CONDITION

Chilblains

Learn what chilblains are, how cold and damp conditions affect the skin, when to seek care, and how symptoms are treated and prevented.

WHAT IT IS
Cold-triggered inflammation of small skin areas

BODY SYSTEM
Skin and circulation

MAIN SYMPTOMS
Itching, burning, swelling, painful skin patches

WHAT CAUSES IT
Unusual small-vessel response to cold

HOW IT IS DIAGNOSED
Skin examination and cold-exposure history

MAIN TREATMENT
Gradual warming and protection from cold

CAN IT BE CURED?
Yes, most heal without lasting damage

IS IT AN EMERGENCY?
Sometimes, rapidly spreading redness or pus

LONG-TERM OUTLOOK
Most heal without lasting damage

Overview

Chilblains are small areas of inflamed skin that develop after exposure to cold, damp conditions. The medical term is pernio or perniosis . They most often affect the fingers and toes, although they can also appear on the ears, nose, heels, or other exposed areas.

Chilblains are caused by an unusual response of small blood vessels to cold. When skin becomes cold, these vessels narrow. As the skin warms, blood flow returns. In people who are prone to chilblains, nearby small vessels may not adjust smoothly. Blood can leak into surrounding tissue and trigger swelling and inflammation.

Unlike frostbite, chilblains do not require the skin to freeze. They can occur after time spent in cool, wet weather, especially when the skin is warmed too quickly afterward.

Chilblains are usually uncomfortable rather than dangerous. Many clear within one to three weeks, particularly when the skin is protected from further cold. However, open sores can become infected. Repeated or unusual episodes may sometimes be connected with an underlying condition, such as lupus or another problem affecting blood vessels.

Symptoms

Symptoms often begin several hours after cold exposure. The affected skin may become itchy, tender, swollen, or painful. Burning is also common.

Chilblains may look red, pink, purple, or darker than the surrounding skin. Their appearance can vary with natural skin tone. On brown or Black skin, redness may be less noticeable, and the areas may appear purple, gray, or dark brown.

Common features include:

Symptoms may become more noticeable when the skin enters a warm room or is placed near a heat source. Scratching can damage the skin and increase the chance of infection.

Chilblains are different from Raynaud phenomenon, which usually causes brief attacks of white, blue, and then red color changes in the fingers or toes. Raynaud attacks often improve as circulation returns, while chilblains leave inflamed areas that may remain for days or weeks.

They are also different from frostbite. Frostbitten skin may become numb, pale, waxy, or hard after exposure to freezing temperatures. Suspected frostbite requires urgent medical assessment.

- Small swollen patches on fingers, toes, ears, heels, or the nose
- Itching, burning, tenderness, or pain
- Red, purple, or darkened skin
- Swelling around the affected area
- Blisters or shallow open sores in more severe cases

Causes and risk factors

Cold and damp conditions are the main triggers. Chilblains are more likely when skin cools and then warms rapidly, such as when someone puts cold hands or feet directly against a radiator or uses very hot water.

Not everyone exposed to cold develops chilblains. Factors that may increase susceptibility

include:

Some cases are described as primary chilblains , meaning no other medical cause is found. Secondary chilblains are associated with another condition. Lupus is the best-known example. Less commonly, chilblains may occur with certain blood disorders or other inflammatory diseases.

Chilblain-like spots were also reported during the COVID-19 pandemic and were sometimes called "COVID toes." These lesions often appeared without clear cold exposure. Research has not established that every such case is caused by COVID-19. A clinician can advise whether testing or another evaluation is appropriate based on symptoms and recent exposure.

Episodes that occur repeatedly, develop during warm weather, or appear without cold exposure deserve medical review. This does not necessarily mean that an underlying disease is present, but it may change the evaluation.

- Regular exposure to cold, damp weather
- Poorly insulated, tight, or damp footwear
- Clothing that leaves the hands, ankles, or ears exposed
- Smoking or nicotine use, which narrows blood vessels
- Low body weight
- Reduced circulation
- Raynaud phenomenon
- A personal or family tendency to develop chilblains

Diagnosis

A clinician can often recognize chilblains by examining the skin and asking about recent cold or damp exposure. They may ask when the spots appeared, whether they itch or hurt, how long they last, and whether similar episodes have happened before.

The clinician may also check circulation and look for signs of infection. Information about joint pain, mouth ulcers, unusual fatigue, fever, weight changes, or other skin rashes can help identify whether another condition should be considered.

Tests are not always needed for a typical first episode that follows cold exposure and improves as expected. If lesions are recurrent, severe, persistent, or unusual, blood tests may be considered. These can look for blood-cell abnormalities, inflammation, or immune-system markers related to conditions such as lupus. The choice of tests depends on the person's

symptoms and medical history.

A skin biopsy, in which a small sample is removed for examination under a microscope, is rarely necessary. It may be used when the diagnosis is uncertain or when another inflammatory skin or blood-vessel condition is suspected.

Other possible causes of similar-looking skin changes include frostbite, contact dermatitis, infection, Raynaud phenomenon, inflammation of blood vessels, and circulation problems. A medical examination can help distinguish among them.

Treatment and management

The main treatment is to protect the affected skin from further cold and allow it to warm gradually. Chilblains often improve without prescription medicine.

Keep the area warm and dry with loose layers, gloves, and well-fitting socks. Avoid placing cold skin directly against a heater, hot-water bottle, or very hot bath. Rapid heating can worsen pain, swelling, and itching. Gentle warming at room temperature is safer.

Do not scratch or rub the area. A plain, fragrance-free moisturizer can reduce dryness and help protect the skin. If a blister or sore develops, keep it clean and cover it with a nonstick dressing. A clinician or pharmacist can advise on appropriate wound care.

Regular movement may support circulation, but activity should be comfortable and appropriate for the person's health. Wet socks and gloves should be changed promptly. Shoes should leave enough room for warm socks without squeezing the toes.

For persistent or troublesome symptoms, a clinician may consider medication. A topical corticosteroid may sometimes be used for inflammation or itching, although evidence of benefit is limited. Overuse can thin or damage the skin, so it should be used only as directed.

Nifedipine, a medicine that relaxes blood vessels and lowers blood pressure, has sometimes been prescribed for severe or recurrent chilblains. Research results are mixed, and it is not suitable for everyone. Possible adverse effects include headache, flushing, ankle swelling, and dizziness. Treatment decisions should account for blood pressure, other medicines, and the person's overall health.

Antibiotics like amoxicillin or doxycycline do not treat chilblains themselves. They may be needed if broken skin develops a bacterial infection.

Prevention is especially important for people who have repeated episodes. Useful steps include warming the home when possible, dressing in several loose layers, wearing insulated waterproof footwear, and protecting the ears and hands. Avoiding nicotine may help because

nicotine narrows blood vessels.

Complications

Most chilblains heal without lasting damage. Skin color may take longer to return to normal after swelling and discomfort have improved.

Blisters and open sores can become infected. Signs include increasing warmth, spreading redness or discoloration, worsening swelling, pus, or increasing pain. Fever or feeling generally unwell may also suggest infection.

Repeated or severe inflammation can occasionally lead to scarring or ongoing skin-color changes. Continued exposure to cold may delay healing or cause new areas to develop.

In some people, recurrent chilblains are a clue to an underlying inflammatory, autoimmune, blood, or circulation condition. Identifying and treating that condition may reduce future problems.

Follow up

Routine medical follow-up is appropriate if the skin is not improving after about two to three weeks, if chilblains keep returning, or if they occur without a clear cold trigger. Arrange an appointment sooner if lesions are widespread, unusually painful, or accompanied by other symptoms such as joint pain, mouth ulcers, unexplained fever, or a different rash.

People with diabetes, reduced circulation, loss of sensation, or a weakened immune system should seek advice promptly about blisters or broken skin. These conditions can make wounds harder to notice or heal.

Seek urgent medical care if there is rapidly spreading redness or discoloration, pus, increasing warmth, severe pain, fever, or an open wound that is worsening.

Seek emergency care for skin that becomes hard, waxy, very pale, black, or persistently numb after exposure to freezing temperatures. These findings may indicate frostbite rather than chilblains. Confusion, marked drowsiness, slurred speech, or uncontrolled shivering after cold exposure may indicate hypothermia and also requires emergency help.

Sources

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