19.1 Patient Consultation

Liposuction of the upper extremities requires a careful examination and evaluation of the patient. The patient should be made aware of the general risks and complications of liposuction as well as the specific problems of performing liposuction on the arms.

The specific problems of liposuction in the posterior regions of the arms include:

1. Inadequate removal of fat
2. Removal of too much fat
3. Sensory loss (Fig. 19.1)
4. Motor nerve injury (Fig. 19.2)
   (a) Ulnar nerve

Fig. 19.1. Sensory distribution of the nerves of the right upper extremity. a Anterior view. b Posterior view
5. Vascular injury (Fig. 19.3)
   (a) Brachial artery
   (b) Axillary artery (P. Fournier, personal communication, 5 October 2002): Fournier described a patient who sustained an injury to the axillary artery during liposuction of the arms. The artery was repaired but the repair failed and, ultimately, amputation was required.

6. Indentations: There is a normal indentation along the edge of the triceps muscle in thin muscular arms (Fig. 19.4).

7. Infection
8. Asymmetry
9. Loose skin: May require surgical brachioplasty to resolve.

---

**19.2 Technique**

The patient is administered anesthesia, usually general but deep sedation or conscious sedation may be utilized through a needle placed in the hand. Cephalolin, 1 g, is administered intravenously. The skin is prepped with betadine from the wrists to the shoulders, including the axillae, and steriley draped. The hands are wrapped with sterile towels (Fig. 19.5). The arms are placed on armboards at 85° abduction, never more than that (to prevent accidental stretching of the brachial plexus and traction nerve injury). The arms should not be strapped to the table since mobility may be necessary.

Tumescent solution is injected, through a small incision in the posterior portions of both upper arms just proximal to the elbow (olecranon process), with a solution containing:

1. Lactated Ringer’s solution: 1,000 ml
2. Lidocaine: 250 mg
3. Epinephrine: 1 mg

Be very careful that the incision is not made medially since the ulnar nerve is medial to the olecranon. The posterior arms are then massaged with a mechanical percussion massager (model PA-1, HoMedics, Commerce Township, MI, USA) for 5 min each side. This will emulsify the fat making extraction easier.

After waiting another 5 min, liposuction is begun on the first side infused with tumescent solution. A 2.5-mm cannula, through the incision in the distal portion of the upper arm, is used to remove the fatty tissue. Tunnels are made in a fanlike distribution and the cannula is pushed with long strokes several times in each tunnel. Make absolutely sure that the cannula does not enter the axilla except in a very superficial fashion and with complete control of the cannula tip with the non-dominant hand. Indiscriminate use of the cannula in liposuctioning in the axilla will frequently result in serious injury to nerves and/or vessels. The superficial fat is liposuctioned to allow better contraction of the skin but leaving a fat layer of 1 cm under the skin.

The tissues are checked with pinching to compare each side and any areas of excess fat remaining can then be identified and liposuctioned. The amount of aspirate from each arm is measured separately so that near equal amounts are removed.