CONDITION

Sarcoidosis

Sarcoidosis is an inflammatory condition that forms tiny cell clusters in the lungs or other organs.

WHAT IT IS
Inflammatory granulomas affecting the lungs and other organs

BODY SYSTEM
Lungs, lymph nodes, skin, eyes, heart, and nerves

MAIN SYMPTOMS
Dry cough, breathlessness, fatigue, skin or eye changes

WHAT CAUSES IT
Unknown trigger with an overactive immune response

HOW IT IS DIAGNOSED
Imaging, tissue biopsy, and exclusion of similar conditions

MAIN TREATMENT
Monitoring and medicines that reduce inflammation

CAN IT BE CURED?
No - treatment controls inflammation; remission may occur

IS IT AN EMERGENCY?
Sometimes - fainting, severe breathlessness, or sudden vision loss

LONG-TERM OUTLOOK
Often settles, but some develop chronic organ damage

Overview

Sarcoidosis is a condition in which the immune system forms tiny clusters of inflammatory cells called granulomas. These clusters can develop in almost any part of the body.

The lungs and lymph nodes in the chest are affected most often. Sarcoidosis can also involve the skin, eyes, heart, liver, kidneys, joints, brain, or nerves. "Sarcoid of Boeck" is an older name for the same condition.

Some people have no symptoms, and sarcoidosis is found during a chest X-ray for another reason. Others develop symptoms that affect daily life or need treatment to protect an organ.

Granulomas may disappear without causing lasting harm. In some people, however, inflammation continues or returns. Long-lasting lung inflammation can lead to scarring, called

fibrosis. Sarcoidosis affecting the heart, eyes, or nervous system may be serious even when lung symptoms are mild.

Sarcoidosis is not cancer, and it cannot spread from one person to another.

Symptoms

Symptoms depend on which organs are involved. They may begin suddenly or build gradually over months. Fatigue can be significant even when tests show limited organ damage.

Common general or lung-related symptoms include:

Skin sarcoidosis can cause raised patches, changes in skin colour, or lumps beneath the skin. Old scars or tattoos may become swollen.

Eye inflammation may cause redness, pain, sensitivity to light, blurred vision, or floating shapes in your sight. Some eye inflammation causes few early symptoms, so an eye examination may be recommended after diagnosis.

Heart involvement can cause palpitations, dizziness, fainting, chest pain, breathlessness, or ankle swelling. These symptoms may result from an abnormal heart rhythm or reduced pumping ability.

Nervous system involvement can cause facial weakness, numbness, weakness in a limb, severe headaches, seizures, or problems with balance. Sarcoidosis can also disturb calcium control, sometimes causing thirst, frequent urination, kidney stones, or kidney problems.

- Persistent dry cough, breathlessness, or chest discomfort
- Tiredness, fever, night sweats, or unplanned weight loss
- Painful or swollen joints, particularly around the ankles
- Tender red or purple bumps, often on the lower legs

Causes and risk factors

The exact cause of sarcoidosis is unknown. It appears to begin when the immune system reacts too strongly to one or more triggers in a person who is susceptible.

Researchers have studied infections, mould, dust, chemicals, and other environmental exposures. No single trigger explains every case, and sarcoidosis is not considered a contagious infection.

Genes probably influence risk. Having a close relative with sarcoidosis increases the chance of

developing it, but inheritance is not simple or predictable. Most relatives of people with sarcoidosis do not develop the condition.

Sarcoidosis can occur at any age and in people of every background. The likelihood of developing it, the organs affected, and the chance of a long-term course differ among ancestry groups. These patterns do not show what will happen to any one person.

Diagnosis

There is no single blood test that proves someone has sarcoidosis. Diagnosis usually combines the pattern of symptoms, imaging findings, and examination of a tissue sample. Other conditions that can also form granulomas must be ruled out.

A chest X-ray or CT scan may show enlarged lymph nodes, small lung nodules, or scarring. Breathing tests measure how much air the lungs hold, how quickly air can be moved, and how well oxygen passes into the blood.

A biopsy removes a small tissue sample. It may be taken from the skin, a lymph node, or the lung. Lung and chest lymph-node samples are often collected during bronchoscopy, in which a thin flexible camera is passed through the mouth or nose into the airways. A laboratory then looks for granulomas.

Granulomas alone do not confirm sarcoidosis. Tuberculosis, fungal infections, exposure-related lung conditions, medication reactions, and some cancers can produce similar findings. Your medical and exposure history helps guide the tests used to exclude these causes. In some highly typical situations, a biopsy may not be needed.

Blood and urine tests can check calcium levels and liver or kidney function. A blood test called angiotensin-converting enzyme, or ACE, may be abnormal, but it cannot reliably confirm or rule out sarcoidosis.

An electrocardiogram records the heart's electrical activity. Further heart imaging or rhythm monitoring may be needed if symptoms or initial tests suggest cardiac sarcoidosis. Eye examinations and other organ-specific tests may also form part of the assessment.

Treatment and management

Not everyone needs immediate treatment. Sarcoidosis that causes few symptoms and is not threatening organ function may be monitored with appointments, breathing tests, imaging, and blood tests. Treatment can be started if inflammation progresses.

Corticosteroids, such as prednisone, are the most commonly used medicines for active sarcoidosis. They reduce immune-system inflammation. Because longer-term use can cause effects such as raised blood sugar, bone thinning, weight gain, mood changes, and increased infection risk, treatment is reviewed regularly.

If corticosteroids like prednisone or hydrocortisone do not control the condition, cause difficult side effects, or are likely to be needed for a long time, another medicine may be used to reduce immune activity. Options include methotrexate and other immune-suppressing medicines. Certain biologic medicines, which target specific parts of the immune system, may be considered for sarcoidosis that has not responded to standard treatment.

Treatment is tailored to the organs involved. Examples include medicated eye drops for eye inflammation, treatment for abnormal heart rhythms, or an implanted device for some people with cardiac sarcoidosis. Oxygen or pulmonary rehabilitation may help selected people with advanced lung involvement. Organ transplantation is uncommon but can be considered for severe irreversible damage.

Do not stop corticosteroids suddenly unless you have been given specific instructions. The body may need time to resume its normal production of steroid hormones.

Sarcoidosis can raise calcium levels. Before taking calcium or vitamin D supplements, ask whether your levels need to be checked.

Complications

Most people do not develop severe complications. The risk is greater when inflammation is persistent, treatment is delayed in a vulnerable organ, or permanent scarring has developed.

Possible complications include:

Symptoms do not always match the amount of inflammation. For example, heart or eye involvement can sometimes be present before obvious symptoms develop. This is one reason routine follow-up matters.

- Lung scarring, low oxygen levels, or high pressure in lung blood vessels
- Abnormal heart rhythms, heart block, or reduced heart pumping
- Cataracts, glaucoma, or loss of vision from eye inflammation
- Nerve damage, seizures, weakness, or hormone-control problems
- High calcium levels, kidney stones, or impaired kidney function
- Chronic pain, fatigue, sleep problems, anxiety, or low mood

Prevention

There is no proven way to prevent sarcoidosis because its trigger is unknown. It is not caused by something you did.

Avoiding smoking, vaping, and unnecessary exposure to lung irritants will not guarantee prevention, but it can protect lung health if sarcoidosis is present. If work or hobbies expose you to metal dust, mould, silica, or other airborne material, describe those exposures during your medical assessment because they can point to conditions that resemble sarcoidosis.

Living with it and what to expect

Sarcoidosis may follow several courses. In some people, inflammation settles within months or a few years and does not return. Others experience relapses or ongoing inflammation. A smaller group develops lasting organ damage, particularly lung scarring.

Even after inflammation improves, fatigue, breathlessness, pain, or reduced stamina may continue. These symptoms can affect work, exercise, sleep, and concentration. Pulmonary rehabilitation, gradually paced activity, sleep assessment, and support for emotional health may help when matched to your needs.

Follow-up may include breathing tests, chest imaging, heart checks, eye examinations, and blood or urine tests. The schedule is based on the organs involved, treatment, and whether findings are stable. Keep appointments even if you feel well, particularly when the heart or eyes have been affected.

If you take an immune-suppressing medicine, you may need blood monitoring and steps to reduce infection risk. Discuss vaccinations and plans for pregnancy with your healthcare team because some treatments require advance planning.

You may be able to work, exercise, travel, and continue normal relationships. Adjustments may be needed during a flare or when fatigue is severe. Your outlook is shaped mainly by which organs are involved, whether inflammation remains active, and whether permanent damage has occurred.

When to get medical help

Arrange a routine or prompt medical review if you develop a persistent cough, increasing breathlessness, new skin changes, worsening fatigue, joint swelling, or symptoms that return after improving.

Seek prompt assessment for eye redness, eye pain, sensitivity to light, or new blurred vision. Early treatment can help protect sight. New palpitations, dizziness, ankle swelling, increased thirst, frequent urination, or possible kidney-stone pain also need medical review.

Seek emergency help for:

These symptoms can have causes other than sarcoidosis, but they need urgent assessment.

- Severe or rapidly worsening difficulty breathing
- Fainting, especially with palpitations or chest pain
- Sudden loss of vision
- A seizure, new facial droop, or sudden limb weakness
- Severe chest pain or signs of a dangerous heart rhythm

Common questions

Is sarcoidosis cancer?

No. Sarcoidosis is an inflammatory condition, not cancer. Enlarged lymph nodes and lung changes can sometimes resemble cancer on a scan, which is one reason a biopsy or further testing may be needed.

Is sarcoidosis contagious?

No. You cannot catch sarcoidosis from another person or pass it to family members. Although infections have been studied as possible triggers, sarcoidosis itself is not an infectious condition.

Can sarcoidosis go away on its own?

It can become inactive without treatment, especially when it is mild and does not threaten an organ. This is often called remission. Sarcoidosis can return, and some people develop long-term inflammation or scarring, so follow-up may still be needed.

Does sarcoidosis shorten life expectancy?

Most people do not develop life-threatening organ damage. The outlook is less favourable when sarcoidosis seriously affects the heart, causes advanced lung scarring, or raises pressure in the lung blood vessels. Individual risk cannot be judged from symptoms alone.

Is there a special diet for sarcoidosis?

No specific diet has been proven to remove granulomas or cure sarcoidosis. A balanced diet can support general health, particularly during corticosteroid treatment. Because sarcoidosis can raise calcium levels, do not start high-dose calcium or vitamin D supplements without

checking first.

Can I exercise with sarcoidosis?

Many people can exercise, but breathlessness, heart involvement, fatigue, or lung damage may affect what is safe. Activity often needs to build gradually. If exercise causes chest pain, faintness, strong palpitations, or unusual breathlessness, stop and seek medical advice.

Sources

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