

# Hyperbaric Oxygen Therapy (HBOT)

Hyperbaric Oxygen Therapy (HBOT) is a non-invasive, evidence-based therapy that delivers 95-97% oxygen under increased atmospheric pressure to enhance oxygen absorption, improve cellular function, and promote natural healing. By increasing oxygen levels in tissues, HBOT reduces inflammation, accelerates recovery, and optimizes overall wellness.

## Why 2.0 ATA is the Gold Standard for Wellness?

One of the most critical factors in HBOT therapy is choosing the right pressure. While mild hyperbaric chambers (1.3-1.5 ATA) are commonly found in wellness facilities, they have limited scientific evidence supporting their efficacy. Higher pressures (2.0 ATA and above) are typically reserved for hospital-based treatments and come with increased risks and side effects.

### Pressure Levels and Their Effects:

Pressure Level (ATA)	Oxygen Absorption	Common Uses & Benefits	Potential Risks
1.3 - 1.5 ATA	Mild increase	General relaxation, mild wellness benefits (limited research)	Minimal benefits, may not be enough for deep healing
1.7 ATA	Moderate increase	Circulation improvement, mild anti-inflammatory benefits	Mild ear barotrauma risk
✔ 2.0 ATA (Optimal)	Maximum oxygen absorption with minimal risk	Best for anti-aging, athletic recovery, brain function, energy, immunity, pain relief, fertility	Gold standard—safe, effective, and scientifically proven
2.0 - 3.0 ATA	Highest oxygen levels	Severe medical conditions (radiation damage, infections, wounds, embolisms)	Increased side effects: oxidative stress, lung irritation, oxygen toxicity, seizures

## The Science-Backed Health Benefits of HBOT at 2.0 ATA:

### 1. Boost Energy, Reduce Fatigue & Improve Mitochondrial Function

- Increases ATP (cellular energy) production in mitochondria, improves oxygen transport and circulation
- Enhances mental and physical endurance, reducing tiredness and brain fog

### 2. Anti-Aging & Cellular Regeneration

- Stimulates collagen & elastin, reducing wrinkles and skin aging
- Supports telomere lengthening, delaying the aging process (*Aging, 2020 study*)
- Promotes DNA repair and cellular detoxification

### 3. Fertility & Sexual Performance

- Enhances blood flow to reproductive organs, improving fertility outcomes
- Increases testosterone and estrogen balance for hormonal support
- Reduces oxidative stress linked to male and female infertility
- Improves erectile function and libido by optimizing vascular health

### 4. Muscle Recovery, Performance & Endurance

- Accelerates post-exercise recovery and reduces lactic acid buildup
- Increases VO2 max (oxygen efficiency), improving endurance and stamina

- Reduces inflammation, muscle soreness, and injury healing time
- Used by elite athletes for faster recovery and enhanced performance

## 5. Brain Function, Cognitive Enhancement & Mental Clarity

- Boosts neurogenesis (new brain cell growth), enhancing memory and focus
- Improves oxygenation of brain tissue, aiding recovery from brain fog, stroke, concussion, and cognitive decline
- Enhances dopamine, serotonin, and GABA, reducing stress and anxiety
- A 2021 study in *Frontiers in Aging Neuroscience* found HBOT reverses cognitive decline

## 6. Pain Relief, Chronic Inflammation & Healing

- Lowers pro-inflammatory cytokines, reducing pain from arthritis, autoimmune disorders, and fibromyalgia
- Speeds up tissue repair and nerve healing, benefiting those with chronic pain, neuropathy, and musculoskeletal injuries
- Reduces swelling and improves circulation, helping joint and tendon repair

## 7. Stronger Immunity & Detoxification

- Increases white blood cell production, boosting immunity against infections
- Enhances liver detoxification, helping remove toxins, heavy metals, and oxidative stress
- Fights chronic infections such as Lyme disease, mold toxicity, and long-COVID symptoms

## 8. Wound Healing & Skin Repair

- Speeds up healing of burns, cuts, surgical scars, and diabetic ulcers
- Improves blood vessel formation (angiogenesis), promoting faster tissue repair
- Beneficial for post-surgical healing and cosmetic procedures

## 9. Stress Reduction & Sleep Improvement

- Enhances melatonin production, improving sleep quality
- Induces parasympathetic (relaxation) response, reducing cortisol and stress
- Supports adrenal function, preventing burnout and chronic fatigue

## Our HBOT Chamber: Spacious, Adjustable, & Comfortable

At Beach Wellness Center, we provide a state-of-the-art HBOT chamber with adjustable pressures (**1.3, 1.5, 1.7, and 2.0 ATA**), allowing us to tailor treatments to individual needs.

- Spacious 99"x65" multi-person chamber – Use it solo or with a friend – perfect for couples or training partners

## Medical Contraindications:

<b><i>Absolute Contraindications (Not Recommended)</i></b>	<b><i>Relative Contraindications (Use with Caution)</i></b>
<b>Untreated pneumothorax (collapsed lung)</b>	COPD with CO2 retention
<b>Certain chemotherapy drugs (e.g., cisplatin, doxorubicin)</b>	Uncontrolled hypertension
<b>Recent ear or sinus surgery, or difficulty equalizing pressure in the ears</b>	Upper respiratory infections
<b>Severe claustrophobia (uncontrolled)</b>	History of seizures (uncontrolled epilepsy)
<b>Pregnancy</b>	History of spontaneous pneumothorax

## Recommended Sessions & Treatment Plans

- General Wellness & Anti-Aging → 1-2 sessions per week
- Chronic Conditions → Consistent sessions based on individual needs

- Athletic Performance & Muscle Recovery → 3-5 sessions post-training/event
- Fertility & Hormonal Balance, Brain Function & Memory Enhancement → 20-40 sessions over 8 weeks

#### **Age Guidelines for HBOT Use**

- **Children (0-11 years old): Permitted for medical cases** (e.g., brain injuries, autism) with pediatric supervision
- **Teenagers (12-17 years old): Safe with supervision**, beneficial for **sports recovery, brain health, and immunity**
- **Adults (18+ years old):** best for **anti-aging, recovery, cognitive function, and overall wellness**