

# Systemic Lupus Erythematosus Affects the Body

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## DESCRIPTION

One of the primary ways Systemic Lupus Erythematosus (SLE) affects the body is through persistent inflammation. The immune system produces abnormal antibodies known as autoantibodies, which target the body's own cells and tissues. These autoantibodies form immune complexes that accumulate in organs and blood vessels, triggering inflammatory responses. Over time, this inflammation can damage tissues and impair normal organ function.

The musculoskeletal system is among the most commonly affected areas in lupus patients. Joint pain, stiffness, and swelling are frequent symptoms and often represent the earliest signs of the disease. The hands, wrists, knees, and fingers are particularly vulnerable. Unlike some other forms of arthritis, lupus-related joint inflammation typically does not cause severe joint destruction, but it can significantly interfere with daily activities and quality of life. Muscle pain and weakness may also occur, contributing to fatigue and reduced mobility.

The skin is another major target of lupus. Many individuals develop characteristic skin rashes, including the well-known butterfly-shaped rash that appears across the cheeks and bridge of the nose. Skin lesions may worsen after exposure to sunlight because people with lupus often experience photosensitivity. Prolonged sun exposure can trigger both skin symptoms and systemic disease flare-ups. Hair loss, skin discoloration, and chronic skin lesions may also develop as the disease progresses.

The kidneys are among the most important organs affected by SLE. A condition known as lupus nephritis occurs when inflammation damages the kidney tissues responsible for filtering waste products from the blood. Kidney involvement may initially produce few noticeable symptoms, making regular monitoring essential. As damage progresses, patients may experience swelling of the legs and feet, elevated blood pressure, and abnormal protein levels in the urine. If left untreated, lupus nephritis can lead to chronic kidney disease or kidney failure.

The cardiovascular system can also be significantly affected. Inflammation may involve the lining surrounding the heart, a condition called pericarditis, which can cause chest pain and

discomfort. Lupus may increase the risk of developing heart disease, stroke, and blood vessel inflammation. Chronic inflammation contributes to accelerated atherosclerosis, a process in which fatty deposits accumulate within arteries, increasing the likelihood of cardiovascular complications at a younger age than in the general population.

The lungs are frequently involved in SLE as well. Inflammation of the tissues lining the lungs, known as pleuritis, can cause sharp chest pain that worsens during deep breathing. Some patients develop fluid accumulation around the lungs, making breathing more difficult. In severe cases, lupus may affect lung tissue directly, leading to chronic respiratory problems and reduced oxygen exchange.

The nervous system is another area that can be impacted by lupus. The disease may affect both the central nervous system and peripheral nerves. Patients can experience headaches, dizziness, memory difficulties, confusion, and problems with concentration. Some individuals develop mood disorders such as anxiety or depression, while others may experience more serious neurological complications including seizures or strokes. These symptoms can significantly affect emotional well-being and daily functioning.

Blood and bone marrow abnormalities are also common in lupus patients. The disease can reduce the number of red blood cells, resulting in anemia and symptoms such as fatigue, weakness, and shortness of breath. Low white blood cell counts may increase susceptibility to infections, while low platelet levels can increase the risk of bruising and bleeding. In some cases, lupus may also increase the tendency for blood clot formation, which can lead to serious complications such as deep vein thrombosis or pulmonary embolism.

The digestive system may be affected either directly by lupus-related inflammation or indirectly through medication side effects. Patients sometimes experience abdominal pain, nausea, vomiting, or changes in appetite. Inflammation can occasionally involve the liver, pancreas, or blood vessels supplying the gastrointestinal tract. Although digestive complications are less common than joint or skin symptoms, they can still contribute to disease burden.

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**Received:** 19-May-2025, Manuscript No. LOA-25-42188; **Editor assigned:** 21-May-2025, PreQC No. LOA-25-42188 (PQ); **Reviewed:** 04-Jun-2025, QC No. LOA-25-42188; **Revised:** 11-Jun-2025, Manuscript No. LOA-25-42188 (R); **Published:** 18-Jun-2025, DOI: 10.35248/2684-1630.25.10.342

**Citation:** Gallagher F (2025). Systemic Lupus Erythematosus Affects the Body. *Lupus: Open Access*. 10:342.

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Fatigue is one of the most widespread and debilitating effects of lupus on the body. Unlike normal tiredness, lupus-related fatigue can be severe and persistent, often interfering with work, education, social activities, and personal relationships. This exhaustion may result from chronic inflammation, anemia, sleep disturbances, pain, emotional stress, or a combination of factors associated with the disease.

## CONCLUSION

Although SLE can affect nearly every part of the body, early diagnosis and appropriate treatment can help control

inflammation, prevent organ damage, and improve long-term outcomes. Advances in medical therapies have significantly enhanced the ability to manage lupus, allowing many individuals to lead active and productive lives despite the challenges posed by this complex autoimmune disease.