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## Systemic lupus erythematosus



Systemic lupus erythematosus (SLE) is an autoimmune disease. In this disease, the body's immune system mistakenly attacks healthy tissue. It can affect the skin, joints, kidneys, brain, and other organs.

### Causes

The cause of autoimmune diseases is not fully known.

SLE is more common in women than men. It may occur at any age. However, it appears most often in people between the ages of 15 and 44. The disease affects African Americans and Asians more often than people from other races.

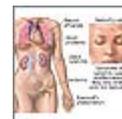
[Certain drugs](#) may also cause SLE.

### Symptoms

Symptoms vary from person to person, and may come and go. Almost everyone with SLE has [joint pain](#) and swelling. Some develop [arthritis](#). SLE often affects the joints of the fingers, hands, wrists, and knees.

Other common symptoms include:

- Chest pain when taking a deep breath.
- Fatigue.
- Fever with no other cause.
- General discomfort, uneasiness, or ill feeling (malaise).
- Hair loss.
- Mouth sores.
- Sensitivity to sunlight.

[Lupus](#)


Systemic lupus erythematosus



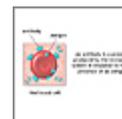
Lupus, discoid - view of lesions on the chest



Lupus, discoid on a child's face



Systemic lupus erythematosus rash on the face



Antibodies

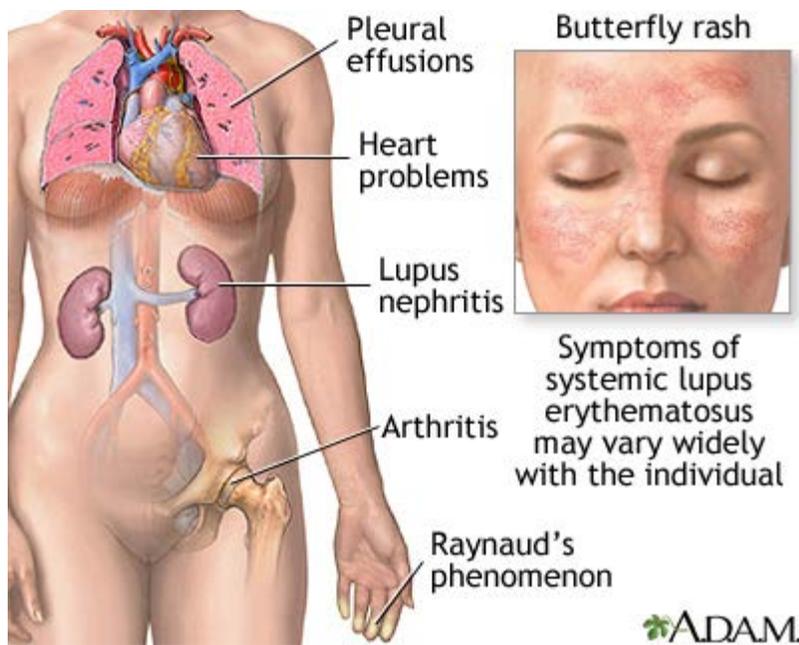
[Acute kidney failure](#)
[Antibody](#)
[Arthritis](#)

- Skin rash: A "butterfly" rash in about half the people with SLE. The rash is most often seen over the cheeks and bridge of the nose. It can be widespread. It gets worse in sunlight.
- [Swollen lymph nodes](#).

Other symptoms depend on which part of the body is affected:

- Brain and nervous system: Headaches, numbness, tingling, seizures, vision problems, and personality changes
- Digestive tract: Abdominal pain, nausea, and vomiting
- Heart: Abnormal heart rhythms ([arrhythmias](#))
- Lung: Coughing up blood and difficulty breathing
- Skin: Patchy skin color and fingers that change color when cold ([Raynaud phenomenon](#))
- Kidney: Swelling in the legs, weight gain

Some people have only skin symptoms. This is called discoid lupus.



## Exams and Tests

To be diagnosed with lupus, you must have 4 out of 11 common signs of the disease. Nearly all people with lupus have a positive test for antinuclear antibody (ANA). However, having a positive ANA alone does not mean you have lupus.

The health care provider will do a complete physical exam. You may have a rash, arthritis, or edema in the ankles. There may be an abnormal sound called a heart friction rub or pleural friction rub. Your provider will also do a nervous system exam.

[Autoimmune disorders](#)

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[Joint pain](#)

[Lupus anticoagulants and antiphospholipid antibodies](#)

[Lupus nephritis](#)

[Myocarditis](#)

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[Pericarditis](#)

[Platelet count](#)

[Pleural effusion](#)

[Pleurisy](#)

[Psychosis](#)

[Pulmonary embolus](#)

[Rashes](#)

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[Skin nodules](#)

[Thrombocytopenia](#)

Tests used to diagnose SLE may include:

- Antinuclear antibody (ANA)
- [CBC with differential](#)
- [Chest x-ray](#)
- Serum creatinine
- [Urinalysis](#)

You may also have other tests to learn more about your condition. Some of these are:

- [Antinuclear antibody \(ANA\) panel](#)
- [Complement components](#) (C3 and C4)
- [Coombs test - direct](#)
- [Cryoglobulins](#)
- [ESR and CRP](#)
- Kidney function blood tests
- Liver function blood tests
- [Rheumatoid factor](#)
- Antiphospholipid antibodies and lupus anticoagulant test
- [Kidney biopsy](#)

## Treatment

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There is no cure for SLE. The goal of treatment is to control symptoms. Severe symptoms that involve the heart, lungs, kidneys, and other organs often need treatment from specialists.

Mild forms of the disease may be treated with:

- NSAIDs for joint symptoms and pleurisy. Talk to your provider before taking these drugs.
- Low doses of corticosteroids, such as prednisone, for skin and arthritis symptoms.
- Corticosteroid creams for skin rashes.
- Hydroxychloroquine, a drug also used to treat malaria.
- Belimumab, a biologic drug, may be helpful in some people,

Treatments for more severe SLE may include:

- High-dose corticosteroids.
- Immunosuppressive drugs (drugs which dampen or suppress the immune system). These medicines are used if you do not get better with corticosteroids, or if your symptoms get worse when you stop taking them.
- Blood thinners, such as Coumadin, for clotting disorders.

If you have SLE, it is also important to:

- Wear protective clothing, sunglasses, and sunscreen when in the sun.
- Get preventive heart care.
- Stay up-to-date with immunizations.
- Have tests to screen for thinning of the bones (osteoporosis).
- Avoid tobacco and drink minimal amounts of alcohol.

## Support Groups

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[Counseling and support groups](#) may help with the emotional issues involved with the disease.

## Outlook (Prognosis)

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The outcome for people with SLE has improved in recent years. Many people with SLE have mild symptoms. How well you do depends on how severe the disease is.

The disease tends to be more active:

- During the first years after diagnosis
- In people under age 40

Many women with SLE can get pregnant and deliver a healthy baby. A good outcome is more likely for women who receive proper treatment and do not have serious heart or kidney problems. However, the presence of SLE antibodies raises the risk of miscarriage.

## Possible Complications

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Some people with SLE have abnormal deposits in the kidney cells. This leads to a condition called [lupus nephritis](#). People with this problem may develop [kidney failure](#). They may need [dialysis](#) or a kidney transplant.

SLE can cause damage in many different parts of the body, including:

- Blood clots in arteries or veins of the legs, lungs, brain, or intestines

- Destruction of red blood cells or [anemia of chronic disease](#)
- Fluid around the heart (pericarditis), or inflammation of the heart ([myocarditis](#) or [endocarditis](#))
- Fluid around the lungs and damage to lung tissue
- Pregnancy problems, including miscarriage
- Stroke
- Severely low blood platelet count (platelets are needed to stop any bleeding)
- Inflammation of the blood vessels

Both SLE and some of the medicines used for SLE can harm an unborn child. Talk to your provider before you become pregnant. If you become pregnant, find a provider who is experienced with lupus and pregnancy.

## When to Contact a Medical Professional

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Call your provider if you have symptoms of SLE. Also call if you have this disease and your symptoms get worse or a new symptom occurs.

## Alternative Names

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Disseminated lupus erythematosus; SLE; Lupus; Lupus erythematosus; Butterfly rash - SLE; Discoid lupus

## References

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Arntfield RT, Jicks CM. Systemic lupus erythematosus and the vasculitides. In: Marx JA, Hockberger RS, Walls RM, eds. *Rosen's Emergency Medicine*. Philadelphia, PA: Elsevier Saunders; 2014:chap 118.

Crow MK. Etiology and pathogenesis of systemic lupus erythematosus. In: Firestein GS, Budd RC, Gabriel SE, McInnes IB, O'Dell JR et al, eds. *Kelley's Textbook of Rheumatology*. 9th ed. Philadelphia, PA: Elsevier Saunders; 2013:chap 79.

Crow MK. Systemic lupus erythematosus. In: Goldman L, Schafer AI. *Goldman's Cecil Medicine*. Philadelphia, PA: Elsevier Saunders; 2016:chap 266.

Lisnevskaja L, Murphy G, Isenberg D. Systemic lupus erythematosus. *Lancet*. 2014;384(9957):1878-1888. PMID: 24881804  
[www.ncbi.nlm.nih.gov/pubmed/24881804](http://www.ncbi.nlm.nih.gov/pubmed/24881804).

## Review Date 1/16/2016

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Page last updated: 05 July 2017