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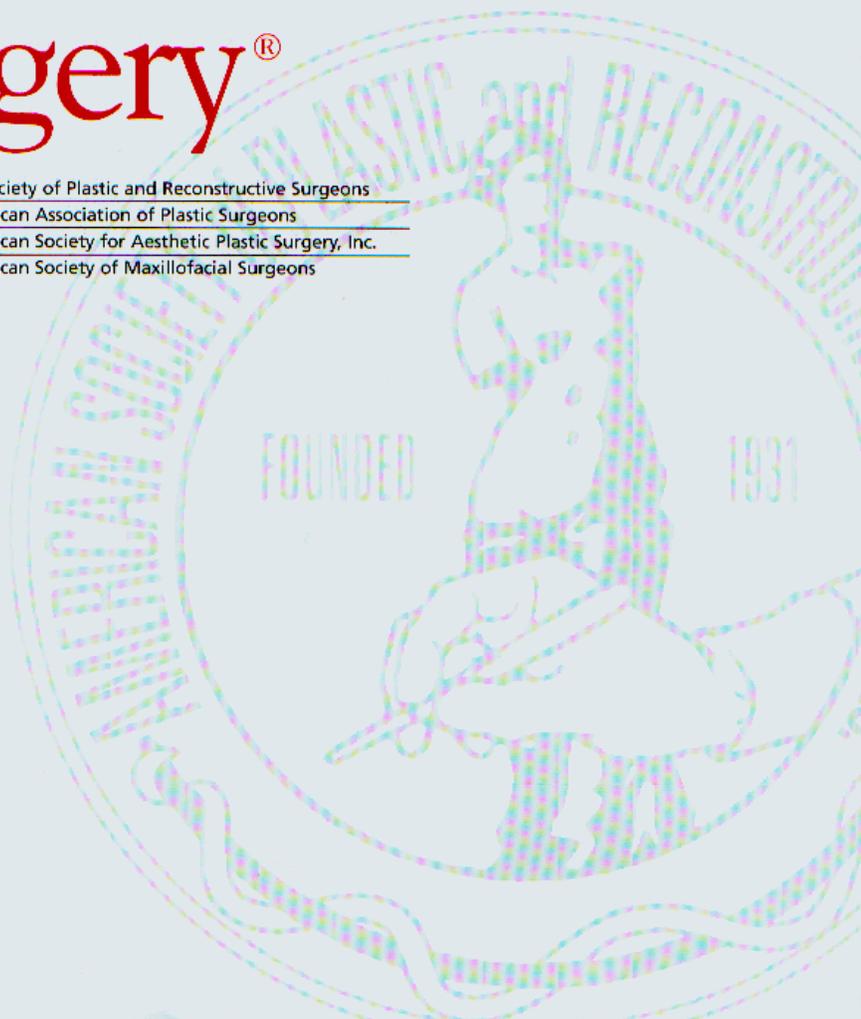


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## **Noninvasive Liposculpture: An Association of External Ultrasound Delivery with Endermosuctioning Massage**

In the last several years, body contouring management has been subject of many different innovative ideas by physicians who deal with skin and subcutaneous procedures. We have seen efforts towards the achievement of better results through less invasive techniques, attempting to minimize risks and patient morbidity, especially regarding suction assisted surgery on adipose tissue. It was so with the development of the tumescent technique<sup>1</sup>, the internal ultrasonic assisted liposuction<sup>2</sup> and most recently, the external ultrasound delivery followed by regular liposuction<sup>3</sup>. On the same way, noninvasive body contouring massage have gained popularity, especially with the experience reported by the negative pressure technique of Endermology that seems to improve contour of skin through some reshaping and better distribution of the subcutaneous fat<sup>4-5</sup>.

Following this natural tendency we started to perform a non surgical treatment that combines the effects of ultrasound energy externally delivered through the skin, with the endermosuctioning massage that generally applies negative pressure and creates a regular skin fold in order to diminish subcutaneous fat dystrophy.

We are working on a preliminary clinical study and have been treating a number of 30 patients so far, with very interesting results showing a marked reduction in body circumference as well as the cellulite appearance. Patients are submitted to 24 sessions, twice a week, when they receive 30 minutes of localized external ultrasound delivery followed by 30 minutes of general endermosuctioning massage. No infiltration is performed and both procedures are absolutely non surgical. Ultrasound is delivered by a transducer in a slow and continuous motion, directly applied to the skin over a transmission gel to enhance coupling and the effectiveness of wave conduction. Localized areas as waist, hips and thighs receive 30 W beams in a frequency of 1 and 3 Mhz, with the delivery time ranging from 3 to 15 minutes each, depending on the patients' needs.

After that, we perform what we call "endermosuctioning massage", with the application of negative pressure through a suction circular handpiece called "Dinamic Anel". We believe that this circular device provides better distribution of the negative pressure applied to the skin and the substitution of the motorized rollers, already used by other equipment, helps to prevent skin fold limitation by the synchronized movement of the rollers. The Dinamic Anel is properly moved around the body areas providing positive pressure by the technician maneuvers and negative pressure by the adjustable suction levels. Patients wear a special

suite that facilitates those maneuvers resulting with a pleasant massage that mobilizes and rebuilds the fat layers of the entire body.

Patients are also encouraged to enhance their metabolic response following a suggested low fat diet and performing some mild physical activity along with the Endermosonic Therapy, as well as they should have a water intake of at least 2 liters every day.

The Endermosonic Therapy does not intend to be a true substitute for conventional surgical lipoplasty, but it seems to be a suitable alternative for those patients who "can not" or "may not" undergo a surgical procedure, either for clinical or psychological reasons. It has been stated that tumescent fluid infiltration of the subcutaneous fat overwhelms the effects of external ultrasound on the tissue. We believe that the necessity for that infiltration and even subsequent conventional liposuction may be lessened by an extended totally noninvasive program that will combine proper session time settings and ideal physical qualities of the ultrasound beams. The association with the endemosuctioning massage seems to enhance the results for localized fat reduction and cellulite appearance. We understand that this should be a medical research field to be emulated, in order to evaluate possible complications or side effects, and hopefully provide our patients with the possibility of having a safe and effective noninvasive liposculpturing method.

*Flávio Henrique Mendes, MD  
Rua Cláudio Manoel da Costa, 65  
16400-000 Lins - SP, Brazil  
clinica@fhmendes.com.br*

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