



Endosphères Therapy / Compressive Microvibration:  
SCIENTIFIC RATIONALE

● MICROVIBRAZIONE COMPRESSIVA®

endoSPHÈRES®  
THERAPY



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# THE FENIX GROUP

Fenixgroup is the company that devised Endosphères Therapy Compressive Microvibration after ten years of research.

Created by Italian bioengineering and the most important research centres (Arezzo Documentation Centre in Aesthetic Pathologies, Faculty of Physical Medicine and Rehabilitation of the G. D'Annunzio University, I.T.A.B. Institute for Advanced Biomedical Technologies of Chieti, Rehabilitation Centre of Montescano (PV), IRCCS Foundation "Work Clinic" Centre, University of Naples), today it represents the most advanced product in the treatment of various types of cellulite, lymphoedemas and muscular bands.

The Fenix Group, owned by the Cavalletti family, is managed with a philosophy directed towards innovation, "because research and dedication to work are the cornerstones of a winning company". With the collaboration of specialised technical staff, Fenix Group designs and manufactures the equipment that allows for the execution of Compressive Microvibration. The great passion that we put in our work has allowed us to achieve a precise

positioning on the market, where we manage to service an impressive 250 sites, comprising Beauty Centres, Health Farms, Spas, and Cosmetic Medicine and Rehabilitation Centres.

The Fenix Group is always available to support the centres that choose to rely on the Endosphères Therapy method throughout all the various phases, always giving its best to its customers. Fenix runs training courses, also customised, for its customers, in order to provide the best possible training. The courses are held at a customer's premises and are addressed to the specific institute's staff. The company always supports its customers by offering a service of planned assistance and setting up specific marketing actions to promote its activities and support development. The centres that rely on Endosphères Therapy can be sure of: the support of a solid parent company behind them, and the guarantee of a scientifically valid method.

For Fenix, innovation means always creating

new solutions of a high technological level, applying research and design to the study of cosmetic medicine to improve wellness and the quality of life.

The machines combine mechanics and a pleasant design with the most sophisticated technologies. Fenix is innovation and harmony applied to body-care. They are a group of people who have turned wellness into a passion. The mechanical industry is known for the safety of the materials used and the quality of the machines' design. It chooses to handle its designs in every detail, boasting the ability to guarantee, beyond the norm, quality and long-running time. Fenix thus chooses to make it an integral part of its group for the creation of the revolutionary machine, which has firmly established itself as part of daily life.

From decades of experience in the US, the well-respected, established research lab is equipped with latest-generation chemical-technological departments.

# PATENTED TECHNOLOGY

The Endosphères Therapy Compressive Microvibration method represents a new era in the treatment of aesthetic and rehabilitative pathologies. Numerous studies and observations made by researchers and Medical-University groups in Italy quote extraordinary results. Some of the most important research centres include: The "G. D'Annunzio" University - Physiotherapy Department - Chieti, I.T.A.B "Institute for Advanced Biomedical Technologies" - Chieti, "Italian Beauty Academy" Study of Cosmetic Pathologies - Arezzo, and others. The sophisticated Compressive Microvibration operating system upturns the principle on which current methods used for the treatment of cellulite are based. In fact, it replaces the traditional phase of the "suction-traction massage" of tissues with compression and vibration. The method therefore represents a revolutionary concept, and one that established itself quickly, producing great results.

## DESCRIPTION OF EQUIPMENT AND MECHANISM OF ACTION

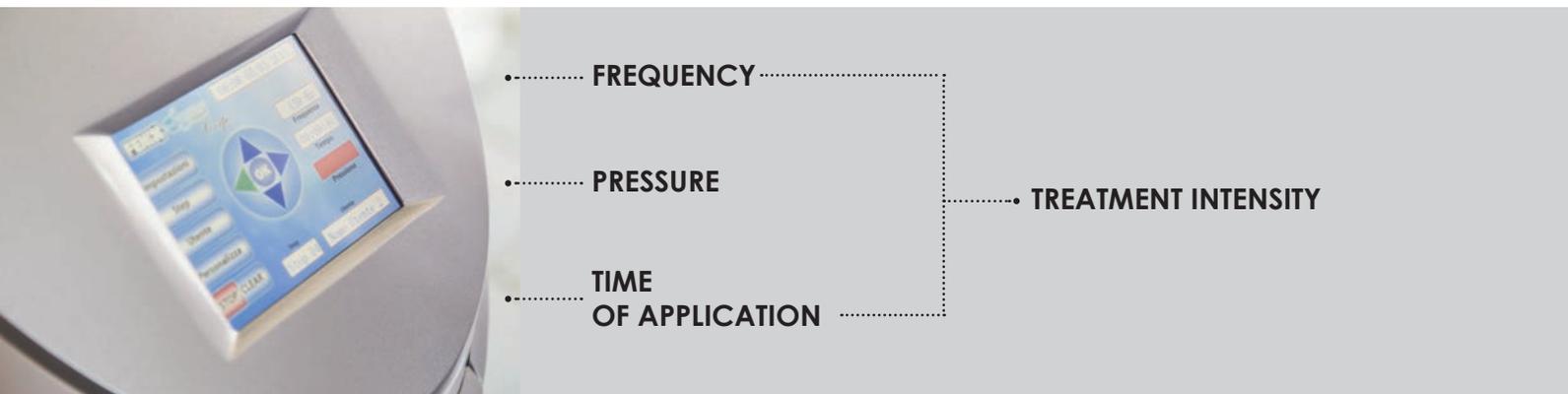
Endosphères Therapy is based on the principle of Compressive Microvibration that, through the transmission of low frequency vibrations in a range between 39 and 355 Hz, can generate a pulsed, rhythmic action on the tissues. The handpiece contains a cylinder that rotates on itself, in which 55 anti-allergic silicone spheres are installed, positioned in a honeycomb-like pattern, with specific density and diameter.

The direction of rotation and the pressure used ensure that microcompression is transmitted to the tissues; the frequency -

measurable through the variation of the speed of the cylinder - generates microvibration; and the right combination of these forces, together with the time of application, determines the treatment intensity, which can be adapted to the clinical condition of a specific patient.

The mechanism of action of the method is based on the integration of three forces.

The treatment is neither invasive nor painful: it will only cause a sense of muscular reactivation, which is very pleasant. The method as a whole is quite simple and at the same time effective; it is performed through the use of specific handpieces, selected according to the area to be treated.





### **MACHINE BODY**

- Design
- Functionality
- Elegance
- Immediate and intuitive touch screen monitor.

### **BODY HANDPIECE**

- Practically flute-shaped, for a better grip
- Direction indicators
- Joystick to change frequency and direction
- Power button

### **FACE HANDPIECE**

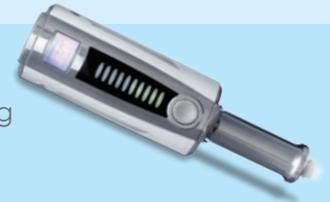


- Particular shape of handpiece head for an easy handling of the instrument.
- “Spinner” positioned at the end of the handpiece for an easy grip
- Direction indicators

### **SENSOR SYSTEM**

The first device in the world capable of detecting the resistance of the tissue and automatically varying the micro-vibration frequency.

- LED LIGHT BAR to always guarantee the correct pressure
- AWDs
- DISPLAY ON THE HANDPIECE for immediate reading of frequency, pressure, time and programme.
- JOYSTICK to change frequency and direction.
- POWER BUTTON







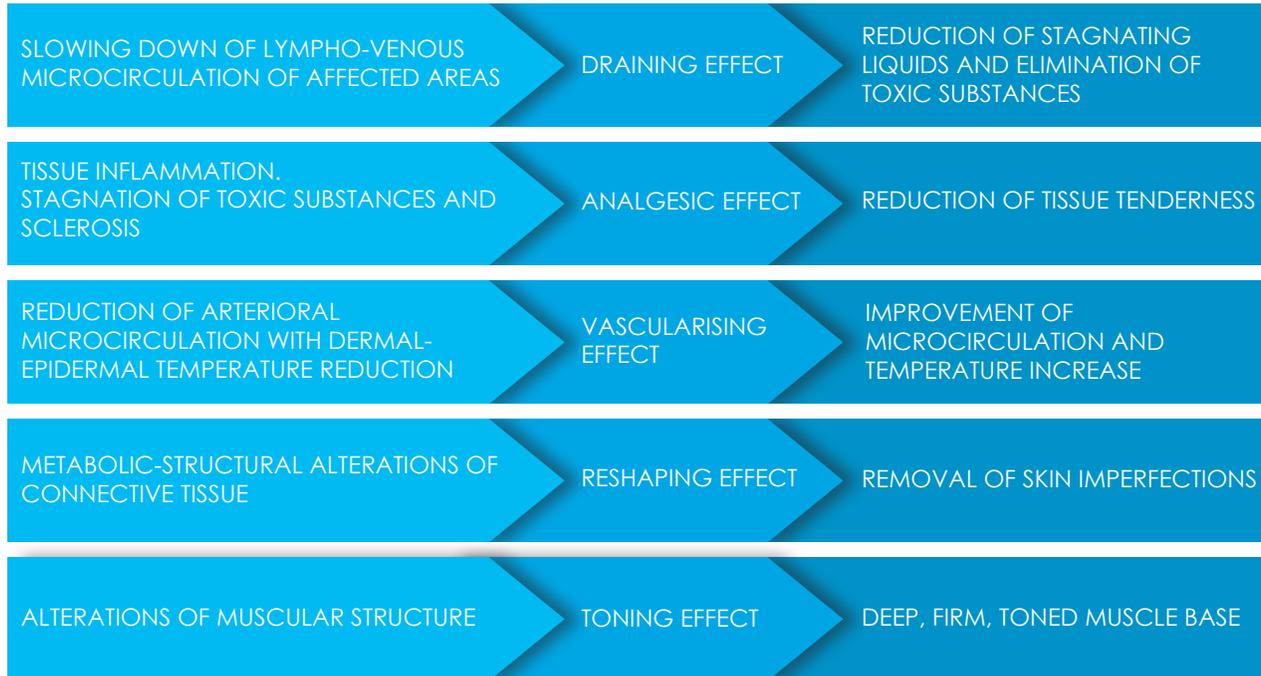
# EFFECTS OF COMPRESSIVE MICROVIBRATION

Every patient has their particular views on cellulite. Today it is known that there are about 29 different situations that may cause the orange peel appearance of the skin, which is simply the manifestation of changes that take place in the skin and subcutaneously, and which can be combined into six main groups:

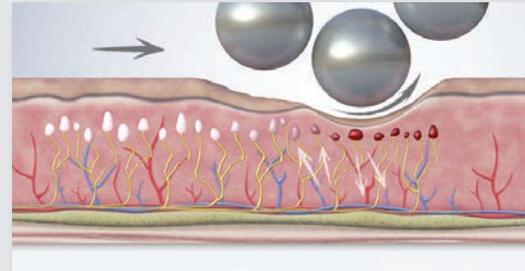
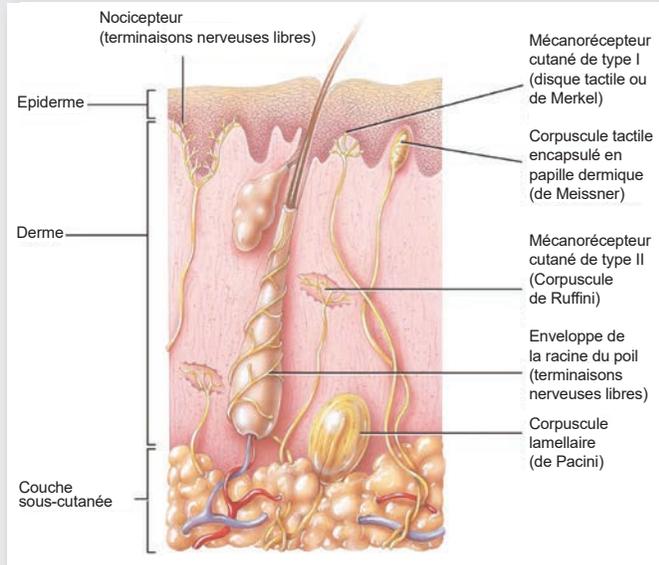
1. Lipoedema: increase in subcutaneous adipose tissue and in free water;
2. Lipo-lymphoedema: increase in subcutaneous adipose tissue and in the quantity of lymphatic liquid;
3. Fibrous cellulite: fibrosclerosis of connective fibres;
4. Lipodystrophy: interstitial and adipose alteration;
5. Localised adiposity: increase in localised adipose tissue;
6. False cellulite: sagging of the skin with fibrosis.

The Endosphères Therapy method is capable of acting on each<sup>1,10,11,13</sup> of the following modifications by first restoring the

physiological vascular and tissue conditions, and subsequently performing a localised remodelling on the skin blemishes.



## ANALGESIC EFFECT



- Stimulation of the receptor corpuscles and release of endorphins
- Elimination of toxic substances and improvement of metabolism

### ANALGESIC EFFECT

According to recent studies, almost all patients with a more or less evident oedema-forming picture experience concomitant painful symptoms. The scope of the research on the direct correlation between the **oedema-forming symptoms and symptoms of pain** has taken shape particularly in the last few years, and continues gradually to assume an ever greater value in the field of

rehabilitation, since both oedema and pain are among the symptoms most frequently encountered and with the greatest impact in the context of chronic pathologies.

The dermis has a countless number of receptors that are capable of perceiving the stimuli of pressure, vibration, touch, heat and pain.

**Nociceptors** are receptors specialised in the transmission of pain stimuli: the greater the

number of nociceptors involved, the greater the sensation of pain will be.

**Mechanoreceptors** are stimulated by pressing and vibrating inputs. They are receptors that adapt quickly and **require continuous and varied stimuli to be activated**. Not all of them respond to the same vibration, and there are also differences in their response, according to the frequency of the stimulus. Those concerned are the corpuscles called Meissner's, Merkel's and Pacini's<sup>13</sup>.

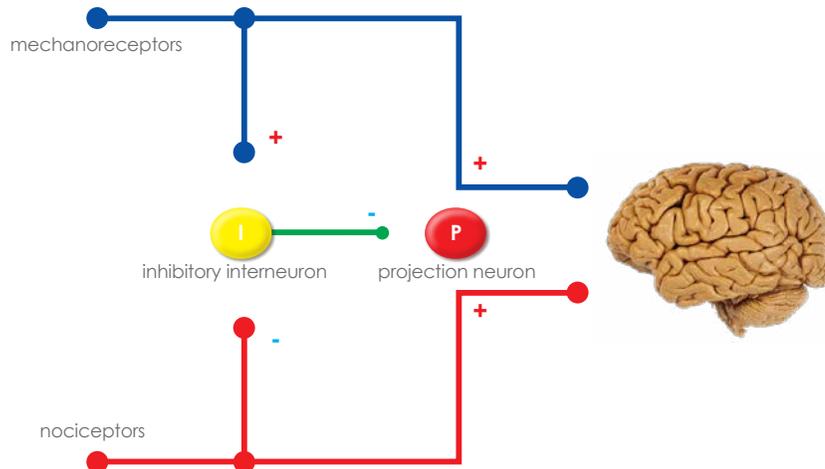
Studies<sup>14,15</sup> conducted at the Faculty of Physical Medicine and Rehabilitation of the G D'Annunzio University of Chieti, and in the Rehabilitation Centre of Montescano (PV), at the IRCCS Foundation "Work Clinic" centre

coordinated respectively by Prof. R. Saggini and Prof. R. Casale of the Neurophysiopathology Service, have shown that the Endosphères Therapy method is capable of stimulating the above-mentioned receptors continuously thanks to microvibrations in different ranges, and micropercussions.

The **activation of the mechanoreceptors** by compressive microvibration thus determines analgesia, thanks to the activation of the **Gate Control**.

This theory states that the Spinal Cord sees the convergence of both the fibres of the nociceptors and those of the mechanoreceptors; both are synapses with an interneuron, which is capable of releasing an endogenous opioid, enkephalin.

**Fig.1** - Gate Control Theory



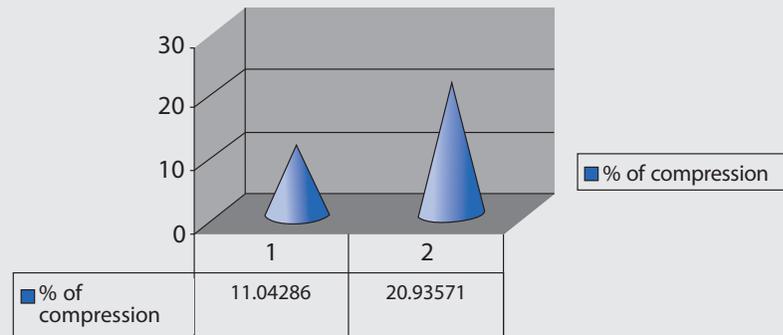
If the fibres of the mechanoreceptors come into contact with the interneuron, this will produce enkephalins, the gate will be closed and transmission of the pain signal will be attenuated; if the fibres of the nociceptors come into contact with the interneuron, this will be inhibited, the gate will open and pain will be felt. (Melzack R., and Wall, P.D., Pain mechanisms: a new theory, Science, 150 (1965) 971-9).

Inflammation represents the most common 16 of algogenicity factors, because the damaged cells release locally chemical substances such as K<sup>+</sup>, histamine and prostaglandins; platelets release serotonin,

while the sensory neurons primary produce peptide P. These chemical substances sensitise nociceptors by activating them or lowering their activation threshold.

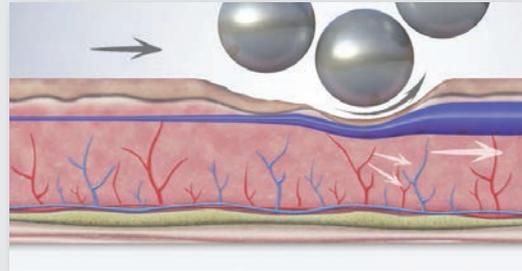
Thanks to the draining effect of Endosphères Therapy, there is rapid resorption, by the lymphatic system, of toxic and inflammatory substances, which ensures a fast resolution of inflammation and pain

The analgesic activity of Compressive Microvibration was evaluated through the Breu-Marshall ultrasonic compression test, which shows a clear reduction in the tenderness of cellulite tissues following treatment.



**Fig. 2. Breu-Marshall Pain Test.** The test enables us to evaluate how much compression, with the ultrasound probe, is necessary to cause pain. Assessing the differences over time, it is possible to have a significant idea of the result offered by the therapy, which in the case of metabolic improvement must promote a reduction in the pain symptom

## DRAINING EFFECT



- Rotation of the spheres opposite to the application direction
- Pulsed and rhythmic action
- Application from proximal to distal
- Progressive pumping with movement of the liquids

### DRAINING EFFECT

An oedema is the result of an imbalance between the supply of liquids and their removal, as a consequence of which water accumulates in the interstitial spaces of the organism.

The increase in volume of interstitial liquids results in the stagnation of the latter in the

tissues or in the serous cavities in an amount such as to become relevant from a clinical point of view.

The most obvious symptom of this condition is swelling, which expresses itself as a palpable and compressible turgor (fovea). The stagnation of toxic substances in the tissues over time alters the state of the interstitial

matrix<sup>4</sup> (a structure of great importance that guarantees maintenance of the basic balance of our body) causing intoxication of the tissues and their subsequent modification, with an evolution towards fibrosis.

The Endosphères Therapy method carries out a pulsed and rhythmic action<sup>3</sup>, which is capable of stimulating the interstitial stasis component typical of oedemas, lymphoedemas, lipoedemas and OFPs (Oedematous Fibrosclerotic Panniculopathies), without causing any



**Fig. 3.** B.P 41 years photographic assessment T0 before treatment and T1 after 15 sessions of compressive microvibration. Results: Knee: Left 4.1 cm Right 4.9 cm, groin: Left 5.2 cm Right 6.1 cm, Left ankle 1.6 cm Right 0.9 cm. T0 Water 33.5 kg T1 Water 31.2. *Tamburlin Medical Archive.*

traction or suction of the skin.

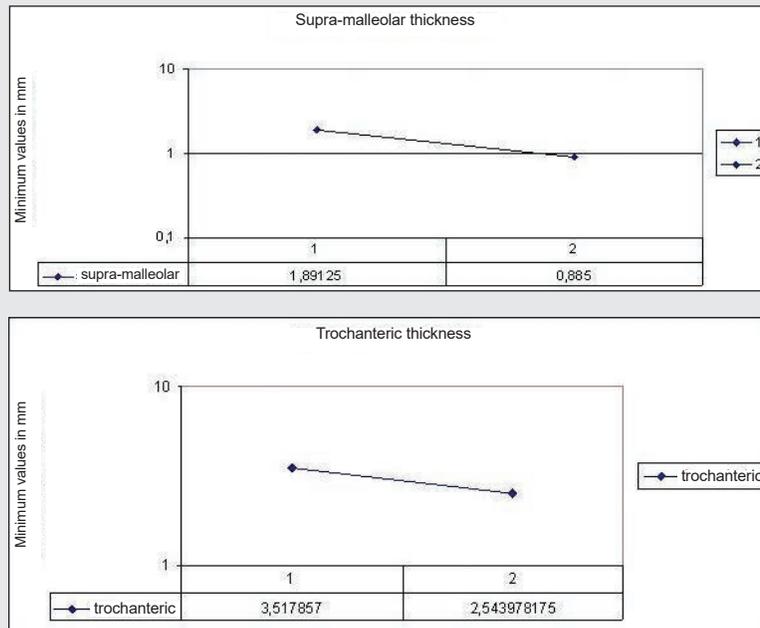
The typical movement of the spheres in the opposite direction to that of the handpiece and the specific implementation of the treatment according to the Endosphères Therapy scientific protocols, allow us to intensify the activity of the lymphatic system, producing a pumping action with the progressive displacement of the liquids, therefore restoring the Starling Equilibrium<sup>1</sup>, which is responsible for maintaining homeostasis inside the vessels and the extracellular matrix.

All this ensures a deep **lymphatic drainage**, which eliminates excess liquids<sup>6</sup>.

Studies<sup>8,9,10</sup> conducted at the Faculty of Physical Medicine and Rehabilitation of the G. D'Annunzio University of Chieti showed that the use of Endosphères Therapy, in conditions of interstitial stasis, is more effective than the application of manual lymphatic drainage



**Fig. 4.** Detail of supra-malleolar thickness in 41-year-old patient. *Tamburlin Archive*



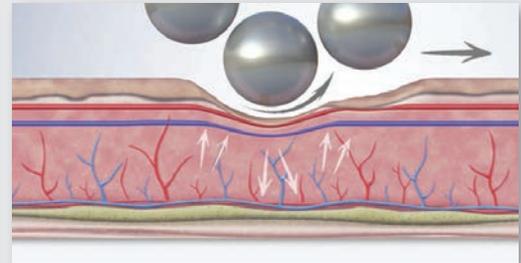
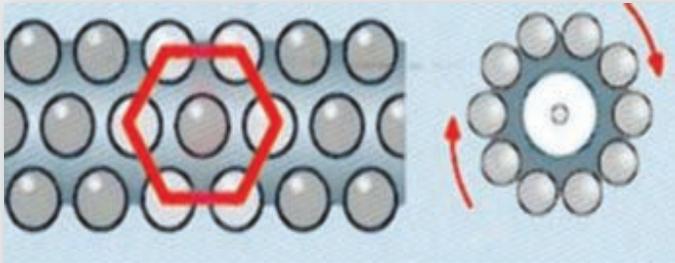
**Fig. 5.** Supra-malleolar thickness. Arezzo Centre of Aesthetic Pathologies<sup>3</sup>

alone, guaranteeing stable and lasting results over time.

The application of compressive microvibration for the reduction of oedema

is also confirmed by the Arezzo Centre of Aesthetic Pathologies<sup>3</sup>, which highlights a net reduction in the supra-malleolar and trochanteric thickness in the patients treated.

## VASCULARISING EFFECT



- Honeycomb-like arrangement of spheres
- Progressive tissue compression
- Vascular 'workout' effect
- Reverse hydrostatic pressure

## VASCULARISING EFFECT

The balance between hydrostatic pressure and oncotic pressure normally allows for the outflow of the liquids and nutrients from the arteriolar side, and the re-entering of the liquids and catabolites into the venular side. The increase in hydrostatic pressure due to the slowing down in the venular outflow leads to stagnation of water in the extracellular space, with oedema formation inside the tissue matrix.

Thanks to the particular arrangement of the spheres, in a honeycomb-like pattern, it is possible to obtain progressive tissue compression with pressures and lifting of

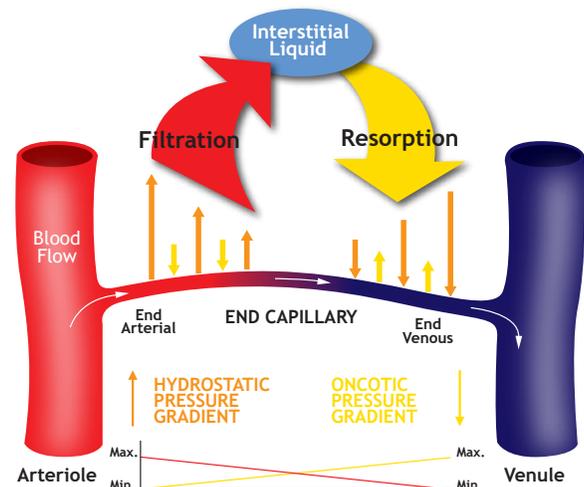


Fig. 6. Physiology of capillary circulation.

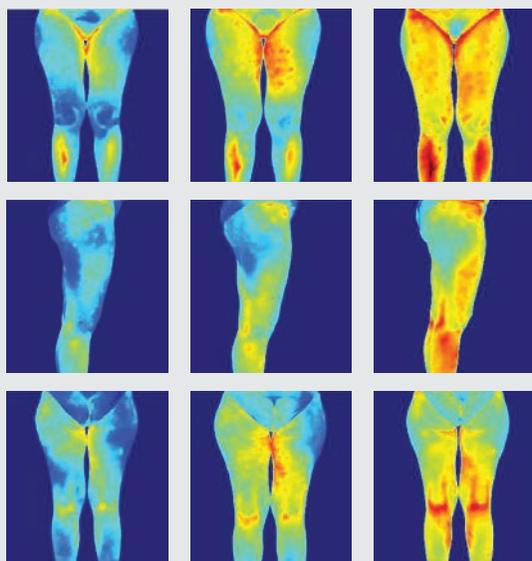
the structure, designed to achieve a sort of vascular workout effect<sup>1,2</sup>.

The “Endosphères” method allows us to counterbalance the hydrostatic pressure of the venous vessels by reversing the inner metabolic and haemodynamic exchange mechanism with flow inversion<sup>3</sup>.

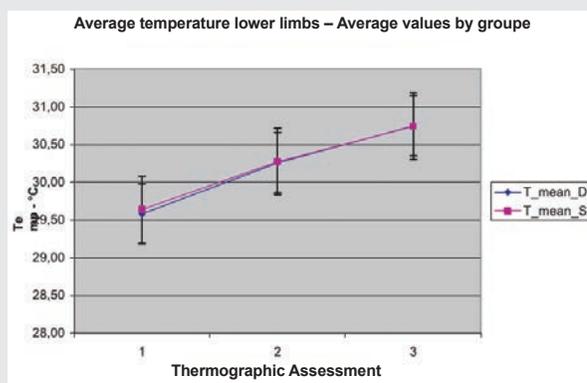
This results in the recovery of metabolic

exchanges, the supply of oxygen and an improvement of microcirculation, whose histological alterations characterise the various stages of OFF<sup>4</sup>, i.e. “Oedematous Fibrosclerotic Panniculopathy”.

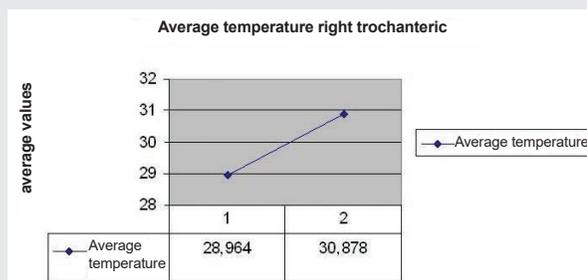
This activity on the vascular system is scientifically demonstrated by thermographic assessments, below, which show a generalised



**Fig. 7.** Thermographic assessment at T0, T1, (48h from the sixth session), and T2 (48h from the 12th session). Institute for Advanced Biomedical Technologies - I.T.A.B. of Chieti, Prof. Merla<sup>5</sup>. This thermal increase effect, as concluded by Dr Merla, can certainly be the result “of the increased perfusion and oxygenation of the skin, of the increased metabolism of the tissues, of the breakdown of adipose aggregates and of the activation of the repairing anti-inflammatory processes of the tissue alterations present”.



**Fig. 8.** Average temperature lower limbs. Arezzo Centre of Aesthetic Pathologies, Prof. Bacchi<sup>3</sup>.

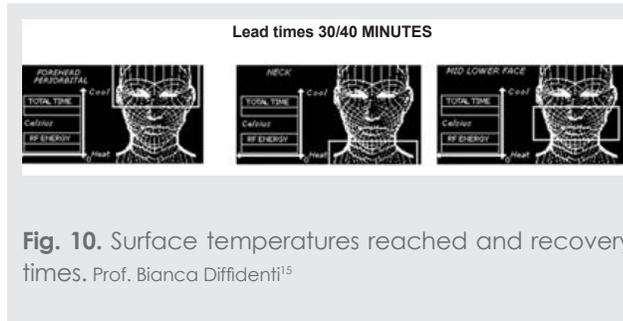


**Fig. 9.** Average temperature right trochanteric. Arezzo Centre of Aesthetic Pathologies, Prof. Bacchi<sup>3</sup>.

increase in the skin temperature of the lower limbs, as well as a remodelling of the silhouette.

The same thermal effect, due to better tissue oxygenation, was monitored by Prof.

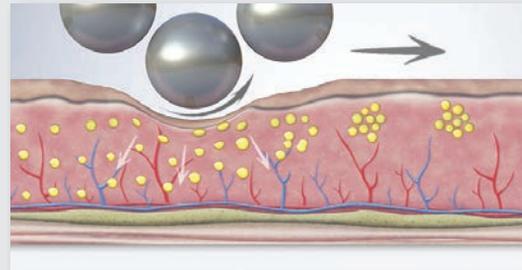
Bianca Diffidenti during the face treatment. In this way, the surface temperatures reached are appreciable, as well as the related recovery times<sup>15</sup>.



**SURFACE TEMPERATURES REACHED AND RECOVERY TIMES**

AREAS	INITIAL	FINAL	10 M'	20 M'	30 M'	40 M'	50 M'	60 M'
Forehead	30 / 32	35 / 36	36 / 39	33 / 34	34 / 35	31 / 33	33 / 32	
Cheeks	28 / 30	34 / 36	34 / 35	33 / 34	32 / 33	30 / 32	29 / 31	28 / 30
Neck Rome 2014	30 / 31	35 / 36	33 / 34	31 / 33	30 / 31			

## RESHAPING EFFECT



- Microcompression of fibrous aggregates
- Breakdown of adipose aggregates and reduction of sclerosis
- Active muscle resistance

### RESHAPING EFFECT

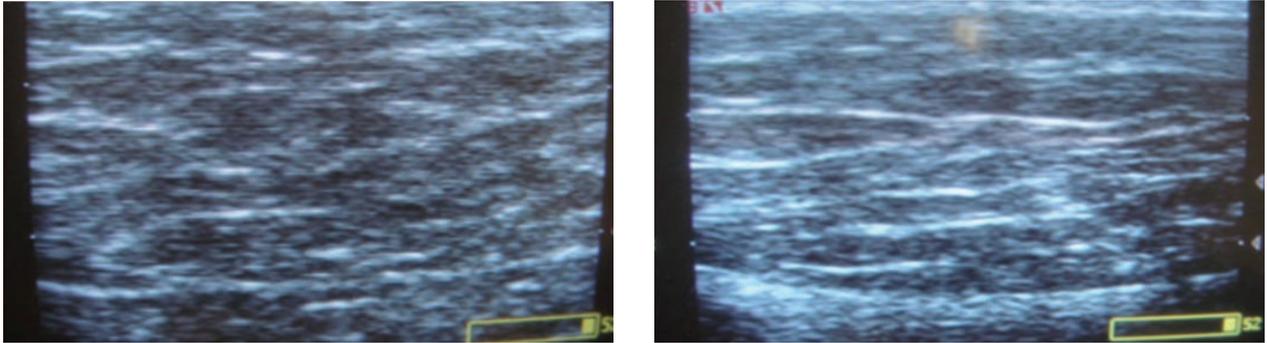
OFP physiopathology presupposes alterations affecting the local microcirculation of the panniculus adiposus, triggering an inflammatory-degenerative process with the stagnation of toxic substances and oedema-formation as well as metabolic-structural alterations of the connective tissue, and subsequent tissue's organisation into micronodules.

The remodelling of the silhouette takes place thanks to the synergy between mechanical oscillations and low frequency vibrations, which cause **microcompression of the adipose aggregates and fibrous** septa, which in turn are broken down and made less sclerotic.

This **activity is amplified by the counter-response generated by the underlying muscle layers**, which offer active resistance

strengthening the defibrosing action<sup>2</sup>. In this way, it is possible to also cover the most inveterate 24 types of cellulite and the most critical situations, such as the adipose-tissue alterations of the chest or of the hips<sup>3</sup>.

These activities determine **localised skin remodelling**, favoured by the physiological restructuring of the tissues, obtained thanks to the vascular, metabolic and purification activities, as well as the remodelling of the



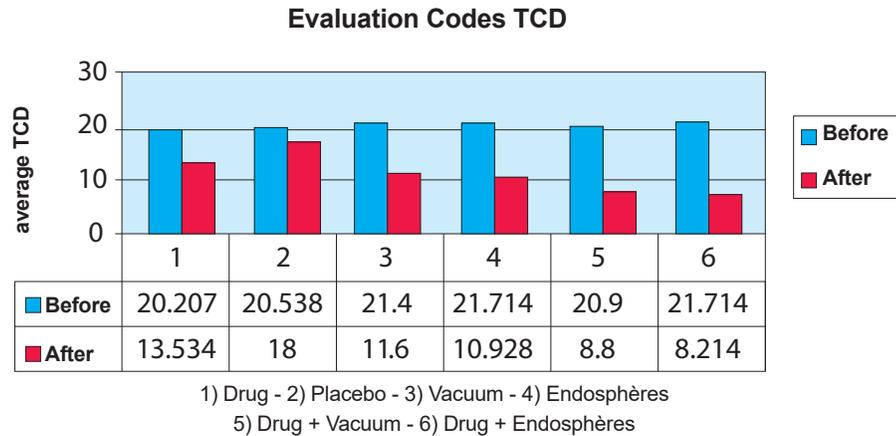
**Fig. 11.** Echographic study 3 carried out at T0 and T1 (after six sessions). Tissue re-compaction following treatment with Endosphères Therapy.

connective system.

On 30 January 2008, in the Milan Press Conference, 'Circolo della Stampa', Prof. Saggini and Prof. Bacci presented their clinical observations conducted on 656 patients, highlighting the efficacy of the method in the treatment of the various types of cellulite<sup>10</sup>. The results obtained were verified via the protocol BIMED-TCD, a classification designed to codify

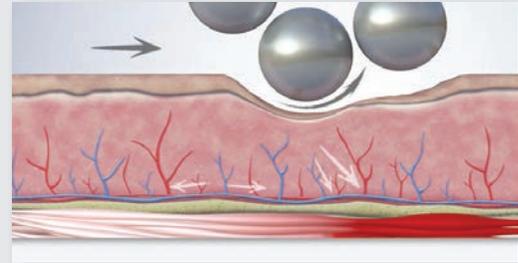
the various types of cellulite, in relation to the structure of the patient, vascular and thermal variation, visible clinical appearance and the presence or absence of pain<sup>12</sup>.

Fig. 12 shows a greater reduction in the TCD code in patients treated with Endosphères Therapy, both alone and in association with the administration of drugs, compared to placebo and common vacuum methods.



**Fig. 12.** TCD Codes assessment, comparing the methods.

## TONING AND RELAXING EFFECT



- Stimulation of muscle and tendon apparatus
- Increase in muscular trophism for a better uptake of oxygen and nutrients

### TONING AND RELAXING EFFECT

Normally, the harmonious distribution of a woman's curves requires a state of physiological, metabolic and circulatory equilibrium of the different layers of the skin (dermis and epidermis of the subcutaneous panniculus adiposus and a **deep, firm and toned muscle base**).

Mechanical oscillations (vibrations) of a defined amplitude and frequency are capable of acting on the - relaxed or extended - muscle and tendon apparatus.

**Vibratory perception** in fact constitutes a **type of mechanical sensitivity** and, for this reason, it involves receptor structures that are sensitive to this stimulus, i.e. the mechano-receptors that are found in different types of tissue such as skin, muscle tissue, periosteum, articular capsules and ligaments (Mouncastle and Rose, 1959). Specifically, mechanical vibrations cause the activation of the neuromuscular spindles (structures responsible<sup>27</sup> for the stretching and movement of a muscle); the muscle's

response to vibratory stress is defined with the term “**tonic reflex from vibration**” (*muscular contraction of the agonist and relaxation of the antagonist*). The vibratory stimulus can then be likened to a succession of contractions of small amplitude, which lead to modest but significant changes of a rhythmic type in the length of the muscle-tendon complex subjected to vibration.

Periodical mechanical stimuli, protracted over time, administered as vibration are considered to be a powerful signal for muscle-articular proprioceptors, which send signals from the periphery to the CNS, which in turn generates an efferent response, activating the motoneurons and thus the muscle fibres.

All the above allows us to obtain both immediate results visually and a **strengthening in the long term**, on the major muscle groups (dorsal, lumbar, buttocks).

Moreover, thanks to the vascularising action, a significant hyperaemia is generated, which improves the uptake of oxygen and nutrients, favouring the correct **muscular trophism**<sup>13,15</sup>.

The action of Compressive Microvibration on the muscles was analysed via Myothon, a portable, non-invasive patented system which quantifies the mechanical properties of muscles. The results of the study conducted

at the Faculty of Physical Medicine and Rehabilitation G. D’Annunzio in Chieti, show a significant improvement in parameters such as tone, elasticity and muscular resistance<sup>20</sup>.

In cases of skin sagging or hypotonia, in sedentary subjects, it is interesting to note the increase in tissue structure that occurs immediately after the “toning treatment with compressive microvibration”, generating a very pleasant sense of “muscle reactivation”.

This toning activity is also used in sports medicine or traumatology for the preparation of athletes and muscular rehabilitation, since the action carried out on major muscle groups allows us to effectively treat contractures, trigger points and fascia-muscle inflammation-related issues.

This activity on the muscle tissue is also used in sports medicine and in physiotherapy, since E.T. Medicine allows us to detect and treat effectively restrictions and muscular adhesions that prevent the performance of normal activities. A compression of the connective tissue of muscles, ligaments and tendons causes pain, alteration of movement and reduced flexibility. Thanks to Compressive Microvibration, today it is possible to treat these restrictions and fascia-muscle issues more specifically and deeply compared to manual treatment alone, and with greater comfort for the patient.



# FACE AREA

The design/functional premises that are at the core of Compressive Microvibration can act with noticeable efficacy in the tegumental “fibre-blemishes” represented by the so-called “sagging skin”, as well as on the expression lines of the face and neck<sup>10,16,17</sup>.

In order to produce appreciable effects, any medical cosmetic intervention must take into consideration the two physiological phases that follow the action of a stressor on a living system or part thereof.

After the action of a stressor, the first phase of recovery, which can be defined as “trophic recovery phase”, enables the tissue or system to regenerate itself, as long as there are appropriate nutrients, blood-borne or coming through the lymphatic system.

An incomplete trophic recovery phase exposes the system or part thereof to an incomplete morphological recovery phase, a factor which is highlighted by the formation of blemishes that can look like local oedemas, up to the

BEFORE	DURING	AFTER
<ul style="list-style-type: none"> <li>• Reduction of microcirculation and oxygen</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in oxygenating vascularisation</li> </ul>	<ul style="list-style-type: none"> <li>• Antiaging effect and rejuvenation of the face</li> </ul>
<ul style="list-style-type: none"> <li>• Reduction of collagen and elastin</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in quantity of water and collagen</li> <li>• Temperature increase (New collagen)</li> </ul>	<ul style="list-style-type: none"> <li>• Wrinkles reduction and increase in tissue thickness</li> </ul>
<ul style="list-style-type: none"> <li>• Tissue fibrosis</li> </ul>	<ul style="list-style-type: none"> <li>• Remodelling of the fibre-connective dermal-epidermal texture</li> </ul>	<ul style="list-style-type: none"> <li>• Restoration of the dermis</li> </ul>
<ul style="list-style-type: none"> <li>• Hypercontraction of facial muscles</li> </ul>	<ul style="list-style-type: none"> <li>• De-contraction of hypercontracted muscles (wrinkles caused by facial expression)</li> </ul>	<ul style="list-style-type: none"> <li>• Relaxation and toning of the face</li> </ul>
<ul style="list-style-type: none"> <li>• Normal deterioration of muscle structure</li> </ul>	<ul style="list-style-type: none"> <li>• Slowdown in muscle-skin structural alteration</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of the skin structure of the face</li> </ul>

formation of structures deformed in terms of their appearance and function, including the so-called wrinkles.

Endosphères fulfils, in an entirely biological manner, a task which up to now was entrusted to aggressive methods not devoid of side effects. Compressive Microvibration acts on the tissue in a non-invasive manner, generating minimum

stress which is controlled directly on the wrinkle (wrinkle-specific action) capable of recalling oxygen and nutrients due to an increase in vascularisation that allows for the natural stimulation of fibroblasts to produce collagen and elastin (Courtesy of Dr Fausto Bellabona).

Moreover, Compressive Microvibration can intervene on the muscles, with both a de-

contracting action on the mimic muscles of the face, and a toning action to counteract tissue subsidence.

The final result is an extraordinary anti-aging effect, characterised by stretching and toning and facial toning, wrinkles reduction and restructuring of the dermis. Thanks to

the peculiarity of Endosphères Therapy, the treatment can be repeated over time, and what is more without any contraindications to exposure to the sun. Moreover, if it is considered appropriate, it lends itself to be applied in combination with other treatments, in both the aesthetic and medical contexts.





# FIELDS OF APPLICATION

All the above characteristics make the “Endosphères Therapy” method a current, effective and safe instrument for aesthetic, physical and rehabilitative treatment, establishing the method itself as a treatment of extreme effectiveness and manageability also in phlebolympology and in sports medicine.

## AESTHETIC MEDICINE

- OFPs<sup>3,4,12,13,20</sup>
- Scars<sup>3,10</sup>
- Localised adiposities<sup>10</sup>
- Face wrinkles<sup>17,18</sup>
- Pre-post surgery treatment<sup>10,13</sup>
- Toning of breast<sup>2</sup>
- Skin grafts<sup>18</sup>

## PHLEBOLYMPHOLOGY

- Lipoedemas<sup>1,2,3,6,7,8,9,10,20</sup>
- Venous insufficiency<sup>2,7,8,9,10,13,</sup>
- Lipoedemas<sup>1,10,11</sup>
- Oedema<sup>1,10,13</sup>

## SPORTS MEDICINE

- Trigger points<sup>13</sup>
- Osteitis pubis syndrome<sup>10,13</sup>
- Shoulder-neck syndrome<sup>10,13</sup>
- Sports massage<sup>10,13</sup>
- Heel inflammation<sup>15</sup>
- Patellar tendinitis<sup>15</sup>
- Tibial syndrome<sup>15</sup>





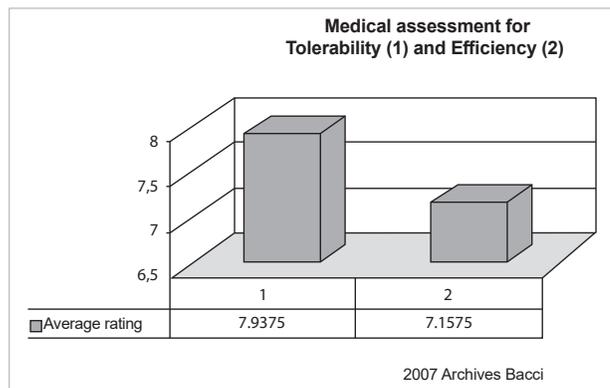
# RESULTS AND CONCLUSIONS

Clinical observations and studies conducted at the Faculty of Physical and Rehabilitation Medicine of the G. D'Annunzio University, the Arezzo Centre for the Documentation of Aesthetic Pathologies, the Institute for Advanced Biomedical Technologies - I.T.A.B. of Chieti and the Rehabilitation Centre of Montescano (PV), the IRCCS Foundation "Work Clinic" centre, and the University of Naples establish the Endosphères Therapy method as a valid and reliable instrument that finds its best use in the treatment of cellulite venous-lymphatic and muscular pathologies.

In order to obtain a correct diagnosis, each patient included in the studies was subjected to: clinical-anamnestic assessment, inspection and palpation of the tissues and primary instrumental examinations such as Echo Colour Doppler, echographic examination, thermography and bioelectrical

impedance analysis. The investigations were 34 repeated every six sessions in order to monitor changes in the tissues in the course of the treatment.

The results obtained demonstrate the good tolerability and efficacy of treatment with compressive microvibration.



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In addition to the visual response, which is certainly easier to conceive of, there are also findings from the clinical data obtained with the TCD2 Code that report the state of vascularisation of the tissues, the state and visibility of the orange peel and the type of tenderness of the cellulite tissues.

Compact fibrous  
adipose cellulite  
Stage 4 - Code TCD 28



T0 (before treatment)

Compact fibrous  
adipose cellulite  
Stage 3 - Code TCD 16



T1 (After 6 sessions)

Mixed  
cellulite lipodystrophy  
Stage 3 - Code TCD 30



T0 (before treatment)

Compact  
cellulite lipodystrophy  
Stage 2 - Code TCD 13

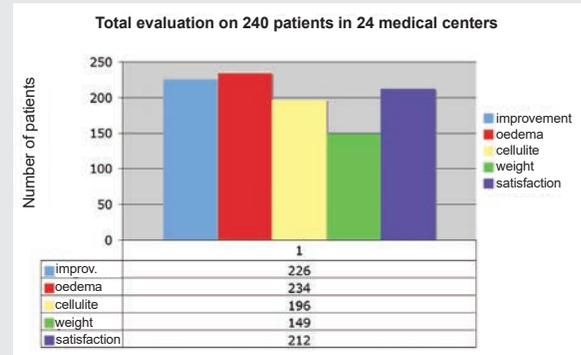
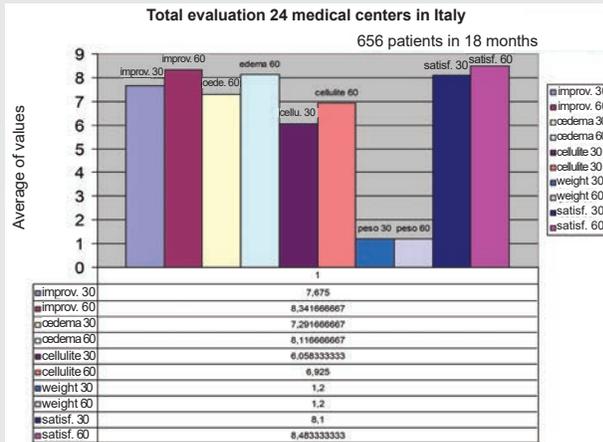


T1 (After 6 sessions)

(Archivio Bacci)

To these data, we must add evaluations referring to the doctor's and patient's<sup>2</sup> opinions in relation to the treatment, thus obtaining

a final result indicating the improvement obtained from both the functional and the psychological-emotional point of view.



By using this method, we ensure the provision to our patients of an innovative and concurrently effective “therapy”, which is pleasant and above all equipped with a therapeutic rationale that is at the foundation of our patients’ satisfaction but, even more so, of our work.

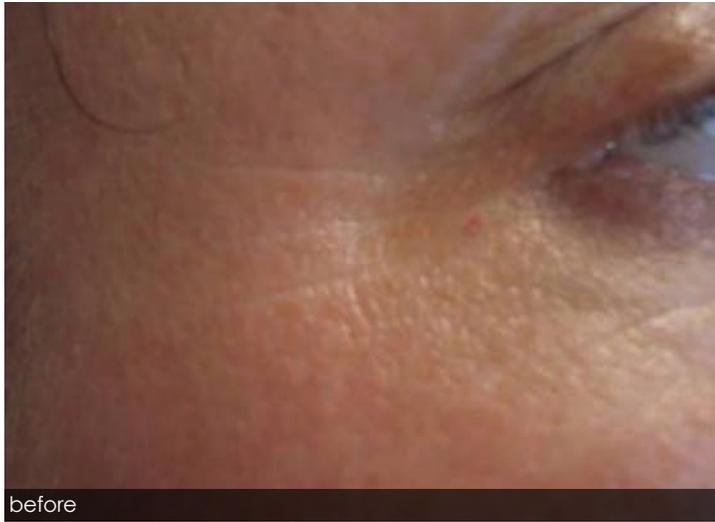




# PHOTOGRAPHIC APPENDIX

**Results - Endosphères Treatment**

Before and After 3 sessions



Before and After 1 session

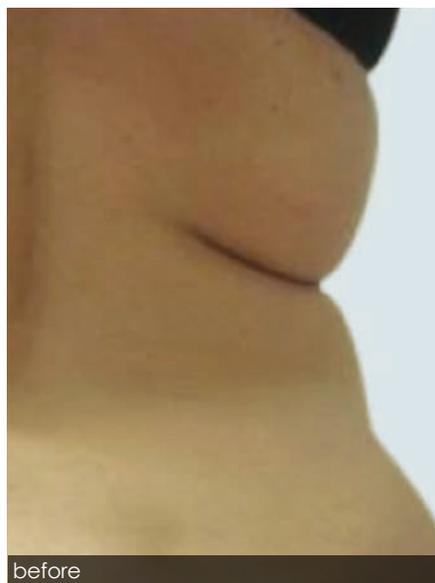


*Courtesy of Prof. Bacci - XI International Congress of Aesthetic Medicine SIES - Italy*

Before and After 15 sessions



Before and After 18 sessions



Courtesy of Prof. Bacci - XI International Congress of Aesthetic Medicine SIES - Italy



Before and After 8 sessions

*Courtesy of Prof. Bacci - XI International Congress of Aesthetic Medicine SIES - Italy*

Before and After 6 sessions



Before and After 6 sessions



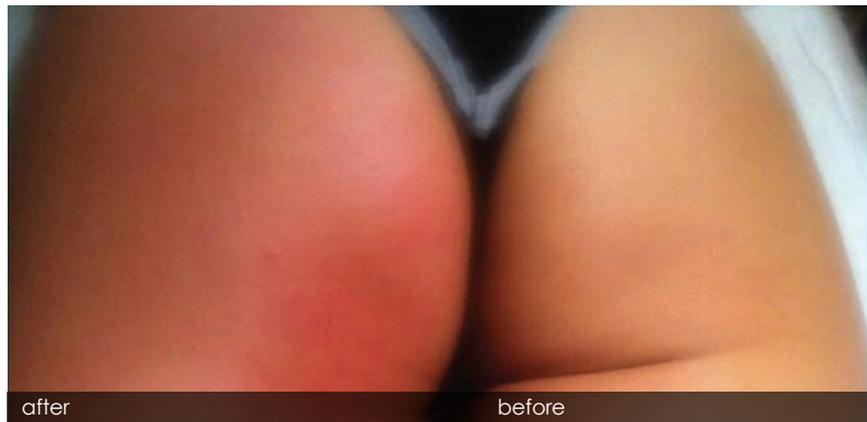
Courtesy of Endosphères Qualified Center



Courtesy of Benessere Barbuto - Cava de' Tirreni - Italy



Soon after the treatment



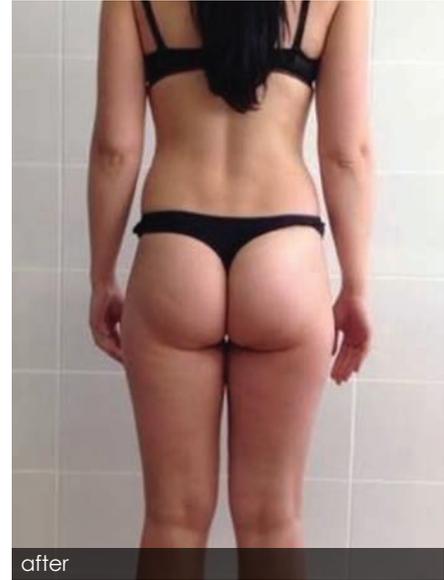


before

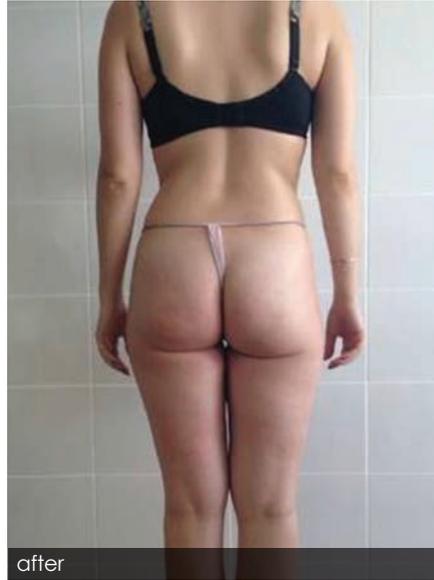


after

*Courtesy of Vensky Svet Salon - Ekaterinburg - Russia*



*Courtesy of Laguna Expert - Ekaterinburg - Russia*



Courtesy of Laguna Expert - Ekaterinburg - Russia

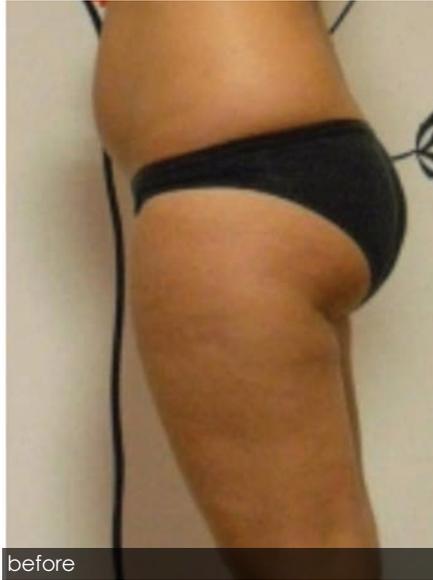
Before and After 12 sessions



Before and After 12 sessions



Courtesy of Dott.ssa Elena Vescovi - Studio Medico Ametis - Vasto - Italy



before



after

Before and After 12 sessions



before



after

Before and After 12 sessions

Courtesy of Dott.ssa Elena Vescovi - Studio Medico Ametis - Vasto - Italy

Before and After 12 sessions



Before and After 12 sessions



Courtesy of Vip Medicum - Estonia





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