CONDITION

Creeping eruption

Creeping eruption is an itchy skin condition caused by animal hookworm larvae moving beneath the skin's surface.

WHAT IT IS
Itchy winding skin tracks caused by hookworm larvae

BODY SYSTEM
Skin

MAIN SYMPTOMS
Intense itching, raised tracks, redness, small blisters

WHAT CAUSES IT
Infection by animal hookworm larvae

HOW IT IS DIAGNOSED
Skin examination and exposure history

MAIN TREATMENT
Antiparasitic medicines

CAN IT BE CURED?
Yes - treatment kills the larvae

IS IT AN EMERGENCY?
No - breathing trouble needs emergency care

LONG-TERM OUTLOOK
Usually clears completely; temporary skin colour changes may remain

Overview

Creeping eruption is a skin condition caused by microscopic hookworm larvae. Its medical name is cutaneous larva migrans , meaning "wandering larva in the skin."

The larvae usually come from hookworms that live in dogs, cats, or other animals. Hookworm eggs pass into soil or sand in animal stool. After hatching, the larvae can enter human skin that touches contaminated ground.

A larva moves through the skin's outer layers, producing a raised, winding track that may appear to creep forward each day. The rash is often intensely itchy.

People are accidental hosts. These animal hookworms cannot usually mature into adult worms in the human body. They remain near the skin's surface and eventually die.

The condition is treatable and rarely causes lasting illness. However, itching can disturb sleep, and scratching can lead to bacterial infection. Diagnosis is important because other rashes can look similar but require different treatment.

Symptoms

Symptoms often begin days after contact with contaminated soil or sand, although they may appear sooner or several weeks later.

You may first notice a tingling, burning, or itchy bump where a larva entered. A narrow, raised track then develops. It may be red, pink, brown, or close to your usual skin colour.

Typical features include:

The visible track does not show the larva's exact location. It is usually a short distance beyond the end of the line.

The feet are commonly affected after walking barefoot. Tracks may also develop on the buttocks, thighs, hands, knees, or other areas that touched the ground. There may be one track or several.

Some people develop itchy bumps around hair follicles rather than a clear winding line. This is called hookworm folliculitis.

Fever and marked tiredness are not typical. Rarely, an immune response may cause coughing, wheezing, or an increase in white blood cells called eosinophils.

- An intensely itchy, winding or snake-like track
- A track that lengthens or changes over several days
- Redness or swelling
- Small bumps or fluid-filled blisters

Causes and risk factors

Creeping eruption is usually caused by larvae from animal hookworms, particularly those associated with dogs and cats.

Adult hookworms lay eggs inside an infected animal. The eggs leave in stool and hatch in warm, moist soil or sand. The larvae can then penetrate unprotected human skin.

Exposure is more likely when you:

Beaches are a recognised setting, but infection can occur wherever contaminated ground and

suitable hookworms are present.

Creeping eruption does not spread through ordinary contact. Touching the rash, sharing a bed, or using the same bathroom does not pass it on. Previous infection does not provide reliable immunity, so another exposure can cause reinfection.

- Walk barefoot on contaminated sand or soil
- Sit or lie directly on the ground
- Garden or work with soil without protection
- Play in sand where dogs or cats pass stool
- Visit warm coastal, tropical, or subtropical areas

Diagnosis

A healthcare professional can usually diagnose creeping eruption by examining the skin and asking about recent activities or travel. Intense itching, a moving winding track, and contact with warm soil or sand are characteristic clues.

There is no routine blood test that confirms a typical case. Eosinophil levels may be increased, but this finding is neither necessary nor specific.

A skin biopsy, in which a small sample is examined under a microscope, is rarely useful because the larva is often beyond the visible track and may be missed.

Similar-looking conditions include scabies, fungal infection, contact dermatitis, bacterial infection, and other parasite-related rashes. A fixed line may instead be caused by a splinter, plant material, or another foreign object.

Tell the healthcare professional about travel, beach visits, gardening, contact with sand, and exposure to animals. Photographs showing how the track changes from day to day may help.

Treatment and management

Antiparasitic medicine kills the larvae and usually stops their movement. Common options include ivermectin and albendazole. The appropriate treatment depends on age, pregnancy, other medicines, and the number and location of lesions.

Some localised cases may be treated with an antiparasitic medicine applied to the skin. Availability varies, and numerous or widespread tracks generally require medicine that works throughout the body.

Itching may continue briefly after the larvae die because skin inflammation takes time to settle. An antihistamine or anti-inflammatory cream may be recommended for relief, but these do not replace antiparasitic treatment.

Avoid scratching where possible. Keep fingernails short, use cool compresses, and cover damaged skin. Keep broken areas clean to reduce the risk of infection.

Antibiotics like amoxicillin or doxycycline do not kill hookworm larvae. They are used only if scratching causes a bacterial infection.

Freezing the end of a track is unreliable because the larva's exact position is difficult to identify. It may damage healthy skin without killing the larva. Cutting into the track is also not recommended.

Do not apply or take animal deworming products. Medicines intended for pets may contain ingredients or strengths that are unsafe for people.

Complications

The main complication is a secondary bacterial skin infection caused by scratching. Warning signs include increasing pain, warmth, swelling, pus, or redness that spreads beyond the narrow track.

Severe itching can interfere with sleep, school, work, and concentration. Repeated rubbing may thicken or inflame the skin.

A darker or lighter mark may remain after the rash settles. This post-inflammatory pigmentation usually fades but can last for months, particularly in darker skin tones.

Rare complications include a strong allergic response or lung inflammation. Eye involvement is also very uncommon but requires urgent assessment.

Typical creeping eruption remains within the surface layers of the skin and does not usually become an adult intestinal hookworm infection.

Prevention

Contaminated soil or sand may look normal, so prevention is not always possible. Risk can be reduced by limiting direct skin contact with ground that may contain animal stool.

Wear shoes outdoors, especially on warm beaches, near kennels, and where dogs or cats roam. Use a towel, chair, or other barrier instead of lying directly on sand. Wear gloves and covered clothing when gardening or working with soil.

Cover children's sandboxes when practical, and remove animal stool promptly. Regular veterinary care and parasite control for pets can reduce environmental contamination. Follow veterinary advice rather than giving an animal human medicine.

Washing after exposure is sensible hygiene but may not prevent infection once a larva has entered. Creeping eruption is not caused by poor personal cleanliness.

Living with it and what to expect

With effective treatment, larval movement often stops quickly, followed by improvement in itching. Tracks and inflammation may take longer to flatten and fade.

Without treatment, the larvae eventually die because they cannot complete their life cycle in humans. However, symptoms may continue for weeks or months. Treatment shortens the course and reduces severe itching.

Most people recover completely and return to normal activities. Temporary skin discolouration may remain. Protecting healing skin from irritation and excessive sunlight may make colour changes less noticeable while they fade.

The rash does not require isolation. You can usually attend work or school if you feel well. Covering scratched or weeping areas protects the damaged skin rather than other people.

A previous infection does not create dependable immunity, so a later exposure can cause another episode.

When to get medical help

Arrange a routine medical appointment if you develop an intensely itchy, winding track, especially after travel or contact with sand or soil. Seek assessment if an unexplained rash moves, spreads, or does not improve.

Seek prompt medical advice if:

Use emergency services for difficulty breathing, fainting, or swelling of the face, lips, tongue, or throat. These are not usual symptoms of creeping eruption but may indicate a serious allergic reaction or another urgent condition.

- The rash is close to an eye or affects vision
- Pain, warmth, pus, or rapidly spreading redness develops
- You have a fever or feel generally unwell

- Itching prevents sleep
- Symptoms continue or worsen after treatment
- You are pregnant, breastfeeding, or seeking treatment for a young child

Common questions

Is creeping eruption contagious?

No. It does not normally spread through touch, shared towels, bedding, toilets, or sexual contact.

Infection comes from larvae in contaminated soil or sand. The animal hookworms do not usually mature or lay eggs inside a person.

How did I get creeping eruption?

The usual cause is direct skin contact with soil or sand contaminated by stool from an infected dog, cat, or other animal. Walking barefoot and sitting or lying directly on sand are common routes.

The exposure may have occurred several days or weeks before the rash became obvious.

Will creeping eruption go away by itself?

It usually does because the larvae cannot survive indefinitely in human skin. Without treatment, however, itching and moving tracks may continue for weeks or months.

Antiparasitic treatment kills the larvae sooner. A clinician should assess an uncertain rash rather than waiting for it to clear.

How fast does the rash move?

The track may extend by millimetres to a few centimetres a day. Movement is not always steady, and the shape may change.

The visible end of the track does not show the larva's exact position.

Can creeping eruption come back after treatment?

Itching or inflammation may persist briefly after treatment and does not always mean it failed.

Seek reassessment if a track continues to lengthen, new tracks appear, or symptoms return. Reinfection is possible after another exposure because infection does not provide lasting immunity.

Can the hookworms live inside my body?

The animal hookworms that cause typical creeping eruption usually remain in the skin's outer

layers. Humans are not their normal host, so they generally cannot mature into adult worms or complete their life cycle.

Rare parasite-related complications can occur, but they are not expected in a typical infection.

Sources

- Centers for Disease Control and Prevention. About Zoonotic Hookworm . Information on transmission, symptoms, treatment, and prevention
- Centers for Disease Control and Prevention, DPDx. Zoonotic Hookworm . Clinical presentation and laboratory identification
- DermNet. Cutaneous larva migrans . Clinical features, diagnosis, treatment, and expected course
- MSD Manual Professional Edition. Cutaneous Larva Migrans . Diagnosis and treatment overview
- Heukelbach J, Feldmeier H. Epidemiological and clinical characteristics of hookworm-related cutaneous larva migrans. The Lancet Infectious Diseases . 2008;8(5):302-309 70098-7). Clinical and epidemiological review