

# EVIDENCE BASED STATEMENT

DOMAIN **11**, Statement **08**

TOPIC: “Carboxytherapy / ozone therapy evidence in venous-lymphatic disease management”

## SEARCH TERMS & SOURCES

Carboxytherapy / (ozone therapy) AND ((vein) OR (venous))

### INCLUSION CRITERIA

- Systematic Reviews, Meta-Analysis, Reviews
- Publication < 10 years, only ENG

## SEARCH RESULT BEFORE - AFTER SELECTION

9/2

### PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Chirchiglia D, Chirchiglia P, Stroschio C, et al. Suspected Pulmonary Embolism after Oxygen-Ozone Therapy for Low Back Pain. J Neurol Surg A Cent Eur Neurosurg. 2019 Nov;80(6):503-506.
2. Brochado TMM, de Carvalho Schweich L, Di Pietro Simões N, et al. Carboxytherapy: Controls the inflammation and enhances the production of fibronectin on wound healing under venous insufficiency. Int Wound J. 2019 Apr;16(2):316-324.
3. Zhou YT, Zhao XD, Jiang JW, et al. Ozone Gas Bath Combined with Endovenous Laser Therapy for Lower Limb Venous Ulcers: A Randomized Clinical Trial. J Invest Surg. 2016 Oct;29(5):254-9.
4. Solovăstru LG, Stîncanu A, De Ascentii A, et al. Randomized, controlled study of innovative spray formulation containing ozonated oil and  $\alpha$ -bisabolol in the topical treatment of chronic venous leg ulcers. Adv Skin Wound Care. 2015 Sep;28(9):406-9.
5. Dharap SB, Ghag GS, Kulkarni KP, Venkatesh V. Efficacy and safety of oxum in treatment of the venous ulcer. J Indian Med Assoc. 2008 May;106(5):326, 328-30.

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## IDENTIFIED REFERENCES

1. Ahramiyanpour N, Shafie'ei M, Sarvipour N, et al. Carboxytherapy in dermatology: A systematic review. *J Cosmet Dermatol*. 2022 Feb 6. doi:10.1111/jocd.14834.
2. Bomfim TL, Gomes IA, Meneses DVC, Araujo AAS. Effectiveness of Ozone Therapy as an Adjunct Treatment for Lower-Limb Ulcers: A Systematic Review. *Adv Skin Wound Care*. 2021 Oct 1;34(10):1-9.

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### TEXT FOR INCLUSION IN THE DOCUMENT

DOMAIN 11, Statement 08, TOPIC: “Carboxytherapy / ozone therapy evidence in venous-lymphatic disease management”

Nowadays, carboxytherapy and ozone therapy for lower limb aesthetic treatments are on fashion in a progressively increasing number of countries and many commercials are found claiming a benefit in the early stages of lower limb venous and lymphatic disease.

In reality, both carboxytherapy and ozone therapy have been in the market for decades, yet no solid evidence based data have been found in support of this use.

Our literature search reports just a limited literature for both carboxytherapy

**\*[Brochado TMM, de Carvalho Schweich L, Di Pietro Simões N, et al. Carboxytherapy: Controls the inflammation and enhances the production of fibronectin on wound healing under venous insufficiency. Int Wound J. 2019 Apr;16(2):316-324].**

and ozone therapy potential benefit and just for wound healing.

**\*[Bomfim TL, Gomes IA, Meneses DVC, Araujo AAS. Effectiveness of Ozone Therapy as an Adjunct Treatment for Lower-Limb Ulcers: A Systematic Review. Adv Skin Wound Care. 2021 Oct 1;34(10):1-9].**

Also in the ulcer context, more data and randomized comparative trials are needed before recommending the use of both carboxytherapy and ozone therapy.

More research is also needed to explain and prove the mechanism of action of both carboxytherapy and ozone therapy in the context of aesthetic phlebology.

While generally considered safe, these therapeutic approaches should be properly tested and monitored, as potential serious complications have been also reported.

**[Chirchiglia D, Chirchiglia P, Stroschio C, et al. Suspected Pulmonary Embolism after Oxygen-Ozone Therapy for Low Back Pain. J Neurol Surg A Cent Eur Neurosurg. 2019 Nov;80(6):503-506].**

Both health and non health professionals should be adequately informed about the lack of evidence in support of both carboxytherapy and ozone therapy for venous-lymphatic disorders.

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### STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 11, Statement 08

**“Up to the knowledge of this experts consensus carboxytherapy and ozone therapy have not demonstrated to improve venous-lymphatic function and appearance”**

### SELECTED REFEREENCES

1. **\*Brochado TMM, de Carvalho Schweich L, Di Pietro Simões N, et al. Carboxytherapy: Controls the inflammation and enhances the production of fibronectin on wound healing under venous insufficiency. Int Wound J. 2019 Apr;16(2):316-324**
2. **\*Bomfim TL, Gomes IA, Meneses DVC, Araujo AAS. Effectiveness of Ozone Therapy as an Adjunct Treatment for Lower-Limb Ulcers: A Systematic Review. Adv Skin Wound Care. 2021 Oct 1;34(10):1-9**
3. **Chirchiglia D, Chirchiglia P, Stroschio C, et al. Suspected Pulmonary Embolism after Oxygen-Ozone Therapy for Low Back Pain. J Neurol Surg A Cent Eur Neurosurg. 2019 Nov;80(6):503-506**

### identified LITERATURE BIAS

Lack of literature

### SUGGESTED NEXT LINES OF RESEARCH

RCTs