Metabolic & Bariatric Surgery Program
Information Session

Changing What’s Possible | MUSChealth.org
Why have Bariatric Surgery at MUSC?
The Expert Experience

• Most established program in the area

• Dedicated interdisciplinary team

• Recognized and designated as a Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) Accredited Center with Adolescent Qualifications

• State-of-the-art technology and equipment

• All resources of MUSC available if the unexpected occurs
Bariatric Surgeons

T. Karl Byrne, MD
Professor of Surgery, Medical Director

Rana Pullatt, MD
Associate Professor of Surgery, Director of Robotic Surgery, Diplomate in Obesity Medicine

Aaron Lesher, MD
Associate Professor of Surgery, Pediatric Surgery
Program Coordination

Nina Crowley, PhD, RDN, LD
Program Coordinator

Beth Fogle, MHA, RN, CBN
Nurse Coordinator

Lisa Steinbronn
Patient Liaison

Janine Garey
New Patient Coordinator
Bariatric Surgery Team Clinicians

Diana Axioits, PA-C
Bariatric Physician Assistant

Amanda Peterson, RD
Lead Bariatric Dietitian

Molly Jones, RD
Bariatric Dietitian, Adolescent Specialist

Sharlene Wedin, PsyD
Bariatric Psychologist

Lillian Christon, PhD
Bariatric Psychologist, Adolescent Specialist
Our Patients – Our Family

• Long standing support group

• Patient advocates

• Outside the clinic, support group is the place to experience what life after surgery is all about

• We bring in speakers on topics ranging from emotional eating to plastic surgery to meal planning and everything in between!

• Community events
What can You do about Obesity?
The Problem

SOUTH CAROLINA
Obesity Fact Sheet

ADULT OBESITY FACTS:

- Obesity affects more than 31.7% of South Carolinians.
- South Carolina is ranked 13/51 in states impacted by obesity.
- The age group most affected by obesity in South Carolina is 45-64 (36.5%).
- More than 30.1% of male South Carolinians are affected by obesity.
- More than 33.1% of female South Carolinians are affected by obesity.
- South Carolina ranks 8th in adults with Type 2 Diabetes (11.8%).

South Carolinians Affected by Obesity by Race

Approx. Percentage

- Caucasian: 28.3%
- African American: 42.2%
- Hispanic: 32.1%
A Solution

• For people with severe obesity it is difficult to lose and maintain a significant weight loss through traditional methods

• Weight loss surgery is currently the most effective method to help people reduce weight and associated health conditions and improve quality of life

• MBSAQIP-accredited center = interdisciplinary program, not just a surgical procedure
Effective Treatment for Morbid Obesity

- **Bariatric surgery:**
  - Has the greatest weight loss of all treatment options
  - Has longest weight loss duration
  - Has the ability to reduce or resolve obesity-related conditions, risks, and need for associated medications
  - Significantly improves quality of life
  - Reduces risk of mortality
  - Is a tool to aid in weight loss and maintenance
  - Is minimally invasive
  - Reduces healthcare costs for patient and healthcare system
  - Has lower 30-day mortality rate than gallbladder surgery or a hip replacement!
Who is a Candidate for Weight Loss Surgery?
Criteria for being a Candidate for Surgery

- BMI ≥ 40 kg/m²
- BMI ≥ 35kg/m² with obesity-related conditions:
  - Type 2 Diabetes
  - High blood pressure
  - Cardiovascular conditions (high cholesterol, coronary artery disease)
  - Sleep Apnea
  - Fertility-related complications
  - Orthopedic conditions
  - Stress Urinary Incontinence
  - Osteoarthritis
  - Degenerative Disc Disease
  - Gastroesophageal Reflux Disease (GERD)
- Have tried to lose weight without surgery but have not succeeded

*NIH Consensus Conference 1991*
Are you Ready?

- Are you ready to commit to:
  - follow diet restrictions
  - Exercise
  - taking vitamin/mineral supplements
  - comply with follow-up recommendations from team
- Are you well informed and highly motivated?
- Do you have a supportive family or social environment?
- Are you willing to stop using nicotine and drinking alcohol?
- Are you actively managing other health and psychological conditions?

**Interdisciplinary team** meets to evaluate readiness and make recommendations to prepare and optimize you for surgery.
Objective of Weight Loss Surgery

To provide YOU, the patient, with a TOOL for YOU to HELP YOURSELF lose weight
What Bariatric Procedures are Offered and what are the Risks and Benefits?
What is Bariatric (Weight Loss) Surgery?

- Bariatric surgical procedures cause weight loss by:
  - **Restricting** the amount of food the stomach can hold
  - Causing **malabsorption** of nutrients
  - **Combination** of restriction and malabsorption
  - Bariatric procedures also often cause **hormonal** changes

- Minimally invasive laparoscopic surgery
Weight Loss Surgery Types at MUSC

- **Roux-en-y Gastric Bypass**
- **Sleeve Gastrectomy**
- **Biliopancreatic Diversion with Duodenal Switch**
Gastric Bypass

- Creates a small pouch which is about 85% smaller than the size of your current stomach
- Restricts how much you can eat at one time
- Bypasses part of small intestine and limits how much is absorbed
- Reduces your appetite through favorable changes in gut hormones

https://youtu.be/x_w4CdEl67s
Gastric Bypass

- **Hospital & Recovery**
  - Procedure takes approximately 1-2 hours
  - Inpatient stay 2 nights
  - Out of work 2-4 weeks (depending on job)

- **Dumping Syndrome**
  - Rapid emptying of food/drink from pouch into intestine due to bypass of pylorus
  - Symptoms – fast heart rate, sweating, nausea, vomiting, diarrhea

- **Reactive Hypoglycemia (low blood sugar after meals)**

- **Ulcer at connection of stomach to intestine**
  - Erosion at the mucosa at the connection
  - Smoking and taking NSAIDS increase risk
  - Take PPI after surgery to prevent
Potential Complications of Gastric Bypass

- Anastomotic leak
- Bleeding
- Deep Vein Thrombosis
- Gallstones
- Gastro-gastric fistula
- Internal hernia
- Marginal ulcer
- Pulmonary Embolism
- Small bowel obstruction
- Stricture or stenosis
- Surgical Site Infection
Sleeve Gastrectomy

- Removes ~80% of the stomach without bypassing intestines
- Keeps pylorus intact
- Creates a small narrow ‘sleeve’ shaped stomach
- Restricts how much you can eat at one time
- Reduces your appetite through favorable changes in gut hormones

https://youtu.be/NyLJDf0Xun0
Sleeve Gastrectomy

• Hospital & Recovery
  • Procedure takes about one hour
  • Inpatient stay 1-2 nights
  • Out of work 2-4 weeks (depending on job)
• Preexisting reflux (GERD) might be made worse
  • Acid-producing cells still can reflux into esophagus
  • High pressure of slim sleeve
• No manipulation of small intestine
  • Fewer complications related to hernia, bowel obstruction
• Choice procedure for adolescents, or more complex patients
• Option for 2nd stage in the future (Duodenal Switch)
Potential Complications of Sleeve Gastrectomy

• Bleeding
• Gallstones
• Gastric fistula
• Gastric outlet obstruction
• GERD – severe reflux
• Leak
• Small bowel obstruction
• Staple line leak
• Stricture or stenosis
• Surgical Site Infection
Biliopancreatic Diversion with Duodenal Switch (BPD-DS)

- Creates a ‘sleeve’ shaped stomach first
- Restricts how much you can eat at one time
- Creates malabsorption by bypassing large part of small intestine after pylorus
- Reduces your appetite through favorable changes in gut hormones
- Requires additional attention to fat soluble vitamins

https://youtu.be/BitgTPIFdY4
Duodenal Switch

- **Hospital & Recovery**
  - Procedure takes about 2-3 hours
  - Inpatient stay 2-3 nights
  - Out of work 2-4 weeks (depending on job)
  - Return to clinic in 1-2 weeks for drain removal
- **Complex surgical procedure – experience helps!**
- **Malnutrition**
  - Protein and fat malabsorption occurs by nature of procedure
  - Additional protein intake, and vitamins/minerals required
- **Diarrhea, malodorous bowel movements/gas**
  - Common side effect, new normal bowel movement pattern
  - Eating too much fat makes it more common
## Potential Complications (30 days – all types)

<table>
<thead>
<tr>
<th>Area</th>
<th>Type of complication</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical</td>
<td>Anastomotic or staple line leak</td>
<td>0.3%</td>
</tr>
<tr>
<td></td>
<td>Anastomotic Ulcer</td>
<td>0.1%</td>
</tr>
<tr>
<td></td>
<td>Bleeding</td>
<td>0.5%</td>
</tr>
<tr>
<td></td>
<td>Internal Hernia</td>
<td>0.1%</td>
</tr>
<tr>
<td></td>
<td>Stricture or Stomal Obstruction</td>
<td>0.3%</td>
</tr>
<tr>
<td>Wound</td>
<td>Incisional Hernia</td>
<td>0.1%</td>
</tr>
<tr>
<td>Abdominal</td>
<td>Surgical Site Infection</td>
<td>0.2%</td>
</tr>
<tr>
<td></td>
<td>Intestinal Obstruction</td>
<td>0.3%</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Pulmonary Embolism</td>
<td>0.1%</td>
</tr>
<tr>
<td></td>
<td>Deep Vein Thrombosis</td>
<td>0.1%</td>
</tr>
<tr>
<td>Dehydration</td>
<td>Nausea, vomiting, fluid/electrolyte nutritional depletion</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

**30 day mortality** 0.1%
Other Bariatric Procedures

- **Adjustable Gastric Band**
  - Lap-Band or Realize Band surgery is no longer performed here
  - Band removal or conversion to gastric bypass or sleeve gastrectomy is available

- **Revision/Conversion**
  - Sometimes patients will require a revision to a previous bariatric procedure for medical complications or weight regain
  - The same program evaluations and guidelines apply

- **Bariatric Surgery for other medical conditions**
  - Some patients require gastrointestinal surgery similar to bariatric surgery for other conditions (like reflux)
Choosing the Ideal Surgery for You

- Discussion between patient and surgeon
- Consideration of comorbid conditions (Diabetes, Reflux, etc.)
- Comorbidity resolution rates
- Risk vs. benefit
- Weight loss expectations
- Insurance coverage
- Patient preference
With ALL Procedures

- Designed to help feel full on less solid food
- Require small high protein meals a few times per day
- Limit liquid/slider foods that don’t fill you up
- Adapt new eating habits forever
- Focus on planning, eating habits and exercise
- Follow up with bariatric team for life
- Take several vitamins daily forever
- Lose the most weight in first 6 months
- Weight maintenance after 18 months
- Avoid alcohol for 6 months or longer
- Avoid pregnancy during first 18 months
What are the Expected Outcomes of Surgery?
Resolution of Conditions Related to Carrying Excess Weight

- Migraines: 46% improved
- Depression: 47% reduced
- Pseudotumor cerebri: 96% resolution of headaches; 95% resolution of pulsatile tinnitus
- Obstructive sleep apnea: 45% to 76% resolved
- High cholesterol: 71% to 94% improved
- Asthma: 39% resolved
- High blood pressure: 42% to 66% resolved
- Nonalcoholic fatty liver disease: 37% resolution of steatosis
- Metabolic syndrome: 80% resolved
- GERD: 72% to 95% resolved
- Type 2 diabetes: 45% to 68% resolved
- Polycystic ovarian syndrome: 52% resolution of hirsutism; 100% resolution of menstrual dysfunction
- Urinary stress incontinence: 50% resolved
- Osteoarthritis/degenerative joint disease: 41% resolved
- Venous stasis disease: 95% resolution of venous stasis ulcers
Outcomes: Expected Weight Loss

• Weight loss discussed in terms of Percentage Excess Weight Loss (% EWL)
  • “Ideal” is tricky term

\[
\%\text{EWL} = \frac{(\text{pre-op weight} - \text{follow-up weight})}{(\text{pre-op weight} - \text{ideal body weight})} \times 100
\]

• A successful outcome long term is generally considered the loss/maintenance of 50% EWL

• Other measures of “success”
  • Resolution of health conditions
  • Improved longevity
  • Improvement in quality of life
# Expected Weight Loss by Procedure

**Excess Body Weight** = Current weight – Ideal body weight

**Example:**

<table>
<thead>
<tr>
<th>Current body weight</th>
<th>Ideal body weight</th>
<th>Excess body weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 pounds</td>
<td>- 130 pounds</td>
<td>170 pounds</td>
</tr>
</tbody>
</table>

Expected weight loss = multiply %EWL by excess weight

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Gastric Bypass</th>
<th>Sleeve Gastrectomy</th>
<th>BPD-DS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expected %EWL</strong></td>
<td>60-75% EWL</td>
<td>50-70% EWL</td>
<td>70-80% EWL</td>
</tr>
<tr>
<td><strong>Weight loss</strong></td>
<td>102-128 pounds</td>
<td>85-119 pounds</td>
<td>119-136 pounds</td>
</tr>
<tr>
<td>for 300 pound person, ideal BW 130, excess BW 170</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Goal weight</strong></td>
<td>172-198 pounds</td>
<td>181-215 pounds</td>
<td>164-181 pounds</td>
</tr>
<tr>
<td>for example person starting 300 pounds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Possible Weight Regain

- 20-30% of patients regain significant amount of weight
- “Significant” weight – regaining more than 15% of total weight lost
  - Ex: regaining 15 pounds if you lost 100 pounds initially
- Usually occurs after 18-24 months
- Weight regain is complex and can be due to:
  - Anatomy/surgery
  - Hormonal imbalances
  - Inability to stick with eating pattern long term
  - Intake of more liquidy foods high in calories, frequent snacking/grazing
  - Physical inactivity
  - Inadequate follow up
- Treatment combines cornerstones of behavior and nutrition, and may include pharmacology and surgical options in some
What about Surgery in Adolescents/Teens?
Adolescent/Teen Surgery

- Age 13 to 19 at the time of surgery
- BMI \( >35 \text{ kg/m}^2 \) with weight-related health problems or BMI \( >40 \text{ kg/m}^2 \)
- Consent from patient and a parent/guardian
- Psychological evaluation to ensure understanding of pre- and post-surgery requirements, commitment to lifelong aftercare
- Patient is done growing (documentation of skeletal maturity)
- Participation in a weight management program 
  - MUSC’s Heart Health/Pediatric Weight Management Program
  - Monthly visits – can use to meet 3-6 month insurance requirement
Teen-Friendly Approach

- Growing our team with Adolescent Specialists
  - Dr. Aaron Lesher, Pediatric Surgeon
  - Dr. Lily Christon, Pediatric/Adolescent Psychologist
  - Molly Jones, RD, Adolescent Specialist Dietitian

- Interdisciplinary roundtable meetings
- Initial visits more convenient at other locations
- Focus on unique medical/surgical needs of adolescent population
- Address unique psychosocial needs of adolescents before, during, after surgery (Mentor Program, Teen Reunions)
What’s Next?
What Next?

• Contact **Insurance Company** to verify Bariatric Benefits
• Complete and mail in **patient info forms**
• **Consultation** with Surgeon & Team
  • Dietitian, Patient Liaison, Coordinator, Lab work
• **Psychosocial Evaluation** with Behavioral Medicine
• **Pre-operative Education Class**
• **Insurance Process**
  • Complete requirements, submit for pre-authorization, receive approval, schedule surgery date, pre surgical - workup, then surgery!
Documenting Monthly Consecutive Weight Loss Attempts (for Insurance)

- 3-6 consecutive months of weight loss attempts or a diet
  - 1 per Month
  - Every month
  - ~30 days apart
- Monitored by a physician
- During the 12-18 months immediately prior to surgery
  - Call your insurance company to get # months
- Office visits regarding your weight loss attempts by a medical doctor (or NP, PA, RD, supervised by MD)
- Sample form (in packet) helps MD get the basic info that they require!
Self-Pay for Surgery

• If you do not have insurance coverage (plan exclusion), you can opt to pay yourself out of pocket
• MUSC has self pay prices are comparable to other programs in the Charleston area
• You will meet with the financial counselor, who can answer your specific financial concerns
• Payment for surgery and copays must be paid in full at workup
• We require 90-day BLIS catastrophic coverage for self pay surgery to cover rare but costly complications
• Contact Nina Crowley, Program Coordinator to discuss in more detail – 843-876-7211, crowleyn@musc.edu
Your Journey Starts Here at MUSC!

Website: www.muschealth.org/weight-loss-surgery

Facebook: www.facebook/MUSCWeightLossSurgery


Stay for Support Group Tonight!
MUSC Bariatric Support Group Meets the 3rd Tuesday of the month in this room following open house 5:30-7 pm