CONDITION

Granuloma annulare

Granuloma annulare is a harmless inflammatory skin condition that causes smooth bumps, often arranged in rings.

WHAT IT IS
A noncontagious inflammatory skin condition

BODY SYSTEM
Skin

MAIN SYMPTOMS
Smooth raised bumps, ring-shaped patches, mild itch, colour changes

WHAT CAUSES IT
Unknown; likely an immune reaction in the skin

HOW IT IS DIAGNOSED
Skin examination, sometimes a skin biopsy

MAIN TREATMENT
Observation, skin treatments, or specialist medicines

CAN IT BE CURED?
Sometimes - often clears, but can return

IS IT AN EMERGENCY?
No - usually harmless and limited to skin

LONG-TERM OUTLOOK
Often clears, though widespread forms may persist or return

Overview

Granuloma annulare is an inflammatory skin condition. It causes small, firm bumps that may join into circles or rings. It is sometimes called Ringed Eruption.

The condition is harmless and is not contagious. It is not caused by a worm or other parasite, despite its ring-shaped appearance. It also does not usually affect internal organs or overall health.

Granuloma annulare can occur at any age. The more common, localized form affects one or a few areas, often the hands, feet, wrists, ankles, elbows, or knees. A generalized form causes bumps across larger parts of the body and may last longer.

Many cases eventually clear without treatment. Treatment may be considered when the

bumps are uncomfortable, widespread, persistent, or affecting how you feel about your appearance.

Symptoms

The usual sign is a group of smooth, firm bumps called papules. These bumps often expand outward or join together to form a ring. The skin in the middle of the ring may look normal or slightly sunken.

The bumps may be skin-coloured, pink, red, brown, or purple. Their appearance can differ with skin tone. Unlike many fungal rashes, the edge usually is not dry or scaly.

Most areas do not hurt. Some people have mild itching or tenderness, especially when the condition is widespread.

Different forms can look and behave differently:

Granuloma annulare can resemble ringworm, eczema, insect bites, or other skin conditions. Its appearance alone cannot always confirm what it is.

- Localized granuloma annulare causes one or several rings, commonly over joints, hands, or feet.
- Generalized granuloma annulare causes many bumps over the trunk, arms, or legs. It is more likely to itch and persist.
- Subcutaneous granuloma annulare causes deeper, firm lumps under the skin, usually in children. Common sites include the scalp, hands, and lower legs.
- Perforating granuloma annulare is uncommon. Bumps may develop a central crust or release a small amount of fluid.

Causes and risk factors

The exact cause is unknown. The bumps form when inflammation develops around collagen, a supporting protein in the deeper layer of the skin. This appears to involve an immune response, but granuloma annulare is not usually considered a classic autoimmune condition.

It is not caused by poor hygiene, and it cannot spread through touching, shared towels, swimming pools, or sexual contact.

Cases have sometimes appeared after skin injury, insect bites, infections, vaccinations, or certain medicines. These events may act as triggers in some people, but a direct cause is often impossible to identify. Having granuloma annulare does not mean that you have an infection.

Research has examined possible links with diabetes, abnormal blood fats, and thyroid conditions. Results have been mixed, and these conditions do not explain most cases. Widespread or persistent granuloma annulare may sometimes prompt a clinician to consider testing based on your age, symptoms, and medical history.

Anyone can develop the condition. Localized granuloma annulare is often seen in children and younger adults, while the generalized form is more often diagnosed in adults.

Diagnosis

A healthcare professional can often recognize granuloma annulare by examining the shape, surface, colour, and location of the bumps. They may ask how long the areas have been present, whether they itch, and whether you have used any treatments.

If the appearance is uncertain, a small skin biopsy may be performed. After numbing the area, a sample of skin is removed and examined under a microscope. The pattern of inflammation can support the diagnosis and help rule out another condition.

If ringworm is possible, skin cells may be gently scraped from the edge of the rash and tested for fungus. Ringworm is an infection and needs different treatment.

Blood tests do not confirm granuloma annulare. They may be offered when your history or the pattern of the condition gives a separate reason to check for diabetes, thyroid problems, or abnormal cholesterol and other blood fats. Not everyone needs these tests.

Treatment and management

Treatment is not always necessary. If there are only a few areas and they are not uncomfortable, waiting for them to clear may be reasonable. Leaving granuloma annulare untreated does not usually damage the skin or allow it to spread to internal organs.

When treatment is wanted, the choice depends on where the bumps are, how widespread they are, and how much they affect you.

For localized areas, options may include:

These treatments may flatten the bumps, but they do not guarantee permanent clearance. Corticosteroids like prednisone or hydrocortisone can thin the skin or alter its colour, especially with prolonged use. Injections and freezing can also cause pain, scarring, or lighter or darker marks.

Generalized granuloma annulare can be harder to treat. A dermatologist may consider

phototherapy, which exposes the skin to controlled ultraviolet light. Medicines that act throughout the body are sometimes used for persistent or widespread cases. Examples include medicines that reduce inflammation or change immune activity.

Evidence for systemic treatments is limited, and no single option works for everyone. These medicines may require blood tests, eye checks, or other monitoring because they can have important side effects. A dermatologist can explain the likely benefits and uncertainties.

Moisturizer can reduce dryness, and treatment for itching may help if that is a problem. Antifungal like fluconazole or terbinafine creams do not treat granuloma annulare unless a fungal infection is also present.

- Corticosteroid cream or ointment to reduce inflammation
- Corticosteroid injections into individual rings or bumps
- Freezing with liquid nitrogen, called cryotherapy
- Other prescription creams that change the local immune response

Complications

Granuloma annulare does not usually cause serious physical complications. It does not turn into cancer and generally does not damage organs.

Possible effects include:

A change in skin colour can remain after the inflammation has settled. This is especially noticeable in darker skin tones and does not necessarily mean that the condition is still active.

- Ongoing itching or tenderness
- Distress about visible areas of skin
- Lighter or darker marks after the bumps flatten
- Scarring, particularly with the uncommon perforating form or after some treatments
- Side effects from topical, injected, light-based, or systemic treatment

Prevention

There is no reliable way to prevent granuloma annulare because its cause is unknown. It is not the result of something you ate, poor hygiene, or contact with another person.

Avoiding rubbing or scratching may reduce irritation, but it cannot be expected to stop new

bumps. If a medicine is suspected as a trigger, do not stop it on your own. A healthcare professional can review the timing and discuss whether an alternative is appropriate.

A recurrence is not your fault and does not mean that you managed the condition incorrectly.

Living with it and what to expect

Localized granuloma annulare often fades on its own. Many cases clear within several months to about two years, although some last longer. New rings may appear while older ones are flattening.

The generalized form is more likely to continue for several years or return after treatment. Treatment can improve the appearance or symptoms without preventing future areas. It may take more than one approach to find an acceptable balance between benefit and side effects.

Once the bumps settle, temporary brown, grey, pale, or reddish marks may remain. These marks often fade gradually, but the timing cannot be predicted. Sun protection may reduce contrast between affected and surrounding skin, although it does not treat the underlying condition.

Granuloma annulare usually does not limit work, school, exercise, swimming, or physical contact. You do not need to cover it to protect other people.

Routine follow-up may be useful if the diagnosis is uncertain, the areas are changing, or treatment is not helping. Follow-up is particularly important when you are using a medicine that requires blood tests or other safety monitoring.

When to get medical help

Arrange a routine appointment if you develop an unexplained ring-shaped rash. Several conditions can look similar, and ringworm requires different treatment.

You should also seek routine medical advice if:

Seek prompt medical assessment for rapidly increasing redness, warmth, swelling, pus, worsening pain, or fever. These are not typical features of granuloma annulare and could suggest an infection or another condition.

Granuloma annulare itself is not an emergency. Emergency care is appropriate if a rash occurs with difficulty breathing, swelling of the face or tongue, fainting, widespread blistering, or peeling involving the mouth or eyes. Those symptoms suggest a different and potentially serious reaction.

- The bumps are widespread, itchy, painful, or affecting daily life
- The areas have not improved or continue to multiply
- A previously diagnosed area develops a different appearance
- Treatment causes skin thinning, sores, marked colour change, or other concerns
- You develop unexplained firm lumps under the skin

Common questions

Is granuloma annulare contagious?

No. You cannot catch it from another person or pass it through skin contact, clothing, towels, or shared surfaces.

Is granuloma annulare the same as ringworm?

No. Ringworm is a fungal infection and often has a scaly, itchy edge. Granuloma annulare is an inflammatory condition and usually forms smooth, firm bumps. Testing may be needed when the appearance is unclear.

Does granuloma annulare mean I have diabetes?

Not necessarily. Studies have reported possible associations, particularly in some adults with widespread disease, but findings are inconsistent. Granuloma annulare alone does not diagnose diabetes. Testing may be considered when there are other reasons for it.

Can granuloma annulare become cancer?

No. Granuloma annulare is not cancer and does not become skin cancer. A changing or unusual skin area should still be examined because other conditions can look similar.

How long does granuloma annulare last?

Localized areas often clear within months to a few years. Widespread granuloma annulare may last longer and can return after it clears. The course is difficult to predict for one person.

Should I cover granuloma annulare?

You do not need to cover it to prevent spreading it. Clothing or a dressing may help protect an irritated area from rubbing, but keeping it covered does not make it clear faster.

Sources

- American Academy of Dermatology Association. Granuloma annulare: Signs and symptoms; Causes; Diagnosis and treatment . Patient education series.
- British Association of Dermatologists. Granuloma annulare . Patient information leaflet.
- DermNet New Zealand. Granuloma annulare . Clinical reference and patient information.
- Joshi TP, Duvic M. "Granuloma Annulare: An Updated Review of Epidemiology, Pathogenesis, and Treatment Options." American Journal of Clinical Dermatology . 2022;23(1):37-50.
- Piette EW, Rosenbach M. "Granuloma annulare: Clinical and histologic variants, epidemiology, and genetics." Journal of the American Academy of Dermatology . 2016;75(3):457-465.
- Piette EW, Rosenbach M. "Granuloma annulare: Pathogenesis, disease associations and triggers, and therapeutic options." Journal of the American Academy of Dermatology . 2016;75(3):467-479.