

# Sarcoidosis

**S**arcoidosis is an inflammatory disease without a known cause and without a cure. It occurs in individuals throughout the world. Sarcoidosis usually affects the lungs, causing **granulomas** (inflammatory nodules). However, it can affect other organs, including the heart, liver, lymph nodes, skin, and eyes. Its symptoms vary depending on the areas of the body affected. Sometimes sarcoidosis is found incidentally, such as when a chest x-ray is taken for another reason. There are many theories about the cause of sarcoidosis, including environmental exposure, a **genetic** (inherited) tendency to develop sarcoidosis, viral infection, immune system overactivity, or a combination of these factors. Treatment is based on an individual's symptoms and the degree to which involved organs are affected.

The November 1, 2006, issue of JAMA includes an article about sarcoidosis.

## SARCOIDOSIS FACTS

- Those most likely to develop sarcoidosis are younger women (aged 20-40 years).
- Persons of African or Scandinavian descent are more likely to have sarcoidosis.
- Sarcoidosis can improve on its own or can worsen over time.
- Some individuals with sarcoidosis have no symptoms, yet others can be severely ill with multiple organ systems involved.
- Symptoms of sarcoidosis vary and can include generalized fatigue, weight loss, shortness of breath, dry cough, raised bumps on the shins (called **erythema nodosum**), reddened or watery eyes, or unexplained fever. Persons who have heart involvement can have abnormal heart rhythms or heart failure. Liver involvement may occur without symptoms, or there may be evidence of liver failure.
- Sarcoidosis is not contagious.

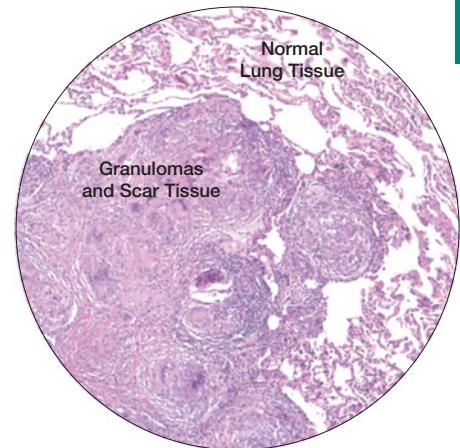
## DIAGNOSIS AND TESTING

- Chest x-ray may reveal scarring or granuloma formation in the lungs.
- Breathing studies, such as spirometry, may reveal restriction in breathing capacity.
- Arterial blood gases can show **hypoxemia** (decreased level of oxygen in the blood), an indication of reduced breathing capacity.
- Blood testing, computed tomography (CT scan), electrocardiogram, biopsies or tissue sampling, and other testing may be required to look for involvement of organs besides the lungs.

## TREATMENT

Treatment is based on the severity of sarcoidosis and its symptoms. Sometimes no treatment is necessary because the disease may have minimal symptoms or none at all or may improve on its own. Prednisone, an oral form of steroid, is usually the first treatment offered. Because steroids have adverse effects, the smallest possible dose is used. Some individuals cannot tolerate the side effects of steroids, which can include high blood pressure, weight gain, thinning of the skin, **osteoporosis** (thin bones), and elevated blood sugar. Other medications may be prescribed, including medications that suppress the immune system and that decrease inflammation. If other organs are involved besides the lungs, medicines to treat those damaged organs may be required. Making healthy lifestyle choices, including not smoking and maintaining a healthful diet, is an important component of living with sarcoidosis.

Lung Tissue Specimen  
From a Patient With Sarcoidosis



## FOR MORE INFORMATION

- National Heart, Lung, and Blood Institute  
[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)
- American Lung Association  
[www.lungusa.org](http://www.lungusa.org)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on JAMA's Web site at [www.jama.com](http://www.jama.com). Many are available in English and Spanish. A Patient Page on living with sarcoidosis was published in the March 13, 2002, issue.

Sources: National Heart, Lung, and Blood Institute; American Lung Association

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