CONDITION

Ringworm of the scalp or beard

A fungal infection that affects scalp or beard hair and nearby skin

WHAT IT IS
Fungal infection of scalp or beard hair

BODY SYSTEM
Skin and hair

MAIN SYMPTOMS
Scaly patches, broken hairs, hair loss, tender swelling

WHAT CAUSES IT
Contagious dermatophyte fungal infection

HOW IT IS DIAGNOSED
Hair or skin microscopy and fungal culture

MAIN TREATMENT
Oral antifungal medicine, with shampoo to reduce spread

CAN IT BE CURED?
Yes, antifungal treatment usually clears it

IS IT AN EMERGENCY?
No, but painful swelling needs prompt care

LONG-TERM OUTLOOK
Usually clears, but delayed care can leave permanent hair loss

Overview

Ringworm of the scalp or beard is a fungal infection of the skin, hair follicles, and hair shafts. Scalp infection is called tinea capitis . Infection in the beard or moustache area is called tinea barbae .

Despite its name, ringworm is not caused by a worm. It is caused by a group of fungi called dermatophytes, which live on keratin-the protein found in skin, hair, and nails.

Scalp ringworm occurs most often in children, although anyone can develop it. Beard ringworm affects coarse facial hair, so it is mainly seen in adolescents and adults.

These infections matter because creams alone usually cannot reach fungi deep inside a hair follicle. Treatment normally requires antifungal medicine taken by mouth. Prompt care also reduces spread and lowers the risk of permanent hair loss from severe inflammation.

Symptoms

Scalp ringworm does not always form a clear, ring-shaped rash. Its appearance can differ depending on the fungus involved and how strongly your immune system reacts.

Possible scalp symptoms include:

A kerion is a strong inflammatory reaction to the fungus. It causes a soft, boggy, painful swelling that may ooze pus or form crusts. The hairs in the area often come out easily. A kerion can resemble a bacterial abscess, but it still requires antifungal treatment.

Beard ringworm may cause scaly patches with broken hairs. More inflammatory cases produce red, lumpy areas around hair follicles, crusting, or pus-filled spots. The area can be tender, and affected hairs may pull out easily.

The infection may affect one patch or several areas. Symptoms can resemble eczema, psoriasis, severe dandruff, alopecia areata, or a bacterial infection, so appearance alone may not identify the cause.

- Round or irregular areas of scaling and hair loss
- Hairs broken close to the scalp, sometimes leaving "black dots"
- Itching, redness, or dandruff-like flaking
- Tender bumps or pus-filled spots
- Swollen lymph nodes, usually around the neck

Causes and risk factors

Scalp and beard ringworm are caused by dermatophyte fungi, most often species of Trichophyton or Microsporum . Different species are associated with transmission from people, animals, or the environment.

The fungus can spread through direct contact with an infected person. It may also spread through shared combs, brushes, hats, towels, bedding, hair clippers, or other items that carry infected hairs or skin flakes.

Some fungi are carried by animals, including household pets and farm animals. An animal can sometimes carry ringworm without having an obvious bald or scaly patch. Beard ringworm has a particular association with contact with infected cattle and other animals, although person-to-person spread can occur.

Factors that make infection or spread more likely include:

Having ringworm does not mean that you or your household are unclean. Ordinary contact can spread fungal spores before the infection has been recognised.

- Close household or sporting contact
- Sharing hair-care tools, headwear, or towels
- Crowded living conditions
- Contact with an infected animal
- Warm, humid environments
- A weakened immune system

Diagnosis

A clinician will examine the affected skin and hair. They may use a dermatoscope, a magnifying device that can reveal characteristic patterns of broken or twisted hairs. This can support the diagnosis but does not always confirm which fungus is present.

Confirmation usually involves collecting hairs, scalp scale, or material from a beard lesion. A laboratory may:

Fungal culture can take time, so treatment may sometimes begin before the result when the clinical findings strongly suggest ringworm. Identifying the fungus can help guide the choice of oral medicine, because some antifungals like fluconazole or terbinafine work better against particular species.

A kerion may contain pus even when bacteria are not causing the main problem. If a secondary bacterial infection is suspected, a separate bacterial swab may be taken.

- Examine the sample under a microscope for fungal structures
- Grow the fungus in a culture to identify it
- Use a molecular test, such as PCR, where available

Treatment and management

Scalp and beard ringworm usually require an antifungal medicine taken by mouth. Antifungal creams and shampoos do not penetrate deeply enough into infected hair follicles to cure the condition by themselves.

Oral treatment options include terbinafine, griseofulvin, and certain azole antifungals. The

most suitable option depends on factors such as the likely fungus, age, other health conditions, pregnancy, possible medicine interactions, and local availability. Treatment commonly continues for several weeks.

Some oral antifungals can affect the liver or interact with other medicines. Before treatment, tell your prescriber about all prescription medicines, non-prescription products, and supplements you use. Follow-up or blood tests may be needed for some people or medicines.

An antifungal shampoo, often containing ketoconazole or selenium sulfide, may be recommended alongside oral medicine. Shampoo can reduce fungal spores on the hair and lower the chance of passing them to someone else, but it is not an effective treatment on its own.

A kerion needs prompt oral antifungal treatment. It should not usually be cut open or drained like an abscess. Other medicines are sometimes considered for severe inflammation, but they are not needed in every case.

Helpful steps during treatment include avoiding sharing combs, brushes, hats, pillowcases, towels, razors, and clippers. Hair-care tools should be cleaned as advised. Shaving the head or beard is not usually necessary and may irritate inflamed skin.

Household members may need examination if they have scaling, itching, or hair loss. In some situations, people without visible symptoms can carry the fungus and may be offered testing or measures to reduce spread. If an animal may be the source, a veterinarian should assess it rather than using human antifungal products.

Complications

Most infections clear with suitable treatment. The main concern is intense inflammation, especially a kerion. This can damage hair follicles and leave permanent areas of scarring hair loss.

Other possible complications include:

Hair shedding can continue for a short time after treatment begins. This does not always mean that treatment is failing. If scaling, swelling, or hair loss is worsening, arrange a review.

- A secondary bacterial skin infection
- Continued spread to household members
- Infection returning after incomplete treatment
- Temporary changes in skin colour after inflammation

- Emotional distress related to visible scaling or hair loss

Prevention

There is no vaccine that prevents scalp or beard ringworm. Exposure cannot always be avoided, especially when someone or an animal carries the fungus without visible symptoms.

You can reduce the chance of catching or spreading it by not sharing items that touch hair or affected skin. This includes brushes, combs, hats, helmets, towels, pillowcases, razors, and clippers.

Wash hands after touching an affected area or applying shampoo. Follow the cleaning instructions given for bedding, clothing, and hair-care equipment. Avoid scratching, because this can injure the skin and spread infected material.

Do not treat pets with human medicines. If a pet has scaly skin, broken fur, or unexplained bald patches-or if infections keep returning in the household-ask a veterinarian about examination and testing.

Rules about school, childcare, work, and contact sports differ by setting and local public health policy. Follow the advice given after treatment has started rather than keeping someone away indefinitely.

Living with it and what to expect

Treatment usually takes weeks rather than days. Itching and scaling may improve before the hair looks normal. Take the oral medicine for the full recommended course, even if the skin appears better, unless the prescriber tells you to stop.

Hair regrowth is slower than clearance of the infection. New growth may take several months to become noticeable and fill in the affected patch. Most hair grows back if the follicles have not been scarred.

A follow-up appointment may be used to check symptom improvement, review laboratory results, look for medicine side effects, or decide whether treatment should continue. Some clinicians repeat fungal testing when symptoms persist or the infection has been difficult to clear.

Ringworm can return after successful treatment, particularly if an untreated household member, shared item, or animal remains a source. A recurrence does not necessarily mean that the original medicine was taken incorrectly.

Most people can continue their normal activities while being treated, with sensible steps to reduce spread. Visible hair loss can still affect confidence. Temporary hairstyle changes or head coverings may help, provided they are not shared and do not rub painfully against inflamed skin.

When to get medical help

Arrange a medical appointment soon if you or your child has unexplained patches of scalp scaling, broken hairs, or hair loss. Beard-area swelling, crusting, or loose hairs also needs assessment. Early treatment helps limit spread and lowers the risk of scarring.

Seek prompt medical care if there is:

Routine follow-up is appropriate when symptoms are gradually improving but hair has not yet regrown, or when you need planned monitoring during treatment.

Ringworm itself is not usually an emergency. Call emergency services for difficulty breathing, fainting, or swelling of the lips, tongue, or throat after taking a medicine, as these can be signs of a severe allergic reaction.

- A painful, soft, boggy swelling suggesting a kerion
- Rapidly increasing redness, warmth, swelling, or discharge
- Fever or feeling significantly unwell
- Swelling or rash that is worsening despite treatment
- New symptoms that may be a side effect of oral medicine

Common questions

Can scalp ringworm go away without treatment?

It is unlikely to clear reliably without an oral antifungal medicine. Delaying treatment allows continued spread and may increase the risk of scarring when there is strong inflammation.

Will antifungal cream cure it?

Cream can treat fungal infection on ordinary skin, but it does not reach deeply enough into scalp or beard hair follicles. Shampoo may reduce spores and transmission, but oral medicine is normally needed for a cure.

Will my hair grow back?

Hair usually grows back once the infection and inflammation have settled. Regrowth can take

several months. Hair loss may be permanent if severe inflammation has scarred the follicles.

Is scalp or beard ringworm contagious?

Yes. It can spread from people, animals, or contaminated personal items. The level and duration of contagiousness differ according to the fungus and whether effective treatment has begun.

Do I need to shave my head or beard?

Usually not. Shaving does not replace antifungal medicine and can irritate painful skin. Avoid sharing razors or clippers, and follow specific advice about cleaning hair-care tools.

Why does a kerion have pus if ringworm is fungal?

A kerion is an intense immune reaction around infected follicles. This reaction can create swelling and pus without a bacterial abscess being the main cause. A clinician may still test for bacteria if the appearance suggests an additional infection.

Sources

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