# Thighplasty and Brachiplasty

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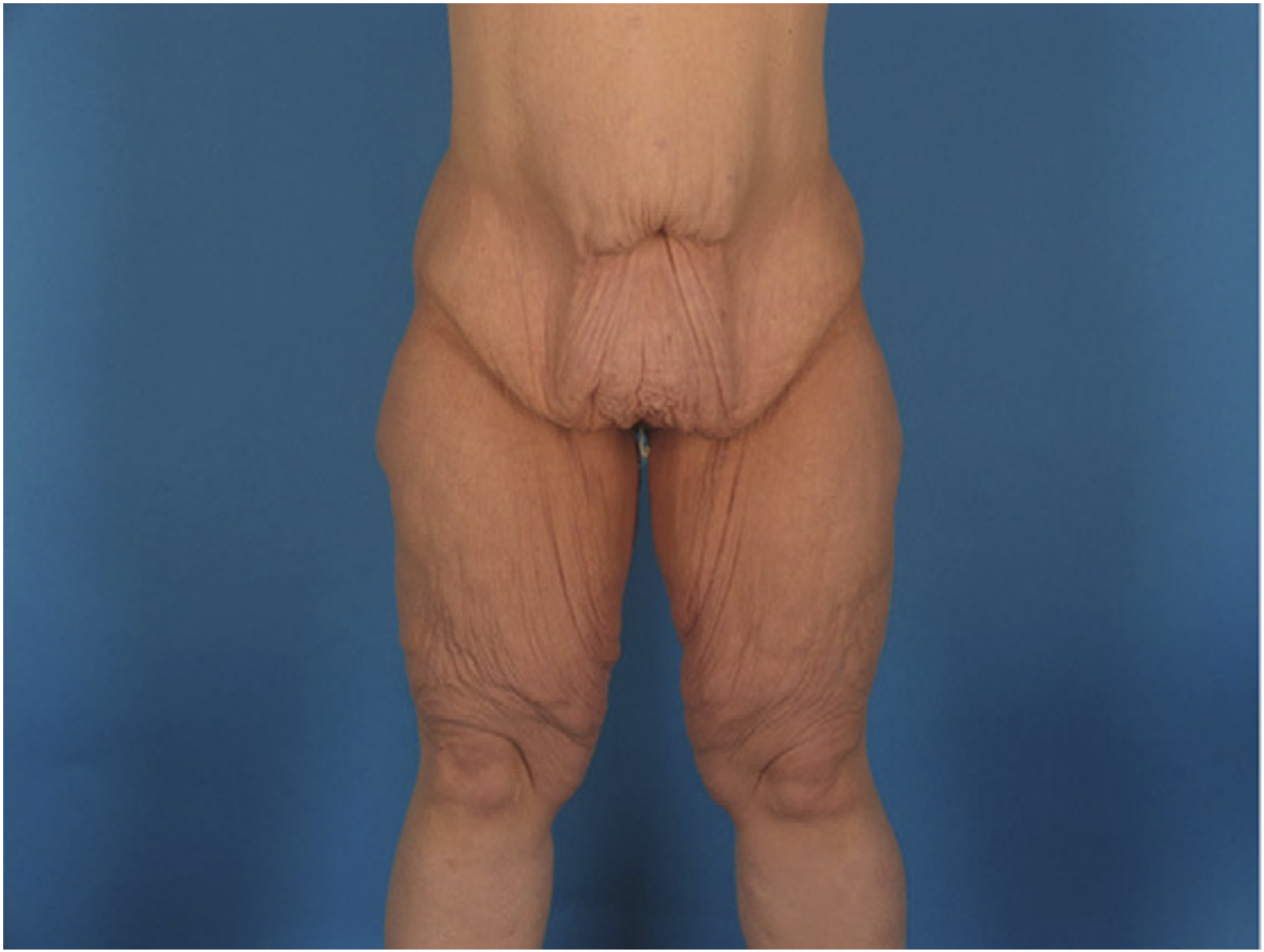
# Introduction

- Massive Weight loss patient has changed the landscape of the referrals that we see for Body-contouring procedures
- The techniques that were commonly used for these procedures have proven inadequate in many cases.

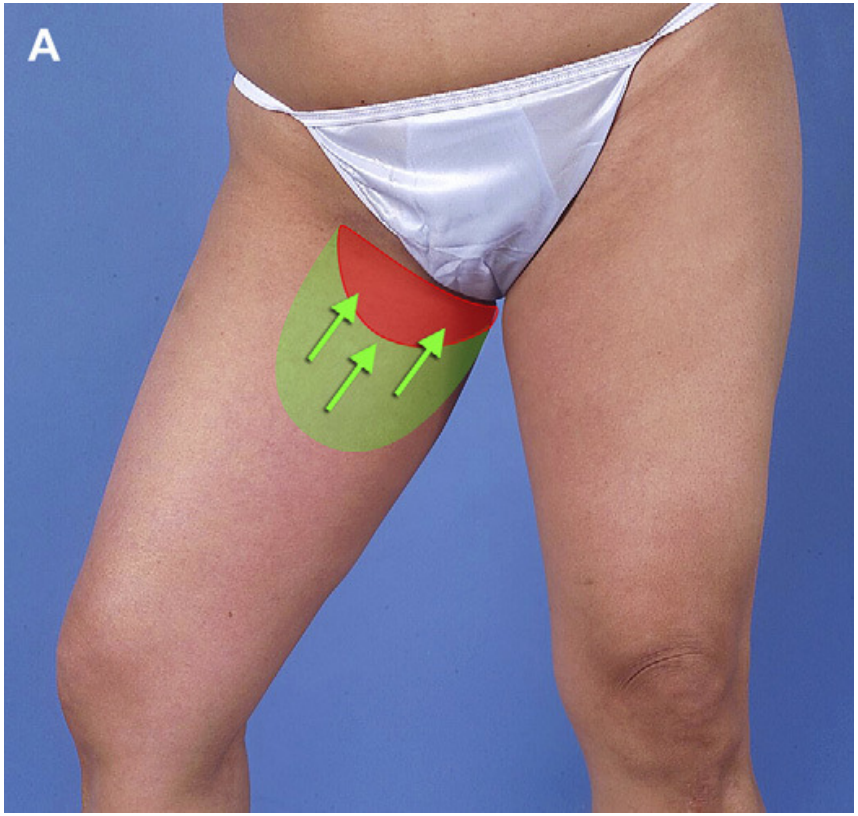
- Two basic principles are very useful to understand and use in plastic surgery.
- First, it is important for a plastic surgeon to understand normal anatomy of any structure that they plan to reconstruct. The overall anatomy of the thigh is similar to a cone with a hard inner core, the musculoskeletal system, and an outer cover made up of the skin-fat envelope.
- The skin-fat envelope is more adherently attached to the musculoskeletal inner core on the outer half of the cone. The top of the cone is located at the perineal crease and the bottom at the knee. Unlike a cone, however, the widest aspect of the cone is located 5-8cm below the top of the cone, and the narrowest is usually located 5-8cm above the knee.

- The second basic principle that is imperative for plastic surgeons is to define the deformity that is encountered.
- The entire thigh skin-fat envelope descends inferiorly with the process of weight gain and loss.
- It seems that most of the excess that occurs after massive weight loss is vertical in nature.
- Careful examination, however, reveals that the skin-fat envelope is less tightly adherent medially than laterally.
- Although there is a certain degree of vertical excess in these thighs, most of the excess is horizontal in nature, and because the medial adherence is not strong, the tissues in this area descend giving the impression that it is vertical rather than horizontal excess that presents

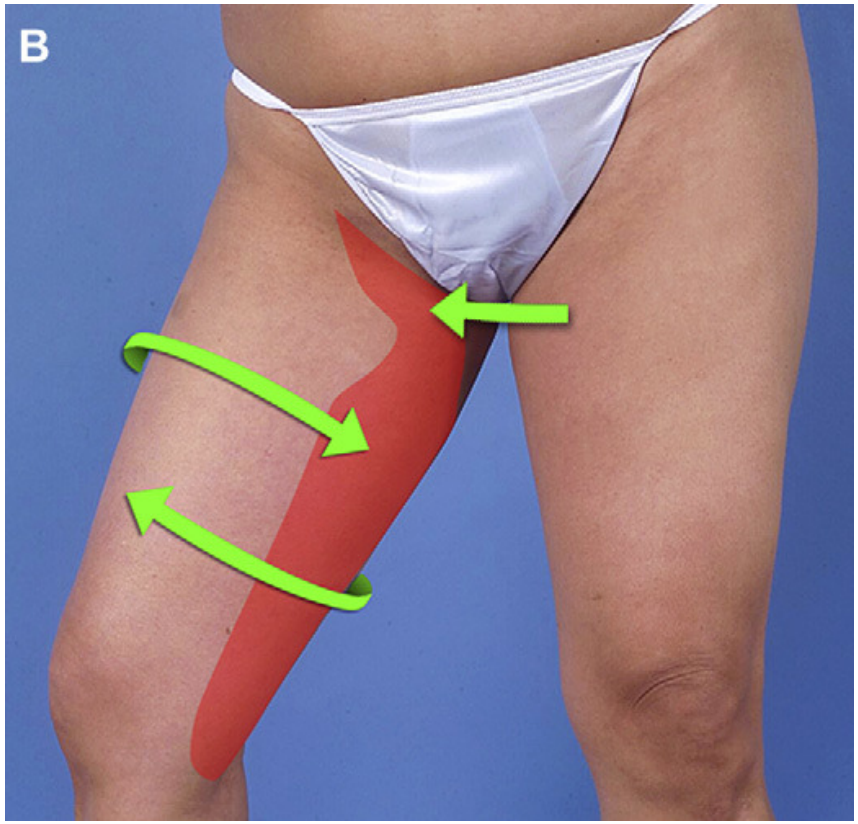


# Thighplasty

## Lockwood Thighplasty




## Vertical Thighplasty

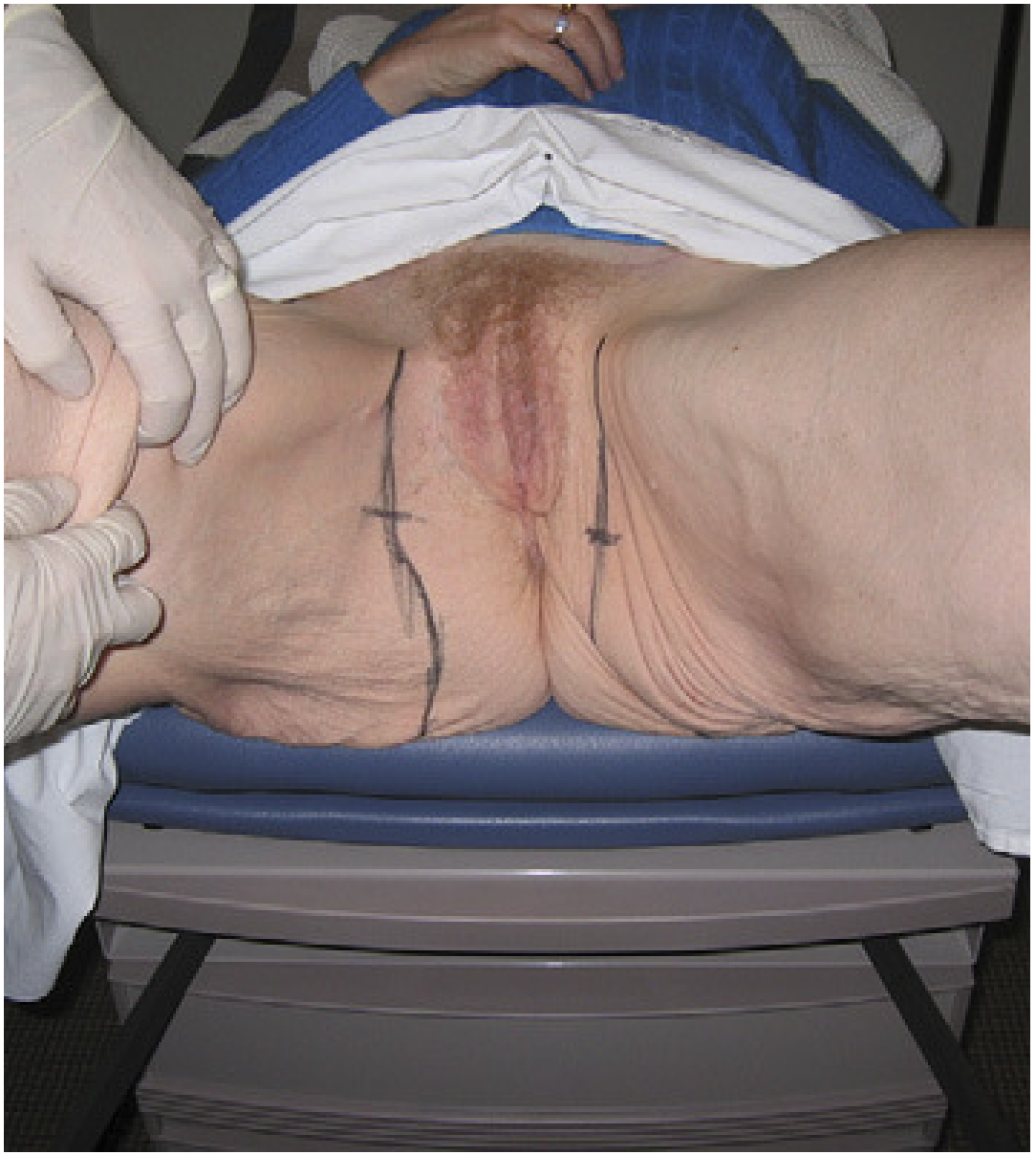



Current Concepts in Medial Thighplasty David W. Mathes, MD, Jeffrey M. Kenkel, MD

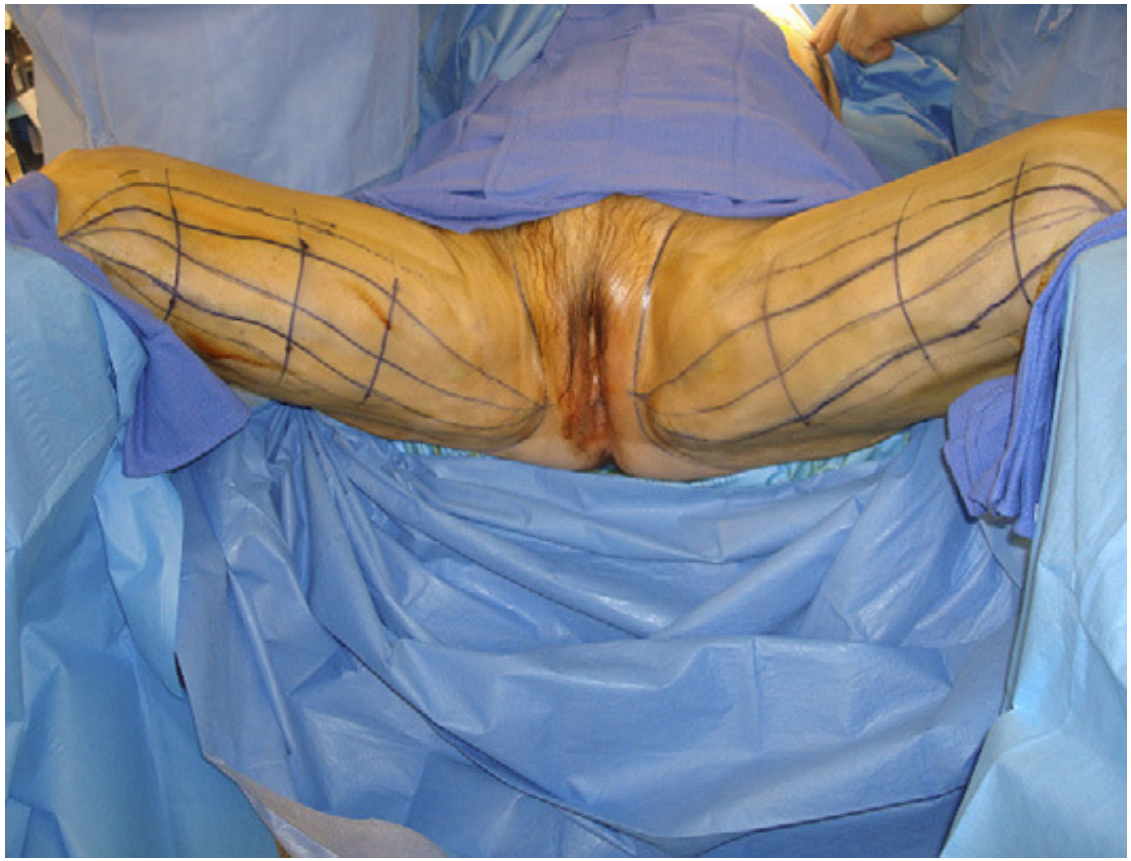
# Vertical Thighplasty

- a vertical wedge of tissue that is located on the medial aspect of the thigh.
- The vertical wedge is situated posteriorly enough so that if a horizontal component is needed to eliminate vertical excess, it does not cause distortion of the labia

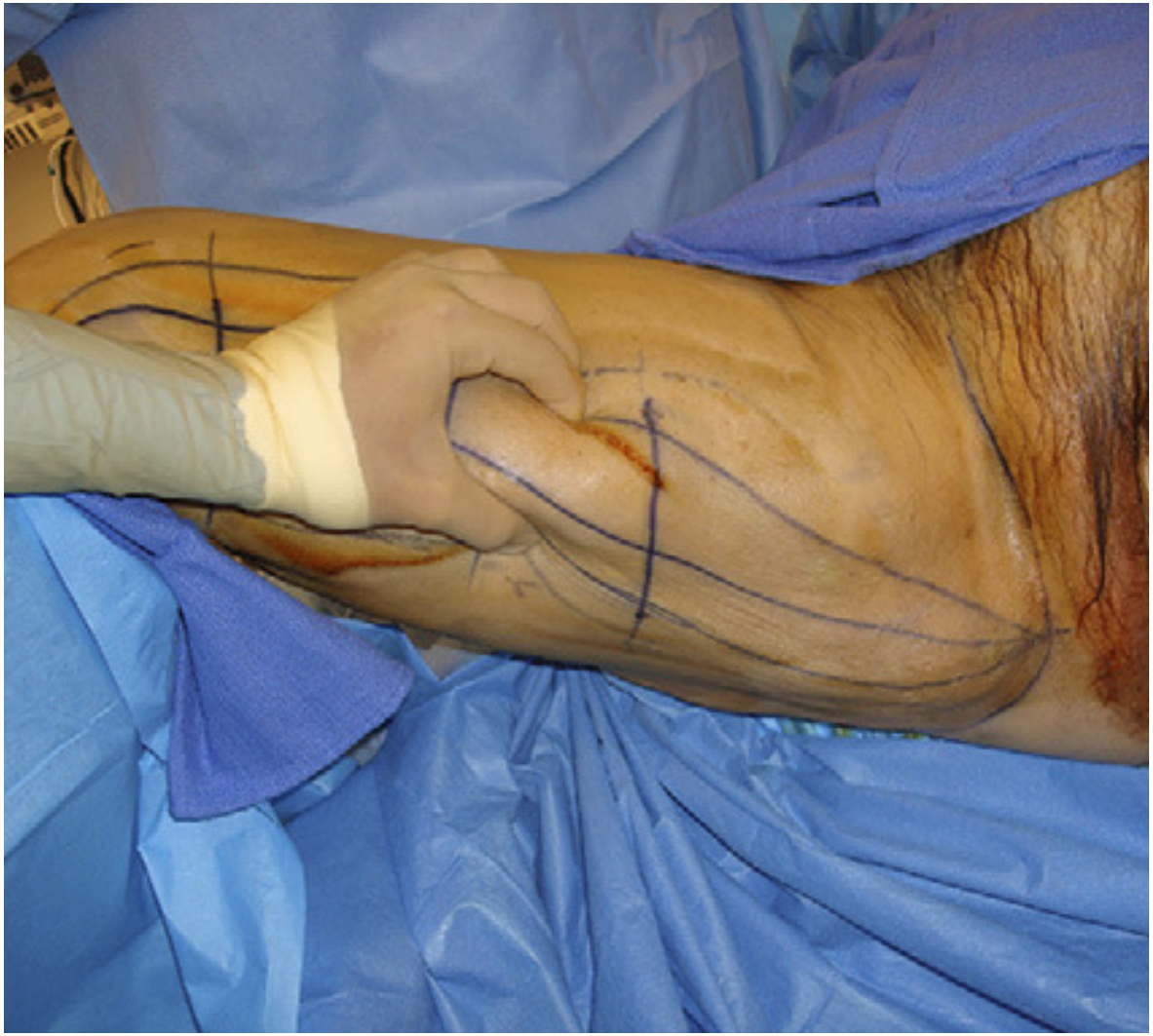
- The patient is placed first in the lithotomy position and the perineal crease as it extends into the infrabuttocks crease.
- Next, a point along that line, which ends up being the top of the ellipse, is marked.
- To determine this point, tissue is pinched along different points of the perineal crease, starting anteriorly and moving posteriorly.
- At some point the pinch has minimal effect on the position of the labia and that point is chosen and marked



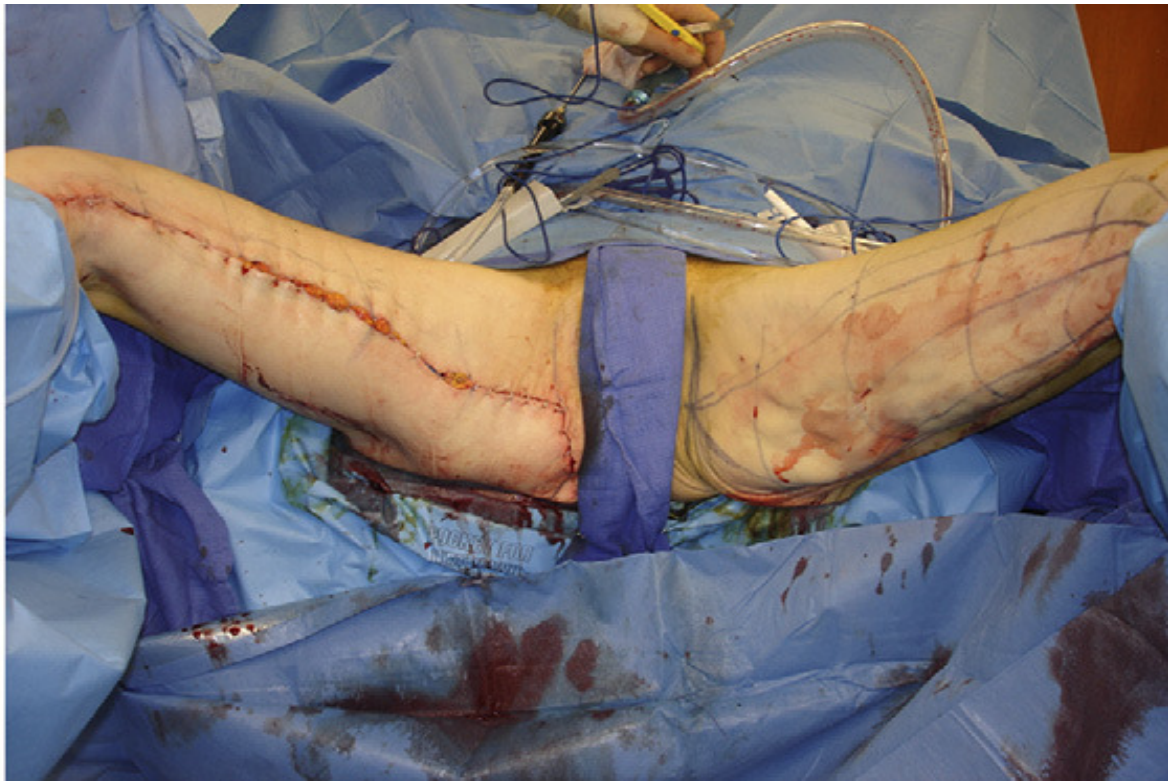
- It is important to remember that the widest aspect of the normal thigh cone occurs 2 to 3 in below the perineal crease; the ellipse needs to be adjusted accordingly.
- Not having to make that area significantly narrow allows the ellipse to be fairly narrow near the top and helps reduce the need for a horizontal resection.
- In some patients, this incision has to extend all the way to the lowest point of knee excess, occasionally even dropping below the medial condyle.
- Horizontal hash marks are then made as guides about every 8 to 10 cm down the length of the ellipse as rough guides for reapproximation at the time of closure



- Hunstad advocates Liposuction of the deep subcutaneous tissue so that we can reduce the risk of Lymphoedema
- Once liposuction is complete incise the skin down to the superficial fascia and remove the excess skin being careful not to damage the underlying lymphatics



If a superior dog ear or excess occurs it can be primarily corrected with a posterior extension



# Postoperative care

- tight liposuction-type garment
- The patient is instructed on leg elevation and avoidance of lower-extremity dependency, especially standing and sitting with legs dependent, for months after surgery
- It may take some patients up to 6 months not to swell when their legs are dependent.

# Results

- The thigh-reduction technique presented here is designed to avoid labial spreading or scar migration issues encountered with perineal scars, and reduce the risk of lymphedema.
- It may not produce as much reduction and tightness in the upper third of the thigh, compared with other techniques that use a horizontal component

# Complications

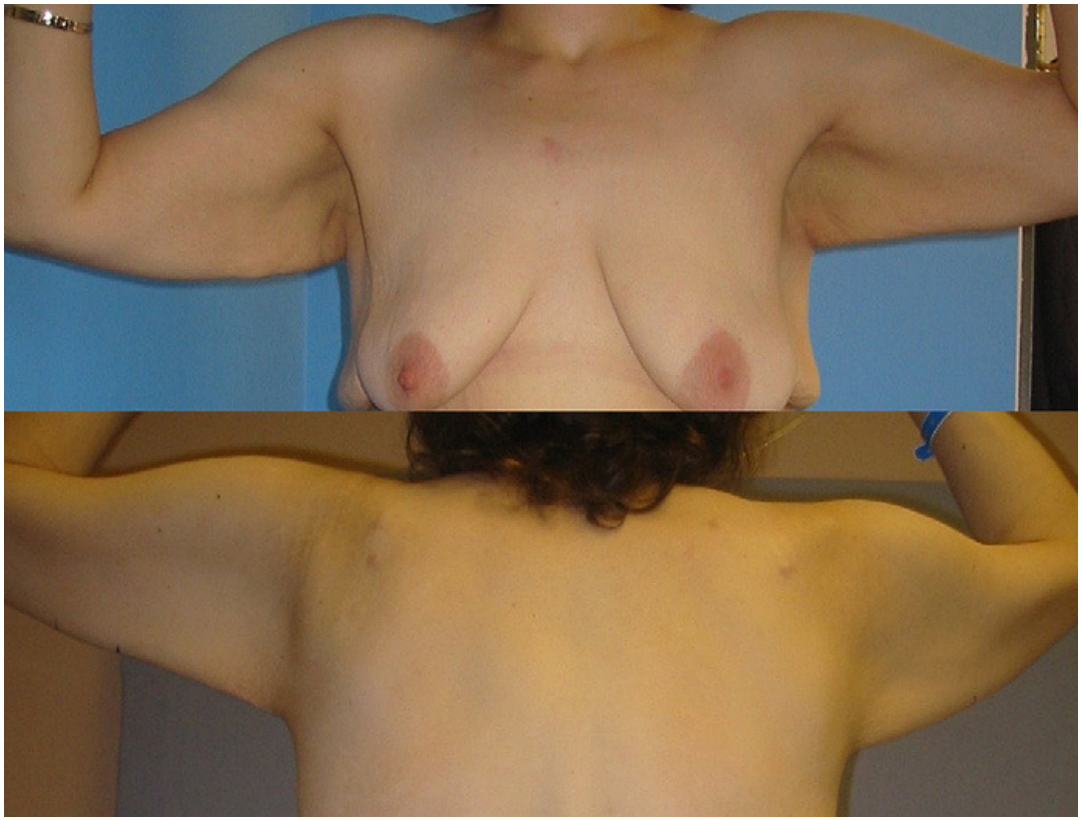
- common universal potential complications of bleeding, infection, and bad scarring
- Seromas can occur and they tend to be at the inferior end of the incision.
- Labial spreading is a dreaded complication
- All patients develop temporary distal extremity edema of varying degrees
- The technique itself helps preserve as many lymphatic channels as possible and avoids the major lymphatic drainage station of the lower extremity located in the femoral region

# Brachioplasty

- Brachioplasty is a resection of tissue around a cylinder with a noncompressible musculoskeletal inner core
- Special caution must be heeded of the visibility and unpredictability of the scars.
- Some advocate chest wall resection but progression below the elbow should be avoided or limited to 5-8cm due to the scarring

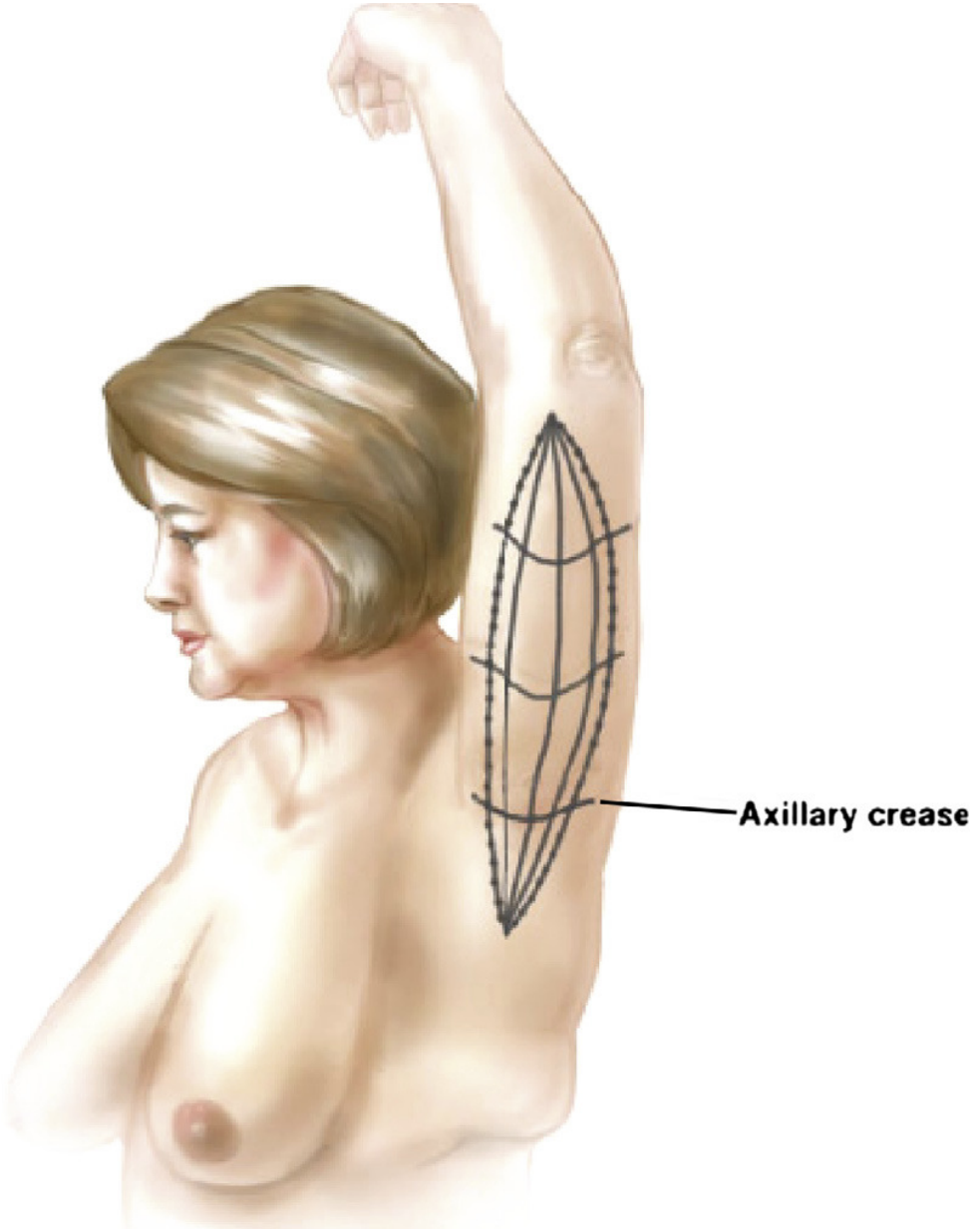
## Upper Arm deformity as per Hurwitz

- The most outstanding component of the deformity is the sagging of the upper arm along the posterior margin from the axilla to the elbow. The descent is greatest about the midpoint
- The second abnormality is inferior dislocation of the posterior axillary fold (PAF)
- The third component is the enlarged and cavernous axilla, which we call hyperaxilla.
- The fourth deformity is the flattened and elongated anterior axillary fold (AAF)
- The fifth component is the lateral chest skin laxity leading into midtorso transverse rolls



## Markings

- The upper arm is marked for brachioplasty using the two-ellipse technique.
- The Outer Ellipse is marked according the the pinch test
- The inner ellipse takes account of the thickness of the skin fold. So if there is 2 cms between the finger and thumb then you mark it 1cm inside the outer ellipse
- Crosshatch marks are made to help alignment at closure



# Procedure

- Some advocate Liposuction of the deep subcutaneous layer to allow preservation of the underlying lymphatics and identification and preservation of the medial cutaneous nerve of the forearm
- Segmental resection – closure technique
  - Distal to proximal
  - As each cross hatch is reached tacking staples are used to close the defect and prevent intraoperative swelling

# Procedure

- Suction drain is used
- Closure is variable among consultants
  - 2 layer monocryl
  - Prineo
  - Quill suture

# Postoperative Care

- Elevation of the arms in a slightly flexed position
- Postoperative compression garments
- Drain for 6-7 days
- The scar will take the usual year to mature and often is thick and raised. It often subsides with time, but overall usually it is the least attractive scar that a patient who has had massive weight loss will develop from the various operations he or she undergoes

# Results

- The arm will be considerably smaller with minimal sagging of the skin.
- The greatest width will be in the center, with gradual narrow tapering toward the elbow and axilla

# Complications

- small wound separations,
- Wound dehiscence,
- Seroma,
- lymphocele/lymphedema,
- inability to close the arm,
- bad scarring,
- infection,
- bleeding,
- nerve compression/compartment syndrome,
- neuromas,
- and sensory loss

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