

Treating Capsular Contracture and Cellulite with Z Wave

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By Anna Buinewicz, M.D.

At our practice, treatment of capsular contracture and cellulite using shockwave therapy isn't new. With previous technology, we achieved results but with potentially prohibitive patient discomfort. Since adding Z Wave we achieve better outcomes without pain or consumables, and enjoy the benefits of a safe and increasingly versatile non-invasive device for body shaping and skin tightening. By its very nature, it works safely and well with other therapies and is commonly used off-label by physicians around the country. The device complements our plastic surgery and MedSpa practice by providing enhancement to existing therapeutic offerings and extending our armamentarium.

Beyond cellulite and capsular contracture, we also employ shockwave therapy with Z Wave to

- Reduce swelling after surgeries like abdominoplasty or liposuction
- Accelerate tattoo clearance
- Assist in the treatment of erectile dysfunction
- Enhance body contouring outcomes for cryolipolysis

Z Wave transmits powerful acoustic (sound) energy up to 35 mm into tissue which spreads radially throughout, creating a mechanical massage effect as well as stimulating lymphatic drainage and microcirculation. It serves as a stand-alone therapy but is ideal in combination with other modalities, especially as an enhancement to other body contouring treatments. Studies have shown that adding a massage component improves the final outcome significantly.

Cellulite is a common condition affecting the overwhelming majority of women in the US. It is difficult to treat due to its multi-factorial nature and the fact that many women feel—or are taught—an attitude of resignation. About 25% of our patients are seeking improvement of the appearance of cellulite, third behind wrinkles and skin laxity. Z Wave is effective because it attacks the problem of cellulite from a variety of angles. In addition to improving microcirculation and lymphatic drainage, which are key aspects of cellulite, shockwave therapy disrupts and relaxes the underlying fibrous septal network, restoring elasticity of the fibrous bands and reducing the lumpy appearance.

Patient satisfaction exceeds 75%. For cellulite, this is quite impressive, especially for a non-invasive therapy that it is so difficult to otherwise effectively treat, and where patient expectations are more difficult to manage.

For cellulite, our protocol is a total of eight treatments, preferably two per week, at settings of 16 Hz and 120 mJ. Visible results seem to manifest after three to four treatments, with excellent results overall. Complete treatment of an area is very important, so we try to apply 4000 pulses per zone, an 8-inch by 4-inch area. In areas where cellulite is denser, we may increase settings to 10 Hz/185 mJ. We evaluate the patient six weeks after completion of a course of treatment. With an accompanying healthy lifestyle, patients may only need a few treatments a year to maintain outcomes.

While some physicians have experimented with combining Z Wave and other modalities for cellulite, we have not felt the need to, given the excellent outcomes we see with Z Wave alone. Patient satisfaction exceeds 75%. For cellulite, this is quite impressive, especially for a non-invasive therapy that it is so difficult to otherwise effectively treat, and where patient expectations are more difficult to manage.



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Treatment of capsular contracture varies by patient and depends on the character of the capsule as well as the time since the initial surgery. More recently formed capsules are easier to treat with higher expectations. We recommend an average of six to eight weekly treatments with typical settings of 16 Hz/120 mJ, 8,000 pulses per treatment, per breast. For extremely firm capsules we alternate settings: 4,000 pulses at 16 Hz/120 mJ, and another 4,000 at 10 Hz/185 mJ. Capsules of Baker Grade 1 through 3 will usually respond to treatment, while Grade 4 capsules are usually recalcitrant. Compliance with at-home post-procedure protocols, including vigorous massage two to three times per day in between treatments, is a key component to achieving a successful result. We reassess firmness and tightness at a 6-week follow-up after the final treatment.

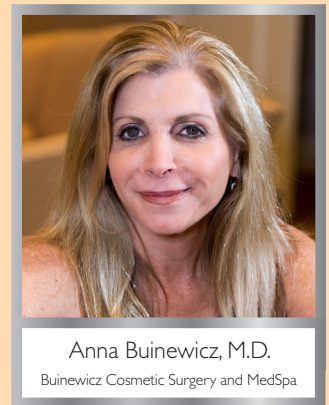
Improvement of capsular contracture is dramatic...

Improvement of capsular contracture is dramatic for patients who were hoping for a better, softer breast enhancement result when they elected to undergo surgery. While the desired result takes time and repeated treatment to fully realize, patients report feeling significant release of tension or tightness after a single treatment. When combined with this safe and comfortable pain-free treatment experience, it promotes compliance and return for more sessions. Recently we treated a woman

whose surgeon had insisted they'd need to go back into the operatory, but after about eight sessions she experienced significant relaxation of the capsule with a more natural look, feel, and movement.

As with any aesthetic treatment, expectation management is important for both capsular contracture and cellulite. Patients will usually have perfection as their aim, however, virtually no aesthetic treatment can meet this. With a historically challenging indication such as cellulite, or the natural look and feel of enhanced breasts, dramatic improvement worthy of celebration may not be good enough for patients whose expectations are too high. With proper guidance during consultation, and good photographic before-and-after documentation, patient satisfaction can be maximized.

The Z Wave device is a workhorse for our practice and is in almost constant use. Aside from reliability, safety, patient comfort, and satisfying results, the appeal of Z Wave stems from the trend toward less invasive treatments with little or no downtime. Many patients prefer non-invasive options, which can include maintenance sessions, as a long-term solution to avoid surgery and its associated risks. Additionally, treatment is simple without the hassle associated with analgesia (including narcotics) or anesthesia. Patients can arrive to the office, receive treatment, and leave to go about their business. By my estimation, at least 65% of my patients come in seeking non-invasive modalities rather than surgery. Having this kind of capability at your disposal not only broadens your offerings, it prevents patients from seeking these treatments elsewhere.



FOR FURTHER READING

Modena DAO, da Silva CN, Grecco C, et al. Extracorporeal shockwave: mechanisms of action and physiological aspects for cellulite, body shaping, and localized fat--systematic review. J Cosmet Laser Ther. 2017 Oct;19(6):314-319.

Chen PC, Kuo SM, Jao JC, et al. Noninvasive Shock Wave Treatment for Capsular Contractures After Breast Augmentation: A Rabbit Study. Aesthetic Plast Surg 2016 Jun;40(3):435-45.

Wu YC, Jao JC, Yang YT, et al. Preliminary study of non-invasive shock wave treatment of capsular contracture after breast implant: animal model. Conf Proc IEEE Eng Med Biol Soc 2013;2013:1108-11

Zimmer
AestheticDivision

3 Goodyear, Suite B
Irvine, CA 92618
tel (800) 327-3576
fax (949) 727-2154
info@zimmerusa.com
www.zimmerusa.com
shop.zimmerusa.com