

# What is Autoimmune Disease?

Autoimmune Disease occurs when the body's immune system mistakenly attacks healthy parts of itself rather than infectious invaders such as bacteria and viruses. The exact cause of autoimmune disorders is unknown. Autoimmune diseases are often life-altering and sometimes life-threatening.

The [American Autoimmune Related Diseases Association](#) (AARDA) estimates that 50 million Americans (almost 1 in 5) suffer from one or more of the 140+ diseases classified as autoimmune. That's approximately double the number of people who suffer from heart disease and four times the number of people affected by cancer. Further complicating the perplexing nature of these diseases, it is not always known whether autoimmune dysfunction is the cause or consequence of the presenting disease.

Some common diseases that are generally considered autoimmune include celiac disease, diabetes mellitus type 1, Graves' disease, inflammatory bowel disease, multiple sclerosis, psoriasis, rheumatoid arthritis, and systemic lupus erythematosus.

Many researches believe the following diseases also have autoimmune components.

- Alopecia (spot baldness)
- Arthritis (all forms)
- Atopic Allergy (tendency to be hyperallergic)
- Dermatitis (all forms)
- Cancer
- Type I Diabetes
- Eczema
- Endometriosis
- Gastritis
- Lichen Planus

- Lichen Sclerosis
  - Morphea (localized scleroderma)
  - Myositis
  - Chronic Fatigue Syndrome
  - Narcolepsy
  - PANDAS
  - Polymyalgia rheumatica
  - Psoriasis
  - Restless Leg Syndrome
  - Schizophrenia
  - Scleroderma
  - Vasculitis

Further, though diseases such as anxiety and depression, asthma, allergies, Type II Diabetes and even acne, are not considered autoimmune, the immune system still plays a part. If you suffer from any of these conditions, it is worth while giving strong consideration to HBOT and a therapeutic diet.

## Oxford's Unique Approach to Autoimmune Diseases

Oxford Recovery Center addresses Autoimmune Diseases with a functional approach. We take the time to sit down with the patient and customize a therapy program that meets their specific needs. Therapies include [hyperbaric oxygen therapy \(HBOT\)](#), [medical consultation](#) and testing for autoimmune markers, and [nutrition coaching](#).

## The Role of HBOT in Treating Autoimmune Conditions

Hyperbaric Oxygen Therapy (HBOT) can be a powerful tool for treating autoimmune disease. HBOT is a clinical treatment where the patient breathes 100% oxygen while enclosed in a hyperbaric oxygen chamber at a pressure greater than one atmosphere.

At pressures greater than normal, the body can incorporate more oxygen into blood cells, blood plasma, cerebrospinal fluid, and other body fluids. The increased oxygen absorption experienced during HBOT boosts stem cell circulation 800% and enhances the body's ability to heal itself. Known effects of HBOT include reduced inflammation, healing of infections and repair of damaged tissues. Raising oxygen levels in tissues where they have been lowered due to illness or injury encourages blood vessel growth, reduces swelling and supports the immune system. These effects provide significant symptomatic relief and delayed or decreased progression of disease.

## Nutrition and Autoimmune Disease

Autoimmune disorders are exacerbated by disorders in the gut. They are also very responsive to dietary changes. When individuals suffering from autoimmune diseases implement healing diets, improvements (often dramatic) in physical and psychological health result.

The Autoimmune Protocol (AIP) is a sophisticated elimination diet where foods known to cause inflammation and immune dysregulation are avoided, while nutrient-dense foods that support the body in healing itself are consumed. The AIP is composed of both an elimination phase and a reintroduction phase. Beginning such an intense diet can be overwhelming. Support from a nutrition coach can make the difference between frustration and success.

There is no single best lifestyle and diet for autoimmune disease. Each individual must learn how specific foods affect their symptoms, find foods that promote healing, and eliminate those that destroy their health.

## Medical Testing and Autoimmune Disease

Autoimmune Disease is complex and multi-layered. Doctors don't agree on which diseases fall under the autoimmune umbrella and how to treat them.

A medical professional who knows how to look for root causes of disease offers the best hope for recovery. A variety of factors influence health and disease, including genetics, environmental toxin exposures, vitamin deficiencies, infection, stress, and sleep. Testing is often the only way to quantify and understand these confounding factors so that an appropriate treatment strategy may be designed.

At Oxford Recovery Center, the medical team is constantly researching and innovating to determine approaches that will help patients restore health. With millions of Americans affected by autoimmune diseases, we've developed protocols for best outcomes, which include HBOT, genetic testing, medical consultation, and nutrition coaching.

## Links to Research on Autoimmune Disease and Hyperbaric Oxygen Therapy (HBOT)

### [Role of hyperbaric oxygen therapy in the treatment of bacterial spinal osteomyelitis](#)

“Hyperbaric oxygen therapy enabled infection cure in 5 of 6 patients with spinal osteomyelitis complicated by medical comorbidities or the failure of primary therapy. These results show that HBO may be a useful adjunctive therapeutic modality in the treatment of spinal osteomyelitis, particularly when there are medical comorbidities that increase the risk of poor healing. Hyperbaric oxygen therapy may also be beneficial in patients with relapsing primary spinal osteomyelitis after standard therapy has failed.”

### [The effects of hyperbaric oxygen therapy on oxidative stress, inflammation, and symptoms in children with autism: an open-label pilot study](#)

“In this prospective pilot study of children with autism, HBOT at a maximum pressure of 1.5 atm with up to 100% oxygen was safe and well tolerated. HBOT did not appreciably

worsen oxidative stress and significantly decreased inflammation as measured by CRP levels. Parental observations support anecdotal accounts of improvement in several domains of autism”

### Hyperbaric-Oxygen Treatment of Multiple Sclerosis — A Randomized, Placebo-Controlled, Double-Blind Study

“Objective improvement occurred in 12 of 17 patients treated with hyperbaric oxygen and in 1 of 20 patients treated with placebo.”

### Early hyperbaric oxygen therapy attenuates disease severity in lupus-prone autoimmune (NZB x NZW) F1 mice.

“HBO(2) treatment resulted in increased survival, decreased proteinuria, alterations in lymphocyte-subset redistribution, reduced anti-dsDNA antibody titers, and amelioration of immune-complex deposition in groups A and B. Our data demonstrated that HBO(2) therapy attenuated disease severity in NZB/W F1 mice. HBO(2) treatment may be of use in the clinical treatment of lupus patients and would benefit from further study.”

### Hyperbaric oxygen for perianal Crohn’s disease

“we undertook a trial of this method in 10 patients with refractory perianal disease. These patients’ perianal Crohn’s disease had not responded to treatment that included local medications, salicylates, corticosteroids, metronidazole, or 6-mercaptopurine were treated. Treatment was administered in a hyperbaric chamber at a pressure of 2.5 atm absolute. Each session lasted 90 min, and each course consisted of 20 daily sessions. Complete healing occurred in 5 patients after one to two courses. In an additional 2, after three courses, 1 patient improved but did not heal, and 2 did not improve. No adverse effects were noted by any of the 10 patients. Follow-up of 18 months did not reveal any recurrence. These preliminary results confirm that HBO therapy is a safe and efficient therapeutic option for perianal Crohn’s disease.”

## Improvement of attention span and reaction time with hyperbaric oxygen treatment in patients with toxic injury due to mold exposure

“It is, by now, well established that mold toxins (mycotoxins) can cause significant adverse health effects. In this study, 15 subjects who developed an attention deficit disorder (ADD) and slowing of reaction time at the time of exposure to mold toxins were identified. Deficits in attention span and reaction time were documented not only by taking a careful history, but also by performing a Test of Variables of Attention (TOVA). The TOVA test provides an objective measure of these two variables. It was found that mold-exposed subjects show statistically significant decreases in attention span and significant increases in reaction time to stimuli compared to controls. After ten sessions of hyperbaric oxygen treatment (HBOT), a statistically significant improvement was seen in both measures. This preliminary study suggests promising outcomes in treating mold-exposed patients with hyperbaric oxygen.”

## Attenuation of collagen-induced arthritis by hyperbaric oxygen therapy through altering immune balance in favor of regulatory T cells.

“Hyperbaric oxygen (HBO<sub>2</sub>) therapy is currently used for the treatment of chronic wounds, radiation-induced soft tissue necrosis, several oxygen-deficiency conditions and decompression sickness. In addition to the current indications, much empirical and experimental data suggest that HBO<sub>2</sub> therapy may benefit autoimmune diseases by suppressing immunity, but the underlying mechanism is not well understood. Therefore, in the present study, we investigated whether HBO<sub>2</sub> prevents the development of collagen-induced arthritis (CIA) in association with alteration of the immune balance between pro-inflammatory Th17 and anti-inflammatory regulatory T cells (Tregs).”

## Microcirculation in patients with systemic scleroderma during treatment using hyperbaric oxygenation.

Hyperbaric oxygenation treatment of systemic scleroderma has a favourable effect on microcirculatory changes whose positive dynamics can be demonstrated by conjunctival biomicroscopy. These changes include accelerated blood flow and decrease in the degree of erythrocyte aggregation. The method can be used for the objective assessment and for prognosis of the effectiveness of hyperbaric oxygenation treatment in patients with systemic scleroderma.

