Myasthenia gravis (MG) is a chronic autoimmune neuromuscular disease in which antibodies against the post-nicotinic acetylcholine receptor at the neuromuscular junction develop. Although the exact cause of MG remains unknown, the thymus is a common factor in many cases. Patients with underlying junctional disease, such as MG, have greater anesthesia-related risks because of their known predisposition toward prolonged muscle weakness. Medications given in the perioperative period, such as anesthetic agents, antibiotics, cardiovascular drugs, and corticosteroids, affect neuromuscular transmission that contributes to muscle weakness. Judicious use of neuromuscular blocking agents for patients with MG must be considered. This patient population is at high risk for respiratory failure, and therefore must be carefully assessed throughout the perioperative period to ensure that a regular spontaneous respiratory pattern is sufficient to provide adequate oxygenation. Perianesthesia providers must consider anesthetic, ventilatory, and pharmacologic implications when proposing, providing, and recovering anesthesia for the patient with MG.