



Advanced Surgical Bodybuilding Intra-Operative Ultrasound Guided Autologous Fat Transfer to the Biceps and Triceps

The philosophy at our Advanced Surgical Bodybuilding Institute of Beverly Hills is clear. The mark of innovation not only begins with an idea, but also with a proven record of results to substantiate what begins as a theory. The use of autologous fat derived from a liposuction procedure was hypothesized as being able to increase

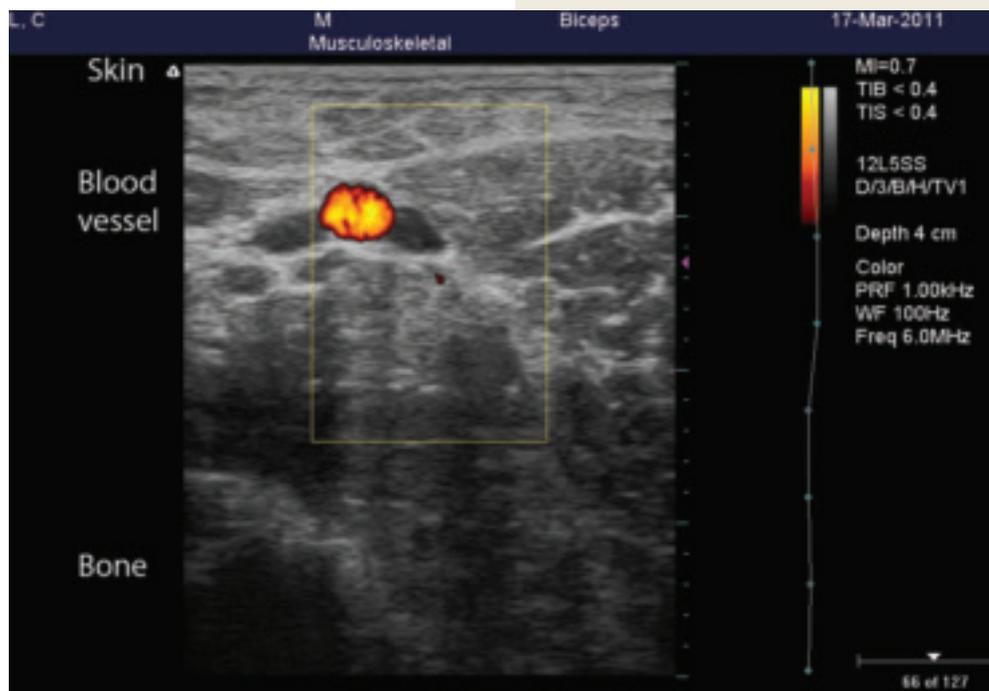
muscle mass if injected into a host muscle group. The theory of ultrasound guided subfascial muscle injection of autologous fat to effect muscle change is an exciting and new way to achieve lasting muscle growth and perhaps even muscle strength. For decades, the use of anabolic steroids and other growth enhancing derivatives have focused on the ability to cause

hypertrophy of muscle tissue. We are now not merely confined to the limited domain of hypertrophy. We now have the ability to enter the elusive realm of myocyte hyperplasia.

It all begins with the harvesting of adipose tissue during a liposuction or lipectomy procedure. All forms of preaspirative disruption, manual, laser, vaser and cold could potentially be included as a method of deriving lipoaspirate in any open or closed system. It has been established that adipose tissue contains stem

cells. The injection of processed combinations of adipose and adipose-derived stem cells from lipoaspirate or excisional lipectomy within muscle tissue beneath the myofascia or directly within muscle tissue under direct ultrasound guidance could theoretically enhance muscle growth in the following manner: autologous fat is living tissue and

remains alive if it becomes revascularized in a transplanted area, in this case either subfascial or intramuscular. The fat itself, and hence the stem cells, have a greater than 95 % viability as seen in the medical literature. The revascularization and retention of

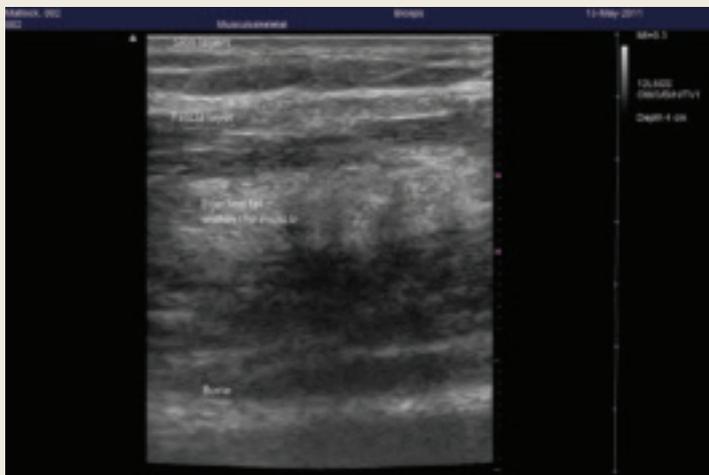


Identifying significant blood vessels within the muscle

processed adipose cells to provide an apparent hypertrophy of the muscle tissue occurs in the following manner: the non-embryonic stem cells normally found in processed adipose tissue form new myocytes (muscle cells) resulting in muscle hyperplasia, as well as by a mass effect of the subfascial filler resulting in enhanced myofascial pliability allowing for increased muscle hypertrophy if

individual's anatomy for superficial vasculature, is vital for success and avoidance of complications.

We want to take this protocol and optimize our results even further. We know the stem cells injected in the muscle groups potentially can be coaxed into becoming myocytes themselves, thus causing



Injected fat within the muscle



Preparing to inject fat within the muscle

subject is in a proper anabolic state. Muscle fascia is a connective tissue sheath firmly adhered to the underlying muscle and is thought to minimize reduction of muscular force by decreasing friction during muscle movement. Muscle fascia may divide muscle groups into separate bundles by intramuscular septa. Myofascia (muscle fascia) has limited pliability and may act as a limiting agent in muscle hypertrophy. By altering the limiting effects of muscle fascia, we can surpass the subject's genetically limiting ability to enhance muscle growth beyond their threshold level. We can even tailor-make an individual's physique. For example, some subject's biceps may be able to gain adequate hypertrophy, yet still remain long, and without the attractive peak seen in a full biceps flexion. By adding more fat in the lateral biceps head we can build a more noticeable peak for an individual desiring this. Likewise, most subjects can adequately build the lateral head of the triceps muscle, and we can overcome the smaller relative medial head tricep size by adding more adipose tissue there.

hyperplasia and not merely hypertrophy. But how can this be further enhanced? We are devising a protocol with our procedure to utilize platelet rich plasma (PRP). PRP is rich in growth factors, cytokines, cell activators and modulators. By adding PRP to our carefully processed adipose and adipose-derived stem cell injectables, we may be able to further promote not only fat retention with this procedure, but also stimulate stem cell differentiation for maximal results. The amount of PRP required will require careful investigation and trial, but this promising approach has the potential to set the stage for incredible gains in muscle mass. This will not be limited solely to this procedure. We hope to use this for our Brazilian Butt Augmentation, a procedure in which we are world renowned for achieving a natural and beautifully enhanced buttock.

In our landmark 10-subject pilot study, we evaluated AFT in the biceps and triceps (IRB approved). Pre- and post-operative circumference (cm) of the biceps and triceps relaxed and flexed were carefully measured and sonographic volume measurement of biceps and triceps were taken, before surgery and 6- and 12-week follow-up. We injected a mean total of 200 cc into biceps/triceps combined. This resulted in a ~1" increase in circumference at time of procedure ($p < 0.001$) with the increase sustained over time ($p < 0.02$). The subjects were thrilled with the results. We did not encounter any major or mild complications. We found that the use of the ultrasound with blunt needle guidance allowed for precise subfascial and intramuscular fat placement, as well as avoidance of vessels and nerves. Great care must also occur preoperatively; marking of muscle groups with flexion, as well as surveying the

With these developments, we may come to a point where gains in muscle mass rarely seen without the use of anabolic steroids and growth hormone may be naturally attained with the use of one's own body fat. And perhaps most importantly, without the negative side effects and subsequent loss of strength and mass once these drugs have ceased being used. This is the "Designer Steroid" in its purest form – with the ability to tailor-make an approach to enhance what was the individual's previously genetically programmed weak areas. The sky is truly the limit here. ■



Scan the QR code to view videos detailing this procedure.