Some liposuctions exceed guidelines

Though most outpatient liposuction procedures in a new benchmarking study stayed within guidelines for the amount of fat and fluid removed, more than 1 in 10 exceeded the guidelines.

In 12% of cases, more than 5 L of fat and fluid was extracted, the limit set by the American Society of Plastic Surgeons (ASPS) for outpatient liposuctions.

The volume of fat and fluid ranged widely—from less than a medicine cupful to more than 13 L—the equivalent of more than six 2 L bottles of soda.

There also was a wide range in procedure times, from 51 minutes to 262 minutes (more than 4 hours).

“Liposuction can be very different procedures, depending on the amount of aspirate you are talking about,” says Naomi Kuznets, PhD, managing director of the Accreditation Association for Ambulatory Healthcare (AAAHC) Institute for Quality Improvement, which conducted the study. A total of 19 facilities participated, submitting 349 cases. The study included only procedures performed under sedation, regional anesthesia, or general anesthesia. An earlier study covered tumescent liposuction, which uses only local anesthesia.

Patients by and large were happy with liposuction—94% responding to a survey 6 months later were positive about their decision, and 89% were satisfied overall.

Complication rate 3%

The median amount of fat and fluid removed was 2.5 L, less than the 4.5 L to 5 L maximum recommended by professional societies. ASPS recommends any case that will remove more than 5 L be performed in the inpatient setting. The American Academy of Dermatology (AAD) recommends no more than 4.5 L be removed, regardless of the setting.

The average dosage of lidocaine given, 26 mg/kg, was well below the AAD-recommended limit of 55 mg/kg limit and the more conservative ASPS limit of 35 mg/kg. The range given was 0 to 66 mg/kg.

Complications were reported for 11 of the 349 cases (3%), comparable to the rate reported in the literature.

The most common complications were hematoma or seroma (6), followed by postoperative nausea and vomiting (3), and arrhythmias (2). No patients were hospitalized.

There were no deaths nor other serious events that have been previously reported, such as equipment failure, hypoxia, necrotizing fasciitis, nerve damage, pulmonary embolism, or respiratory arrest.

Patient safety concerns

One reason for conducting the study was patient safety concerns. Liposuction generated headlines in the late 1990s after a series of patient deaths. Many of these were associated with tumescent liposuction, in which megadoses of highly diluted lidocaine with epinephrine are injected. In some cases, multiple procedures, such as an abdominoplasty and facelift, were done in one session.

Since 1998, plastic surgeons have taken a more conservative approach and are less likely to infuse large amounts of wetting solution, remove mega-amounts of aspirate, and perform multiple procedures in the same session.

In addition, several states, including New York, New Jersey, and Florida have set guidelines, and accreditation of office surgery facilities has expanded. The American Society of Plastic Surgeons has issued guidelines (see p 29).

Nevertheless, though serious complications in this study were absent, it’s
apparent some providers are still exceeding the guidelines.

Of the 19 facilities participating, 4 were freestanding ambulatory surgery centers, 14 were office-based facilities, and 1 was a hospital outpatient unit.

Liposuction is the most common cosmetic surgery, with more than 380,000 performed in 2003—up 117% from 1997, according to the American Society for Aesthetic Plastic Surgery (www.surgery.org).

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**Liposuction study**

**Most common locations**
- Lower abdomen
- Upper abdomen
- Flanks
- Hips

**Fat and fluid extraction**
Range: 10 mL to 13,700 mL  
Median: 2,075 mL

**Fat extraction**
Range: 25 mL to 11,600 mL  
Median: 1,575 mL

**Guidelines**
- American Society of Plastic Surgeons
  - Inpatient surgery if more than 5,000 mL will be aspirated.
- American Academy of Dermatology
  - No more than 4,500 mL of fat extracted during a single operation.

New practice advisory on liposuction

Though some members of the public may see liposuction simply as a cosmetic procedure, “it is real surgery with real risks,” notes the American Society of Plastic Surgeons, which, along with other societies, has published a practice advisory on liposuction.

“Over the years, advances in liposuction have allowed for ever-increasing amounts of fat to be removed,” noted Robert Iverson, MD, chair of the society’s Committee on Patient Safety.

The advisory covers techniques, anesthesia, patient selection, liposuction volume, multiple procedures, postoperative care, facility selection, surgeon training and qualifications, and facility accreditation.

Highlights

A few of the recommendations:

• Plastic surgeons should use the American Society of Anesthesiologists Guidelines for Sedation and Analgesia (www.asahq.org/publications and services/standards).

• The liposuction patient must be assessed using the same standards used for anyone undergoing surgery, including a complete preoperative history and physical.

• Large-volume liposuction (> 5,000 mL of total aspirate) should be performed in a hospital or a facility that is accredited or licensed. Postoperative vital signs and urinary output should be monitored overnight in an appropriate facility by qualified and competent staff.

• Large-volume liposuction combined with other procedures should be avoided.

• Physicians performing liposuction must be trained as surgeons. Surgeons performing procedures outside their specialty must obtain additional education and experience.

• Plastic surgery, including liposuction, should be performed in a surgical facility that is accredited, Medicare certified, or licensed by the state.

A task force was formed in 2000 to develop the advisory after several highly publicized patient deaths involving plastic surgery.

Reference