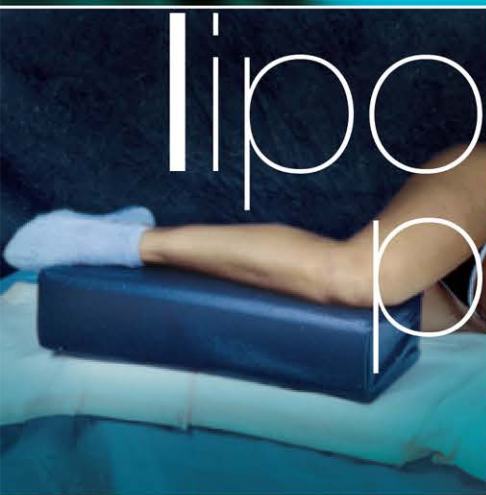


HK SURGICAL

liposuction positioning pillows



liposuction positioning pillows



Complete Tumescant Solution

Prevent Liposuction Defects

The Thigh Midline™ and the Thigh Aside™ are surgical pillows that optimize the position of a patient's thighs during liposuction and thus contribute to smoother postoperative results. The Midline and the Aside, designed by Jeffrey Klein, MD, inventor of the tumescent technique, are manufactured and marketed by HK Surgical.

Awkward positioning of the patient during liposuction increases the risk of cosmetically unsightly liposuction defects. Even the most proficient liposuction surgeons must continuously strive to avoid causing liposuction-related irregularities of the skin. The risk of such irregularities can be minimized by correct intraoperative surgical positioning.

There are two important types of position-related distortions of subcutaneous fat on the thigh. The most common problem is a focal bulge of fat created by the protrusion of the trochanteric tubercle; this type of distortion is termed the **trochanteric pseudobulge**. The second type of distortion is a biomechanical compression or stretching of subcutaneous fat due to deviation from the anatomic position; this type of distortion is called a **topological lipowarp**. (See Figure 1)

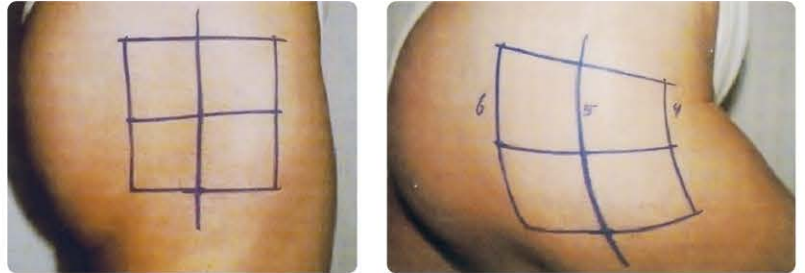
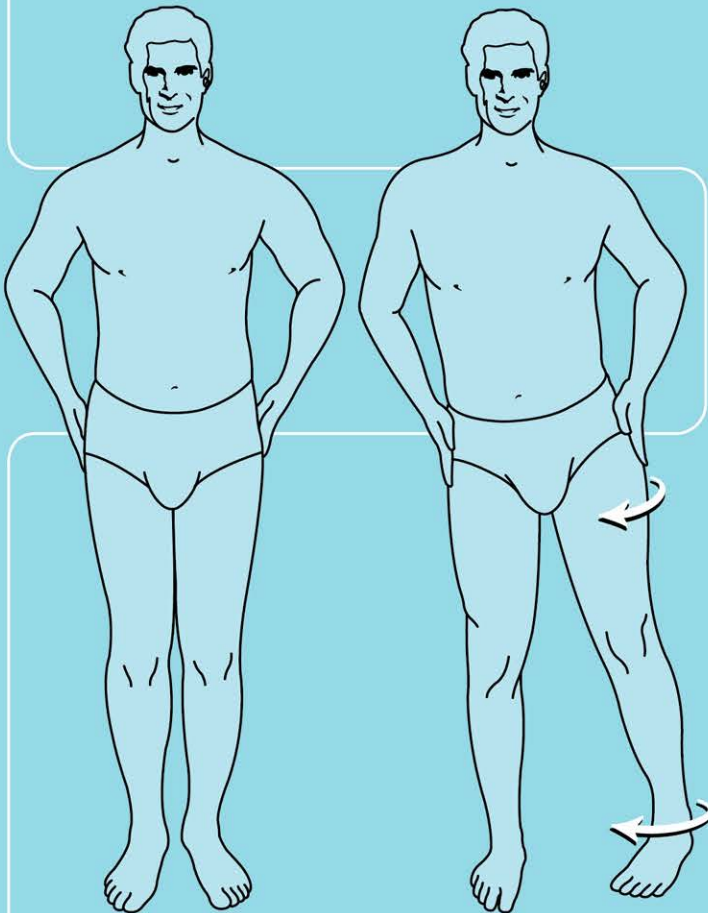


Figure 1. Lateral Thigh Lipowarp: Flexing the hip produces a topological distortion of the targeted compartment of fat represented by four adjacent 5cm x 5cm squares. The squares are stretched posteriorly (becoming 6cm x 5cm), and compressed anteriorly (becoming 5cm x 4cm). An intra-operative malposition producing this type of distortion is termed a lipowarp. It predisposes to excessive liposuction posteriorly and insufficient liposuction anteriorly.

Understanding the Trochanteric Pseudobulge

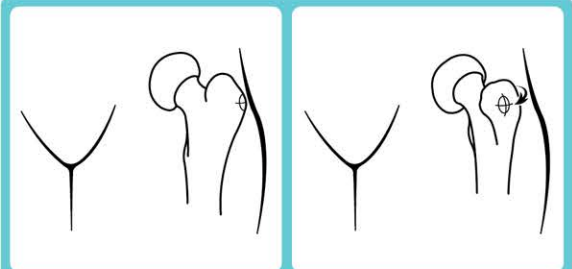
One can appreciate how the size of a pseudobulge varies with thigh position by doing the following self-examination:

- 1) While standing upright, palpate the trochanteric protuberances. (See drawing below).
- 2) Lean to one side, slightly raise the opposite foot off the ground, and adduct the raised thigh toward midline; notice that the pseudobulge becomes more prominent.
- 3) Abduct the raised thigh away from midline, and medially rotate the knee and ankle into an exaggerated "pigeon-toed" position; notice that the pseudobulge disappears as the trochanter moves anteriorly.

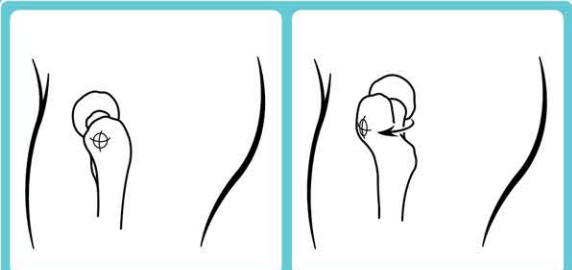


Stand upright and palpate the greater trochanter.

Elevate and medially rotate foot. Note displacement of trochanter.



Medial Displacement of Trochanter by Abduction and Rotation



Anterior Displacement of Trochanter by Abduction and Rotation

Trochanteric Pseudobulge

Of all areas treated by liposuction, the lateral thigh is probably the most vulnerable to poor intraoperative positioning. Inward adduction of the thigh causes the greater trochanter to protrude outward, elevating and distorting the overlying fat, and creating a "pseudobulge." The greater the degree of thigh adduction, the greater the size of the pseudobulge. The pseudobulge is maximal in the lateral decubitus position, when the upper most thigh is flexed forward and adducted across the midline with the knee lying across the opposite thigh.



The visible and palpable presence of a pseudobulge encourages excessive liposuction resulting in a discrete depression over the trochanter, a trochanteric lipotrop. (See Figure 2).

Figure 2. Trochanteric Lipotrop: Excessive liposuction of the lateral thighs as a result of excessive liposuction of the trochanteric pseudobulge.

This iatrogenic disfigurement is avoidable with an awareness of the dynamic nature of outer thigh surface anatomy, together with rational intraoperative positioning and meticulous surgical technique.



Figure 3. Lateral Thigh Lipotrop: Example of excessive liposuction with a broad depression of the lateral-posterior thigh as the result of a lipowarp.

Tumescent liposuction positioning pillows improve cosmetic results and help prevent skin irregularities. The Thigh Midine™ and Thigh Aside™ help position and maintain the targeted thigh area in the ideal anatomic position during liposuction surgery.

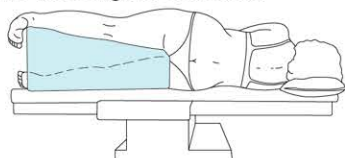
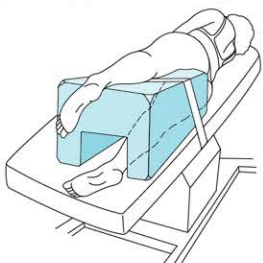
Order #	Description	Quantity	Order #	Description
CV-A25	Aside Position Plastic Covers	25/pkg	PP-A	Aside Block
CV-M25	Midine Position Plastic Covers	25/pkg	PP-M	Midine Wedge



The Thigh Midine™

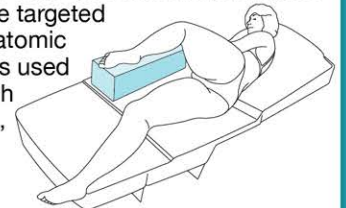
Thigh Midine™ is a wedge-shaped surgical positioning pillow that helps approximate the anatomic position with the patient in the lateral decubitus position. In the lateral decubitus position the Midine™ minimizes the pseudobulge by abducting the upper-most thigh. In fact, the trochanteric pseudobulge can be completely eliminated by using the Midine™ and also rotating the femur anteriorly and medially, and pointing the toes of that foot in a "pigeon-toed" fashion. This maneuver causes the trochanteric tubercle to be displaced anteriorly, and medially. By using the Thigh Midine™ in this fashion, the surgeon can reduce the risk of creating a trochanteric

depression due to excessive liposuction. When using the Thigh Midine™, the patient should be in the lateral decubitus position, with both legs straight. Lifting the uppermost thigh, the Midine™ is placed between the thighs as illustrated. Two-inch wide paper tape may be used to secure the midline to the surgical table and prevent it from sliding. A cloth towel placed over the top of the Midine provides additional comfort for the patient's thigh and leg.



The Thigh Aside™

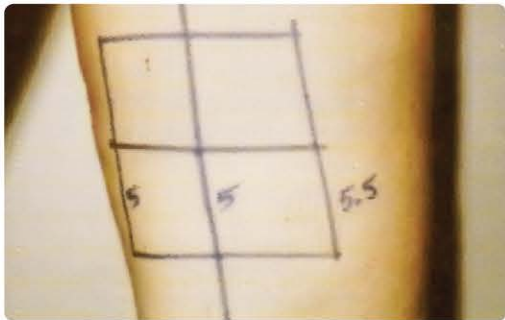
The Thigh Aside™ is a rectangular foam pillow used for liposuction of the medial aspects of the thigh and knee. The Aside supports the non-targeted leg in the "high-step" position and facilitates access to the entire length of the targeted medial thigh and knee in the anatomic position. Other surgical positions used for medial thigh liposuction, such as the supine "frog-leg" position, distort medial thigh fat, and predispose to liposuction irregularities. The anatomic position minimizes the risk of inadvertently causing liposuction irregularities of the medial thigh. By supporting the patient, the Aside™ provides improved patient comfort, and minimizes the risk of liposuction irregularities of the medial thigh.



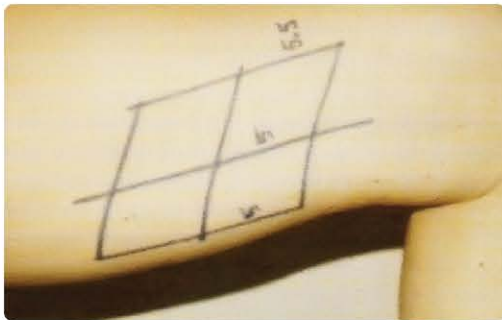
Thigh Lipowarp

A lipowarp of the lateral thigh is more subtle than the trochanteric pseudobulge. It is a topological distortion of the thigh's subcutaneous fat compartments caused by a deviation from the anatomic position. Flexion, extension, or rotation of the hip changes the shape and proportions of the subcutaneous fat of the lateral thigh. Similarly, lying supine or prone compresses the subcutaneous fat of the lateral thigh in the anterior posterior direction, while causing it to protrude laterally.

A clinically important form of a thigh lipowarp occurs with simple anterior flexion of the hip. This maneuver distorts the lateral thigh, stretching the posterior-lateral aspect, and compressing its anterior-lateral aspect. Liposuction of the thigh with the hip flexed predisposes it to excessive liposuction posteriorly where the stretched fat covers a greater area, and insufficient liposuction anteriorly where the compressed fat covers a smaller area. (See Figure 3, Trochanteric Pseudobulge). Although a skillful surgeon can compensate for this distortion, any deviation from the anatomic position unnecessarily risks an unsightly cosmetic defect.



Anatomic Position



"Frog-leg" Position

Medial Thigh Lipowarp: A deviation from the anatomic position of the medial thigh to a "frog-leg" position creates a topological distortion of the medial thigh fat. This can predispose to uneven liposuction results.

Lipotrop and Liponot

A lipotrop is an iatrogenic depression of the skin caused by localized excessive liposuction; conversely, a liponot is a focal area of insufficient liposuction. Appropriate intraoperative positioning of the patient provides confidence in doing enough liposuction to see a significant cosmetic improvement, and minimizes the risks of a lipotrop or a liponot. Use of a Midine can help achieve this positioning.

Optimal Positioning

The optimal position for liposuction of the thighs is a version of the lateral decubitus position, modified so that the thighs approximate the anatomic position. The anatomic position minimizes the distortion of subcutaneous fat that occurs in other positions.

The surgeon usually assesses a patient's pre-operative shape with the patient standing in the anatomic position. The nuances and subtleties of the pre-operative shape will be more easily discerned during surgery when the intraoperative position approximates the anatomic position.

In addition, patients usually judge the results of their surgery while standing in front of a mirror in a manner that approximates the anatomic position. By using the anatomic position during surgery, smooth intraoperative results will translate to smooth post-operative results.

The Thigh Midine™ and Thigh Aside™

The Thigh Midine™ and the Thigh Aside™ are surgical pillows that optimize the biomechanical positioning of the patient's thighs during surgery. They facilitate superior aesthetic results for liposuction by allowing the surgeon to confidently remove enough fat to achieve significant improvement, while minimizing the risk of excessive fat extraction.

Single-use, sterile, plastic **Midine covers™** and **Aside covers™** are also available. The Midine and Aside are constructed with FDA approved medical grade foam covered with Staph-Check™, an anti-bacterial vinyl plastic-coated fabric.



Medial Thigh Lipotrop: Excessive liposuction of the medial thighs as a result of intraoperative "frog-leg" malpositioning.