

Performing significant cosmetic surgeries in your outpatient facility? If so, consider this sampling of some of the most important safety tips for preventing fatal complications:

1. Institute rigid patient selection criteria. Patient selection is often lax, say experts, and underlying medical issues can set the stage for real problems. Here are some important factors to consider:

- ASA status. Accept only ASA I or II patients into the outpatient facility.
- BMI. Liposuction is not a treatment for obesity. Obese patients (BMI ≥ 30) have greater risk of complications like DVT due to the potential for diabetes and hypertension, a heightened sensitivity to respiratory depressants, and a higher incidence of sleep apnea.
- Medications. Consider all possible anesthesia interactions with any medications the patient is taking, and you may need to adjust or discontinue hormones.
- Smoking history, which can affect coagulation.
- Age.
- Cardiopulmonary reserve.
- History of sleep apnea.
- Weight history. Weight should be stable or decreasing.

2. Don't take anesthesia risks. Experts advise following ASA guidelines for ACLS training of staff and anesthesia personnel/administration. They warn against administering IV sedation without the proper personnel and emergency preparedness. And when performing tumescent technique, stay within the per-procedure lidocaine limits, which the American Academy of Cosmetic Surgery puts at 45 to 55 mg/kg depending on volume of body fat and patient size. For higher-volume procedures, says Edward Lack, MD, member of the American Academy of Cosmetic Surgery's liposuction guidelines task force, dilute the infiltrate rather than adding more lidocaine.

3. Take a strict approach to fluid management. Clinicians agree it is crucial to closely monitor what goes into the patient, and what comes out in terms of aspirate as well as urine. (Catheterize all patients.) This is essential because a significant portion of infiltrate remains behind even after aspiration, and the body fills the "third-space void" left behind after liposuction with fluid via the circulation. Fluid management is a balancing act between over- and under-hydration, so take into account the liposuction technique (tumescent vs super-wet) as well as the overall volume of fat removed.

4. Maintain normothermia. Cosmetic surgery patients can be widely exposed for a long time, and they must be kept normothermic throughout the entire perioperative period. Warm the aspirate.

5. Take measures to prevent DVT. Many clinicians recommend prophylactic low-molecular weight heparin in lower-volume liposuction patients who receive general anesthesia, as well as intra- and postop intermittent pneumatic compression devices. In

addition, Rod J. Rohrich, MD, with the University of Texas Southwestern Medical School Department of Plastic Surgery in Dallas, recommends intra-op knee flexion to maximize blood flow through the popliteal veins, as well as ambulation as soon as possible after surgery.

6. Consider aspirate volume relative to patient weight. “High-volume” liposuction is defined as 5 liters of fat, or 5 liters of fat plus aspirate, depending on who you talk to. This controversy exists in part because no one knows for sure at what point tissue trauma will initiate a cascade of clinical complications. However, experts do agree that an important consideration is patient weight, because removing 1 liter, or 2.2 pounds, of fat might be excessive in a 110-pound patient, but removing 4 liters, or 9 pounds of fat, in a patient weighting 220 pounds may not.

7. Create a firm overnight stay policy. Certain patients need overnight monitoring, and your policy should clearly state the criteria. For example, Henry Mentz, III, MD, FACS, FICS, and his colleagues at The Aesthetic Center for Plastic Surgery in Houston, keep patients meeting any two of the following criteria overnight: Over 50 years of age, smoking history, surgery longer than 2 to 3 hours, abdominoplasty, face lift, large-volume liposuction.

This checklist is not complete and should be considered in light of other safety measures.