



## Therapeutic Effect of Ozone in the Treatment of Chronic Non Specific Low Back Pain

Hadeer Elhamid\*

Department of Physical Therapy, Harvard Medical School Clinical Scholars Research Training, Egypt

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### Introduction

One of the most common health problems in primary care is Low-back pain (LBP) [1].

LBP patients take the high cost of treatment for with has a major economic impact worldwide. From all spinal problems & chronic pain conditions, LBP affected on the population indiscriminately worldwide. So, the diffusion of LBP different according to use determination & study of the populations. "It is estimated that 70% to 85% of the population experience an episode of LBP at some point. 90% of individuals will have more than one episode" (1). Chronic LBP due to spine issues is managed using a number of approaches, such as physical therapy, oral medications, and local injections. Surgery is a treatment option as well and it doesn't always yield good outcomes and may entail revision spine surgery. Pain inducing spine problems which tend to limit physical activity. "Therapeutic US is vastly used treatment for LBP, the healthcare provider uses a hand-held device output waves which go over the skin. The goal is to transfer heat and energy to body part under the skin to decrease pain and increase speed of recovery" [2].

Ozone therapy ( $O_3$ ) has anti inflammatory & analgesic effect [3] and in the cases of intradiscal injection  $O_3$  treatment, one of the main therapeutic causes of medical  $O_3$  are reducing the disk size which can possibly decrease nerve root compression. "Furthermore, disk shrinkage can improve local microcirculation and increase the supply of oxygen by reducing venous stasis caused by a disk compression of vessels" [4].

"Also intramuscular lumbar paravertebral injections, which are slightly invasive, seem to safely and effectively relieve pain also reduces both inability and the intake of analgesic drugs" [5]. But we can use conser-

vative treatment to be safe and comfortable for patients & less expensive.

So the physical therapy treatment aims to improve function and prevent lack of ability from getting worse. Physical therapy programs help to support low back, promote proper positioning and posture are often used in combination with other interventions, improve mobility and flexibility.

Ozonated Olive Oil is made by steaming highly concentrated ozone gas through pure organic olive oil. This method takes some days of continuous gas flow. The conclusion is an effective strong oil that has the special odor of ozone. Topically use Ozonated Oil which allow ozone to enter the tissue and oxidize lactic acid and other toxins that may be present and relieve pain. According to a previous study found that used ozonated oil applied topically and found that there is decrease in pain & tenderness of muscle [3].  $O_3$  induced vascularization by the effect of tissue hyperoxygenation. Therefore, the inhibitory capacity of inflammatory metabolites is improved [4]. " $O_3$  has analgesic effect which is provided by oxidation of the products of albuminolysis, the so called allopeptides that act on the nerve endings in the damaged tissue and determine the intensity of pain response"[4]. that will improve blood flow and decrease pain & inflammation of the LBP.

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**Contact:** Hadeer Elhamid PT, DPT ✉ hadeer.elhamid@gmail.com 📍 Department of Physical Therapy, Harvard Medical School Clinical Scholars Research Training, Egypt.

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