Possible staple line leaks
- Higher potential of weight regain in comparison to RYGB
- Worsening of GERD
- Contraindicated in patients with Barrett's Esophagus

## Possible Short-Term Complications

- Leaks along the staple line in the new stomach
- Bleeding
- Stenosis or swelling of the new small stomach
- Deep vein thrombosis (blood clots) in the legs with potential for travelling to lungs, causing a life-threatening pulmonary embolism, or a blood clot in the lungs

## Possible Long-Term Complications

- Vitamin and mineral deficiencies
- Hernias
- Temporary hair loss (thinning of the hair, not total baldness)
- Gallstones



# Single Anastomosis Duodeno-Ileal Bypass with Sleeve Gastrectomy (SADI-S)

## Procedure Description

The Single Anastomosis Duodenal-Ileal Bypass with Sleeve Gastrectomy, referred to as the SADI-S is the most recent procedure to be endorsed by the American Society for Metabolic and Bariatric Surgery. While similar to the BPD-DS, the SADI-S is simpler and takes less time to perform as there is only one surgical bowel connection.

The operation starts the same way as the sleeve gastrectomy, making a smaller tube-shaped stomach. The first part of the small intestine is divided just after the stomach. A loop of intestine is measured several feet from its end and is then connected to the stomach. This is the only intestinal connection performed in this procedure.

When the patient eats, food goes through the pouch and directly into the latter portion of the small intestine. The food then mixes with digestive juices from the first part of the small intestine. This allows enough absorption of vitamins and minerals to maintain healthy levels of nutrition. This surgery offers good weight loss along with less hunger, more fullness, blood sugar control and diabetes improvement.

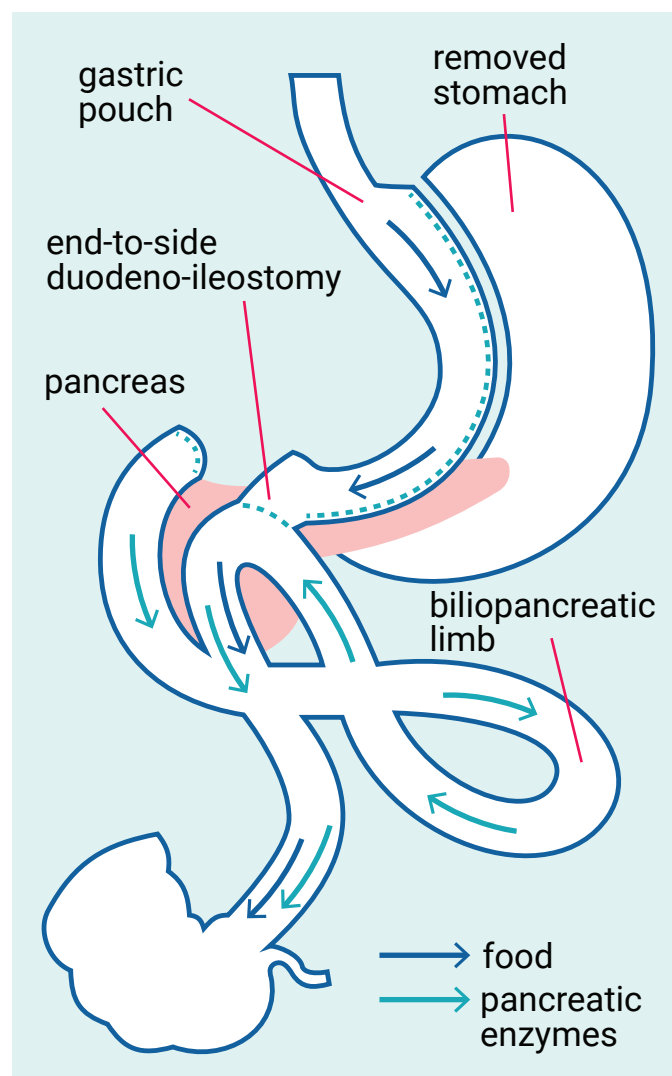
This surgery is performed totally robotically by our board-certified bariatric surgeons, using the latest Intuitive DaVinci Xi robotic system, via four small incisions. In very rare circumstances, it may need to be performed laparoscopically or as an open procedure. The hospital stay is usually one night.

## Advantages

- Highly effective for long-term weight loss and remission of type 2 diabetes
- Simpler and faster to perform (one intestinal connection) than other surgeries
- Excellent option for a patient who already had a sleeve gastrectomy and is seeking further weight loss

## Disadvantages

- Vitamins and minerals are not absorbed as well as in the sleeve gastrectomy or Roux-en-Y gastric bypass
- Higher associated cost and increased frequency of taking vitamins and minerals
- Newer operation with only short-term outcome data
- Potential to worsen or develop new-onset reflux
- Risk of more frequent loose bowel movements



# Steps Along Your Journey



## Medical Evaluation

Upon entry into our program, your medical and surgical history will be evaluated by one of our nurse practitioners. This will ensure efficient navigation through the program, as well as a safe and timely surgery. This visit will be scheduled after your initial weigh-in visit once we receive your last primary care physician office visit note and recent lab work. It is strongly encouraged that you provide us with results of your routine age-appropriate medical screenings prior to surgery (i.e. mammogram, colonoscopy, etc.). Lab and diagnostic studies will be ordered as indicated. Our nurse practitioner will review your results to determine if it is safe for you to proceed with surgery from a medical standpoint. You will continue to have regular visits with your nurse practitioner after surgery. Postoperative labs should be completed one-week before your six months, one year, and annual visit to ensure your vitamin/mineral levels are in a normal range.

## Nutrition Evaluation

Following your medical evaluation, you will be scheduled to see one of our bariatric dietitians. The dietitian will evaluate your weight history, current eating behaviors, social support system, and understanding of bariatric-related nutrition. Nutrition-focused labs are reviewed and customized recommendations for lifelong vitamin/mineral supplementation will be provided. Realistic expectations, including anticipated weight loss outcomes are discussed. Mutually agreed upon goals will be created to assist you in making lifestyle changes needed for your safety and success after surgery. You will be enrolled in the Nutrition & Behavior Management classes and see the dietitian for a subsequent visit. At your follow-up visit, the dietitian will evaluate your progress with preoperative nutrition goals and you will move forward to surgery once readiness is determined. You will continue to have regular visits with your dietitian after surgery.







## Nutrition and Behavior Management Classes

You will be scheduled to attend a series of four 1 hour classes taught by our bariatric dietitians and behavioral health provider.

The intent of these classes are to teach you how to be successful in weight maintenance through diet modification and behavior management. Good behavior management skills (i.e. being able to self-correct, self-monitor, seek support, etc.) is the strongest contributor of weight management success.

These classes are not billed to insurance, and cost \$200 total. Payment can be made on the Mass General Brigham Patient Gateway or in the Center for Weight Management & Bariatric Surgery office.

## Support Group

**“Weigh” of Life Support Group** – These group meetings are intended to provide education and support to patients before and after surgery. Groups are moderated by the bariatric coordinator. Groups are held via Zoom on the second Monday of

each month from 6–7 p.m. Occasionally, additional groups and special events are added to the schedule. Details on our Facebook group.

**Postop Support Group** – These in person group meetings are intended to provide support to patients after surgery. Groups are moderated by the bariatric coordinator. Groups are held in the Garrison Auditoriums at Wentworth-Douglass Hospital on the second Thursday of each month from 6–7 p.m. Sign up is required in advance through EventBrite. Sign up opens at midnight on the 1st of each month for the following month’s group.



**WDH Bariatric  
Surgery EventBrite**

## Behavioral Health Evaluation

An evaluation by a behavioral health provider is required before surgery. The purpose of this evaluation is to identify your goals, weight history, family history, support system strength,

psychological history, and current behavioral functioning. It can help you to learn the skills you need to be successful and begin applying them before surgery. Ability to make lasting behavior changes is one of the biggest predictors of long-term success after surgery.

Some may be nervous about what you will be asked in the evaluation, and may think you need to keep certain parts of your behavior history private. Please keep in mind that we are most interested in your success and our questions will largely address factors known to relate to successful post-surgery weight management. If we know something about your history, we can help you understand how or if it relates to your post-surgery outcome. This visit will be billed to your insurance. Ongoing behavioral health support is available to you after surgery as needed.

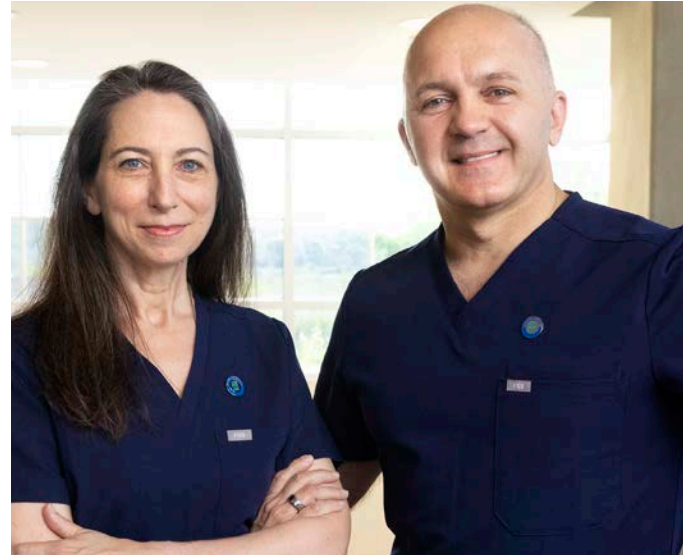
### Primary Care Physician (PCP)

We require that you establish care with a PCP, and recommend you notify them that you are seeking bariatric surgery. Your PCP plays a vital role in managing and chronic medical conditions you may have to optimize your safety during and after bariatric surgery. We strongly encourage you complete all age-appropriate medical screenings prior to surgery (i.e. colonoscopy, mammogram, PAP smear, etc.), coordinated by your PCP. It may be indicated for some patients that your PCP perform a medical evaluation or provide medical optimization or a letter of support before surgery. If you are having Roux-en-Y gastric bypass, any medications that are delayed-release, extended-release, or enteric coated should be changed to an immediate-release form by the ordering provider.

Notify your PCP of your surgery date so they can help manage your medications after surgery. We recommend you schedule a follow-up visit with your PCP one to two weeks after surgery.

### Surgical Evaluation

Upon receiving medical, behavioral, and nutritional optimization for surgery, you will be scheduled to



see one of our bariatric surgeons. The decision on surgery type will be made together through consideration of your preference and desired health outcomes, as well as results of lab and diagnostic studies, and risk calculators. Risks and benefits will be discussed and consent for surgery will be obtained. Assuming that no contraindications to surgery were identified, surgery and all post-operative visits will be scheduled by our Patient Services Coordinator before you leave.

### Exercise

Staying physically active throughout your bariatric journey will ensure success in reaching your goals. Exercise is critical to maximize weight loss and prevent weight regain. Initiating this before surgery is essential to begin improving your overall mobility, flexibility, muscle strength, and endurance. It also helps you to establish a routine to follow during and after your surgery. Activity and exercises, if started early and resumed right after your surgery, will help you feel better, recover faster, and minimize the likelihood of post-surgical complications.

### What Counts as Exercise?

You are likely incorporating small amounts of exercise naturally in your day through household chores, playing with your children at the playground, grocery shopping, shoveling, gardening, washing

the car, climbing stairs, or helping a friend move. Keep in mind that any increase in physical movement over what you are currently doing is a step in the right direction. There are two principal kinds of exercise that you should try to incorporate into your weekly routine:

**Aerobic (“cardio”) exercise:** defined by the American College of Sports Medicine (ACSM) as any activity that uses large muscle groups, can be maintained continuously, and is rhythmic in nature. Aerobic exercise strengthens your heart and lungs. Examples include: walking, running, dancing, swimming, hiking, and bicycling. Adults should do at least 150 minutes to 300 minutes a week of moderate-intensity, or 75 minutes to 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity as recommended in *The Physical Activity Guidelines for Americans*.

**Resistance (strength) training:** defined by the ACSM as a form of physical activity designed to improve muscular fitness by exercising a muscle or a muscle group against external resistance. Resistance training helps increase metabolic rate, muscular strength, bone density, and endurance. Examples include: exercises using your own body weight such as arm circles, push-ups, squats, or any exercise using weight machines, dumbbells, or resistance bands. Adults should do 2 or more days a week of this type of activity, as recommended in *The Physical Activity Guidelines for Americans*.

*Ideas to Begin Living an Active Life:*

- Take the stairs
- Park far away
- Walk instead of drive
- Swim with your kids
- Do yard work
- Enjoy a nature hike
- Family walk after dinner
- Dance to music
- Stand instead of sit

- Go to the gym
- Take an exercise class
- Take the dog on a longer walk

## Alcohol

Alcohol consumption is not recommended after bariatric surgery for the following reasons:

- Alcohol is high in calories
- Increases risk for dumping syndrome
- Impaired vitamin/mineral absorption
- Increased risk for ulcer formation
- Increased risk for alcohol use disorder after surgery

The way your body metabolizes alcohol changes after bariatric surgery, resulting in a faster absorption, a higher blood alcohol content, and a longer elimination time of alcohol. Studies have shown that after gastric bypass surgery, patients are at a higher risk for alcohol use disorder in comparison to the sleeve gastrectomy. We recommend eliminating alcohol before surgery, for at least 1 year after surgery, and in moderation after this. Some insurance companies may mandate specific abstinence guidelines.

## Smoking Cessation

We require patients to quit smoking at least six weeks prior to bariatric surgery. Lifelong avoidance is recommended. Smoking increases risk for infection and impairs wound healing. At Wentworth-Douglass Hospital, the Patient & Family Learning Center offers a smoking cessation program, which has been shown to be more effective than quitting on your own. Vaping and e-cigarettes are also not recommended. Some insurance companies may mandate specific smoking cessation guidelines.

Smoking marijuana is also not recommended after surgery due to side effects of tachycardia, hypertension, and arrhythmias. Marijuana increases risk for blood clots, heart attack, and stroke. Patients who smoke marijuana often require higher doses of opioids.

# Preparing For Your Surgery

At the time your surgery is scheduled, you will be given an appointment to attend a pre-op class 1-2 weeks before surgery. At this meeting, you will review what to expect the day of surgery and during your hospitalization, signs and symptoms of potential complications, and the post-operative diet.

You will be contacted by a pre-admission services representative the week before your surgery. Be prepared to provide a list of allergies and medications or supplements you are taking.

You will also receive a call from our pharmacist a week before surgery to review medications.

It is important to keep a complete list of medications and supplements (including vitamins, minerals, and herbal supplements) you are taking.

Avoid taking these medications **1 month** before surgery:

- Estrogen-based hormones and estrogen-based birth control pills should be avoided 1 month before surgery, and for 1 month after surgery due to risk for blood clots.
- Herbal supplements since they may interfere with anesthesia (Ephedra, Garlic, Ginkgo, Ginseng, Kava, St. John's Wort, Valerian, Echinacea)

Avoid taking these medications **4 days** before surgery, which will be discussed with our nurse practitioner, due to increased risk for diabetic ketoacidosis after bariatric surgery:

- SGLT-2 Inhibitors (canagliflozin/Invokana, dapagliflozin/Farxiga, empagliflozin/Jardiance) or combination medications containing an SGLT-2 inhibitor

## Fertility & Obesity

- The combination of obesity and pregnancy may increase complication risks of birth defects,

preeclampsia, gestational diabetes, still births and cesarean deliveries.

- Obesity is associated with a 2-fold longer time to pregnancy as compared to normal weight women attempting pregnancy without interventions.
- Obesity is also associated with an increased risk of failure to achieve pregnancy after in vitro fertilization (IVF). This risk increases with increasing BMI.
- Obesity in men may also be associated with decreased reproductive function including erectile dysfunction and obesity related hormone changes that negatively impacts male fertility.
- As weight loss occurs, fertility status might be improved.
- The CDC identifies that women who have had bariatric surgery in the past 2 years have an increased risk for adverse outcomes as a result of unintended pregnancy.
- The American Society of Metabolic and Bariatric Surgery recommends that women avoid pregnancy for up to 12 to 18 months postoperatively.
- Reliable contraception should be established prior to bariatric surgery and continued for at least 12 months and up to 24 months postoperatively.
- In the event that a woman becomes pregnant following bariatric surgery, nutritional monitoring and lab screening for deficiencies should be performed every trimester. Pregnant women should be followed closely by an Obstetrician and dietitian throughout their pregnancy and advise them of their bariatric surgery status as soon as possible after pregnancy occurs.
- There is also a potential higher failure rate of oral contraception in women with obesity. This failure rate may increase following Roux-en-Y gastric bypass and possibly to a lesser extent, following sleeve gastrectomy. This is due to the potential



decrease in absorption of the medication after surgery. Non-oral contraceptive methods may be a more appropriate choice following bariatric surgery.

### The Week Before Surgery

- Complete pre-op labs as instructed.
- Attend preop education class
- Initiate constipation protocol as instructed in preop education class 3 days before surgery (if applicable)

### The Day Before Surgery

The day before surgery, you will receive a call by 5 p.m. to notify you of your arrival time. If you are unable to be reached, or you missed our call, please call the main hospital number at (603) 742-5252.

### Prepare items you will need to bring with you to the hospital:

- This handbook – it's a great place to put questions you may have for the surgeon who will visit you daily during your stay.
- CPAP machine and mask, if applicable
- Glasses or contact lenses with lens case and solution, if applicable
- A list of medications/supplements including dosage, frequency. The hospital will provide you with your medications during your stay.
- Identification, insurance cards and/or necessary insurance paperwork
- Jewelry, valuables, and money should be left at home
- Makeup and nail polish must be removed
- Loose-fitting, comfortable clothing that is easy to put on for discharge. In the hospital, you will be wearing hospital gowns or robes due to IVs, urinary catheter, and abdominal dressings that may be needed.
- Non-slip sneakers or slippers
- Personal hygiene items (toothbrush, deodorant, razor, etc.)
- Books, magazines, laptop/tablet/other wireless devices for use of free guest WiFi (optional)

## Pre-operative diet

All patients are required to complete the one-day preoperative diet the day before surgery. Failure to follow this could result in serious harm and cancellation of your surgery. Some patients may be required to complete a two-week pre-operative “liver shrinking” or very low-calorie diet (VLCD).

### One Day Before Surgery

#### 3 Protein Shakes & Clear Liquids ONLY

##### Protein shake options (3 shakes total):

- **If ready-to-drink:** 8 ounce or 11 ounce bottles
- **If powder:** Mix 1 serving powder with 8 ounces water, skim/1% milk, or unsweetened non-dairy milk and optional ice.
- Do not blend any fruit, vegetables, peanut butter, etc. into your protein shake

##### Clear liquid options

##### (64 ounces or more total):

- Water, broth, sugar free flavor mixes (i.e. Crystal Light, Mio drops, etc.), Fruit 20 water, Hint Water, Propel, Gatorade or Powerade zero, sugar free popsicles, sugar free Italian ice, sugar free jello.
- Drink a 10 ounce bottle of **Ensure Pre-Surgery** in the evening
- If having a revision surgery, drink 20 ounces of Gatorade G2 or Gatorlyte instead (any color)
- No caffeine (no caffeinated protein shakes)

### Day of Surgery

#### Clear Liquids ONLY

- From midnight until 2-3 hours before arrival time, clear liquids (any color) only are allowed
- Stop drinking **3 hours** before arrival time if you are diabetic or have gastroparesis
- Stop drinking **2 hours** before arrival time for all others
- Drink a 10 ounce bottle of **Ensure Pre-Surgery** and finish drinking it 2-3 hours before arrival time
- If having a revision surgery, drink 20 ounces of Gatorade G2 or Gatorlyte instead (any color)
- No caffeine
- No protein waters/shakes
- Do not take your vitamins
- **Do not eat any food!** No candy, mints, etc.

Ensure Pre-Surgery is available at the WDH Outpatient Pharmacy by request at the counter (no prescription required, open Mon-Fri 7:00 am - 5:30 pm). It's also available on Amazon. If you forgot to purchase, you can substitute 20 ounces **regular** (full sugar) Gatorade in any color/flavor.

## Pick up prescription at your pharmacy for Scopolamine patch

Before going to bed the night before surgery, place patch behind the left ear as directed on medication instructions.

## Shower the night before surgery and the morning of surgery

Getting your skin ready for surgery is extremely important. Chlorhexidine Gluconate (CHG) 4% is a special chemical found in soaps such as Hibiclens® and other brands. You will be given this when you schedule your surgery. Everyone's skin has bacteria; this soap can reduce the number of bacteria on your skin. Follow these instructions to reduce your risk of infection:

1. Wash your hair, face, and body, with your normal shampoo, conditioner and soap. Rinse completely.
2. Turn off the shower.
3. Pour a quarter size amount of liquid CHG/ Hibiclens soap onto a wet, clean washcloth and apply to your trunk. (**Do not** use CHG on face, hair, or genital area)
4. Rub the soap filled washcloth over your entire torso, apply more soap as needed. Avoid scrubbing your skin too hard. Pay particular attention to your armpits, buttocks, under your breasts and groin folds. Keep the liquid soap on for at least 2 minutes.
5. Turn on the shower and rinse the liquid soap off your body. Do Not use regular soap after washing with the Hibiclens.
6. Pat your skin dry with a freshly-laundered, clean towel after each shower/bath cleansing.
7. Dress with freshly-laundered clothes after each shower/bath cleansing and sleep with clean bed linens.
8. Do not shave or remove and body hair below the neck for two days prior to surgery. Facial shaving is the only thing permitted before surgery.
9. Do not apply lotions, powder, or deodorant to your body.

## The Day of Surgery

- When you arrive at Wentworth-Douglass Hospital, park in the South Entrance. Enter the South Entrance glass doors and take the first elevators on your right, elevators 8 & 9, to the 2nd floor and exit to your left to the reception desk for Same Day Surgery. The receptionist will check you in and give you your ID bracelet.
- After you check in with the receptionist, one of the Same Day Surgery staff will come out and bring you (and your family member/coach) to one of the pre-op rooms where the staff will get you ready for surgery. This includes having your weight measured, starting your IV, answering any questions, and completing necessary paperwork. You will see the surgeon and a nurse. You will meet an anesthesiologist and complete your anesthesia consent.
- You will receive medications before surgery that are part of our Enhanced Recovery After Surgery (ERAS) protocol to reduce your surgical stress response, control your pain, and facilitate recovery.

## During Surgery

- After being taken into the operating room, you will be moved to a table and prepared for surgery. Many safety precautions are taken to prevent infection or injury during surgery. You will be carefully positioned on the table with safety straps and padding. Once you are asleep, your abdomen will be cleaned with an antibacterial solution and draped with sterile sheets. Antiembolic devices will be applied to your legs. These devices apply intermittent compression to your legs during surgery. They are necessary for maintaining good circulation in your leg veins and preventing the formation of blood clots. You will continue to have these on your legs during your hospital stay. A blood pressure cuff and electrocardiogram leads will be placed on you to monitor your condition during and after surgery. Once you are asleep, the anesthesia team will perform a TAP block (transverse abdominis plane), which is an injection of local anesthetic