



What Is Lupus? A Rheumatologist Breaks Down Causes, Symptoms, and Lifestyle Strategies That Can Help

By Micah Yu, MD
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Systemic lupus erythematosus, commonly known as lupus, is a chronic autoimmune disease. Lupus can affect any of the body's organs but most commonly affects the joints, skin, and kidneys. Lupus can range in severity from mild to life-threatening, depending on the organs involved and the degree of the symptoms. An estimated [5 million people](#) worldwide suffer from the disease.

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How Lupus Works

Lupus is an autoimmune disease in which the immune system attacks the DNA and nuclei of its own cells when cells break apart. The [pathophysiology](#) is complex and involves both the innate and adaptive immune systems, but lupus predominantly has to do with overactive B cells (which belong to the adaptive immune system). Interferons, the part of the immune system that fights viruses, may also be overactive in lupus patients.

This educational video from Osmosis by Elsevier does a

great job of showing how SLE works.

Types of Lupus

Lupus can come in many different forms. Lupus in general is called systemic lupus erythematosus (SLE) and can affect many different organs in the body. Other forms include lupus nephritis (lupus of the kidneys); neuropsychiatric lupus (lupus involving the brain); drug-induced lupus (lupus induced from medications); and cutaneous lupus (lupus affecting the skin only).

Symptoms

The manifestation of lupus varies from patient to patient. While some patients can have only one or two symptoms of lupus, others will exhibit many more. Symptoms can present in multiple organs and can range from mild to life-threatening. Some common ones include:

- Rashes on the face or body
- Fatigue
- Arthritis
- Brain fog
- Hair loss
- Photosensitivity
- Oral ulcers or nasal ulcers
- Chest pain
- Shortness of breath

Lupus can also affect the functioning of the kidneys, nerves, and brain, as well as different blood cell types, potentially causing anemia, low platelets, and low white blood cell count.

Diagnosis

Lupus is typically diagnosed by rheumatologists based on a number of different clinical symptoms and laboratory values. The American College of Rheumatology published updated [classification criteria](#)

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for [SLE](#) in 2019 to help clinicians to determine if a patient has lupus.

What Causes Lupus?

Available research [suggests](#) that a combination of genetic, environmental, and hormonal factors cause lupus.

Genes

Research has indicated that there is a [genetic component to lupus](#). Multiple genes have been implicated in SLE development, with a 2010 study published in [Nature Reviews](#) finding more than 30 genetic associations with the disease. A study published in 2018 in the [Seminars of Arthritis and Rheumatism](#) found that twins of lupus patients were more likely to develop lupus or other autoimmune diseases.

Environmental Factors

Environmental factors, [particularly obesity](#), can also influence lupus risk. In a prospective cohort study among 238,130 women in the Nurses Health Studies, obese participants were [85 percent more likely](#) to have SLE than participants with normal BMIs. One possible explanation for this association is that obesity can contribute to gut dysbiosis. Additionally, an excess of adipocytes (fat cells) can push the immune system toward inflammatory pathways.

Hormones

Women are much more likely than men to suffer from lupus, representing roughly 90 percent of all lupus cases, and women between the ages of 15 and 44 are the most likely to develop the disease. This may be because [estrogen](#) stimulates the production of antibodies, making autoimmune responses more likely.

Can Certain Foods Make Lupus Symptoms Worse?

Certain dietary elements are generally inflammatory and thus prone to making lupus worse. These include excess salt, highly processed foods, processed and red meats, and refined sugar—all of which are common in the standard American diet. [High-fat diets](#) can potentially worsen lupus, as well.

In addition to causing inflammation directly, [highly processed foods](#) can promote weight gain and obesity. [Obesity](#), in turn, can contribute to chronic inflammation that heightens the risk of developing autoimmune diseases, including lupus.

Interestingly, a study [published in 2015](#) found that lupus patients had higher levels of AGEs (advanced glycation end-products), inflammatory compounds found in the highest concentrations in animal products and fried foods.

Triggers

Any factors that put stress on the body can exacerbate lupus and cause symptoms to flare up. Common triggers for SLE flare-ups include:

- Stress
- Lack of sleep
- UV radiation
- Smoking cigarettes
- Viruses
- Bacterial infection
- Hormonal fluctuations (particularly estrogen)

How to Treat and Manage Lupus

While there is no cure for lupus, there are ways to manage it. Medications can be an essential part of managing SLE, but lifestyle changes can help reduce and relieve symptoms of autoimmune disease, as well.

Foods to Alleviate Lupus

Gut dysbiosis—an imbalance in the gut microbiome—has been closely associated with multiple autoimmune diseases, [including lupus](#), rheumatoid arthritis, multiple sclerosis, and inflammatory bowel disease. It is unclear at this time whether gut dysbiosis in lupus occurs as a result of the disease itself or occurs prior to the actual disease onset. In either case, fostering a healthier gut microbiome can be a boon for autoimmune health, since up to [70 percent](#) of the immune system is located in the gut. Fruits and vegetables, which are rich in fiber and phytonutrients, are excellent for promoting a healthy gut microbiome.

[Chia seeds](#) and flax seeds are high in fiber as well as omega-3 fatty acids, which can potentially decrease

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lupus disease activity. Polyphenols in fruits and vegetables exert anti-inflammatory activity, as well. Turmeric and ginger have powerful phytonutrients that can help decrease inflammation.

Fiber also seems [protective](#) against lupus disease activity. After systematically reviewing 184 studies on diet and SLE, the authors of a [2020 report](#) published in *Frontiers in Immunology* recommended that lupus patients consume a low-calorie, low-protein diet that contains plenty of fiber, polyunsaturated fatty acids, vitamins, minerals, and polyphenols.

In a [study published in *Lupus*](#) in January 2022, researchers surveyed SLE patients about their experiences using dietary changes to manage their symptoms. The greatest reduction in symptoms was reported among those who reduced their intake of dairy and processed foods and those who reported trying a vegan diet.

Other Tools

In addition to the dietary changes mentioned above, SLE is largely managed by medications. Hydroxychloroquine is often the first-line medication. Azathioprine, mycophenolate mofetil, belimumab, and other immunomodulators are also used for management.

Lifestyle modifications that can help with all autoimmune-related issues include [improving sleep quality](#), exercising regularly, and decreasing stress levels.

Patients should consult with their rheumatologists to determine an optimal treatment plan.

Success Stories

Read these inspiring stories from patients who reduced their lupus symptoms after adopting a whole-food, plant-based diet.

- [I Overcame Lupus with a Plant-Based Diet](#)
- [From Crippling Lupus to Living Pain-Free on a Plant-Based Diet](#)
- [After a Stroke, This Doctor Reversed Her Lupus With a Plant-Based Diet](#)

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](#).