PATIENT SERVICE EXCELLENCE

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EFFECTIVE COMMUNICATION

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RESOURCE MANAGEMENT

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COMMUNITY DRIVEN

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TEAMWORK

•

QUALITY

MARION HEALTH

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MARION HEALTH

Your guide to Bariatric Surgery

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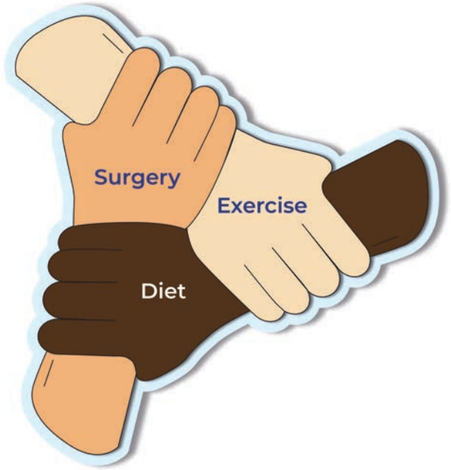
Welcome!

When it's time for the next step in your journey to lifelong healthy living, Marion Health's bariatric surgery team can help find the right solution for you. We will guide you step-by-step through a process that will help you change old habits and create a long-term solution for weight loss and health improvement. ***Reclaim your life, your freedom, and your vitality!***

POST-OPERATIVE DIET & NUTRITION

- Take 20 minutes to consume your meal
- Vitamin and mineral supplementation must be taken every day
- Exercise 30 minutes per day
- Avoid high fat foods and sweets. These foods may cause dumping (post operative gastric bypass) or slow down the weight loss process due to abundance of calories (post op gastric sleeve/ bypass)
- The key to success after bariatric surgery is lifelong compliance to a healthy diet and regular exercise.



Why bariatric surgery?

Bariatric surgery is the most effective tool available to treat morbid obesity. Multiple systematic review and meta-analysis demonstrate that bariatric surgery is more efficient than non-surgical treatment for obesity.

Bariatric surgery led to greater body weight loss, higher rates of remission of type 2 diabetes and metabolic syndrome, greater improvements in quality of life, and greater reductions in use of antidiabetic, antihypertensive, and lipid lowering drugs.

Only surgery has proven effective over the long term for most patients with clinically severe obesity. (NIH Consensus Conference Statement, 1991)

Surgery for the treatment of clinically severe obesity is endorsed by:

- The National Institutes of Health
- The American Medical Association
- The National Institute of Diabetes and Digestive and Kidney Diseases
- American Association of Family Practitioners

Types of Surgery We Offer

Marion Health Bariatric offers an effective and proven surgical solution for weight loss in obese patients. There are four available surgery modalities at Marion Health:

- Gastric Banding
- Gastric Bypass
- Vertical Sleeve Gastrectomy (sleeve gastrectomy)
- Biliopancreatic Diversion with Duodenal Switch

After your consultation with Dr. Sharma, he will determine the best surgery fit for your health profile, lifestyle and weight-loss goals. All bariatric surgery options performed at Marion Health use laparoscopic technique for a less invasive surgery and recovery process.

Each type of bariatric surgical procedure has associated benefits, drawbacks, and risk including: operative risk, potential for complications and long-term weight-loss variation. The possible benefit and risk of each procedure should be carefully considered and discussed with Dr. Sharma to accommodate individual patient need and preference. No single procedure is right for all patients, and the selection of a specific procedure is a decision best left to the patient and physician.

Tips for healthy lifestyle changes after bariatric surgery:

- Drink fluids, but stop 30 minutes prior to eating and restart 30 minutes after eating
- No fluids with meals
- Drink 64 ounces of fluids per day once you are eating soft solid foods
- Do not drink with a straw
- Do not drink alcohol
- Avoid caffeine
- Avoid carbonated beverages
- All food must be chewed to an applesauce consistency
- Place utensils down between each bite
- Chew food thoroughly and count your bites
- Stop at the first sign of fullness
- Always eat your protein first
- All meals should be balanced nutritionally

SUPPORT GROUPS

Additional one-on-one behavioral services and nutritional counseling are available as needed.

To register for support groups call (765) 660-7500. The registrar will inform you of the dates, times, and locations of all support groups.

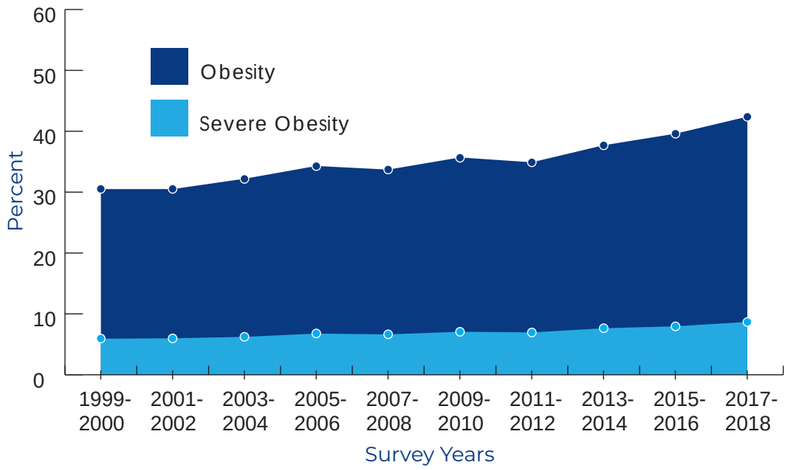
About obesity:

According to the World Health Organization (W.H.O.), two-thirds of the world's population lives in countries where obesity kills more people than symptoms associated with being underweight. Approximately 500 million adults in the world are affected by obesity, and one billion are affected by overweight, along with 48 million children.

In the United States, epidemiological data shows that 34 percent of adults more than 20 years old are affected by obesity and 68 percent are overweight (2007-2008 data). Obesity affects 10 percent of children between two and five years of age, 2 percent of those between 6 to 11 years old, and 18 percent of adolescents.

Throughout the last 20 to 25 years, the prevalence of obesity has been increasing at an alarming rate.

Trends in age-adjusted obesity and severe obesity prevalence among adults aged 20 and over: United States, 1999–2000 through 2017–2018.



NOTES: Estimates were age adjusted by the direct method to the 2000 U.S. Census population using the age groups 20–39, 40–59, and 60 and over. **SOURCE:** NCHS, National Health and Nutrition Examination Survey, 1999–2018.

Pre-surgery:

Attendance is required to a support group led by our bariatric surgery program manager/ registered dietician, licensed therapist, or certified bariatric nurse. The support groups allow patients to network with others and answer any additional questions that they may have. As a result, patients feel more in control to make healthier life decisions. These support groups are free to attendees. Individual and family meetings are available if requested.

Post-surgery:

Patients are encouraged to attend our bariatric support group sessions, and all sessions assist patients with addressing lifestyle changes. Patients will learn to identify eating behaviors and discover the coping skills necessary to ensure long term success of their surgery. This program also includes participation by our nutritional staff.

FAQS

The psychological evaluation is performed by a behavioral therapist. If you are currently seeing a behavioral therapist, you may have him/her complete psychological evaluation. Your insurance company may also have a preferred behavioral therapist on their list of providers, or you may see a behavioral therapist referred by Dr. Sharma's office.

Definition of obesity:

Obesity is no longer considered a cosmetic issue caused by overeating and a lack of self-control. On the contrary, the World Health Organization (W.H.O.), along with National and International medical and scientific societies, now recognize obesity as a chronic progressive disease resulting from multiple environmental and genetic factors.

The disease of obesity is extremely costly not only in terms of economics, but also in terms of individual and societal health, longevity, and psychological well-being. Due to its progressive nature, obesity requires life-long treatment and control.

How do we measure obesity?

The disease of obesity is characterized by an excessive accumulation of body fat. A variety of instruments are available for assessing the amount of fat versus lean tissue in the body.

One of these estimates for body size is ideal body weight (IBW), a number that is obtained from the Metropolitan Life Insurance Company Table (shown on the next page).

Using this table, overweight and obesity are defined by percentage of weight more than IBW.

About Body Mass Index (BMI)

BMI is another measure used to define overweight and obesity and is considered a more accurate estimate of body fatness than Ideal Body Weight (IBW).

BMI does not necessarily consider a person's distribution of fat (abdominal vs. peripheral), however, and is not a good measurement of the metabolic activity of a person's fat tissue.

BMI takes into consideration an individual's height and weight and can be determined by using a BMI chart or can be calculated according to one of the following formulas:

Will my insurance pay for this surgery?

The Bariatric Nurse Specialist at Dr. Sharma's office will contact your insurance company to find out whether your procedure and care are covered, and what additional requirements may be necessary to obtain the preauthorization for bariatric surgery. The insurance specialist may also discuss payment options when applicable.

Where are the psychological and nutritional evaluations performed, and are they covered by insurance?

The nutritional evaluation is performed by a registered dietician at Marion Health and is billed to your insurance company. A preauthorization may be required by your insurance company for the nutrition consults to be covered. If nutrition visits are not a covered benefit, it diverts to the Medicare rate and is billed to you. Both initial nutrition appointment and any follow ups required will take place at the hospital by the registered dietician.

- Drink six to eight glasses of water per day.
- Learn as much as you can about bariatric surgery and the lifestyle changes that are required after bariatric surgery.

Key to Your Success

A well-informed, motivated patient with a strong desire for substantial weight loss and a commitment to life-style changes is paramount to achieve your desired goals.

The key to your success after surgery is a commitment to a healthy diet and exercise throughout your life!

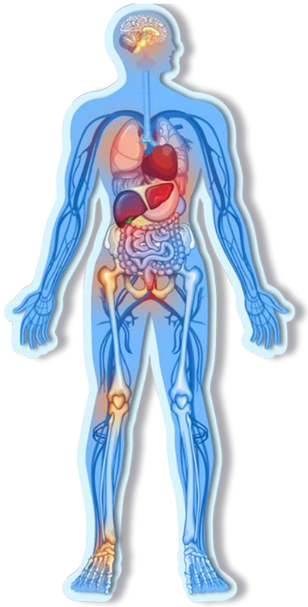
Weight in kilograms divided by Height in meters squared (BMI = kg/m2). The categories and respective BMI categories are:

Category	BMI Range
Normal Size	18.9 to 24.9
Overweight	25 to 29.9
Class I, Obesity	30 to 34.9
Class II, Serious Obesity	35 to 39.9
Class III, Severe Obesity	40 and greater

Adverse impact of obesity:

Obesity is associated with causing “metabolic syndrome”. Metabolic syndrome is a cluster of conditions that occur together, increasing your risk of heart disease, stroke, and diabetes. These conditions include increased blood pressure, high blood sugar, excess body fat around the waist, and abnormal cholesterol or triglyceride level; all of which are related to weight gain, specifically intra-abdominal/body fat accumulation and large waist circumference.

Obesity and its associated comorbidities:



NEUROLOGICAL
- Headache
- Stroke
- Dementia, including Alzheimer's
- Vision loss from Diabetes complications
- Pseudotumor cerebri (false brain tumor)
- Diabetic neuropathy

RESPITORY
- Asthma
- Sleep apnea
- Pulmonary embolism
- Pulmonary hypertension

UROLOGICAL
- Diabetic kidney disease
- Kidney cancer

CIRCULATORY
- High blood pressure
- High cholesterol
- Atherosclerosis
- Irregular heartbeat
- Heart attack
- Heart failure
- Poor circulation
- Leg and ankle swelling
- Blood clots
- Peripheral artery disease
- Certain lymphomas (lymph node cancers)

MUSCULOSKELETAL
- Arthritis (hips, knees, and ankles)
- Lower back pain
- Vertebral disc disease

PSYCHOLOGICAL
- Depression
- Anxiety
- Eating disorders

GASTROINTESTINAL
- Reflux disease
- Esophageal cancer
- Colon polyps
- Colon cancer
- Fatty liver disease
- Cirrhosis
- Liver cancer
- Gallstones
- Gallbladder cancer

PANCREAS
- Diabetes (type 2)
- Pancreatitis
- Pancreatic cancer

NUTRITIONAL
- Vitamin D deficiency
- Other vitamin and mineral deficiencies

REPRODUCTIVE
Women:
- Irregular menses
- Infertility
- Polycistic ovarian syndrome
- Ovarian cancer
- Endometrial cancer
- Cervical cancer
- Breast cancer

Men:
- Prostate cancer
- Infertility
- Erectile dysfunction

- Completion of questionnaires
- Psychological consultations
- All medical and specialty clearances obtained

Pre-Operative Preparation and Lifestyle Changes:

Preparation for any bariatric surgery procedure involves some lifestyle preparation. It is recommended that patients begin the following activities and changes to their health regimen prior to bariatric surgery:

- Quit smoking at least 30 days prior to surgery.
- Begin taking a daily multivitamin.
- Maintain a healthy diet by eating foods low in fat and high in fiber.
- Eliminate fast food, fried foods, and foods high in sugar.
- Drink non-caloric or low-calorie beverages.
- Decrease consumption of carbonated beverages and caffeine.
- Begin walking 10 to 20 minutes per day.

to gain a therapeutic advantage: a more favorable disease state that will require lifestyle changes.

A discussion about the procedure and postoperative demands can reveal any gaps in understanding and allow us to address these. If patients are unable to demonstrate knowledge of what they are undertaking, they can be referred for further education about the role of surgery as a treatment tool and the need to adhere to lifestyle modification throughout in order to garner the greatest benefit from this treatment as a whole.

Our bariatric patients are enrolled in our multidisciplinary program where they attend seminars preoperatively and have the opportunity to talk with people who have had surgery.

Patients should have completed the following before applying for insurance approval (a separate check list to track the progress will be provided to the patients):

- Support group attendance
- Pre-operative teaching and education sessions
- Dietary visits
- Review of informational brochures, facts sheets, handouts, booklets, and videos

Available bariatric surgeries at MGH:

The four most performed bariatric surgeries can be divided into two categories: restrictive and hormonal. Gastric banding is purely restrictive. Sleeve gastrectomy, in addition to being restrictive, results in hormonal changes. Roux-en-Y Gastric Bypass (RYGBP) and biliopancreatic diversion (BPD) result in significant hormonal changes and a reduced stomach size.

Each procedure changes the physiology of the patient in a unique way and has its own specific outcomes, risks, merits, and demerits.

1. Roux-en-Y Gastric Bypass (RYGBP)

This combination procedure is one of the most used in the United States and is the benchmark standard by which all other bariatric surgical procedures are measured. Roux-en-Y gastric bypass enables weight loss through a combination of restriction and malabsorption. Using staplers, a small stomach pouch (15cc to 30cc) is created to limit food intake. The small intestine is divided and connected to the stomach pouch. Food is rerouted to pass directly into the lower jejunum, bypassing calorie absorption and the duodenum.

Surgeries performed by a fellowship-trained surgeon using state-of-the-art tools typically result in less complications and an overall better experience.

Source: https://pubmed.ncbi.nlm.nih.gov/25666098/

dietician to understand pre- and post-operative diet plans and protocols.

- Best practice guidelines for assessing a patient's psychological fitness for surgery do not yet exist, although we do know that such an assessment can rarely be done in a single visit. Most patients preparing for bariatric surgery need to be evaluated by a psychologist or psychiatrist. The effect of certain critical psychosocial changes resulting from weight loss should be considered before surgery.
- Patients are questioned about past and present patterns of eating, timing of meals, and the presence of emotional triggers for eating. They are asked to keep a food diary and to record their eating patterns preoperatively. Patients are also screened for eating disorders, such as bulimia and binge eating disorders.

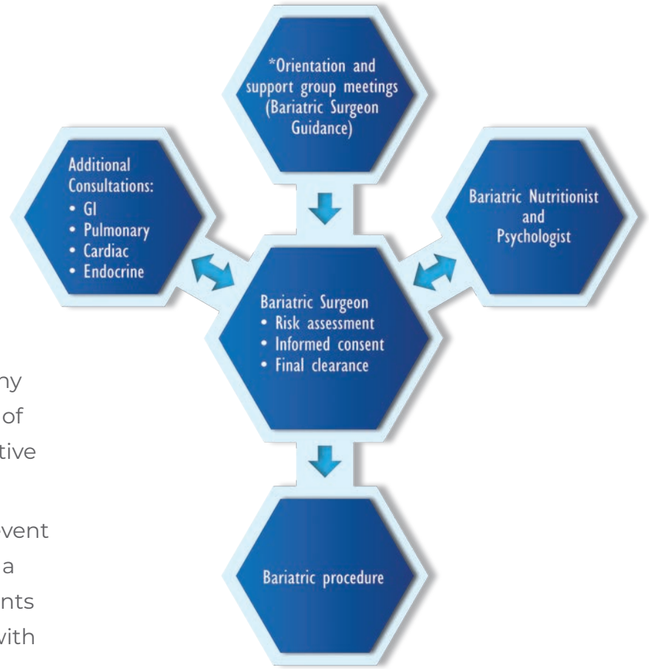
Understanding the procedure and postoperative demands:

Patients are informed regarding risks and benefits of Bariatric surgery. It is ensured that they understand and describe the procedure, its risks and benefits, and the preoperative and postoperative diet.
Patients need to be prepared for their "new normal." They must appreciate that they are essentially trading one disease for another. A relatively healthy gut is being altered anatomically

All patients have an electrocardiogram to screen for arrhythmias and silent ischemia. Further cardiac and pulmonary testing is based on the patient's specific clinical state and comorbidities.

- All patients undergoing bariatric surgery should be screened for obstructive sleep apnea (OSA). This is done by a polysomnography test. Untreated OSA remains one of the key contributors to perioperative mortality after bariatric surgery.

- Bariatric surgery is a life changing event and therefore dietary supervision is a significant part of the care. All patients are required to regularly follow up with



2. Adjustable Gastric Banding (AGB)

A restrictive procedure that limits food intake by placing an adjustable hollow band around the stomach, dividing it into two parts: a small upper pouch and a lower stomach. The upper pouch only holds about 4 ounces (1/2 cup) of food, helping patients to feel full sooner and longer than usual. This type of procedure is reversible and may reduce the risk of nutritional and mineral deficiencies. The Lap-Band® and the REALIZE™ Bands are the two FDA approved devices. FDA has approved the Lap-Band® for lower weight patients (BMI 30-35).

Surgeries performed by a fellowship-trained surgeon using state-of-the-art tools typically result in less complications and an overall better experience.

Source: https://pubmed.ncbi.nlm.nih.gov/25666098/

3. Sleeve Gastrectomy

Sleeve gastrectomy procedures limit food intake by reducing the size of the stomach. In this procedure, a linear stapling device is used divide the stomach vertically along the lesser curvature of the stomach, leaving behind a thin vertical sleeve of stomach that is at least 60% smaller and allows the patient to feel fuller faster. The sleeve reduces the size of the stomach to 50 mL to 150 mL. The rest of the stomach is removed which causes the stomach to make less appetite inducing hormones and further decreases food intake.

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Source: https://pubmed.ncbi.nlm.nih.gov/25666098/

Clinical Assessment Processes

The cornerstone of our bariatric surgery program is clinical assessment to determine if surgery is safe and appropriate for a particular patient with obesity.

- Clinical assessment is done over a period and by a multidisciplinary team that includes a dietitian, a physician, a surgeon, cardiologist, pulmonologist and a psychologist or psychiatrist.
  - This process involves history taking, physical examination, laboratory investigations, and interviews to determine a patient's motivation for undergoing surgery and how much the patient understands about the procedure and postoperative demands. Clinical interviews also provide information about the patient's weight-loss and weight-gain history and current eating behaviors.
  - All patients preparing for bariatric surgery should undergo general metabolic screening. Many patients will have disorders such as diabetes, hypertension, and dyslipidemia.
  - All patients have a baseline fasting glucose test, an HbA1c test, a full cholesterol panel, and testing for liver function, renal function, and thyroid function. Patients additionally have vitamin B12, vitamin D, and multivitamin baseline assessment.

This multidisciplinary approach assures safety in selecting and evaluating bariatric patients. Various medical conditions may be newly discovered during work up, which can be managed or treated before surgery.

4. Biliopancreatic Diversion with Duodenal Switch:

Abbreviated BPD-DS begins with the creation of a tube-shaped stomach pouch similar to the sleeve gastrectomy.

BPD-DS resembles the gastric bypass, where more of the small intestine is not used.

Following the creation of the sleeve-like stomach, the first portion of the small intestine is separated from the stomach.

A part of the small intestine is then brought up and connected to the outlet of the newly created stomach, so that when the patient eats, the food goes through the sleeve pouch and into the latter part of the small intestine.

The food stream bypasses roughly 75% of the small intestine, the most of any commonly performed approved procedures.

This results in a significant decrease in the absorption of calories and nutrients. Patients must take vitamins and mineral supplements after surgery.

Even more than gastric bypass and sleeve gastrectomy, the BPD-DS affects intestinal hormones in a manner that reduces hunger, increases fullness, and improves blood sugar control.

The BPD-DS, like gastric bypass, is the most effective approved metabolic operation for the treatment of type 2 diabetes.

Surgeries performed by a fellowship-trained surgeon using state-of-the-art tools typically result in less complications and an overall better experience.

Source: https://pubmed.ncbi.nlm.nih.gov/25666098/

Determining a patients' fitness for surgery

In order to qualify for bariatric surgery, a patient must have a BMI greater than 40.0 kg/m2 or a BMI greater than 35.0 kg/m2 with one or more obesity-related comorbidities (e.g., depression, hypertension, reflux, type 2 diabetes, obstructive sleep apnea, hyperlipidemia, coronary artery disease, arthritis, fatty liver). Bariatric surgery has a significant beneficial impact on several components of the metabolic syndrome, particularly uncontrolled diabetes. This led to the introduction of bariatric surgery to treat diabetes two to three decades ago, yet only in obese individuals.

Since then, along with the improvement in surgical technique, bariatric surgery performed in morbidly obese individuals established itself not only as the most effective means of treating diabetes but also as a "cure" to the disease in a significant proportion of the cases. Surgery is considered when less invasive methods of weight loss such as diet, exercise, pharmacotherapy, and behavior modification have failed, or the patient is at high risk for obesity related morbidity or mortality.

At Marion Health, we follow a standard multidisciplinary evaluation of our bariatric surgery patients as endorsed by ASMBS and ACS. This includes the following health care professionals: