

CALF AUGMENTATION

Without the knife

For years, fat transfers (or grafts) have been used to fill in facial flaws such as hollow cheeks, sunken eyes or indented scars. Now they are also used to augment many other areas of the body.

DR VERNON CHING discusses non-surgical calf augmentation with the use of one's own body fat.

Thin calves are the bane of many a gym attending fanatic, and calf augmentation is being requested more frequently by patients who are becoming increasingly body conscious due to a greater emphasis on health and exercise. Essentially, calf augmentation is a cosmetic operation performed to enhance the calf muscle in the lower leg.

In patients with a wasted lower leg (as a result of trauma or illness), an augmentation of the calf muscle can help lessen disfigurement. Although the actual leg function has not been improved, many consider this a reconstructive surgery procedure as it helps to restore a more normal appearance.

Some people have naturally underdeveloped calves, and despite exercise or diet, the lower leg remains thin. These patients ask for

calf augmentation for purely cosmetic reasons. Women may want only the inner part of the leg enhanced to create the long, gentle curve on the inner aspect of the leg, while bodybuilders often want both the inner and outer lower leg made larger. This is mainly to simulate a well-defined and bulky gastrocnemius muscle.

Traditional calf augmentation is usually performed by placing an implant made out of silicone rubber over the calf muscle, on the inner part of the leg.

Body builders may need a larger enhancement, and in these patients an implant may be placed on both the inner and lateral outer parts of the calf.

Fat Grafting: What is it?

Fat grafting is a revolutionary aesthetic body contouring treatment for volume related soft-tissue concerns in plastic surgery. It has been used with remarkable success in facial rejuvenation, as well as for breast shaping following cancer reconstruction surgery. Additional areas that have been grafted include the buttocks, hips, hands as well as any other area that requires an improvement of contour.

The Adipocyte-Derived Stem Cells (ADSC) present in fat grafts also assist in wound healing, as evidenced in recent scientific journal articles where tissue damaged by radiation therapy have been healed by fat grafting.

A recent Aesthetic Surgery Journal article showed that fat grafting for improvement of thin calves (either for purely cosmetic purposes or for a difference in appearance between legs due to deformity, infection or trauma) is a worthwhile alternative to traditional implant-based calf augmentation.

The procedure

Fat is harvested from various areas including the hip, inner thigh, abdomen, flanks, upper back as well as the waistline

deliver sufficient material to graft the lower leg. This fat is then processed in a centrifuge to remove the tumescent solution as well as excess oil.

The fat is then injected into the calf muscle initially, then the surrounding tissue to enhance and improve the lower leg contour and appearance. Enough fat was judged to have been injected when the calf was minimally firm but not tense.

Advantages of Fat Grafting

According to Dr James E. Vogel, a corresponding author and ASAPS member, in the right patient, fat grafting to the lower leg has distinct advantages over standard calf implants.

In most patients, there is an ample supply of material (fat) for grafting.

Liposuction is performed in all cases at the level of the knee and surrounding areas as needed to improve overall shape.

This is a less invasive procedure with incisions of only 3-4mm in length, as fat is removed, processed then injected with a thin cannula (as opposed to inserting a larger silicon implant).

In some patients (if more volume is desired), a repeat fat graft may be performed which is not possible with implants. The results are long lasting as fat is your own living tissue.

There is no foreign body reaction as no implants are inserted.

The area of fat grafting can be customized to the individual patient as opposed to using an off the shelf implant.

Again, as with all cosmetic cases, patients with severe medical problems, unrealistic expectations, and specifically relating to calf augmentation, patients with poor vascularity to the lower leg are excluded from this surgery. 



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Women may want only the inner part of the leg enhanced to create the long, gentle curve on the inner aspect of the leg, while bodybuilders often want both the inner and outer lower leg made larger.

using standard tumescent liposuction techniques. The advantage of this method is that it is a safe, relatively pain-free procedure with minimal blood loss and downtime.

The fat is removed in such a way as to improve the overall body contour in the donor area (i.e., a liposuction result) yet