



Autoimmune Diseases and Diet: Here's What You Need To Know

By Lindsay Morris
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Affecting 24 million people nationwide, autoimmune diseases can severely impact a person's quality of life. More than 80 conditions—including [lupus](#), rheumatoid arthritis, and Type 1 diabetes—fall under the umbrella of autoimmune diseases, and while most of them have no cure, simple lifestyle changes can make symptoms more manageable.

What Are Autoimmune Diseases?

Your immune system plays a critical role in protecting your body against infection and disease. In [autoimmune diseases](#), an unknown trigger causes the immune system to produce antibodies that—rather than fight infections and ward off diseases—attack the body's own tissue. The following list comprises just a few of the vast number of known autoimmune diseases.

• Inflammatory Bowel Disease (IBD)

Approximately [3.1 million American adults](#) have been diagnosed with IBD, an umbrella term for [ulcerative colitis](#) and [Crohn's disease](#). Both conditions are characterized by chronic inflammation of the gastrointestinal tract.

Whereas Crohn's disease can affect any part of the GI tract, ranging from the mouth to the anus, ulcerative colitis occurs in the large intestine and rectum. Common symptoms for both include fatigue, weight loss, persistent diarrhea, abdominal pain, and bloody stools or rectal bleeding.

• Lupus

There are several types of [lupus](#), including the most commonly diagnosed form, systemic lupus erythematosus (SLE), which accounts for 70% of the approximately [1.5 million Americans](#) affected. The disease attacks healthy tissues and cells, causing damage to much of the body, including the heart, lungs, blood vessels, skin,

joints, and brain. Symptoms differ from person to person, but the most common include pain and swelling in joints, swollen glands, muscle pain, tiredness, hair loss, red rashes (often producing a butterfly pattern on the face), pale or purple fingers and toes, unexplained fever, chest pain while taking a deep breath, and photosensitivity.

• Multiple Sclerosis

Multiple sclerosis affects [400,000 people in the U.S.](#), with related health care costs as high as \$52,244 per patient per year. Affecting the brain and spinal cord, [this central nervous system disease](#) causes damage to the myelin sheath that surrounds and protects nerve cells. That damage interferes with the brain's communication with the body. As a result, people with multiple sclerosis experience symptoms that include muscle weakness, impaired coordination and balance, feelings of numbness or prickling (as if walking on pins and needles), visual disturbances, and cognition and memory problems.

• Psoriasis

Affecting approximately [8.1 million Americans](#), psoriasis causes itchy or sore patches of thick, red skin with silvery scales. These so-called plaques most commonly appear on the face, scalp, elbows, knees, back, palms, and feet; however, they can also show up on other parts of the body. Psoriasis occurs when an overactive immune system accelerates the growth of skin cells, taking just days to produce the number of cells that would normally take a month. There's not enough time for skin cells to shed; instead, the cells pile up on the skin's surface. More than 33% of those with psoriasis may also develop a condition called [psoriatic arthritis](#), a condition

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marked by stiffness and pain in the joints and surrounding affected areas.

• Rheumatoid Arthritis

Not to be confused with osteoarthritis, the more common arthritis that often presents itself in older age, [rheumatoid arthritis](#) can start at any age and affects approximately [1.3 million Americans](#). Characterized by joint stiffness (particularly in the mornings), this chronic condition typically occurs when the immune system generates excess inflammation that is sent to the joints and produces pain and swelling. But rheumatoid arthritis can also affect the eyes, mouth, and lungs.

• Type 1 Diabetes

Formerly known as juvenile diabetes, Type 1 diabetes affects approximately [1.84 million Americans](#). In this chronic condition, the body attacks cells that produce insulin, the hormone that regulates blood sugar. Eventually, no more of these cells are left, and the body cannot produce insulin. High blood sugar is responsible for the disease's primary signs and symptoms, which include fatigue, excessive thirst, frequent urination, weight loss, blurred vision, tingling or loss of feeling in the hands and feet, and weight loss.

Autoimmune Disease Risk Factors

While the exact causes of autoimmune diseases remain unknown, researchers point to the following noted risk factors, which may occur alone or in combination with others.

- **Your genes.** Autoimmune diseases tend to [run in families](#); however, the gene inheritance pattern is typically unknown.
- **Your sex.** Women make up [78%](#) of those affected by autoimmune diseases.
- **Having another autoimmune disease.** Roughly one-quarter of autoimmune disease patients have [multiple autoimmune syndrome](#), an accumulation of three or more autoimmune conditions.
- **Some viruses.** Influenza A viruses, measles, and hepatitis C are among the [viruses](#) that may trigger the development of autoimmune diseases.
- **Some medications.** Certain blood pressure medications, statins, and antibiotics can induce conditions such as [autoimmune hepatitis](#) and [drug-induced lupus erythematosus](#).
- **Smoking.** Tobacco smoking has been [linked](#) to multiple autoimmune diseases.
- **Obesity.** [More than 10 autoimmune diseases](#) are known to be associated with being overweight or obese. Research suggests that [obesity](#) may promote inflammation while reducing the body's ability to recognize its own antigens as a non-threat when responding to foreign substances.

How Does Diet Affect Autoimmune Diseases?

“Diet plays a huge role in autoimmune diseases because the immune system is affected by food, and [two-thirds](#) of your immune system is located in the gut,” says triple board-certified rheumatologist [Micah Yu, MD](#), who also practices integrative medicine. “Whatever food passes through your gut will talk to your immune system.”

Gut dysbiosis—an imbalance in the gut microbiome, the naturally occurring population of bacteria and other microorganisms within the GI tract—has been closely [associated with](#) multiple autoimmune diseases, suggesting that maintaining a healthy gut microbiome benefits autoimmune health.

According to [2021 research](#) published in *Lupus Science & Medicine*, a dietary fiber called resistant starch (commonly found in bananas, plantains, legumes, and whole grains) may positively affect the gut microbiome

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of people with lupus. Researchers collected stool samples and dietary information from 12 SLE patients and 15 SLE-related antiphospholipid syndrome (APS) patients to see if resistant starch in their regular diets impacted their gut bacteria makeup. While no one consumed high quantities (more than 15 grams) of resistant starch, medium levels (between 2.5 and 15 grams daily) of dietary starch were associated in SLE with increased *Bifidobacterium*, which is beneficial to the immune system. And people with APS who ate medium levels of resistant starch exhibited lower quantities of harmful bacteria linked to the disease.

Conversely, **ultra-processed foods**—such as soft drinks, refined sweetened foods, salty snacks, and processed meats—have been demonstrated to promote gut dysbiosis. A [2017 review](#) published in *Foods* concluded that the resulting imbalance might be associated with an increased risk of at least two autoimmune diseases—Type 1 diabetes and celiac disease—in predisposed children. Additionally, a [2021 study](#) published in *The BMJ* suggested that eating ultra-processed foods can significantly heighten the risk of developing IBD.

One reason these foods are so detrimental is that they produce inflammation, which can trigger an abnormal immune response, says Yu. “With your immune system, you have something called immune tolerance, where your immune system’s supposed to see its own cells and just ignore it. But [in autoimmune diseases] over time, because of chronic inflammation, your body will start reacting to its own cells. That’s where [the body] can attack its own joints, its own brain cells, its own nervous system cells, and so forth.”

Yu says that one way to combat that inflammation is by consuming more anti-inflammatory foods. Research has shown that **fruits** and **vegetables** are associated with anti-inflammatory properties. And there is **evidence** that a vegan diet rich in fruits, vegetables, and whole grains reduces inflammation.

A plant-based diet may also reduce autoimmune disease symptoms, such as fatigue. A [2004 study](#) had 24 middle-aged people with rheumatoid arthritis follow a low-fat vegan diet for four weeks. At the end of the study, participants saw a significant reduction in all RA symptoms, except for the duration of morning stiffness. A more recent study, published in *Lupus* in January 2022, looked at extensive data from 420 SLE patients

who completed a 26-question survey on their diets and SLE symptoms. Researchers found that patients “who changed their eating patterns to incorporate more plant-based foods while limiting processed foods and animal products reported improvements in their disease symptoms.”

Real-Life Success Stories

Have you been diagnosed with an autoimmune disease? You may be able to improve your outcomes by eating more whole plant foods and avoiding animal products and highly processed foods. For inspiration, check out the following first-person testimonials from people with autoimmune diseases who benefitted from a whole-food, plant-based diet.



“I Resolved a Decade of Rheumatoid Arthritis Pain Within Months on a Plant-Based Diet”

After 10 years of painful rheumatoid arthritis, Andrea Kane changed her diet and dramatically reduced her rheumatoid arthritis symptoms. [Read her story.](#)



“How I Reversed Crippling Rheumatoid Arthritis

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With a Plant-Based Diet"

In August 2015, at 35 years old, Emily Brandehart was diagnosed with rheumatoid arthritis, with symptoms so painful that she couldn't sleep. Then she did some research and discovered the benefits of a plant-based diet. [Read her story.](#)

- **I Overcame Lupus and Freed Myself from Medications with a Plant-Based Diet**
- **For 26 Years, I've Managed Type 1 Diabetes With a Plant-Based Diet**
- **I Used to Have MS Relapses Every 6 Months. After Going Plant-Based, I Haven't Relapsed in 10 Years**
- **Overcoming Myasthenia Gravis Symptoms on a Plant-Based Diet**
- **Plant-Based Diet Has Me Winning My Long, Hard Battle with Ulcerative Colitis**

Ready to get started? Check out [Forks Meal Planner](#), FOK's easy weekly meal-planning tool to keep you on a healthy plant-based path. To learn more about a whole-food, plant-based diet, visit our [Plant-Based Primer](#).