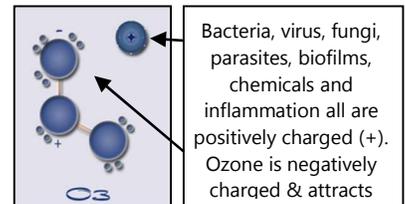


## HEMO-OZONE THERAPY (HOT)

Ozonotherapy is the use of medical grade ozone, a highly reactive form of pure oxygen, to create a curative response in the body. The body has the potential to renew and regenerate itself. When it becomes sick it is because this potential has been blocked. The reactive properties of ozone stimulate the body to remove many of these impediments thus allowing the body to do what it does best – heal itself.

Ozonotherapy has been and continues to be used in European clinics and hospitals for over fifty years. Ozone was in regular medical usage in the United States before 1885 as reported in the Florida Medical Association. Therefore, ozone predates the 1906 Pure Food and Drug Act and the FDA. Thus, ozone for medical usage is grandfathered in the United States and held perfectly legal for use without censure. With the advent of antibiotics, ozone therapy faded from routine use in the US. However, in the early 1980's, ozone was re-introduced to North America and has been increasingly used since. When ozone is injected into the bloodstream, it immediately reacts with any available oxidizable substrate (called peroxidation), most notably the lipids of cell membranes. The lipid peroxidation products created by ozone include hydrogen peroxide, which is the mechanism by which viruses, bacteria, and fungi are killed by immune cells (macrophages). In addition, other highly reactive substances are formed that promote overall detoxication of chemicals, toxic metals, metabolic waste, etc. As such, IV medical ozone-oxygen has been found useful in various diseases because it:

- **Kills bacteria, fungi and viruses** at lower concentrations than chlorine (1 molecule of ozone = 3,000 to 10,000 molecules of chlorine) and kills 3500 times faster than chlorine.
- **Oxidizes toxins** such as phenolics (poisonous compounds of methanol and benzene), pesticides, detergents, chemical manufacturing wastes and aromatic compounds more rapidly and effectively than chlorine, yet without chlorine's harmful residues (trihalomethanes, etc.).
- **Activates the immune response system.**
- **Improves cellular utilization of oxygen** that reduces ischemia in cardiovascular and cerebrovascular diseases. Improved microcirculation and reduced stacking of blood cells (rouleaux) has been reported. As such ozone has been reported to be significantly helpful in heart disease, poor circulation, stroke, etc. and many of the infirmities of aging.
- It causes the **release of growth factors** that stimulate damaged joints and degenerative discs to regenerate. Increases fibroblastic activity to help expedite repair. When used as HMAHOT mentioned later, it has been suggested that **ozone releases and activates stem cells** to repair and rejuvenate tissues throughout the body.
- Reduce or eliminate many cases of chronic pain through its action on pain receptors.
- Published papers have demonstrated its healing effects on interstitial cystitis, chronic hepatitis, herpes infections, dental infections, diabetes, and macular degeneration.



Oxygen as a single atom is deficient in electrons. This makes the atom very unstable, and as a result single oxygen atoms cannot exist in nature all by themselves – at least not for more than nanoseconds. However, two oxygen atoms can join together to share electrons, and this combination forms a very stable molecule referred to as O<sub>2</sub>. This is the stable form of oxygen that is found in the atmosphere.



**How is medical grade ozone made?** When an energetic force, such as electricity or ultra-violet light, is imposed upon a molecule of O<sub>2</sub>, the two oxygen atoms are temporarily split apart into single oxygen atoms. Then, in a matter of nanoseconds these highly unstable oxygen atoms will pair up again and reform back into O<sub>2</sub> molecules. But a small percentage of them will unite in a ménage-a-trio known as ozone. Thus, ozone, referred to as O<sub>3</sub>, is a molecule which consists of three oxygen atoms all sharing the same electrons. Because there just are not enough electrons to go around to keep three oxygen atoms completely happy, ozone is a relatively unstable molecule. This instability has powerful biological activity.

Ozone is made by passing pure oxygen gas through a crystal tube through which an electrical spark is directed. The electrical energy breaks apart the oxygen molecules as described above, and what emerges from the other side is a mixture of pure oxygen and ozone. It is critical that only medical grade pure oxygen is used and not an oxygen concentrator. We use a state of the art self-calibrating German-made unit with full certification to generate ozone.

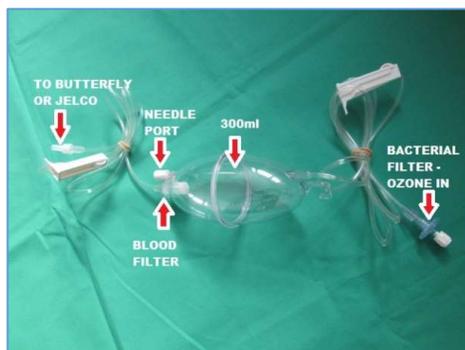
**What are some of the most effective way of getting ozone into the body?** Since ozone dissolves rapidly in fluids, ozone can be used therapeutically in a variety of ways:

1. Topically: onto and through wet/damp skin, sinuses, etc.
2. Rectal Insufflation: through the colonic mucosa by rectal insufflation.
3. Prolozone Injection: directly into tissues such as joints, scars, trigger points, fibromyalgia sites, etc.
4. Intravenously: either directly (DIV), bubbling through salt water (saline), or by injection of ozone into blood that has been withdrawn from the body and then re-injecting it (MAHT and HMAHOT).

□ **Major AutoHemoTherapy (MAHT):** The technique of MAHT involves mixing medical grade oxygen-ozone gas with the blood of the patient and then intravenously infusing the ozonated blood back into the same person. This highly oxygenated blood destroys most pathogens it comes in contact with AND seems to generate a vaccine-like response. In other words, ozonated blood stimulates the immune defense system to clear pathogens and toxins from the body. It has also been suggested that MAHT stimulates the release and activates stem cells, induces cellular enzymes that help with detoxification and reduce oxidative stress.

MAHT is comfortable, safe and has a cumulative effect so that each treatment builds on and enhances the effects of previous treatments. For acute infections, frequent treatment may be necessary initially. The session requires drawing up your blood (up to 100cc which is about 6-7 tablespoonfuls) from an arm vein into a syringe that has heparin added to it to prevent clotting, mixing it with sterile salt water (saline solution), slowly adding an ozone/oxygen mix into the blood-saline mixture, and then slowly dripping your blood back into the same vein via tubing. The process takes about 30-45 minutes. You may leave immediately after completion of the IV without any restrictions on driving, activity, etc. MAHT is often combined with Ultraviolet Blood Irradiation (UBI or UVP) because there is a synergistic amplification of combining these therapies simultaneously. There is a separate information sheet about UVP.

□ **Hyperbaric MultiPass Auto Hemo Ozone Therapy (HMAHOT):** This is similar to MAHT described above with some key exceptions: 1) instead of the blood being withdrawn with a syringe, the blood is withdrawn using suction from the ozone generating unit; 2) the volume of blood removed and then exposed to the ozone/oxygen mixture is 200-220 ml (about twice as much as traditional MAHT); 3) the tubing and the holding material is specialized to resist ozone and clotting; 4) the ozone/oxygen is mixed into the blood with pressure (hence the term "hyperbaric") enabling a greater concentration of the ozone/oxygen to dissolve into the blood and plasma; 5) more than one "pass" can be performed at a single session. Up to 15-20 passes have been safely performed on repetitive basis but the majority of patients receive 6-10 passes; 6) because the blood is withdrawn and then returned to the body multiple times, a larger dose of heparin is used to prevent clotting; and 7) the results are dramatically increased. Because the procedure is more automated, the duration of time to under a single pass is much shorter. However, because the equipment, disposables, and labor involved are more involved, HMAHOT is more expensive than MAHT - but the results are much faster and greater. According to Dr. Lahodny of Austria, who pioneered the approach, his standard treatment is one session of 10 HMAHOT per week with



estimation that after 10 HMAHOT treatments, most ailments are repaired.

Preparing for HMAHOT:

1. **Drink 0.75L of water 30 minutes prior** to starting each HMAHOT session.
2. **Drink another 0.75L of water just prior** to starting each HMAHOT session.
3. Although you may take any supplements, medications, etc. prior to a HMAHOT session, it is your responsibility **to tell the nursing staff of any changes to medications** that you are using that are not listed in your chart or that you think we may not be aware of (eg- aspirin, blood thinners, etc.). HMAHOT and MAHT is not recommended during the first 12 weeks of pregnancy.
4. Your blood pressure and pulse will be taken prior to each HMAHOT session.
5. Heparin interferes with clotting for about 10-12 hours – there **can be no active bleeding** (eg- nose bleeds, hemorrhoids, menstruation, etc.) during an HMAHOT.
6. Although rare, heparin when given subcutaneously can cause an itchy red or eczematous plaques directly around the injection sites, when given intravenously (as is the case with MAHT and HMAHOT), heparin allergy is exceedingly rare. However, because heparin can cause a non-immune based reaction leading to low blood pressure, this must be understood prior to engaging in MAHT or HMAHOT.
7. You must have a **signed consent form** and have **any of your questions answered** before receiving HMAHOT.
8. When the procedure is finished, you must leave the **compression bandage in place for 6hrs** to prevent bruising/bleeding at the site of the venipuncture.