

## TYPES OF LIPEDEMA SURGERY

**WAL Liposuction: (Water Assisted Liposuction):** uses a slightly pressurized stream of saline to dislodge fat and simultaneously remove the cells. Instead of destroying fat cells, it loosens the fat cells to facilitate a more gentle removal. WAL injects tumescent fluid (saline and medicines including a local anesthetic) into the body part being treated. Once the local anesthesia has taken hold, a cannula is then introduced into the tissue to irrigate and then simultaneously suction the loosened fat cell from the body. Finally, any remaining fluid is removed. So basically, the fluid used in TAL (see below) is actually injected into those getting WAL to act as a local anesthetic to the tissue.

**SmartLipo:** (Laser-assisted tumescent liposuction): uses a laser is used to liquefy the targeted fat before it is removed, allowing for an easier and less painful removal. The laser may also be used to tighten skin in the treated area after fat is removed.

**TAL Liposuction:** (Tumescent Assisted Liposuction): The tumescent technique is a type of local anesthesia that involves the injection of large volumes of very dilute lidocaine (local anesthetic) and epinephrine (drug that shrinks capillaries) into the tissue. The word tumescent means swollen and firm. With the tumescent technique, the volume of fluid that is injected into fat is so large that the targeted areas literally become tumescent (swollen and firm). The tumescent technique produces very noticeable areas that the surgeon can act on. TAL designates a form of liposuction that uses tumescent local anesthesia.

**PAL:** (Power-assisted Liposuction): is a system that uses specialized vibrational cannulas that assist in the breakdown of fat and makes it easier and much faster for the fat to be suctioned out with a cannula. So basically, a liposuction cannula that mechanically moves back-and-forth rapidly. It's like giving the surgeon power steering while operating compared to without it which would be like driving without power steering. Regardless the car gets to point A in both cases. It's just technique or skill specific to that surgeon.

**VASER:** uses ultrasonic energy pulses to gently break apart the fat cells with minimal collateral damage to important tissue. The VASER® is not a laser, in fact VASER stands for Vibration Amplification of Sound Energy at Resonance. The ultrasonic energy is transformed primarily to vibration energy which is transmitted to the fat cells by small probes (between two and three millimeters). The fat cells are "shaken" apart and then mixed with fluid, which is infiltrated by the surgeon at the onset of the operation. So basically, using ultrasound to help shake apart fat cells into a fluid that is previously injected in the body so then it can be removed together.

Overall, all these methods have been used to treat lipedema patients. Most surgeons you talk to will do a combination of the tools available to treat lipedema. It is generally a combination that is used in the actual operating room to successfully remove the lippy fat. Thus, because every surgeon's specific procedure can vary, it is important to thoroughly research your surgeon first and identify if his/her particular skill set can help you. Know that there is no cure for lipedema and even if you have surgery, your fat may come back.