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Body contouring

Dr Sharon Giese describes the body contouring procedures she performs and the devices available to achieve the best results, including VASERshape, LySonix, and Velashape

A CLEAR INTEREST AMONG the public in non-invasive body contouring procedures has become evident over the past few years. The appeal is no downtime and no risk from an invasive surgical procedure. The perceived benefit is a size reduction with one-to-four treatment sessions lasting up to 1 hour each. Having a non-invasive treatment does not burn bridges for proceeding to a more definitive invasive treatment in the future. As a plastic surgeon, I was skeptical about the

efficacy of the non-invasive body contouring devices but was surprisingly impressed with the VASERshape™ (Valeant Pharmaceuticals International, Inc., Laval, Quebec) which I have integrated into my practice. I have found the key is managing patient expectations with the non-invasive treatment and understanding that it must be compared to the gold standard of liposuction—the single, permanent solution for body contouring. The integrated use of both invasive and non-invasive modalities will be discussed as well as strategies to satisfy a larger group of patients.

Non-invasive

VASERshape was approved by the Food and Drug Administration (FDA) for cellulite reduction in 2010. However, I primarily use it off-label for body contouring and size reduction. It uses external ultrasound which penetrates the skin to destabilise the adipose cell membrane with acoustic thermal and mechanical energy. The external ultrasound heats the skin and underlying adipose tissue to 42-45°C. It is continuous and modulation can be adjusted from the skin to as deep as 4 cm. With the membrane destabilised the internal fat lipids and fluid can escape; these will be scavenged and later excreted by the body. The latter process is aided by a second handpiece which embraces the process of lymphatic drainage to aid excretion. The treatment time for one area is typically 45 minutes. Some immediate change is seen, partly owing to the lymphatic drainage. This is obviously very pleasing for the patients and encourages them to complete a four treatment series at weekly intervals. End results are realised 2-3 months after the final treatment. At that point, maximum collagen remodelling has occurred with resultant skin tightening. A typical patient will require a 4 hour time commitment (plus travel times) for minimal to moderate improvement of one area.

I favour the VASERshape over other popular single treatment non-invasive body contour

devices such as Coolsculpting® (ZELTIQ, Pleasanton, CA), which uses cold therapy to stimulate adipose cells apoptosis, or Liposonix® (Solta Medical Inc., Hayward, CA), which uses high intensity focused ultrasound (HIFU) to destabilise the adipose membrane. This is because the VASERshape mimics the sculpting of the body more similarly to what I do with liposuction. The other devices treat a band of fat clamped between or under them. The hand piece for VASERshape can follow the contours of the body and feather the edges of the treatment area. The treatment is pain-free and has the relaxing sensation of a hot stone massage. After having the device for 2 years I believe there is a degree of permanency to the results. Treatment protocols can vary and I also believe there is variation among technicians and protocols. I find patient satisfaction to be quite high and patients have returned to have additional areas treated. A few patients opted for liposuction to another area after VASERshape. I have also used this after a liposuction procedure to speed recovery and eventual results.

In summary I favour VASERshape because it mimics body contouring similarly to what I do with liposuction, some immediate results are seen at the time of treatment, and it is pain free (Figure 1). Potential drawbacks are that it requires multiple treatment sessions and may not achieve the results a patient expects, with regard to size reduction and skin tightening. I see all clients myself prior to any treatment to manage and set expectations.

Invasive

Liposuction, the gold standard for body contouring, has been performed for 40 years (Figures 2 and 3). I trained using internal ultrasound with the first unit to the US market LySonix (Misonix, Inc., Farmingdale, NY). This unit converts the electrical energy to ultrasonic energy, which in turn causes cavitation of the adipose cells. This results in implosion of the cells, with release of the fatty contents, permanently destroying them. The aspirate resembles emulsified fat. Additionally, the heat that emanates from the tip of the probe stimulates collagen in the deep dermis leading to significant skin tightening. The benefit of a good liposuction procedure is precise, permanent, aggressive removal of fat in a single setting. Many areas can be treated at once which can result in a one-to-three clothing size reduction within 6 weeks after surgery and 20 lbs or 9 kg of surgical fat reductions. Furthermore, a number of publications have shown health benefits from the selective debulking of excess adipose tissue^{1,2}. The

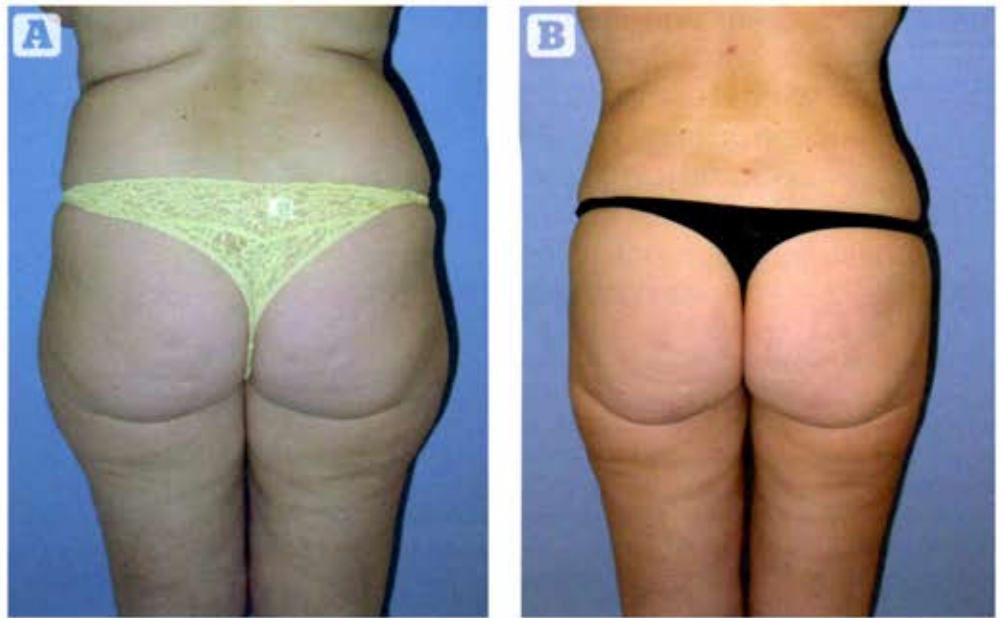


Figure 1 A) Before, and B) 3 months after six VASERshape treatments to the flank area. The pre-operative view also shows the left side immediately post treatment with immediate improvement

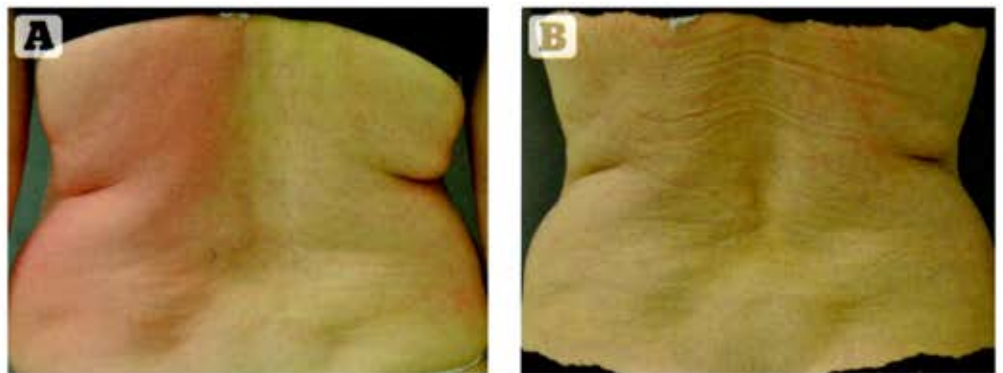


Figure 2 A) Before, and B) 4 months post liposuction procedure to the abdomen, flanks, upper back, lateral and medial thighs, knees, and arms. Total fat aspirate removed was 4500 cc or 9 lbs



Figure 3 A) Before and (B) 4 months post-op large volume liposuction of lower body

“The LySonix unit also has fine line instrumentation, which I use for facial liposuction primarily of the neck and jowl areas. Removing excess neck fat can make someone look 10 lbs lighter.”

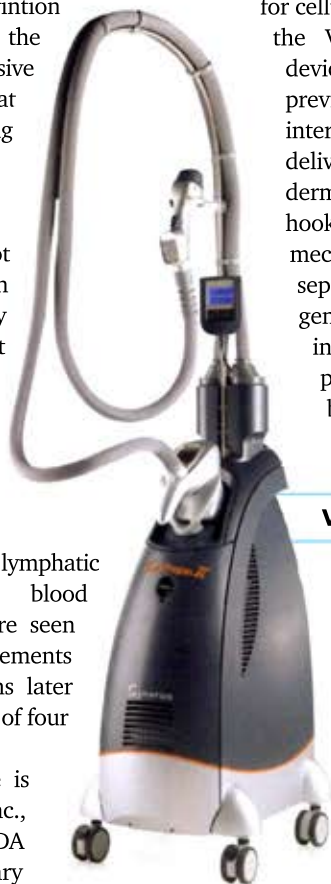
most significant change is weight loss and improved insulin sensitivity. Of course a single area can be treated under local anaesthesia with liposuction as well.

Currently, I use both the LySonix and VASER internal ultrasound systems. An advantage of the VASER system is that minimal cavitation occurs so the fat can be used for immediate fat grafting. Popular areas requested are the buttocks and breasts. I also frequently use the fat for facial rejuvenation. The LySonix unit also has fine line instrumentation, which I use for facial liposuction primarily of the neck and jowl areas. Removing excess neck fat can make someone look 10 lbs lighter (Figure 4). This can also make your patient look slimmer. Other newer and more aggressive techniques pioneered out of Columbia by Alfredo Hoyas include the high definition liposuction, which uses the internal ultrasound, aggressive evacuation, and selective fat grafting to reveal underlying musculature.

Cellulite

Body contouring is not complete without an improvement to the quality of skin. The most prevalent problem being cellulite. VASERshape was given FDA approval for temporary reduction in the appearance of cellulite in 2010. The external ultrasound diathermy with lymphatic massage increases local blood circulation. Some results are seen immediately but improvements can be seen up to 3 months later with completion of a series of four treatments.

The other device I use is Velashape II (Syneron, Inc., Irvine, CA). It was given FDA approval for the temporary



Velashape II

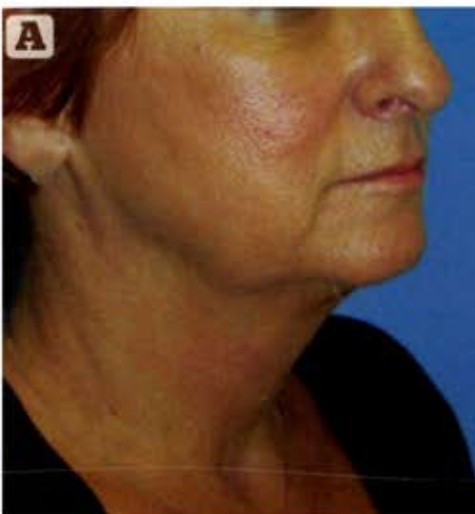


Figure 1 A) Before and (B) 4 month post-op neck and jowl liposuction

reduction in the appearance of cellulite in 2007. It uses radiofrequency to generate heat to stimulate circulation and mechanical rolling of the skin to remove excess fluid and stretch septae to decrease the dimpled appearance. Other similar devices are available but most use some element of massage and heat.

The invasive option I use for cellulite reduction is the VASERsmooth™ device. It uses previously discussed internal ultrasound to deliver heat to the deep dermis and a specialised hooked probe to mechanically divide the fibrous septae creating the dimpling. This is generally done with sedation alone or in combination with a liposuction procedure. Significant swelling and bruising increase the length of recovery but the results are better and longer lasting than with the non-invasive options.

Stretch marks

Another surface irritation are stretch marks. The collagen and elastic tissue has been stretched beyond their yield points. Their appearance depends on genetics, rate of weight gain or loss, and pregnancy. Stimulating any healthy collagen or elastic tissue will

improve their appearance. My treatment of choice is microneedling. Mechanical injury into the dermis brings inflammatory reaction and contracture of the skin. My current device is the Eclipse Micropen™



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(Eclipse Aesthetics, LLC.,

Dallas, TX). It is cordless and goes to 2.5mm depth. A total of two-to-three treatment sessions are recommended and results are realised 3 months later after collagen remodelling has occurred.

Conclusions

There is a spectrum of options for body contouring today, ranging from the improvement in skin surface to weight loss and significant size reduction. For those opposed to the invasive option of liposuction surgery, pain-free, no downtime, less expensive options exist. Patients simply need to understand they will not gain the same results even when multiple treatments sessions are offered I believe it is more important than ever to educate the patient on all available options and to help guide each patient to the best solution.

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