# IV Ozone Therapy | *Major Autohemotherapy (MAH) • 10-Pass • Gravity Method*

IV ozone therapy (Major Autohemotherapy) draws a patient's blood, infuses it with medical-grade ozone and oxygen, then reinfuses it — activating the body's antioxidant defenses, eliminating pathogens, reducing inflammation, and dramatically improving cellular oxygen delivery. It works at root-cause level across a wide range of chronic conditions, infections, and wellness goals.

## How Ozone Therapy Works

Medical ozone ($O_3$) triggers a controlled oxidative response that simultaneously activates five key therapeutic mechanisms. Importantly, oxidation therapies do not simply provide more oxygen — they directly improve oxygen utilization by increasing the NAD/NADH ratio intracellularly and intramitochondrially, often more effectively than oral or injectable NAD+.

**1 Antimicrobial** — *directly destroys viruses, bacteria, and fungi by oxidizing cell membranes — no resistance risk*

**2 Anti-Inflammatory** — *activates Nrf2, upregulates antioxidant enzymes (SOD, GSH, catalase), reduces systemic cytokines*

**3 Oxygenation & Circulation** — *increases 2,3-DPG in red blood cells, enhances tissue oxygen utilization, improves microcirculation, increases nitric oxide*

**4 Immune Modulation** — *potent regulator of the immune system — balances overactive (autoimmune) and stimulates underactive (chronic infection) responses*

**5 Mitochondrial & Cellular Support** — *improves NAD/NADH ratio intracellularly, activates platelets, induces heat shock proteins, upregulates adenosine (A1 receptor) — pain levels drop*

## Who Benefits Most

→ **Chronic Illness** *Lyme, mold, autoimmune, post-viral — treatment-resistant conditions*

→ **High Toxic Burden** *heavy metals, mycotoxins, chemical sensitivity needing systemic detox support*

→ **Athletes & Biohackers** *optimized oxygenation, faster recovery, mitochondrial & anti-aging benefits*

→ **Post-Illness Recovery** *long COVID, surgery, burnout — cellular energy and immune restoration*

→ **PRP Patients** *platelet activation makes ozone an excellent adjunct to PRP therapy*

## Treatment Benefits

### Physical & Neurological

- Increased energy levels and reduced fatigue
- Enhanced mental clarity, reduced brain fog
- Decreased pain (adenosine A1 receptor upregulation)
- Improved stamina and workout capacity
- Fewer recurring infections, reduced GI issues

### Cellular & Mitochondrial

- Improved NAD/NADH ratio — often superior to oral/injectable NAD+
- Upregulation of antioxidant enzymes: SOD, glutathione, catalase
- Platelet activation — synergistic with PRP therapy
- Induction of heat shock proteins — cellular stress protection
- DNA protection and cellular repair activation

### Anti-Aging & Regenerative

- True cellular regeneration via lipid oxidation products (LOPs) reaching hypothalan endocrine glands, kidneys, liver, and bone marrow
- Neuro-endocrine response including euphoria and vitality
- Increased bone marrow function
- Healthier skin appearance, stronger hair and nails
- Better sleep quality and renewed energy

## Important: Chronically Ill Patients

In patients whose disease is not too advanced, ozone upregulates SOD, glutathione, and catalase — priming the antioxidant system to become more efficient. However, patients with advanced disease may not have sufficient antioxidant enzyme reserves, and ozone could worsen their condition without proper preparation.

## Dose-Dependent Effects

Ozone produces distinct therapeutic effects based on concentration. Protocol is always individualized to the patient's condition, health status, and goals.

| Dose Level | Passes / Concentration | Primary Applications |
|---|---|---|
| **Low dose** | 1–4 passes1 mcg/kg (5–10 mcg/mL) | Restoration & regeneration, antioxidant pathway support, neurological and cardiovascular health |
| **Medium dose** | Mid-range passes2 mcg/kg (10–20 mcg/mL) | Neurological and cardiovascular support, immune modulation, performance enhancement |
| **High dose** | 5–10 passes5 mcg/kg (20–70 mcg/mL) | Antimicrobial — kills viral, bacterial, and fungal pathogens. Performance enhancement for robust/athletic individuals |

*Note: Higher concentrations (40–70 mcg/mL, gamma range) can become immune inhibitory. Dosing is carefully calibrated to each patient's baseline and treatment goals.*

### Performance & Wellness

- Athletic performance enhancement and recovery acceleration
- Biohacking, anti-aging, and immune resilience protocols
- General wellness optimization

## Pairs Well With

- PRP (Platelet-Rich Plasma) — ozone activates platelets, amplifying PRP's regenerative effect
- IV Glutathione — enhances antioxidant support and detox post-ozone
- IV NAD+ — complementary mitochondrial support (ozone improves intracellular NAD ratio)
- IV Vitamin C (HDIVC) — use when direct $H_2O_2$ delivery to tissue is the goal
- Peptides (BPC-157, Thymosin Alpha-1) — synergistic tissue repair
- HBOT — layered oxygenation for neurological and tissue recovery
- Binder protocol — supports toxin clearance, reduces Herx reaction

## What It Treats

### Medical Conditions

- Autoimmune — Hashimoto's, rheumatoid arthritis, celiac, Graves' disease, MS
- Chronic infections — Lyme disease, mold toxicity, mycotoxin illness
- Infectious diseases — fungal, viral, bacterial infections (including herpes)
- Cancer support — complementary alongside conventional care
- Neurological — fatigue, brain fog, post-viral cognitive impairment
- Musculoskeletal — pain, injury recovery, joint inflammation
- Circulatory — ischemic conditions, poor tissue oxygenation
- Liver disease, hepatitis, respiratory disorders, interstitial cystitis

## The Treatment Process

Blood is drawn, ozonated with medical-grade ozone and oxygen in a closed sterile system, then reinfused — triggering a systemic healing response throughout the body.

→ **1. IV Placement** *sterile IV placed in arm, same as a standard blood draw*
→ **2. Blood Collection** *150–250mL flows into a closed sterile container*
→ **3. Anticoagulation** *small amount of heparin added to prevent clotting*
→ **4. Ozonation** *blood infused with precise medical-grade ozone and oxygen*
→ **5. Reinfusion** *fully ozonated blood returned through the same IV line*

### Initial Assessment & Screening

- First treatment: standard IV bag or 1–2 passes — low and slow start
- Required: G6PD enzyme deficiency test (blood draw) — rare but must be ruled out before higher doses
- Full health history review; protocol individualized to condition and goals
- Chronically ill patients: antioxidant support recommended 1–2 weeks before starting

## How to Prepare for Your Treatment

Proper preparation significantly improves your experience and reduces the risk of post-treatment symptoms. Most side effects are due to dehydration, not the ozone itself.

### Hydration — Most Important

- Begin pre-hydrating 72 hours before your infusion — dehydration causes the majority of post-IV symptoms
- Hydrate before, during, and especially after your IV
- Water is best; electrolyte mixtures (Quinton, Seeking Health, Designs for Health) and coconut water are supportive
- Symptoms such as headache, dizziness, dry mouth, joint stiffness, and aches are often simply dehydration

### Diet Before Treatment

- Reduced fat and protein diet 48 hours prior to infusion
- Prefer plant-based, vegetable-rich diet 24 hours before infusion

### Duration & Post-Treatment

| Method | Duration | Post-Treatment Note |
|---|---|---|
| **Gravity Method** | ~30–45 min | Next day: increased energy and clarity |
| **10-Pass (1–4 passes)** | ~45–60 min | Mild fatigue on treatment day is normal |
| **10-Pass (5–10 passes)** | ~60–90 min | Slight pink urine is normal — resolves in hours |

## Safety & Side Effects

IV ozone has an excellent safety record with decades of clinical use. Administered by trained practitioners with medical-grade equipment, it is very well tolerated.

### Herxheimer Reaction (most common side effect)

Occurs when ozone rapidly kills pathogens, releasing toxins faster than the body can process. More common in high-burden patients (Lyme, mold, chronic infection).

- Symptoms: flu-like fatigue, body aches, mild fever — typically 1–2 days
- Management: rest, hydration, binders, detox nutrients

### Risk Mitigation

- Start low — conservative doses and fewer passes on first sessions
- Gradual dose escalation based on individual tolerance and response
- Support detox pathways before and between treatments
- Ensure antioxidant building blocks are in place for chronically ill patients

### What to Avoid

- No alcohol 48 hours before treatment (dehydrating)
- Avoid marijuana 72 hours after treatment (dehydrating)
- No methadone, morphine, or oxycodone 12 hours before treatment

### Recommended Supplements (Starting 1 Week Before)

- Vessel Support / Bioflavonoid mix — 2 caps twice daily
- Omega-3 fish oils — 2,000 mg daily
- Lumbrokinase (40 mg) — 1–2 times per day (81 mg aspirin is an alternative)

## Treatment Options & Pricing

### 10-Pass Machine (Major Autohemotherapy)

The highest-potency form of IV ozone. Blood is pressurized, ozonated, and reinfused up to 10 times in a single session. Ideal for chronic illness, high pathogen burden, and anti-aging protocols.

| Passes | Single Session | Package Option |
|---|---|---|
| **1 to 4 passes** | $350 / session | 4-session package: $1,250 |
| **5 to 10 passes** | $550 / session | 4-session package: $1,750 |

### Gravity Method

A gentler, standard-dose MAH — ideal for first-time patients, sensitive individuals, or maintenance between higher-dose sessions.

| | Gravity Method |
|---|---|
| **Price** | $250 per session |
| **Best for** | First-timers, sensitive patients, maintenance between 10-Pass sessions |
| **Duration** | Approximately 30–45 minutes |

***Every protocol at Larrea is individualized — beginning with proper screening, starting conservatively, and escalating based on your response and goals. We guide you safely every step of the way.***

Larrea Naturopathic Medicine | Dr. Kam Tecaya, NMD | 1601 N Tucson Blvd, Suite 8, Tucson, AZ 85716 | Phone/Text: 520-222-6208 | www.tecayahealth.com