

## **Erythema nodosum**

### **What is erythema nodosum?**

Erythema nodosum is the most common type of panniculitis (inflammation of the fat layer in the skin) leading to red, raised nodules usually over the shins, ankles and knees. Erythema nodosum can occur at any age but most commonly occurs between 20 to 40 years of age. It occurs more commonly in women than men.

### **What causes erythema nodosum?**

Erythema nodosum is considered to be a hypersensitivity response to different provoking agents. This leads to activation of the immune system and inflammation of the fat layer in the skin.

The condition can be triggered by a wide variety of stimuli such as previous streptococcal throat infection, pregnancy, tuberculosis, medications, inflammatory bowel disease (ulcerative colitis and Crohn's disease), sarcoidosis and rarely malignancy. Less common causes include infection such as *Yersinia enterocolitica* and *Mycoplasma*. Various drugs (such as the oral contraceptive pill, salicylates, sulphonamide drugs, iodine/bromide and non-steroidal anti-inflammatory drugs) may also precipitate the condition. However, more than fifty per cent of cases have no identifiable cause.

### **What does erythema nodosum look like?**

Erythema nodosum is characterised by the sudden development of red, painful nodules over the shins and/or lower legs. At first, the lesions are a bright red colour and are raised above the skin. After 1 to 2 weeks, they flatten and become a darker red/purple colour. The nodules usually do not form pus and do not ulcerate. They usually heal without scarring. Leg ache and ankle swelling are common in the initial phase. In rare cases, other sites such as upper thighs, upper arms and face can be involved. Other symptoms can include fever, lethargy, abdominal pain, diarrhoea and joint pain.

### **How is erythema nodosum diagnosed?**

Usually the diagnosis of erythema nodosum can be made by your doctor from a clinical examination and medical history. Sometimes a biopsy of the fat layer may be needed to confirm the diagnosis. The classic finding in the biopsy is a septal panniculitis (inflammation of the septae dividing the fat into lobules).

A number of tests may also be needed to determine the underlying cause. These include blood tests for markers of inflammation, antistreptolysin titre (to test for previous streptococcal throat infection), calcium levels, ACE level (to test for sarcoidosis) and quantiferon gold (test for active tuberculosis). Your doctor may also order a urine test, chest X-ray, throat swab (to test for group A *streptococci*) and stool culture (to test for *Yersinia enterocolitica*).

### **How is erythema nodosum treated?**

If no underlying cause is found, treatment usually involves elevating the legs and wearing compression stockings. Nodules usually disappear in 2 to 4 weeks.

Aspirin and other anti-inflammatory medications can be helpful for pain.

Potassium iodide and prednisone have also been used successfully in treating erythema nodosum.

If an underlying cause has been found, treatment of the condition or removal of the offending medication will usually lead to resolution of symptoms.

### **What is the likely outcome of erythema nodosum?**

In most people, the lesions resolve within 4 to 6 weeks. However, leg pain and swelling of the ankles may persist for weeks after this. Children usually have a shorter illness than adults.

Relapses tend to occur more commonly in those with erythema nodosum of unknown cause and erythema nodosum not associated with respiratory tract infections. Complications from the condition are highly uncommon.