

## Systemic Lupus Erythematosus (SLE): A Chronic Inflammatory Autoimmune Disease

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### DESCRIPTION

Systemic Lupus Erythematosus (SLE) is the most common and most serious sort of lupus among all other lupus diseases. It is an autoimmune disease where the immune system itself attacks healthy tissues, causing substantial irritation and tissue problems in the affected organs. It basically has major effects on the joints, skin, brain, lungs, kidneys, and blood vessels. The disease can be mild or severe and life threatening as well. Lupus is associated with many health major complications. The immune system typically fights with infections and microorganism to keep the body healthy and away from lupus. There are many autoimmune diseases, which include systemic lupus erythematosus. SLE influences all types of organs, tissues in the human body, especially skin is more affected by SLE. It been a long time period, lupus has been used to become aware of some of immune sicknesses which have comparable medical displays and laboratory features. SLE is a serious disease which can have several stages with many risky signs. According to the Lupus Foundation of America, as a minimum 1.5 million Americans are discovered with identified lupus. No therapy for SLE exists till now. SLE is the most frequent variety of lupus, though the term has been used to refer to a range of immunological illnesses with comparable clinical symptoms and laboratory characteristics. When people mention lupus, they frequently mean SLE. In many but not all cases of lupus, the most recognizable lupus symptom—a face rash that looks like butterfly wings expanding across both cheeks—occurs. The main aim of treatment of lupus is to relieve the patient pain. Early initiation of treatment is better after diagnosis of SLE. Some of the symptoms of this include extreme fatigue, pain or swelling in the joints, headaches, chest pain when breathing deeply, low fevers and etc. It is also said to be chronic autoimmune inflammatory disease that can affect many organ systems, including the skin, joints, and internal organs at the same time. In people with lupus, the immune system, which normally protects the body from foreign substances and infections, attacks its own healthy

body tissues. In severe cases, it can even be life-threatening. The exact cause of lupus is unknown, but most scientists believe that external factors such as infections, medications, and other environmental factors are main contributing factors to this disease. Genetics is also said to lead to the development of SLE. Studies have found that young women are most at risk of SLE. Symptoms vary from person to person, but the typical lupus sufferer is a young woman with arthritis in the fingers, wrists, or other small joints, hair loss, and a rash (often a butterfly-like pattern on the face, nose, and cheeks). These symptoms may be accompanied by fever, swollen lymph nodes (glands), chest pain, and/or protein in the urine. The diagnosis of lupus is generally based on other conditions with similar symptoms (e.g. Lyme disease). It is based on laboratory tests like serological tests like blood tests that confirm the presence of certain antibodies. Most people with lupus can expect a normal life expectancy with proper treatment, but many may experience some degree of disability. Abnormal blood counts often do not require treatment, but rashes, fatigue, arthritis, and other symptoms are usually treated with antiepileptic drugs, antidepressants, corticosteroids, nonsteroidal anti-inflammatory drugs, hydroxychloroquine. More than 90% of SLE cases occur in women and often begin during the pregnant years. SLE is diagnosed by a doctor using symptom assessment, physical examination, x-rays, and laboratory tests. SLE can be difficult to diagnose because early signs and symptoms are non-specific and can resemble signs and symptoms of other diseases. Anti-Nuclear Antibodies (ANA) are autoantibodies directed against the nucleus of cells. Ninety-eight percent of patients with systemic lupus have a positive ANA test, making it the most sensitive diagnostic test to confirm this disease diagnosis. The future promises good news for the treatment of systemic lupus erythematosus, some of which is already predictable. Improved knowledge of predisposition, etiology, pharmacogenomics, and the genes involved in protection against this disease is greatly helping the scientist in the development process.

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