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Intramuscular Oxygen-Ozone Therapy in the treatment of Lumbar Disc Herniation

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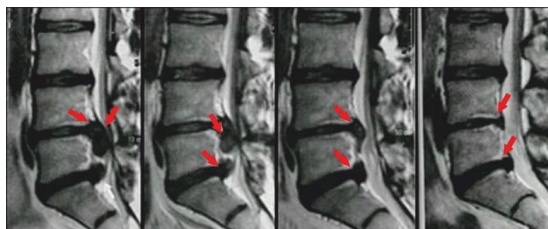
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Acute Low Back Pain is a major cause of disability, among its causes, is Disc Herniation. It is estimated that one of the usual treatment of LBP is Oxygen-Ozone Therapy. Medical Ozone [O₂ O₃] has long been used in the medical field, thanks to its antiseptic and anti-inflammatory properties. This treatment has been recommended by the National Italian Institute of Health after stipulating a Consensus Conference regulating the use of O₂ O₃ injections according to SIOOT protocol (Oxygen-Ozone Italian Society OOIS). In the treatment of Disc Herniation, the oxygen-ozone mixture acts in 3 ways:

- 1) Thanks to its hydrophobic propriety, It reduces the pulpy nucleus direct mechanic compression applied to the nerve roots.
- 2) It has an anti-inflammatory effect, as it inhibits the activation of phospholipases, COX and metalloproteases by oxydizing algogen or commonly known pain mediator such as proinflammatory prostaglandins. A survey published on "Science" has revealed that our immune system naturally produces ozone molecules to defend against infections.
- 3) It reactivates the microcirculation increasing red blood cells deformability and the production of 2-3 diphosphoglycerate, thus eradicating the vasa nervorum painful ischaemia.

Ozone application in the treatment of Disc Herniation is administered employing intramuscular paravertebral injections, according to specific SIOOT Scientific Society Oxygen Ozone therapy protocol instructions. If correctly applied, there are no side effects nor are there downsides in the method. The results of different studies on people affected by the above-mentioned pathology have shown complete healing in 88.4% of cases, a substantial improvement in 9.4% and a non-modified framework in only 2.2%.



Biography

Marianna Chierchia is a specialist in Orthopedics and Traumatology, Doctor of Research at the University of Campania Luigi Vanvitelli. Her study is on knee biomechanics, with particular regard to the ligaments of the knees, nanocomposite shelves, osteoporosis, epidemiology & genetics of scoliosis and use of ozone in orthopedic & vascular pathology.

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