

Innovatory Combined Ultrasound & RF Liposuction – A Pain-Free Solution To Eliminate Fat Quickly, Effectively And Safely With Minimal Down-Time

Quick and painless fat loss is the dream of many men and women the world over. And a solution involving some form of liposuction is usually one of the first things that comes to mind having tried possibly a host of alternative methods with little or no success. Indeed liposuction is by far one of the most frequently requested cosmetic plastic surgery operations, its technology constantly evolving up to the point we arrive at today with the introduction by Elite Plastic & Cosmetic Surgery Group in Dubai of a high tech combined Ultrasound Cavitation and Radio Frequency system, offering speed, effectiveness, safety and a totally pain-free treatment with minimal down-time, ideally suited to the contemporary lifestyle.

In the early days of liposuction, surgery was performed under general anaesthetic with large-bore cannulae, and such early procedures were often less than ideal, being fraught with irregularities such as asymmetrical results, blood loss and sometimes infection. Since then, techniques have developed rapidly to the point where patients now benefit from the use of local anaesthetics and their surgeries have become not only safer and more effective but also less costly.

Modern [liposuction](#) methods are typically characterized by several advantages: they are better tolerated by patients and carry a much lower risk of complications; patients experience less pain and shorter post-operative down-time; there is less blood loss and bruising; they are less expensive due to the reduced cost of anaesthesia and shorter operating time; and surgeons can contour the body to any desirable angle, producing a more aesthetically appealing result. The many advanced technologies now widely available include, what must seem to the patient, a bewildering array of techniques involving ultrasound, radio frequency (RF) and even laser, each with their own advantages and disadvantages and suitability in differing circumstances.

In purely technical terms, the *Combined Ultrasound & RF Liposuction* system combines the benefits of Low Frequency Ultrasound Cavitation and Tumescent Liposuction with Mono-polar Radio Frequency. The former melts fat without any associated bleeding and swelling, whilst the RF waves of the latter effectively tighten the skin as the energy is transported through the various layers of tissue and stimulate the action of existing collagen. Moreover, the innovative design of its special cannula concentrates vibration at the very tip, which not only provides for silent operation but also reduces the temperature at the skin surface, thus avoiding the potential side-effects of burning and swelling, resulting in minimum down-time for the patient.

According to Dr Allen Rezai, lead surgeon at Elite Plastic & Cosmetic Surgery Group of Dubai Healthcare City, one of the foremost plastic and reconstructive surgeons in the Middle East, *Combined Ultrasound & RF Liposuction* represents the most advanced development of the "cavitation" concept. Cavitation is a natural phenomenon using low frequency ultrasound to apply a strong pressure wave to fat cell membranes which they are unable to withstand and therefore disintegrate into a liquid state, resulting in a natural form of fat loss. However, unlike other cavitation-based systems, *Combined Ultrasound & RF Liposuction* treatment acts from "within", generating ultrasonic waves along the entire length of its high tech cannula probe in addition to the tip. It is thus able to target even the most restricted areas that have up until now been inaccessible.

A second major advancement integral to the technology, explained Dr Rezai, is its combining the internal miniaturised lipo-cavitation with the firming effect created by internally deployed radio frequency (RF). The resultant skin-tightening effect avoids leaving behind flaccid tissue. The RF waves are simultaneously emitted from the full length of the cannula body, compensating for the dissolution and depletion of tissues created by the cavitation. Acting through the thin body of the cannula, the waves permeate even the smallest gaps in such a way as to leave no sign of depletion from the cavitating action. Furthermore, the firming effect takes place immediately and thus the

patient is not obliged to return for subsequent contouring treatments.

The design of the technologically advanced equipment package with its special cannulae created specifically for this treatment, enthuses Dr Rezai, enables a greater versatility in the range of performable procedures whilst keeping costs to the patient generally lower than with more traditional liposculpture methods. The cannula itself can be any of 3 different diameters: 1.8mm, ideal for treating local areas such as the chin and arms; then slightly larger 2.2 and 3.5mm sizes for treating deeper fat deposits of the buttocks and abdomen; none of which can be considered as large by comparison with the typical 6mm cannula used in traditional liposuction. In fact it can be used to great advantage in [fat removal](#) from the chin, arms, knees, ankles, hips, abdomen, buttocks and inner and outer thighs, some of which were hitherto impossible to treat. And, thanks to the precision of the cannula's action, it is also possible to operate in proximity to the most delicate of areas.

The resultant versatility permits its use either in the clinic with a simple local anaesthesia or local anaesthesia plus sedation, or in the hospital operating theatre with general anaesthesia and sedation, dependant upon the precise nature of the treatment. A second platform is also available for topical application, enabling its use in the treatment of cellulite stages 3 & 4, to stimulate liquid drainage post-liposuction, and in body contouring.

When employed surgically – as opposed to its non-surgical, cosmetic application – a *Combined Ultrasound & RF Liposuction* procedure is comprised of essentially six activities: 1- application of an anaesthetic, 2 – introduction of the tumescent solution, 3- micro lipo cavitation using the special cannula, 4 – squeezing of the fat deposits, 5 – liposuction, and finally, 6 – collection of the fat. Dr Rezai explains that the cannula probe is manipulated with a very slow, gentle motion so as to melt the fat, and only a few minutes of action is needed in each area to be treated, thus eliminating any bruising and swelling which can occur with less advanced methods.

The procedure is capable of removing about 400-500cc of fat, which is extracted mechanically in the same way as in traditional liposuction. However a key benefit to the patient is that, since the fat has already melted prior to extraction, the procedure is much less invasive, very quick and very safe. He or she can return to work and normal activities typically within 1 or 2 days following the procedure, or in the case of more superficial treatments, literally within an hour or two. Depending upon the area of treatment, a compression garment may need to be worn for a month following surgery, however this would not normally prohibit a return to work.

As to results, these will already be visible at the end of the first treatment, and indeed only one session is needed to eliminate the fatty deposits in an individual area. This is real liposculpture – which is evident from the immediately noticeable effects – but of a "soft" type resulting from the minimum level of invasiveness. The dissolved fatty tissue is aspirated on the spot and also, in part, disposed of by the body itself.

Dr Rezai does however insist upon clarifying that whilst this technology is remarkable for being able to treat a very wide range of problems in both female and male patients, it is not suitable for treating obesity in individuals with a Body Mass Index (BMI) greater than 35. And for those with a BMI in the range 30-35, its suitability must be evaluated on a case by case basis. In general, this restriction is imposed by certain physical limitations in skin tightening where the skin might be very loose following liposuction in those with higher BMI. In such cases traditional major surgery may be required.

In conclusion, Dr Rezai explains that "there are today a large number of advanced liposuction methods, each with their individual indications, pros and cons. However, in my opinion, *Combined Ultrasound & RF Liposuction* is capable of providing the best overall results in terms of fat volume removal and skin tightening in a single combined procedure which is at once highly effective, fast, pain-free and economical. It also has the additional advantage of being able to effectively treat advanced stage cellulite and other dermatological conditions.

“Liposuction can produce considerable benefits for patients, and these last exceptionally well. One

of the main benefits is that of a patient's renewed self image and boosted confidence through body contouring. The result is also permanent, since the removed fat cells will not regenerate. By maintaining a sensible weight and also through regular exercise, the patient will be helping to both maintain and even improve the result of their treatment,” says Dr Rezai.

For more details concerning *Combined Ultrasound & RF Liposuction* treatment and other Body Contouring procedures performed by Elite Plastic & Cosmetic Surgery Group, reference can be made to their website at <http://elitecosmeticsurgery.ae>

They can also be contacted directly through their clinic in Dubai at the following address:

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