

Impact of Vitamin D on Autoimmune Risk



WILLIAM FALOON

Autoimmunity occurs when the **immune system** mistakenly targets healthy body tissues.

These misdirected **immune attacks** result in **damage** to normal tissues.

Autoimmune disorders are one of the **largest** classes of illnesses in the United States.

Diseases with a known or suspected **autoimmune** component include:

- Rheumatoid arthritis
- Multiple sclerosis
- Type I diabetes
- Ulcerative colitis
- Lupus
- Myasthenia gravis
- Psoriasis
- Raynaud's
- Hashimoto's thyroiditis
- Vasculitis
- Crohn's disease
- Grave's disease

A recent study found that the prevalence of a common **biomarker** of **autoimmunity** is *increasing* in the United States.¹

Treatments for autoimmune disorders vary and often focus on *reducing* immune activity.²

A side effect of **immune suppression** is *increased* risk of certain **cancers**, along with higher risk of bacterial, fungal, and viral **infections**.³

A landmark placebo-controlled **prevention** trial studied a large group of people for over **five years**.⁴

The findings indicate that most readers of **Life Extension® Magazine** are reducing their **auto-immune disease** risk by **25%-30%**.

This article describes an increase in **autoimmune prevalence** and what can be done to reduce this risk.



Autoimmunity occurs when the **immune system** produces **antibodies** that **attack** the body's own tissues.

A common method to screen for potential **autoimmunity** is the **antinuclear antibody** blood test or "**ANA**" for short.

In a study published in **June 2020**, researchers found that the prevalence of positive **antinuclear antibody (ANA)** tests is *increasing* in the United States.¹

Groups with the greatest increase in this biomarker of **autoimmune disease** include males, non-Hispanic whites, adults 50 years and older, and adolescents.

This study was the first to evaluate **ANA** changes over time in a large representative sampling of the American population.⁵

The study evaluated over **14,000** people enrolled in the **U.S. National Health and Nutrition Examination Survey (NHANES)**.

The following increases in **ANA** (antinuclear antibodies) prevalence were found:

PERIOD	ANA PREVALENCE
1988-1991	11.0%
1999-2004	11.5%
2011-2012	15.9%



The percentages for the **2011-2012** period correspond to an approximate **41 million** individuals who may be afflicted by quality-of-life-robbing **auto-immune disorders** that shorten overall **longevity**.

The scientists conducting this analysis state that the observed **ANA** increases were not explained by current trends in weight, alcohol, or smoking exposure.

The findings are concerning because they suggest troubling potential *increases* in future **autoimmune disease** cases.

First Comprehensive List of Autoimmune Diseases

In **November 2020**, a nonprofit group called the **Autoimmune Registry** (www.autoimmuneregistry.org) published a comprehensive list of over **150 autoimmune diseases** along with links to published literature and information about possible treatment options.⁶

This group states that between **15-30 million** people in the United States suffer from an **autoimmune** disorder.

The **Autoimmune Registry** emphasizes how **autoimmune diseases** can affect every part of the human body—including skin, blood vessels, nerves, and immune and digestive systems.

Their list includes well-known diseases like **lupus**, **rheumatoid arthritis**, **celiac disease**, **multiple sclerosis**, and **type I diabetes**.

Dozens of rarer diseases like hemolytic anemia, myasthenia gravis, cytopenia, and vasculitis are also listed.





Human Autoimmune Study

In **November 2021**, findings from a follow-up analysis from a major clinical trial were published.⁴

In this study, subjects were randomized to receive daily **vitamin D** and **fish oil** or **placebo** for five years.⁷

This nationwide, double-blind, placebo-controlled trial enrolled men at least 50 years of age and women at least 55.

Compared to the **placebo** group, those given **vitamin D3** and **omega-3** supplements had a **25%-30% reduced** incidence of **autoimmune disease**.⁴

Impressive Study Size and Design

This **November 2021** published study is not the first to indicate protection against **autoimmune** disorders with **vitamin D** or **omega-3s**.⁴

Vitamin D has been associated with reduced risk of several autoimmune diseases in some observational studies, but a large, randomized, controlled trial has been lacking.⁸⁻¹⁰

Smaller clinical trials with dietary fish oil **omega-3** fatty acids have suggested that supplementation may help decrease the abnormal immune activation against otherwise healthy cells and tissues observed in autoimmunity.¹¹⁻¹³

No prior rigorous studies (i.e., large, randomized controlled trials), however, tested whether **supplementation** lowers risk of developing **autoimmune disease**.

This recent study tested **vitamin D3** and **omega-3 supplements** versus **placebo** for prevention of **autoimmune** diseases in 25,871 Americans for a median of over **five years**.

The daily supplemental dose was **2,000 IU** of **vitamin D3** and **1,000 mg** of **omega-3** fatty acids.

Impact of Longer-Term Vitamin D Supplementation

In this study showing a **25%-30% reduction** in **autoimmune disease** risk, the effect of **vitamin D3** appeared to strengthen after **two years** of supplementation.⁴

When the first two years of supplementation were excluded, the **vitamin D3** group had a nearly **40% reduced autoimmune** risk at a median of **5.3 years**.

This is an important finding that confirms, for autoimmune disease, what has previously been observed—including in results from this same study cohort—for **cancer**. The effects of vitamin D on reducing cancer incidence and mortality become evident, or more pronounced, after continuous supplementation for one or two years or more.¹⁴⁻¹⁶

One reason for this is that some people in these studies have **preexisting cancers** that are only formally diagnosed one to two years after the study starts. When *longer* term data are analyzed, improved protective effects can be demonstrated.

Be it **nutrient supplementation** or controlling **hypertension** with **medications**, the *earlier* one initiates an effective strategy, the greater the likelihood of a successful outcome.

Serendipitous Benefits of Vitamin D + Omega-3s

According to one survey, the illnesses that people fear most are cancer, dementia, and cardiovascular disease.¹⁷

When stricken with **autoimmune disorders**, people are often bewildered because they gave it little thought before symptoms manifest.

Most readers of this publication **supplement** with **vitamin D** and **omega-3s** to help protect against common age-related maladies.

This in turn may have provided a robust degree of serendipitous protection against a growing trend of **autoimmune** blood indicators.

For longer life,



William Faloon,
Co-Founder, Life Extension

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In this Month's Issue...

Life Extension has long urged supporters to include **walnuts** as part of their regular diet. Favorable data continue to pour in from **human** studies showing remarkable disease risk reductions in those who ingest **walnuts**. The article on page 32 of this month's issue describes some of these new findings.

Reduced mental energy, clarity, focus, and performance are symptoms of **brain fog**. Page 24 introduces an easy method to think more clearly.

Other articles published this month reveal ways to help manage blood **glucose** levels, improve mood, and boost **immune** defenses.