CARBOXYTHERAPY: A BIG PART OF THE SOLUTION

What is it?
The Carboxitherapy consists in the therapeutical use of the CO2 in its gaseous state, by either percutaneous or subcutaneous injection.

Where it was developed?
It was originally developed in France, in the thermal waters station of Royat. There, a group of cardiologists began treating patients with peripheral organic and functional arteriopaties (Arterosclerotics, Buerger, Raynaud, Etc.) In 1953, the cardiologist Dr. Jean Baptiste Romuef, published a paper with its experience in 20 years of work with CO2.

How many patients have been treated?
Until 1983, 402,000 patients had been treated in Royat. Only in 1994, 20,000 new patients were treated. This number of patients, not only verifies the efficiency of the method but also its security.

What are the therapeutical effects?
- Artery and Capilar Vasodilatation.
- Botth Effect Enhancement
- Lipolitic Effect
- NeoAngioGenesis (experimental)
- Simpaticolitic Action
- Hemoreolofic Action

What's the toxicity of CO2?
The CO2 has no toxicity even in elevated dosages. It does not increment the arterial pressure, nor variations in the partial pressure of the oxygen or CO2 in the system. To better understand this we have two examples:

1. Our body produces 200 cc of CO2 when resting. That amount can be raised 10 times during exercise, the dosage utilized for the therapeutical treatment are in that range.
2. In the Laparoscopies CO2 is used to distend the abdomen and help introduce the laparoscopy with no problems.

**What are the indications?**

**Aesthetic Medicine:**
- Paniculopathia Edemato fibro sclerosis-cellulite
- Localized adiposity

**Angiology:**
- Peripheral arteriopathies
- Microangiopathies

**Urology:**
- Erectil dysfunction, associated with microangiopathy.

**Dermatology:**
- Psoriasis, Varicose Ulcers

**Reumatology:**
- Acute Arthritis
- Sport Medicine

**How does the CO2 work in Cellulite?**

Through the therapeutical effects mentioned before, it re-establish the morphology and functionality of the microcirculation, the core of the problem, by raising the quantity and speed of the blood flow, diminishing the accumulation of liquids between the cells, disintegrating the fat of the hypodermis, and diminishing the fibrosis. In a few weeks, natural local metabolism is stimulated, with the increase in the microcirculation, the elimination of toxins and the activation of the lipolysis process (destruction of the adipose tissue).

**Can it be applied to any zone of the body with Cellulite?**

Yes, the CO2 can be used in any part of the body with good results and no secondary effects. The carboxithery is a therapeutical method for the cellulite, ideal for women of any age, highly efficient and safe.
How is the Carboxitherapy performed?
The Italian carboxitherapy has improved and innovated the equipment used for its administration. From a tube of pure CO2, connected to a specially developed equipment, which allows the Doctor to regulate the speed of the flow, the time of the injection and the administered dosage. The CO2 is injected through an sterile needle 30g (0.3mm of diameter) in the sub-cutaneous tissue. From the injection site, the CO2 is easily distributed to all the affected area (lets remember that CO2 is 20 times more dissolvable than oxygen) and surrounding tissues. The CO2 works in the affected area and is eliminated from the system very fast.

How many sessions are needed?
The ideal is to have 3 sessions per week, until a total of 10 to 15 sessions.

What are the results?
The first results are seen almost immediately, the quality of the tissue improves, the skin becomes softer and the affected zones thinner. However, the most interesting effect does not occur on the surface, but is what happens to the microcirculation. This is observed through a Videocapilaroscopy that allows the doctor to observe the changes at the microcirculation level and by objective with the improvements.

What is the Video Capilaroscopy?
A non-invasive method, which allows the Doctor to evaluate the morphology of the capilars, the speed of the flow and the population of active capilars, through the use of a video camera with 200x zoom connected to a monitor.

What can we achieve with it?
Evaluate the exact form of the alterations in the microcirculation, and take better therapeutical decisions for the patient.
Are there any University research done on this subject?
Yes, there are works from the University of Siena, Italy and the center for Microangiology and microcirculation of the University of Milan and Pavia, Italy.

In a few words, how does the carboxitherapy works on cellulite?
According to the most recent studies, the cellulite has its origins in the microcirculatory alterations, the network of diminutive arteries, veins and lymphatics that crosses the connective. If this microcirculatory system starts failing, the tissue is not fed efficiently. The substances start accumulating and forming edemas, nodules, and skin retractions. The CO2 reverts this situation when injected in the affected zones through a very thin needle. It produces vasodilatation and improves the speed of the microcirculation, the tissue receives more oxygen and the toxins are eliminated, the edema is reduced. It also favors the lipolysis, the destruction of the adipose tissue. Another interesting fact is that Carboxitherapy provides excellent results for patients with long time cellulite and it also provides great results to young patients as a prevention method.