

carbomed^{CO₂} carboxytherapy



Method

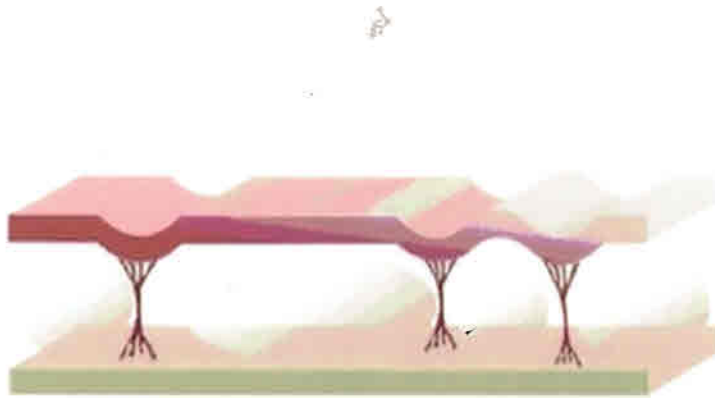
Carboxytherapy is a medical treatment consisting in the administration of gas [CO₂] subcutaneously or intradermally, for therapeutic purposes, through micro-localized injections by means of thin needles 30G, commonly used in mesotherapy.

Carboxytherapy has ancient origins, already in 1932 in Royat, France was used percutaneously for patients with arteriopathy and angiopathy, with carbon dioxide rich water. Several scientific studies have shown that carboxytherapy improves skin elasticity, reactivates the micro-local circulation, stimulates collagen fibers, and breaks the membrane of the adipocytes, causing a lipolytic and lipoclastic effect, without damaging the connective tissue, blood vessels and the surrounding neural structures.

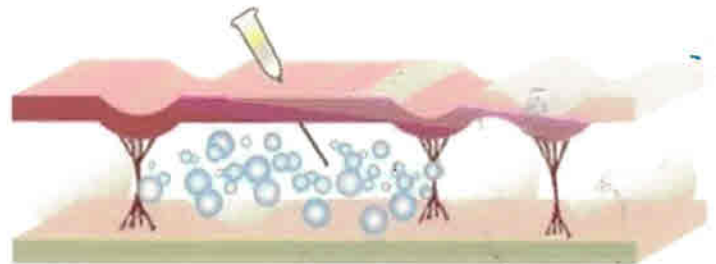
Carbon dioxide is naturally produced by our body, so it is not toxic, even in high doses, and it is disposed at the physiological level. After a single treatment normally the gas is absorbed in 5/10 minutes. Therefore, we speak of a safe procedure that only presents minor side effects (crackling sensation in subcutaneous areas and small chance of bruising).

Action Mechanisms

Vasodilation: the first direct mechanical effect resulting from the injection of carbon dioxide is a powerful vasodilation, also an increased perfusion of the treated areas is present along with arteriolar sphygmicity. Even the partial pressure of O₂ in the tissues is noticeably increased after the subcutaneous administration of CO₂.

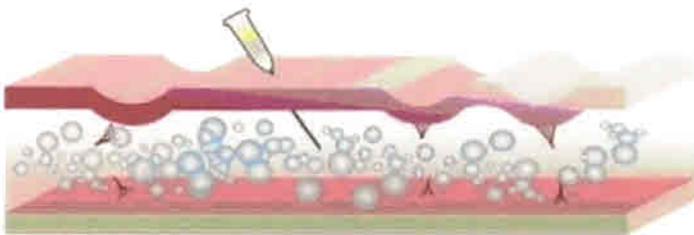


1. Adipose tissue, skin laxity.



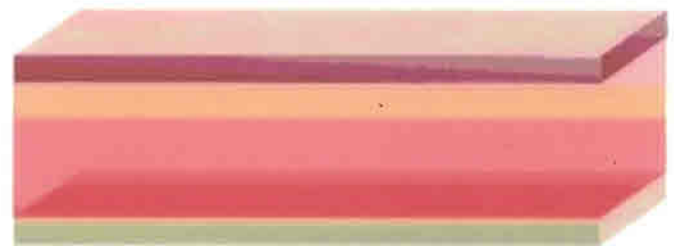
2. Sterile, medical-grade CO₂ is infiltrated into subcutaneous tissue through a tiny 30G needle. The gas can be set to flow continuously or in pulses from 0 to 200 cc/min.

3. From the injection point, the carbon dioxide diffuses easily into the adjacent tissues.



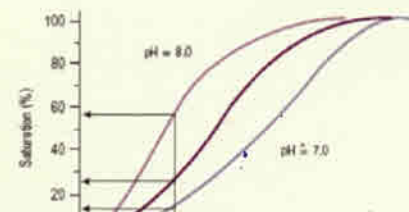
4. A strong vasodilatory effect on local capillaries enhances the flow of nutrients and dramatically improves the health and the appearance of nearby skin.

5. The effects can be long-lasting - study in Japan and Italy indicate that the introduction of small amounts of CO₂ to the dermis stimulates the production of VGF (venous growth factor).



6. The net result is increased micro-vascularization, restoration of age-depleted collagen, reduction of subcutaneous fat and firmer subcutaneous tissue.

Bohr effect: it regards the hemoglobin tendency to reduce its affinity for oxygen when the concentration of CO₂ in the blood increases. This causes the hemoglobin to release more oxygen in the surface tissue and muscle. The administration of CO₂ in the tissues promotes hydra-



Stimulation of collagen synthesis: a study carried out in Brazil in 2008 showed a reorganization of the collagen fibers in response to intradermal injections of CO₂. It is as if it were sent a message of damage to the dermis that triggered a natural process of reparation. The CO₂ improves this process firstly through greater revascularization, and then, by releasing more oxygen in the treated area, improves the phase of "the repair mechanism".

Neo-angiogenesis: by microangiological evaluation - through videocapillaroscopy with optical probe - it was possible to assess the actual creation of new capillaries. In 1930 the first experiments that demonstrated the powerful vasodilation were performed on frog's leg.

Receptor activation and lipolysis: the CO₂ activates, as a secondary effect, lipolysis and the lipoclasts of the adipocyte's membrane (Bohr effect increase and activation of lipolysis receptors). This effect is related to the hyper distention of the esteroceptors subcutaneous, i.e. the corpuscles of Pacini and Golgi. Their activation would lead to the release of algogenic substances such as bradykinin, histamine, serotonin and catecholamines.

Application fields

- Localized adiposity
- Body Contouring and Anti-aging
- Lipomatosis
- PEFS
- Dermatology
- Psoriasis
- Striae distensae
- Skin Laxity
- Phlebology and vascular diseases
- Venous insufficiency
- Restless leg syndrome
- Lymphedema
- Acrocyanosis
- Raynaud syndrome
- Ulcers
- Alopecia areata
- Male sexual impotence and female sexual dysfunctions
- Pain therapy and sport medicine
- Veterinary medicine

What's new?

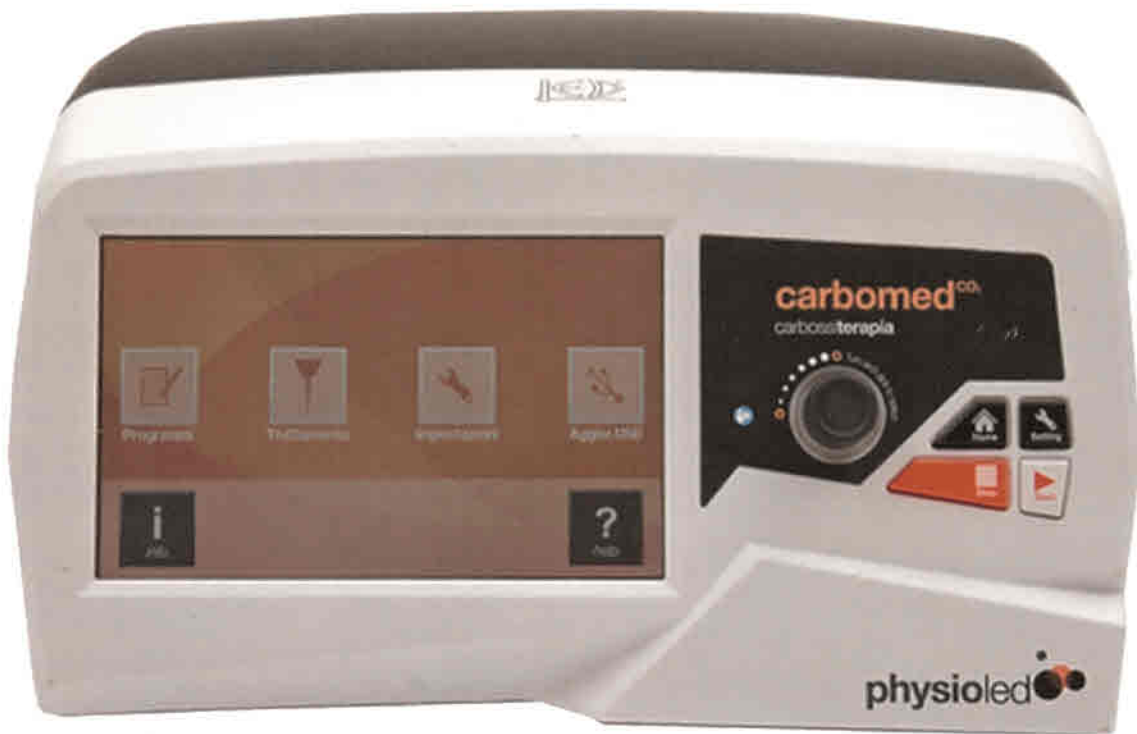
Finally a truly portable and a user-friendly device. The ergonomically designed shell and the light weight make it a portable, convenient, shock resistant and easily transportable. The gas is heated by the device to make the treatment as comfortable as possible to the patient.

The high-sensitive touch-screen of the user interface is easy and intuitive and it has pre-set programs and protocols already installed. The therapeutic flow is adjustable from 0 up to 150 cc per minute, allowing to get the biggest lift off of the tissues

Safety

- CO₂ is non-toxic and it doesn't cause embolism.
- It doesn't increase blood pressure.
- It doesn't increase CO₂ levels into the blood.
- It doesn't produce free radicals.
- It doesn't cause any allergic reactions.
- No damages to the deep connective tissues.
- Naturally eliminated and filtered through the lungs, livers and skin.





CE 0051



Specifiche Tecniche

Medical Device Class

IIb (all. IX 93/42/CE)

Power Supply

100-240V~/50-60Hz

Absorbed Power

80 VA

Equipment Protection

N. 2 fuses

Input CO2 Pressure

3.0 bar ± 0.5% bar (300kPa ± 50kPa)

Output flow

From 10 to 150 ml/min.

Gas Heating

From 0 up to 43°C

Treatment time

From 1 to 99 minutes

Equipment Dimensions

170x315x190 mm.

Net Weight

5.00 kg.



TAUMEDIKA S.R.L.-Via E.Saccetti, 7 - 00137 Rome - Italy
 Tel. +39 0765 481614 - export@taumed.it - www.taumed.it