ADVANCES IN
RADIO FREQUENCY BODY CONTOURING AND SKIN TIGHTENING

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As an aesthetics provider, your priority is to offer therapies that deliver significant enhancement with little discomfort and downtime. Treatments using radio frequency (RF) technology have become a go-to choice because they fulfill these objectives, thrilling patients and generating positive financial returns for practitioners.

In this guide, we will look at why RF has become such an important part of non-invasive aesthetic medicine for body contouring and skin tightening, and review some exciting recent advances that make clear RF's role will only grow. As a leader in innovative RF technology, Venus Concept is uniquely positioned to offer insights on how you can maximize your business potential with these treatments, gleaned from our partnerships with providers in 65 countries worldwide.

HOW RF WORKS

RF therapies have a variety of applications, from their use in skin resurfacing, to some fat reduction, to the treatment of common face and body aesthetic concerns such as skin laxity, wrinkles, cellulite, and fatty deposits. The technology directs energy at precise depths to heat tissue, stimulate soft tissue modeling and activate collagen production. Practitioners can work with delivery depth, power, targeted temperature, and duration to control results.

Radio frequency has become especially popular with patients seeking non-surgical tightening, and skin tightening was the seventh most-popular non-surgical procedure in the United States in 2016, according to the American Society for Aesthetic Plastic Surgery.[1]

Radio frequency therapies have been used in medicine for more than seven decades. In skin tightening and body contouring aesthetic treatments, RF waves are directed beyond the first layer of skin to the deep dermis and sub-dermal layers without impacting the epidermis. Improvements are often seen from the first treatment, but multiple sessions spaced at intervals are usually required for best results.

All RF devices use different numbers and configurations of electrodes and varying electromagnetic fields to achieve their effects. The number of electrodes, and their arrangement in relation to each other, contributes to how they reach and maintain different energy temperatures and what patients experience during treatment. For instance, monopolar arrangements—those composed of only one electrode—tend to require a return pad for the energy, which can cause heat spikes for the patient and inconsistent energy delivery. Bipolar arrangements may be more effective. The most advanced RF systems employ multipolar radio frequency, where the RF energy is evenly distributed across a number of electrodes, allowing for deeper energy penetration and more homogeneous delivery.

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1 American Society for Aesthetic Plastic Surgery, 2016 Cosmetic Surgery National Data Bank Statistics; Retrieved from https://www.surgery.org/sites/default/files/ASAPS-Stats2016.pdf

HOW RF WORKS

RF doesn't work the same way for everyone, and the results aren't the same in each patient. Some of the most common side effects include redness and mild swelling, increased sensitivity of the treated skin and sinking. Occasionally, there may be bruising and blistering. All this said, many RF treatments boast low or no side effects, and RF can be used on any skin type and color. It thus holds wide appeal for patients with many different issues from face to body. The most common areas treated are face, jowls, neck, arms, bra bulge, and thighs.

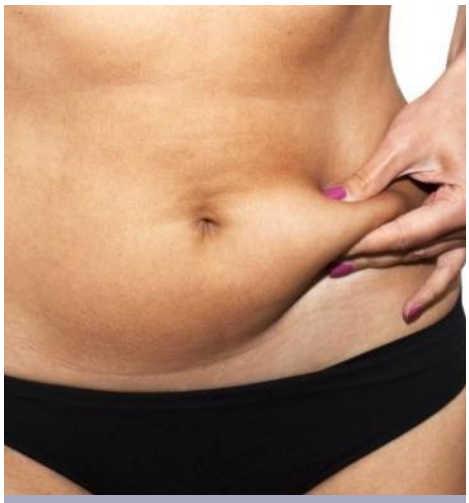
The ideal candidate for skin tightening and body contouring with RF generally fits one of three profiles:

CLIENTS WITH MILD TO MODERATE FACIAL SAGGING AND WRINKLES

Generally, these are people up to their 40s and 50s; for patients over 60, and/or with a significant amount of skin laxity, the procedure may not provide enough improvement.

PEOPLE WITHIN 5 TO 10 POUNDS OF THEIR IDEAL WEIGHT

The tightening and circumferential reduction work best with patients closer to their ideal weight.



INDIVIDUALS WITH SMALL FAT DEPOSITS

These are bumps and bulges often don't respond to diet and exercise, such as the small belly pooch or lax skin that mothers often experience after having children.

COMPARISON OF RF TO OTHER PROCEDURES

RF isn't the only non-invasive treatment around for skin tightening. Other methods have been studied, such as mechanical suction, laser, and light, with varying results. Studies that have reviewed clinical results for different therapies found that RF achieved clinical benefits at safer levels of energy than other technologies when used for skin laxity and greater though still modest circumferential reduction in body contouring.[2,3] RF devices also are generally more affordable than many other technologies.

LATEST DEVELOPMENTS IN RF FOR SKIN TIGHTENING AND BODY CONTOURING

The aesthetics community is constantly striving to drive innovation. Recent research has focused on using RF in novel ways to achieve greater results. Let's look at some of the latest developments.

LONGER TREATMENT SESSIONS

Patients who are looking for non-surgical alternatives for fat reduction evaluate cost, effectiveness, number of visits, and time commitment. According to a study in the Journal of Drugs in Dermatology, patients considering treatments take into account the immediate visibility of their expected results in relation to the time commitment involved in a treatment plan. Because non-invasive treatments would take longer, with less dramatic results, than a surgical intervention like liposuction, researchers wondered whether more noticeable outcomes could be produced with longer and more intense sessions of non-invasive treatments—what researchers called "megasessions". Researchers substituted two to three treatments of two hours each of treatment with a bipolar RF device that also uses suction and vacuum instead of eight weekly sessions.

"Volumetric analysis and patient assessment showed similar results with a two or three treatment 'megasession'[4] protocol when compared with the traditional protocol of eight weekly sessions. While the cohort number was not statistically significant, the photographs and measurements are compelling enough to warrant further investigation," the author wrote.

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2 Sadick N. Tissue tightening technologies: fact or fiction. Aesthet Surg J. 2008;28(2):180-8.

3 Lapa T. An Introduction to Fat Reduction. Aesthetics Journal. Retrieved from https://aestheticsjournal.com/feature/an-introduction-to-fat-reduction

4 Duncan D. Megasessions: Efficacy of Fewer, Longer Treatment Sessions for Fat Reduction in Noninvasive Body Contouring Using a Radiofrequency Based Device. J Drugs Dermatol. 2017;16(5):478-480.

LATEST DEVELOPMENTS IN RF FOR SKIN TIGHTENING AND BODY CONTOURING

COMBINING RF WITH OTHER TREATMENTS

Radio frequency skin tightening and body contouring treatments are useful supplements to fat reduction, enabling treatment providers to effectively mitigate common side effects of both surgical and non-surgical procedures.

Radio frequency can be used along with other treatment options to enhance results. For example, one recent study looked at using cryolipolysis, which uses destroys fat cells by chilling them and inducing cell death, in combination with multipolar RF with pulsed electromagnetic field and pulsed suction.[5]

Study subjects with fat deposits on their flanks received one cryolipolysis treatment, followed by two sessions of RF with PEMF spaced two weeks apart, then two sessions of RF with PEMF and pulsed suction spaced two weeks apart. Researchers found that the combined treatment produced 20 percent greater improvement in skin laxity and 10 percent greater patient satisfaction. No additional side effects or discomfort were noted.

While surgical solutions like liposuction may be appealing to patients seeking more dramatic results, it is worth recognizing that many liposuction procedures come with lengthy downtimes. Though the technology has advanced considerably since first coming to market, liposuction remains a traumatic treatment, and not without significant side effects—including lax skin and uneven (and often painful) pockets of fat remaining after the procedure.[6] In these cases, many treatment providers find that non-invasive RF treatments are effective in smoothing out body circumference and tightening lax skin.

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5 Few J, Gold M, Sadick N. Prospective Internally Controlled Blind Reviewed Clinical Evaluation of Cryolipolysis Combined With Multipolar Radiofrequency and Varipulse Technology for Enhanced Subject Results in Circumferential Fat Reduction and Skin Laxity of the Flanks. J Drugs Dermatol. 2016;15(11):1354-1358.

6 Kilmer S L, Burns A J, Zelickson B D. Safety and efficacy of cryoliposis for non-invasive reduction of submental fat. Lasers Surg Med. 2016;48(1):3-13.

CONCLUSION:

The future is bright for aesthetic practitioners who embrace radio frequency technology. Radio frequency technology continues to see advancements, with the development of multipolar devices equipped with features to further improve operator control, ease of use, and consistency in outcomes. As well, treatments that tighten the appearance of skin and contour the shape of the body using RF are gaining in popularity. Patients are pleased, and results are well validated. As new advances are made in devices, treatment options, and applications that complement other procedures, RF will maintain its importance for practices.

As the leader in device innovation, Venus Concept is available to help you find the technology that best suits your practice goals and patient base. If you have questions or would like support in exploring next steps, please contact us.

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