PATIENT SELECTION CRITERIA: Clinical Considerations for Elevated BMI

The Centers for Disease Control and Prevention (CDC) define an adult's body mass index (BMI) as weight in kilograms divided by the square of height in meters.[1] By the year 2035, it is estimated that over 50 percent of Americans will be obese.[2] This obesity crisis is projected to cost the global economy $4 trillion in healthcare costs and other related expenses.[2] As the number of patients with obesity in ambulatory and office-based ("ambulatory") settings increases, the demand for surgical and invasive procedures ("surgery") suitable to be safely performed in these settings is also rising.[3-5]

Obesity is often described in three categories[4,6-8]

BMI of 30 to <35	BMI of 35 to <40	BMI of 40 & Up
Class 1 Obesity	Class 2 Obesity	Class 3 Obesity Extreme or severe. BMI >50 constitutes "super obese".

Elevated BMI and Ambulatory Surgery

The diagnosis of obesity alone is not a contraindication to ambulatory surgery, as BMI measurements are an inaccurate indicator to determine the amount of one's body fat.[4,6,9] There is insufficient evidence recommending one "cut-off" BMI above which it's not safe to have surgery in the ambulatory setting, though many facilities will state one in their facility policy.[4,9] Determining the appropriateness of the ambulatory setting for the patient with obesity is a multifactorial decision that involves several considerations. For example, an elevated BMI is often correlated with other comorbidities, such as obstructive sleep apnea (OSA), cardiovascular disease, diabetes, and hypertension.[2,4-6,10] Additionally, patients with obesity are more likely to experience challenges with airway management, wound infections, unplanned hospital admissions, respiratory complications, and cardiovascular impairment.[2,5,6,8-10]

Whether the patient with obesity is a candidate for surgery in the ambulatory setting depends on the patient's specific comorbidities, type of procedure, anesthetic required, proceduralist's experience, facility's available standard and emergency equipment, established facility policies and procedures, and the anesthesia professional's discretion.[6,9] While there is insufficient evidence to issue clinical guidelines or recommendations, a facility can establish a multidisciplinary team of experts to develop a patient selection policy that is appropriate for a facility's patient population.

Preanesthesia and Preoperative Assessment and Evaluation

Airway accessibility is one of the main concerns of anesthesia professionals when providing care to an patients with obesity, with changes such as an increased neck circumference, lingual fat content, and tongue volume.[2,8,10] The preanesthesia assessment and evaluation, along with patient optimization based on comorbidities, may reduce the risk of perioperative complications, such as difficult airway management.[2,6,11,12] For patients with obesity, the anesthesia professional should document or verify documentation of the patient's cardiac assessment and a STOP-Bang questionnaire to screen for OSA.[2,6,12] Additionally, if the patient is taking a Glucagon-like peptide-1 (GLP-1) agonist, take appropriate measures to minimize the risk of regurgitation and aspiration.[2,13] See the AANA Anesthesia Care of the Patient on a GLP-1 Receptor Agonist document for more information.

Recommendations from Expert Opinion

- **Patients with Class 3 obesity (BMI of >40)** are more susceptible to perioperative events such as airway complications and sudden cardiomyopathy, leading to increased mortality. Consider this during the preanesthesia and presurgical/preprocedural assessment and evaluation and development of the anesthetic plan.[2,3,6,8]
- **Patients who are super obese (BMI >50)** face an increased mortality risk when combined with comorbidities. Select these patients with caution and carefully evaluate whether a hospital may offer a safer alternative to the ambulatory setting.[3,6]

Other Considerations:

- Position the patient in a ramped or reverse Trendelenburg position, unless prohibited by surgical procedure and/or patient comorbidities.[2,10,11]
- Calculate pharmacologic agents based on the evidence-based dosing regimens, as certain drugs are tailored to either total body weight, lean body weight, or ideal body weight as opposed to actual body weight, as adipose tissue has relatively low blood flow.[8,10]
- Avoid or titrate opioids carefully if the patient has a confirmed or suspected diagnosis of OSA.[2,6,8,10] Adhering to Enhanced Recovery after Surgery (ERAS) protocols leads to improved patient outcomes, reduced postoperative complications, and accelerates recovery, among others.[14] See the AANA Enhanced Recovery after Surgery document for more information.

AANA American Association of NURSE ANESTHESIOLOGY

Questions? Contact us.
practice@aana.com

Learn more at: **AANA**.com/FacilityConsiderations

1. Centers for Disease Control and Prevention. About Body Mass Index (BMI). Accessed March 18, 2025, https://www.cdc.gov/bmi/about/
2. Arora L, Sharma S, Carillo JF. Obesity and anesthesia. *Curr Opin Anaesthesiol*. Jun 1 2024;37(3):299-307. doi:10.1097/ACO.0000000000001377
3. Accreditation Association for Ambulatory Health Care (AAAHC). Ambulatory Procedure Considerations for Obese Patients. 2021.
4. Tumminello ME, Hogan MG, Leonardi C, Barton JS, Cook MW, Davis KG. Morbid Obesity Not a Risk for Serious Complications Following Outpatient Surgery. *Am Surg*. Jun 2023;89(6):2608-2617. doi:10.1177/00031348221103656
5. Bautista A, Marshall SV, Vo C, Weiss L. Anesthetic Considerations for Ambulatory Surgery in the Obese Patient. ASA Monitor. Philadelphia, PA: Wolters Kluwer Health, Inc.; June 2022.
6. Rajan N, Rosero EB, Joshi GP. Patient Selection for Adult Ambulatory Surgery: A Narrative Review. *Anesth Analg*. Dec 1 2021;133(6):1415-1430. doi:10.1213/ANE.0000000000005605
7. Obesity Medicine Association. Shifting from "Morbid Obesity" to "Class III Obesity". 2023. Accessed March 25, 2025. https://obesitymedicine.org/blog/shifting-from-morbid-obesity-to-class-iii-obesity/
8. Narra LR, Udongwo N, Dominic JL, et al. Obesity and the Other Independent Predictors in Elective Endotracheal Tube Intubations: A Narrative Review. *Journal of clinical medicine research*. May 2022;14(5):177-187. doi:10.14740/jocmr4727
9. Hajmohamed S, Patel D, Apruzzese P, Kendall MC, De Oliveira G. Early Postoperative Outcomes of Super Morbid Obese Compared to Morbid Obese Patients After Ambulatory Surgery Under General Anesthesia: A Propensity-Matched Analysis of a National Database. *Anesth Analg*. Dec 1 2021;133(6):1366-1373. doi:10.1213/ANE.0000000000005770
10. Waheed Z, Amatul-Hadi F, Kooner A, et al. General Anesthetic Care of Obese Patients Undergoing Surgery: A Review of Current Anesthetic Considerations and Recent Advances. *Cureus*. Jul 2023;15(7):e41565. doi:10.7759/cureus.41565
11. Carron M, Safaee Fakhr B, Iepparielloo G, Foletto M. Perioperative care of the obese patient. *Br J Surg*. Jan 2020;107(2):e39-e55. doi:10.1002/bjs.11447
12. Benalcazar DA, Cascella M. Obesity Surgery Preoperative Assessment and Preparation. *StatPearls*. 2025.
13. American Association of Nurse Anesthesiology. Anesthesia Care of the Patient on a GLP-1 Receptor Agonist. 2024.
14. Enhanced Recovery after Surgery: Considerations for Pathway Development and Implementation. Glycemic Management. Rosemont, IL: American Association of Nurse Anesthesiology; 2024.