CONDITION

# Erythema nodosum

Erythema nodosum is inflammation beneath the skin that causes tender red or bruise-like lumps, usually on the shins.

**WHAT IT IS**
Inflammation beneath the skin causing tender nodules

**BODY SYSTEM**
Skin and immune system

**MAIN SYMPTOMS**
Tender shin lumps, redness, joint pain, fever

**WHAT CAUSES IT**
Immune reaction to triggers, often unidentified

**HOW IT IS DIAGNOSED**
Clinical examination; deep skin biopsy when uncertain

**MAIN TREATMENT**
Supportive care and treatment of any underlying trigger

**CAN IT BE CURED?**
Sometimes - most episodes settle as inflammation fades

**IS IT AN EMERGENCY?**
Sometimes - breathing difficulty or severe illness needs emergency care

**LONG-TERM OUTLOOK**
Usually clears within weeks; recurrences can occur

## Overview

Erythema nodosum is inflammation of the layer of fat just beneath the skin. It causes painful, raised lumps called nodules. These usually develop on the fronts of both lower legs, although they can appear elsewhere.

The nodules often begin as bright red or warm areas. Over time, they may turn purple, blue, green, or yellow, much like a fading bruise. They do not usually break open or leave permanent scars.

Erythema nodosum is a condition rather than a single disease. It is often an immune reaction to an infection, medicine, pregnancy, or another inflammatory condition. In many people, no clear trigger is found.

The skin inflammation usually settles, but finding a possible cause still matters. Occasionally, the nodules are the first sign of an infection or an inflammatory illness that needs separate treatment.

Erythema nodosum is not contagious. You cannot catch it by touching someone's skin.

## Symptoms

The main symptom is a sudden outbreak of tender lumps beneath the skin. They are usually found on both shins and may feel firm, warm, and painful when touched.

Individual nodules are often several centimetres wide. New ones may appear over several days. They usually flatten gradually rather than forming a head or releasing pus.

Common features include:

Joint pain can begin before the skin changes and may continue after the nodules fade. The joints can feel stiff or swollen, but erythema nodosum does not usually cause permanent joint damage.

Symptoms linked to the underlying trigger may also occur. These can include a recent sore throat, cough, diarrhoea, abdominal pain, weight loss, or eye discomfort. Their meaning depends on the full pattern of symptoms and your medical history.

- Painful red or bruise-like lumps, especially on the shins
- Swelling around the ankles or lower legs
- Aching joints, particularly the ankles and knees
- Fever, tiredness, or a generally unwell feeling

## Causes and risk factors

Erythema nodosum develops when the immune system causes inflammation in the fat beneath the skin. This may happen in response to another condition, but it is not always possible to identify why.

A recent streptococcal throat infection is a well-recognised trigger. Other bacterial, viral, fungal, or parasitic infections can sometimes be involved. Which infections are relevant can be affected by where you live, recent travel, and possible exposure to tuberculosis.

Inflammatory conditions can also be associated with erythema nodosum. These include sarcoidosis, which causes small areas of inflammation in organs such as the lungs, and

inflammatory bowel diseases such as Crohn's disease and ulcerative colitis.

Some medicines may trigger it. Reported examples include certain antibiotics and medicines containing hormones. Pregnancy can also be associated with an episode, possibly because of hormonal and immune changes.

Erythema nodosum can occur at any age. It is reported more often in women during early and middle adulthood. Having one episode may increase the chance of another, especially if the same trigger returns.

Cancer is an uncommon cause. Most people with erythema nodosum do not have cancer, and the nodules themselves are not cancerous.

## Diagnosis

A healthcare professional can often recognise erythema nodosum from the appearance, tenderness, and location of the nodules. They will usually ask when the lumps appeared and whether you have recently had an infection, started a medicine, travelled, or developed other symptoms.

No single blood test confirms every case. Tests are chosen to look for a possible trigger or to rule out conditions that can resemble erythema nodosum.

Depending on your history and symptoms, the assessment may include:

A skin biopsy may be needed if the appearance is unusual, the nodules persist, or the diagnosis is uncertain. During a biopsy, a clinician removes a small sample for examination under a microscope. Because erythema nodosum affects deeper tissue, the sample must include enough fat beneath the skin.

Microscopy typically shows inflammation of the walls separating small sections of fat. This pattern is called septal panniculitis. "Panniculitis" simply means inflammation of the fat beneath the skin.

- Blood tests for inflammation or signs of infection
- A throat swab or blood test for recent streptococcal infection
- A chest X-ray when tuberculosis or sarcoidosis is a concern
- Stool tests if you have ongoing diarrhoea or abdominal symptoms
- Pregnancy testing when relevant to care

## Treatment and management

Treatment focuses on easing pain and swelling while the inflammation settles. Any identified trigger is treated or managed separately.

Rest can help during the most painful stage. Raising your legs while sitting or lying down may reduce swelling. Cool compresses and supportive bandages or stockings may feel helpful, provided they are comfortable and do not worsen the pain.

Pain-relieving or anti-inflammatory medicines may be considered. Non-steroidal anti-inflammatory drugs like ibuprofen or naproxen , or NSAIDs, can reduce pain and inflammation, but they are not suitable for everyone. They may be unsafe with some stomach, kidney, heart, bleeding, pregnancy, or inflammatory bowel problems. A clinician or pharmacist can help you check what is appropriate.

Antibiotics like amoxicillin or doxycycline do not treat erythema nodosum itself. They are used only when a bacterial infection has been identified or is strongly suspected. Likewise, a medicine that might have triggered the condition should not be stopped without advice from the clinician who prescribed it.

Corticosteroids like prednisone or hydrocortisone , which strongly reduce inflammation, are occasionally considered for severe symptoms. They are generally avoided until important infections have been excluded because they can make some infections harder for the body to control.

Persistent or frequently recurring erythema nodosum may need assessment by a dermatologist or another specialist. Treatment then depends on the symptoms and any underlying condition.

## Complications

Erythema nodosum usually heals without ulcers or scars. Temporary bruise-like colour changes can remain after the tenderness has gone, particularly in darker skin tones.

Pain and ankle swelling may make walking, working, or sleeping difficult for a time. Joint discomfort can last longer than the skin nodules, although permanent joint injury is unusual.

Some people have repeated episodes. Recurrence may happen without a clear reason or when an infection, medicine, or inflammatory condition triggers the immune response again.

The most important possible complication is not usually the skin inflammation itself. It is an underlying infection or inflammatory disease that has not yet been recognised. Follow-up is particularly important if the nodules persist, repeatedly return, or occur with symptoms

affecting the lungs, digestive system, eyes, or general health.

## Prevention

There is no reliable way to prevent every case of erythema nodosum. Many episodes have no identifiable cause, and the immune reaction cannot be predicted.

If a specific trigger is confirmed, managing that trigger may reduce the chance of another episode. This might involve treating an infection, controlling an inflammatory condition, or reviewing a suspected medicine with the prescriber.

Do not avoid prescribed medicines or routine activities simply because they have sometimes been associated with erythema nodosum. A suspected link needs to be assessed in the context of your health and the reason for the medicine.

Erythema nodosum is not spread from person to person, so isolation and special cleaning measures are not needed.

## Living with it and what to expect

The nodules usually become less tender and begin to fade over several weeks. Their changing colours can look similar to bruises at different stages. New nodules may continue appearing for a short time even while older ones are improving.

Many episodes clear within about two months, but recovery can take longer. Joint aches or ankle swelling may continue after the skin looks better. The course is affected by whether there is an ongoing trigger and whether that trigger can be treated.

During a painful episode, you may need to reduce standing, strenuous exercise, or activities that put pressure on the shins. Returning to usual activity gradually is reasonable as pain and swelling allow.

Keep track of related symptoms, especially persistent cough, digestive problems, fever, weight loss, or eye pain. Also note whether episodes follow a particular infection or medicine. This information can help with future assessment.

Most people do not have lasting skin damage and can return to their usual activities. Some have recurrences over months or years. Repeated episodes do not automatically mean that a serious illness is present, but they are a reason for routine medical review.

## When to get medical help

Arrange a routine appointment if you develop new tender lumps beneath the skin, especially if they are on both shins. Other conditions can look similar, and an examination can help identify whether tests are needed.

Seek prompt medical advice if:

Get urgent or emergency help if you have difficulty breathing, cough up blood, faint, develop severe chest pain, or become seriously unwell. These are not typical features of uncomplicated erythema nodosum and may point to another condition needing immediate assessment.

- The nodules are not improving after several weeks
- New nodules keep appearing or episodes repeatedly return
- You have ongoing fever, cough, diarrhoea, abdominal pain, or weight loss
- A joint becomes very swollen or difficult to move
- The skin breaks down, blisters, drains pus, or becomes rapidly more painful
- Symptoms began soon after starting a new medicine

## Common questions

How long does erythema nodosum last?

The tender lumps often fade over several weeks, commonly within about two months. Joint discomfort or mild colour changes may last longer. Symptoms can persist if an underlying trigger remains active.

Is erythema nodosum contagious?

No. The skin condition itself cannot spread between people. However, an infection that triggered it, such as a throat infection, may be contagious in its own right.

Does erythema nodosum leave scars?

It does not usually scar because the nodules normally flatten without breaking open. Temporary red, purple, or brown marks can remain while the skin recovers.

Can erythema nodosum come back?

Yes. Some people have another episode, particularly if they encounter the same trigger or have an ongoing inflammatory condition. Repeated episodes should be reviewed, even when previous nodules settled without treatment.

Is erythema nodosum an autoimmune disease?

Not usually by itself. It is an immune-driven reaction that can occur without another illness. It can also accompany immune-related conditions such as inflammatory bowel disease or sarcoidosis.

Can I exercise with erythema nodosum?

Gentle activity may be possible if it does not increase pain or swelling. During a painful flare, rest, leg elevation, and avoiding pressure on the shins may be more comfortable. Activity can usually be increased gradually as symptoms improve.

## Sources

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