

## CO<sup>2</sup> therapy is one of the most fascinating wonders of the world!

Although CO<sup>2</sup> therapy is mainly utilized in upmarket cosmetic and medical spas for its powerful ability to treat cellulite, wrinkles, scar marks and other skin conditions. It is even more potent as a healer of the cardiovascular system. So long as it is used for the correct indications and in the proper dose, CO<sub>2</sub> can serve as a scientifically and technically rigorous therapy which is natural, effective and free of side effects.

### Discovery of CO<sub>2</sub>'s healing power

The healing powers of acidic waters from volcanoes were already known to medieval Europe. In 1624 a medical scholar found that volcanic waters contained carbon dioxide. The first systematic medical research on CO<sup>2</sup> use was conducted in 1777. Areas where CO<sup>2</sup> containing water emerged naturally, developed in the 19<sup>th</sup> century into curative spas for heart disease.

### Mechanism of Action

In spite of numerous clinical studies in the literature, the detailed mechanism of action is still a matter of speculation. The question that is constantly debated up until now is whether CO<sub>2</sub> acts directly or indirectly as H<sub>2</sub>CO<sub>3</sub> carbonic Acid. CO<sub>2</sub> will convert to H<sub>2</sub>CO<sub>3</sub> in the body.

Here is what we do know:

Carbonic acid (H<sub>2</sub>CO<sub>3</sub>), which is CO<sub>2</sub> dissolved in water and CO<sup>2</sup> are both present naturally in our body. It has two major mechanisms of actions:

- **CNS (Central Nervous System) sedation:** This is useful in treating anxiety, stress, insomnia and tension naturally. It is a powerful mechanism to relax body and mind.
- **Vasodilatation of blood vessels:** This is useful in all vascular diseases e.g. coronary insufficiency, peripheral vascular insufficiency, diabetic vascular complications, hypertension...etc. It helps also to decrease the vascular after load in cardiac problems.

H<sub>2</sub>CO<sub>3</sub> enhances circulation in the body that leads to life giving oxygenation of tissues. Combing it with ozone therapy with better oxygenation of the blood, there will be wonderful tissue oxygenation (within the physiological range) that leads to rejuvenation and better performance of all body organs -towards optimum level.

## **CO<sup>2</sup>/H<sup>2</sup>CO<sup>3</sup> have the following effects:**

- Anti - inflammatory effect
- Stimulator of warmth receptors in the skin, inhibition of cold receptors
- Vasodilation of arteries
- Reconstruction of functionally closed capillaries
- Rightward shift in O<sup>2</sup> dissociation curve
- Rise in venous response
- Improvement in blood flow properties
- Stimulation of sympathetic nerve system

## **What does all of this mean?**

In short this means that it is one of the most valuable and effective natural therapies that create the perfect foundation for optimal wellbeing and anti-aging that have ever been in existence. It has the capacity to eradicate cardiovascular disease in a restorative and preventative way.

## **Popular Applications:**

CO<sup>2</sup> can be applied to the skin as either a :

- CO<sup>2</sup> spa baths
- CO<sup>2</sup> foot spa
- Co<sup>2</sup> Steam Sauna
- CO<sup>2</sup> gaseous body enclosure.
- CO<sup>2</sup> Injections

## **Most Popular uses for CO<sup>2</sup>**

- Skin rejuvenation by eliminating fluid buildup between skin cells

- Dilating skin blood vessels to allow for more blood, oxygen and nutrients to the skin surface
- Production of higher levels of collagen to eliminate more fat leaving a smoother, younger looking skin
- Reduction of Cellulite
- Stretch marks
- Treatment of loose flabby skin
- Removal of small fatty deposits
- Reparation of light scarring caused by acne
- Treatment of Circulatory Disease

## What application is best?

- CO<sup>2</sup> therapy is very effective no matter the application that is used.
- Deciding factors are determined by the facilities and the type of equipment available to administer the CO<sup>2</sup>.

## Practical Complications

Up until now CO<sup>2</sup> have only been produced in large scale and supplied in quite heavy cylinders that are almost impossible to carry. Besides these factors, the equipment to put it into the water are very specialized and very expensive. One of the easier forms of administering CO<sup>2</sup> is by injection but that requires medical practitioners. There are certain countries that keep CO<sup>2</sup> water as pharmaceutical products but it is easier to buy soda water or make it your self. Problem is that it will cost you a lot of money to fill up your bath with soda water. The biggest inhibitor of this therapy is that it is expensive to do hence the reason that even it is a very popular therapy.

## Dosage factors taken into consideration

- CO<sub>2</sub> Concentration and Volume
- Media: water or moisture gas
- Temperature
- Surface area of exposure

- Time : Length of exposure, number of exposures and interval between exposures

## Medical Indications and Contraindications

### Reliable indications:

- Arteriolar occlusion disease
- Cutaneous microcirculation disorder
- Arteriolar Hypertension
- Venous Hypertension
- Venous insufficiency (particularly cold water)
- Mild to moderate heart failure
- Painful dystrophy (Sudeck's disease) Stage 1
- Fibro muscular pain
- Disorders in autonomic function and regulation
- When muscle training is inadequate or impossible
- Cerebrovascular disorders

### **Contraindications:**

- Hypercapnia ( Cases where water are contraindicated )

## CO<sup>2</sup> CUTANIOUS DOUBLE BLIND STUDY

<http://www.ncbi.nlm.nih.gov/pubmed/19736632>

Website for research

<http://www.co2bath.com/top.htm> MUST USE

[http://www.ncbi.nlm.nih.gov/pubmed?cmd=Link&db=pubmed&dbFrom=PubMed&from\\_uid=17795093](http://www.ncbi.nlm.nih.gov/pubmed?cmd=Link&db=pubmed&dbFrom=PubMed&from_uid=17795093)

Website with resorts

<http://www.youraziza.co.uk/blog/2011/05/30/Carbon-Dioxide-CO2-Bath-in-Cardiac-Care-and-Rehabilitation-Program.aspx>

<http://www.hit-polen.com/sanatoriums.htm> Very good a lot of big sanatoriums

<http://www.exitservices.me/home/page/Mzg=>

<http://www.ghotw.com/magazine/article/best-spa-treatments/2009/jul/co2-bath.htm>

[http://www.assistireland.ie/eng/Products\\_Directory/Healthcare\\_Products/Hydrotherapy\\_Equipment/CO2\\_Steam\\_Dry\\_Gas\\_Baths.html](http://www.assistireland.ie/eng/Products_Directory/Healthcare_Products/Hydrotherapy_Equipment/CO2_Steam_Dry_Gas_Baths.html) This one shows CO2 steam dry bath

<http://www.spa-resorts.cz/eng/kaleidoskop/natural-health-spa-treatments-dry-carbonic-baths-1236.html>

This website shows excellent images for dry CO<sup>2</sup> bathing

[http://www.google.com/imgres?hl=en&sa=X&tbo=d&biw=1736&bih=930&tbnid=DJLf5JNdW74aIM:&imgrefurl=http://gogalavanting.com/blog/2011/6/26/wrapped-in-a-plastic-bag-in-czech-republic.html&docid=qncN0A0F0kOR4M&imgurl=http://gogalavanting.com/storage/article\\_photos/view-from-abroad/luhacovice-spa-town-CO2-dry-bath-bag-treatment-collage-520px.jpg%253F\\_SQUARESPACE\\_CACHEVERSION%253D1309133615697&w=520&h=555&ei=nh--UKDiLO01iwKCn4CoCA&zoom=1&iact=hc&vpx=1036&vpy=243&dur=8282&hovh=232&hovw=217&tx=126&ty=117&sig=109476497970600614668&page=1&tbnh=126&tbnw=120&start=0&ndsp=43&ved=1t:429,r:31,s:0,i:185](http://www.google.com/imgres?hl=en&sa=X&tbo=d&biw=1736&bih=930&tbnid=DJLf5JNdW74aIM:&imgrefurl=http://gogalavanting.com/blog/2011/6/26/wrapped-in-a-plastic-bag-in-czech-republic.html&docid=qncN0A0F0kOR4M&imgurl=http://gogalavanting.com/storage/article_photos/view-from-abroad/luhacovice-spa-town-CO2-dry-bath-bag-treatment-collage-520px.jpg%253F_SQUARESPACE_CACHEVERSION%253D1309133615697&w=520&h=555&ei=nh--UKDiLO01iwKCn4CoCA&zoom=1&iact=hc&vpx=1036&vpy=243&dur=8282&hovh=232&hovw=217&tx=126&ty=117&sig=109476497970600614668&page=1&tbnh=126&tbnw=120&start=0&ndsp=43&ved=1t:429,r:31,s:0,i:185)

<http://www.uzdrowisko-ladek.pl/index.php?page=268>

Check out the wellness packages

<http://www.trust-tours.com/outbound/wellness.shtm>

<http://www.keltenbad.de/englisch/therapie/start.php>

<http://www.uzdrowisko-ladek.pl/index.php?page=268>

Website for Mitsubishi product

<http://www.mcmed.co.jp/english/business/export/carbothera.html>

German Product

<http://www.bodyreg.de/co2-dry-bath-unit/>

This website is super excellent  
Read all the benefits in different areas.

## WEBSITE FOR VIDEO

<http://www.youtube.com/watch?v=Joig8AOaBjI>

<http://www.youtube.com/watch?v=2XMWP3Bdpc>

<http://www.youtube.com/watch?v=UHurhKibro>