

## SARCOIDOSIS SYMPTOMS AND CAUSES

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**Abstract:** *Sarcoidosis is a condition that causes lumps or nodules (granulomas) to form in your lungs, lymph nodes, skin, eyes and other parts of your body. Symptoms include cough, shortness of breath, tender sores on your shins, eye pain and redness. Many cases go away on their own or with treatment, but sometimes it becomes a chronic condition. This article will provide you with the skills and knowledge to understand the causes of sarcoidosis and its treatment.*

**Keywords:** *Insomnia, glaucoma, cataracts, pulmonary function tests, seizures, kidney stones,*

Sarcoidosis is a condition that causes your immune system to overreact and make lumps or nodules called granulomas. Depending on location and size, granulomas can cause mild to severe symptoms or no symptoms at all. In some cases, they can turn into fibrosis, causing permanent lung scarring.

Granulomas can be found almost anywhere in your body, but they're most commonly found in your lungs or lymph nodes. You may also have noticeable symptoms of granulomas in your skin, eyes or muscles.

A granuloma is an area of inflammation caused by your immune system. It's made up of a cluster of white blood cells that have been "walled off" from the rest of your body to try to protect you from something your immune system thought was harmful. Granulomas are surrounded by fibrous (dense) tissue, which makes them feel hard and lumpy.

While sarcoidosis can affect anyone, it's more common in Black people than in white people. It also affects females slightly more than males. Most cases are diagnosed between the ages of 25 and 40.

While you can't inherit sarcoidosis, you're at a higher risk of developing it if you have a first-degree biological relative (parent, child or sibling) who has it.

The symptoms of sarcoidosis depend on where in your body granulomas form. Most people with sarcoidosis have lung symptoms, but you can have symptoms in your skin, eyes, joints and almost anywhere else in your body. You may also have general feelings of being unwell or no symptoms at all.

General symptoms of sarcoidosis



- Fever.
- Fatigue.
- Joint pain.
- Muscle aches or weakness.
- Night sweats.
- Swollen lymph nodes.
- Unexplained weight loss.

Kidney stones.

Symptoms of sarcoidosis in your lungs

- Cough.
- Shortness of breath (dyspnea).
- Chest pain.
- Wheezing.

Symptoms of sarcoidosis in your eye

- Blurred vision or loss of vision (optic neuritis).
- Eye pain.
- Red or swollen eyes (uveitis or conjunctivitis).
- Sensitivity to light.

Symptoms of sarcoidosis of your skin

- Growths under your skin around scars or tattoos.
- Light or dark patches of skin.
- Raised, reddish-purple sores or rash across your nose or cheeks (lupus pernio).
- — Red, tender bumps on your shins (erythema nodosum).

Symptoms of sarcoidosis of your heart

- Chest pain.
- Fluttering heartbeat (palpitations).
- Irregular heartbeat (arrhythmia).
- Heart failure.
- Shortness of breath.

Symptoms of sarcoidosis of your nervous system

- Increased thirst or amounts of pee (Diabetes insipidus).
- Weak or paralyzed facial muscles (Bell's palsy).
- Headaches.



- Seizures.

What are the stages of pulmonary sarcoidosis?

Pulmonary (lung) sarcoidosis is sometimes described in stages called the Siltzbach classification system.

It's important to know that these stages aren't necessarily an indicator of severity. You're not expected to move through each stage. They're based on your lungs' appearance on a chest X-ray and mostly describe where the granulomas are located.

Someone with sarcoidosis can move between stages or have granulomas disappear completely. The only stage that's irreversible is stage four, which is permanent lung damage.

Stage 0: X-rays don't show any pulmonary sarcoidosis. Lungs and lymph nodes appear normal on an X-ray.

- Stage 1: Granulomas in your lymph nodes only.
- Stage 2: Granulomas in your lymph nodes and lungs.
- Stage 3: Granulomas in your lungs only.
- Stage 4: X-rays show pulmonary fibrosis, or permanent scarring of your

lungs.).

How is sarcoidosis diagnosed?

Sarcoidosis is usually diagnosed with a combination of a physical exam, imaging (such as a chest X-ray) and biopsy of suspected granulomas. Because sarcoidosis can look like other conditions, your healthcare provider may perform additional tests to rule out other illnesses.

Imaging tests and biopsies are the most common ways to diagnose sarcoidosis, but your healthcare provider may order others based on your signs and symptoms.

Imaging tests use special machines to take pictures of the structures inside of your body. Your healthcare provider may order chest X-rays, CT scans or MRIs.

Biopsies can be done in many different ways, depending on where your provider suspects you have granulomas. Skin, conjunctiva (eye) and some lymph node biopsies can be non- or minimally invasive.

More involved procedures can examine tissue from your lungs using small tubes, cameras and biopsy equipment passed through your nose, your throat or an incision (small cut). These include:

Endobronchial ultrasound-guided transbronchial fine needle aspiration (EBUS-TBNA).



Bronchoscopic transbronchial biopsy.

Mediastinoscopy.

Other tests for sarcoidosis include:

- Pulmonary function tests: Noninvasive tests that measure how well your lungs work.
- Lab tests: Blood or urine tests are used to see how well your liver, kidneys and other organs work.
- Electrocardiogram (EKG or ECG): A routine office test that checks the electrical activity of your heart.
- Nuclear imaging: PET scans and gallium scans use a small amount of radioactive material injected into a vein to show inflammation in your body.
- Purified protein derivative: A simple skin test that helps establish prior exposure or infection with tuberculosis (TB). This can diagnose or rule out TB, which is sometimes mistaken for sarcoidosis.
- Slit-lamp examination: Your provider looks at the inside of your eye to detect eye-related problems caused by sarcoidosis.

Sarcoidosis is a rare condition with many possible symptoms. Many cases resolve on their own or with treatment, but chronic sarcoidosis can be managed with medications and careful monitoring. It's important to note that in some cases, it may be beneficial to monitor symptoms without treatment. You and your healthcare provider can make a plan that works for your specific case.

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