Metabolic and Bariatric Surgery

What Pediatric Providers Need to Know

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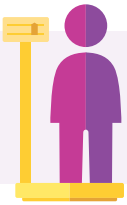
According to 2023 AAP Clinical Practice Guidelines for Childhood Obesity,[1] obesity treatment should begin without delay. Adolescents 13 and older (or younger in extreme cases) who meet the criteria below should be offered a referral for evaluation by a metabolic and bariatric surgeon to discuss surgical treatment options. A patient does not have to "fail" medical treatment before being referred to a surgeon.



Indications for Adolescent Metabolic and Bariatric Surgery (MBS)

- BMI ≥ 35 or 120% of the 95th percentile for age and sex, with co-morbidities **OR**
- BMI ≥ 40 or 140% of the 95th percentile for age and sex, with or without co-morbidities

Surgery Timeline

Preoperative Evaluation (varies) ➔ Surgery (2-3 hours) ➔ Inpatient Stay (1-2 nights) ➔ Discharge and Follow-Up (lifetime)

Preoperative Evaluation Components

- Metabolic lab work:
  - CBC
  - CMP
  - Fasting lipid panel
  - TSH
  - Hemoglobin A1c
  - ALT (if abnormal, then full liver panel)
  - Vitamin D, vitamin B12, thiamine, iron levels
- Sleep medicine evaluation and therapy as indicated
- EKG and referral to cardiologist as indicated
- Psychological evaluation (bariatric surgery focus)
- Comprehensive nutrition evaluation and counseling

Surgery and Post-Operative Care

What to Expect During Surgery

- Laparoscopic Sleeve Gastrectomy or Roux-en-Y Gastric Bypass under general anesthesia
- 4-5 small abdominal (5mm) incisions

What to Expect After Surgery

- Typical discharge instructions:
  - Full liquid diet with emphasis on fluids (48-64oz/day) to avoid dehydration
  - Incentive spirometry x 5 days
  - Frequent walking (every hour while awake)
  - Return to surgeon 5-7 days after discharge

Complications

Adolescent patients experience a low rate (< 3.4%) of postoperative adverse events following MBS.[2]

- Red flags to look for that may indicate a complication:
  - Tachycardia
  - SOB
  - Tachypnea
  - Chest pain
  - Fever
  - Hemoptysis
  - Persistent hiccups

  - Maroon or red, bloody emesis or stool
  - Pain, swelling, and/or redness in extremities
  - Incisional drainage, pain, swelling and/or redness
  - Increased abdominal pain, nausea, and/or vomiting

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Surgery and Post-Operative Care (continued)

Complications (continued)

Potential post-operative complications may occur.

- First 30 days post-discharge:
  - Dehydration
  - Blood clots (DVT, PE)
  - Bleeding
  - Infection
  - Pneumonia
  - Leak at staple/ anastomosis site(s)
  - Intestinal obstruction
  - Gastric outlet obstruction

- 30+ days post-discharge:
  - Intestinal blockage
  - Gastric/jejunal ulcer
  - Cholelithiasis
  - Renal calculi
  - Hernia (rare)
  - Nutritional deficiencies (most commonly vitamin D, vitamin B12, and iron)

Diet Progression

The patient's diet will gradually progress to normal food textures over 6-8 weeks. Each patient's goals are individualized, but these are the general recommendations:

- Daily protein goal > 40 grams
- Daily fluid intake > 48 ounces
- Lifelong bariatric multivitamin, calcium, and iron supplementation
- Continue Intensive Health Behavior and Lifestyle Treatment or lifestyle intervention

General Long-Term Care Recommendations

Patient

- Avoid oral steroids and NSAIDS to prevent ulcers
- Avoid smoking/vaping to prevent ulcers
- Avoid pregnancy for 12-18 months following MBS
- Attend follow up visits* with the surgeon
  - *Visits recommended at months 1, 3, 6, 9, 12, 18, 24 and then annually

Provider

- Complete periodic nutritional lab work at least annually (done at follow-up visits with surgeon or HCP)
- Evaluate for substance use/abuse, depression/suicidal thoughts, and disordered eating

For more information, visit www.greauxhealthy.org/provider-hub or scan the QR code with the camera on your smartphone.

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Sources: [1]Hampl SE et al. Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity. Pediatrics (2023) Vol 151 Issue 2.
[2]Torres A et al. Evaluating Safety and Durability of Adolescent Metabolic and Bariatric Surgery. Journal of Surgical Research (Nov 2024) Vol 303 pp. 332-341.