



The Bariatric Patient

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QUESTION: WE ARE IN need of education relating to the care of the bariatric patient. What are the key points we should consider?

Response: This is a timely and relevant subject. The Centers for Disease Control and Prevention reported that between 2015 and 2016 an estimated 93.3 million American adults (more than a third in the country or 39.8%) were considered obese, defined as a body mass index of 30 kg/m² or greater.^{1,2} In addition, the National Center for Health Statistics reported the prevalence to be 18.5% in youth during the same time period.³ More than half of the population, by definition, is considered overweight (body mass index of 25 kg/m² to 29.9 kg/m²). Inevitably, many of these individuals will require surgery. Consequently, “patients of size”⁴ will find themselves in the care of perianesthesia nurses. Regardless of whether the patient is undergoing bariatric surgery or nonbariatric procedures, there are some basic physiological, psychosocial, and environment of care needs that should be kept in mind.

Physiological Challenges

There are numerous system-related health issues associated with excess body weight. These issues essentially impact all major body functions and are briefly summarized in [Table 1](#).

Preoperative Care

As with any surgical planning, preoperative optimization of medical conditions is one of the best

Table 1. Health issues associated with excess body weight

Body System	Impact ⁵⁻⁹
Cardiovascular	<ul style="list-style-type: none"> • Hypertension • Increased cardiac output • Increased incidence of arrhythmias • Higher risk for heart failure and myocardial infarction
Endocrine	<ul style="list-style-type: none"> • Metabolic syndrome • Diabetes and poor glycemic control
Hematological	<ul style="list-style-type: none"> • Risk for deep vein thrombosis and pulmonary emboli • Venous stasis • Polycythemia • Increased viscosity and volume of blood
Integumentary	<ul style="list-style-type: none"> • Impaired skin integrity secondary to retained surface moisture • Poorly vascularized tissue • Yeast and fungus skin infections
Psychological	<ul style="list-style-type: none"> • Depression • Disordered eating • Low self-esteem • Fear of health care • Subject to provider biases
Respiratory	<ul style="list-style-type: none"> • Reduced functional capacity • Atelectasis due to decreased tidal volumes • Higher risk for difficult intubation due to redundant pharyngeal tissue and large neck measurements • Rapid dips in arterial oxygen levels • Increased breathing rates at rest • Increased minute oxygen demand • Increased metabolic requirements • Increased sensitivity to opioid therapies • Sleep-disordered breathing (obstructive sleep apnea [OSA]; obesity hypoventilation syndrome [OHS])

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Conflict of interest: None to report.

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approaches to minimizing surgery and anesthesia-related complications. As much as possible, preoperative treatment of any pre-existing condition

ensures safer outcomes. Cardiology, pulmonary, and sleep study consultations are prudent safety measures for the bariatric patient. Depending on the planned surgery, some patients will additionally benefit from the preconditioning offered by preoperative physical or occupational therapies. As with most complex patients, initiation of preoperative care management and care coordination for discharge planning should also be considered.

On the day of the procedure, the environment must be able to accommodate the special needs of the overweight patient. The unit should be supplied with the appropriately sized patient downs, stretchers, blood pressure cuffs, mechanical devices for deep vein thrombosis prophylaxis such as pneumatic compression appliances or stockings, and other devices commonly used. In general, morbidly obese patients tend to have difficult intravenous access, so it is imperative to have access support as well (eg, ultrasound, vein illumination devices). Given that the bariatric patient tends to have poorly vascularized tissues, a 4-eyed skin assessment is highly recommended.⁵ Finally, the clinical staff caring for these patients must have the appropriate safe patient handling devices for movement and positioning of the larger patient to prevent workplace injuries as well as inadvertent patient harm.

Intraoperative Care

The same principles regarding right-sized equipment and patient handling devices apply to the intraoperative environment. Drug dosing should generally be based on lean body weight and titrated to effect, rather than dosed to total body weight.^{5,8} To minimize the potential for pulmonary complications associated with general anesthesia and difficult airway management, regional anesthesia is desired. Unfortunately, in the patient with excess weight, the process of applying regional anesthesia

(either local or intrathecal) can be technically difficult and require highly skilled providers.

Postoperative Care

During phase I postoperative care, consider assuring there is adequate staffing to help with positioning and application of safe patient handling principles. If possible, apply semi-Fowler positioning to support efficient airway maintenance and for ease of breathing. Positive airway pressure devices, if not provided by the patient, should also be available in the event that the patient demonstrates signs of unwanted sedation and hypoventilation. Prudent titration of medications and a vigorous multimodal approach to ease discomfort, although appropriate for all surgical patients, require particular attention in the bariatric population.

During phase II postoperative care, right-sized durable medical equipment must also be available to phase I, assuring access to properly care for the patient. This includes beds, commodes, walkers, and crutches that can support the weight of the bariatric patient. Early mobilization of the patient will support efforts to reduce the risk of pulmonary and vascular complications such as atelectasis and deep vein thrombosis.

Summary

Historically, larger patients are at higher risk for surgical site infections, significant surgical blood loss volumes, and prolonged anesthesia times due to excessive adipose tissue, elevated blood glucose findings, and increased tension on surgical incisions.⁹ Awareness of both the physiological changes and challenges presented by the bariatric patient, as well as the preemptive and active nursing interventions aimed at reducing complications, can help reduce the chances of poor outcomes.

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Calendar of Events

March 7, 2020. The Illinois Society of PeriAnesthesia Nurses (ILSPAN) invites you to join them for the 2020 ILSPAN Spring Conference in Rolling Meadows, Illinois at the Meridian Banquet & Conference Center, 1701 Algonquin Road, Rolling Meadows, IL 60008. The conference objective is to discuss key topics and essential skills for nurses in all phases of perianesthesia nursing. More information is coming soon. For more conference information contact Juby Vallikalam, MSN, RN, CCRN at jubyvallikalam@gmail.com or (312) 685-5829.