

Systemic Lupus Erythematosus (SLE) in Cats

 www.cat-world.com.au/sle-in-cats.html

At a glance:

- Systemic lupus erythematosus is an inflammatory disease which is caused by the cat's own immune system attacking the tissues.
- Diagnosis requires veterinary examination as well as tests which include baseline bloodwork, biopsies, and imaging.
- Treatment is lifelong medications to suppress the immune system.



What is systemic lupus erythematosus?

First reported in 1971, systemic lupus erythematosus (SLE) is a rare autoimmune disorder which can affect any organ system in the cat. Antibodies are proteins produced by the immune system to counteract and protect the body from antigens such as invading viruses and bacteria. However, sometimes the body produces antibodies against itself (known as auto-antibodies), attacking various systems including the skin, joints, blood vessels, kidneys, heart, and lungs.

Causes:

The cause SLE is unknown, although it is thought to be a combination of several factors including genetics, pharmacological agents, environmental, viral infection and exposure to UV light. Siamese, Persians and their related breeds appear to be at greater risk of developing the disease. There is no age or sex predilection in cats.

The mechanism for damage is a type III hypersensitivity. Antigen-antibody complexes (or immune complexes) are formed when antibodies bind to antigens. These antigen-antibody complexes are deposited in the tissues which activate a number of immune responses which initiates an inflammatory response. This, in turn, stimulates neutrophils, phagocytes, and monocytes to the site. Phagocytes release toxic by-products which cause tissue damage.

Symptoms:

Known as *The Great Imitator* due to many symptoms mimicking other disorders to affect cats. SLE affects many body systems including the kidneys, skin, blood, and joints. As such, clinical signs can be widely variable depending on the system affected.

Symptoms can be acute (sudden onset) or chronic, where the cat experiences symptoms on and off.

- Flare up – The re-appearance of symptoms
- Remission – Symptoms abate

Musculoskeletal

- Joint pain and swelling associated with polyarthritis.

- Shifting leg lameness.
- Decreased mobility.
- Muscle weakness.

Renal (glomerulonephritis/kidney disease)

- Enlarged kidneys
- Ascites (fluid in the abdomen)
- Increased thirst
- Increased urination
- Lethargy
- Weight loss
- Vomiting

Dermatologic

- Multifocal alopecia with crusty skin lesions, particularly on the head, face, ears, and rear legs
- Oral ulcers
- Nasal ulcers
- Paronychia (inflammation of the skin around the claws)

Hematologic (hemolytic anemia)

- Depression
- Lethargy
- Pale or yellow mucous membranes
- Anorexia
- Increased heart rate

Hematologic (thrombocytopenia)

- Lethargy
- Blood in urine
- Blood in stool
- Red spots in the eyes and/or gums
- Bruising

Neurological

- Seizures
- Behavioural changes

Other

- Fever with no apparent cause
- Swollen lymph nodes
- Weight changes
- Photosensitivity

Diagnosis:

The criteria for diagnosing SLE in cats has been modified from the one created by the [American Rheumatism Association](#) (ARA) in which in human patients must meet *four* of eleven criteria in order for a diagnosis of SLE to be made including: rash, photosensitivity, oral ulcers, non-erosive arthritis, pleuritis/pericarditis, renal disorder, neurologic disorder, hematologic disorder, immunologic disorder and positive antinuclear antibody.

Your veterinarian will perform a complete physical examination of your cat and obtain a medical history from you. He will perform routine tests such as:

- Biochemical profile – Elevated BUN, hypoalbuminemia.
- Coombs test – This test is used to detect the presence of antibodies which bind to the surface of red blood cells in cats with hemolytic anemia.
- Complete blood count – May reveal anemia, low platelets, low white blood cell count, low lymphocytes, spherocytosis (round shaped red blood cells).
- Urinalysis – Proteinuria, elevated BUN.
- Antinuclear antibody test (ANA) – This test measures antibodies to self-tissues.
- Biopsy of a skin lesion.
- Kidney biopsy for cats suspected of having glomerulonephritis.
- Xrays of the joints to check for arthritis.
- Synovial fluid (fluid from the joints) analysis.
- Blood pressure monitoring.

Treatment:

There is no cure for SLE and the goal of treatment is to suppress the immune system and improve quality of life. Hospitalisation will be necessary while the condition is brought under control.

Medications:

- Nonsteroidal anti-inflammatory drugs (NSAIDs), to reduce inflammation and fever.
- Reduce inflammation with corticosteroids such as prednisone or dexamethasone, tapering the dose once the condition is under control.
- Cyclosporine may be necessary for cats who do not respond to dexamethasone or prednisone.

Note: NSAIDs and corticosteroids should not be given concurrently due to severe side effects including gastroduodenal ulceration and renal papillary necrosis.

- Limiting exposure to sunlight.
- Splenectomy (removal of the spleen) for severe cases of thrombocytopenia.

Supportive care:

- Rest, especially during a flare-up

- Dietary management of kidney disease such as a low protein diet
- Medications to treat high blood pressure

The prognosis for cats with SLE depends on the organs involved and how well your cat responds to treatment. If there is internal organ involvement, it is poor.