

The most effective supporter of complementary medicine is OZONE THERAPY....



## What Is Ozone Therapy?

Ozone is a state of oxygen gas transformed into O<sub>3</sub> form with a high electric current from the O<sub>2</sub> form. With the application of ozone gas to the body by various methods, the chemical reactions created in metabolism are used for a wide variety of treatments.

Did you know that ozone therapy is a complementary medicine technique and gives very successful results in the following applications?

### 1) Major Autohemotherapy

Major autohemotherapy; It is the return of 50-200 ml of blood to be taken from the patient after mixing with the ozone determined at the dose.

Major autohemotherapy method strengthens the immune system.

Increases resistance to infectious diseases.

It renews the vessels and regulates blood pressure.

It cleans the blood and lymph system.

It normalizes the production of hormones and enzymes.



### 2) Minor Autohemotherapy

Among the medical applications, minor autohemotherapy has a rapidly developing effect. 2-5 ml of blood taken from the patient mixed with the dose of ozone and injected into the muscle. Heals joint pain and muscle ailments.

By removing the toxin accumulated in the muscles, it relaxes and softens the muscles and increases their flexibility.

### 3) Rectal Application

It is the process of slowly injecting the desired dose of ozone into the 100 cc syringe into the patient's intestines through the rectal route with the help of a special catheter.

Rectal ozone therapy; The ozone gas flow applied to the intestines eliminates free radicals.

It is very effective against pathogenic microbes.

It is used as a supportive treatment in the treatment of such disorders in anal fissure, anal fistula, hemorrhoids, prostate and gynecological problems in the rectal region.

### 4) Bagging Application

It is the application of ozone gas to the legs, feet or any part of the body with an ozone-resistant bag. Before this procedure, the injured area should be moistened with water. After the bag is filled, it is waited for 20-30 minutes and then the ozone gas in the bag is absorbed by the device, decomposed in the catalyst and converted into oxygen and thrown out.

It is a very effective method especially applied in extremity infections, ulcers and local skin lesions.

In diabetic foot wounds, it increases the amount of oxygen in the wound area, tissue and cells renew themselves; thus begins a repair process.



### 5) Water Ozonation Application

Water ozonation application is the process of giving an ozone dose in the range of 60-100 ug/ml for 10-15 minutes to distilled water in a 1 liter glass chamber. During this process, the outlet part of the glass chamber must be connected to the catalyst. After the distilled water is ozonated at the desired dose, it should either be used immediately or stored in the refrigerator.

Ozonated water; It is used in disinfecting the skin, in the treatment of throat and stomach diseases and in dentistry applications.



### 6) Low Concentration

It includes ozone applications needed between 0.1 and 2 ug/ml. In this application, as in other applications, the amount and duration of the dose should be determined by the Doctor.

## 7) Ozone Sauna

Ozone sauna; Far infrared technology is a method of injecting water vapor and ozone gas into the body through the skin in the cabin.

It helps to remove toxins and heavy metals accumulated in the body through sweating and to open the pores.

It helps the body to burn calories and helps to lose weight and stay in shape.

It is an important factor in providing and protecting the elasticity of the skin by helping to remove toxins from the body.

It is used to relax the muscles and gain flexibility by helping to oxidize the lactic acid accumulated in the muscles.

It is used to reduce depression and stress.

It helps to eliminate fungus and foot odor.

It contributes to revitalizing the immune system.

It is beneficial in reducing connective tissue stiffness.

With warming up, muscle spasm is resolved, pain is relieved and range of motion increases.



## Ozone Therapy Indications

- Arterial circulation disorders
- Disruptions in the immune system (Immune system activation, Allergy)
- As additional treatment in cancer patients
- Diseases caused by viruses
- Diseases caused by fungi
- Inflammatory conditions
- Rheumatic diseases
- Skin lesions, burns and external ulcers
- Dentistry applications



## Ozone Therapy Contraindications

- Pregnancy
- Glucose-6-Fospatdehydrogenase Lack of Enzyme (Favism)
- Not under control hyperthyroidism, thrombocytopenia and serious cardio-vascular situations
- Patients using ACE inhibitor
- Ozone allergy

106 patients with idiopathic sudden sensorineural hearing loss were studied. The highest response rate to the treatment was seen in the group of oral steroid + ozone therapy (82.4%).

## Clinical Study Examples-1

In the article 'The place of hyperbaric oxygen therapy and ozone therapy in sudden hearing loss' published in the Brazilian Journal of Otorhinolaryngology, the effectiveness of hyperbaric oxygen therapy and ozone therapy in the treatment of idiopathic sudden sensorineural hearing loss was evaluated when both treatments were included in steroid therapy.

In the steroid + ozone group, medical ozone therapy was applied using the major autohemotherapy method in addition to oral steroid therapy.

## Clinical Study Examples-2

In the article 'Effect of sodium ascorbate on dentin bond strength after treatment with oxidizing root canal irrigants' published in the Journal of Dental Sciences, water ozonation method, which is one of the application methods of the device, was used.

Distilled water was ozonated using the device's high-dose feature. The ozonated water was used within 20 minutes after preparation.

A significant increase in the bond strength of dentin was observed after application.

In the literature, the use of water ozonation method is recommended in the treatment of gingival infections, during dental surgery, in cases of failed implants, root caries and canal treatment.

Table 3 The groups' response to the treatment.

Groups	Response to treatment	No response to treatment	Total
A	32 (50.8%)	31 (49.2%)	63
B	16 (61.5%)	10 (38.5%)	26
C	14 (82.4%)	3 (17.6%)	17

A, oral steroid group; B, oral steroid + hyperbaric oxygen group; C, oral steroid + ozone group.

There is response to treatment: gaining PTA above 15 dB.

There is no response to treatment: gaining PTA less than 15 dB.

### Clinical Study Examples-3

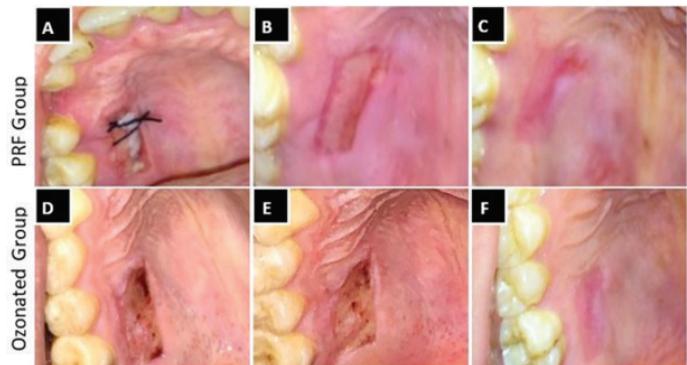
In the article 'Clinical and cytological assessment of platelet-rich fibrin versus topical ozonated oil in palatal wound healing after free gingival graft harvesting: Randomized controlled trial' published in the Journal of Oral and Maxillofacial Surgery Medicine, and Pathology, ozonated products, which is one of the application methods of the device (ozonized olive oil) is discussed.

The aim of this study was to evaluate the effects of platelet-rich fibrin (PRF) and ozonized oil on the healing of palatal (palate) donor wound sites and patient morbidity (disease) after free gingival graft (SDG) removal. Regarding the primary outcome of the healing index, it was observed that the topical application of ozone reduced the patient's morbidity and the palatal wound healed faster than the PRF compared to the control group. It was observed that there was no significant difference in Recovery Index between PRF and ozonated oil at 4 weeks.

### Clinical Study Examples-4

In the article 'Ozone therapy versus surgery for lumbar disc herniation: A randomized double-blind controlled trial' published in Complementary Therapies in Medicine, ozone injection method, which is one of the application methods of the device, was used. The aim of this study is to apply and compare three methods in the treatment of symptomatic disc herniation. These methods are: Intradiscal ozone infiltration ( $27 \mu \text{g/mL}$ ), Oxygen infiltration, Surgery.

As a result of the applications, it was stated that 20% of the patients in the ozone group, 60% of the patients in the oxygen group and 11% of the patients who were initially treated with surgery required a second surgery five years after their treatment. It has been observed that intra-disc ozone infiltrations reduce the need for conventional surgery.



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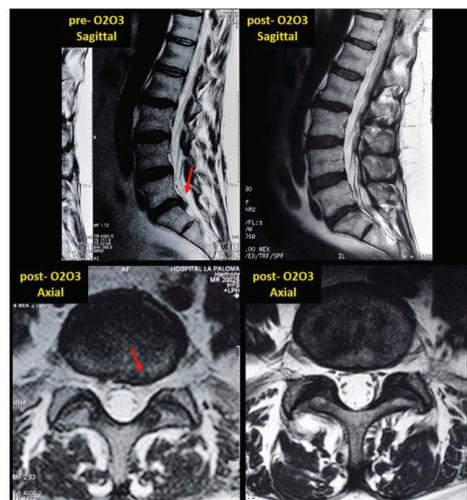


Fig. 2. Images pre- and post- ozone treatment. 59 years old patient on waiting list for surgery because a symptomatic left paracentral L5-S1 disc herniation (red arrow) with muscle end-plate impingement, and S1 compression. After randomized, blinded assignment, the patient was treated by intradiscal oxygen-ozone (O203) infiltration. Planned surgery was avoided. In the last magnetic resonance images (MRI), nine years after procedure, the patient remained without symptoms and relevant clinical signs. Upper left: Sagittal MRI pre-treatment. Upper right: Sagittal MRI three years post-treatment. Lower Left: Axial MRI pre-treatment. Lower Right: Axial MRI three years post-treatment.

### Vetozone Veterinary Ozone Generator

Vetozone Ozone Device has the ability to perform all ozone applications. This device, which is produced for veterinarians, is used as a support in the treatment of wounds, infections, fungi and orthopedic diseases, especially chronic diseases in animals.

