CONDITION

Candida infection of the skin

Learn how Candida skin infections cause red, irritated rashes in warm or moist areas, how they are diagnosed, and which treatments and warning signs to discuss with a clinician.

WHAT IT IS
Fungal infection of the skin

BODY SYSTEM
Skin

MAIN SYMPTOMS
Red moist rash, itching, burning, tenderness

WHAT CAUSES IT
Candida yeast overgrowth

HOW IT IS DIAGNOSED
KOH microscopy, fungal culture

MAIN TREATMENT
Antifungal medicine and moisture control

CAN IT BE CURED?
Yes, but moisture can cause recurrence

IS IT AN EMERGENCY?
Sometimes, with rapidly spreading redness

LONG-TERM OUTLOOK
Usually improves without lasting harm but may recur

Overview

Candida infection of the skin, also called cutaneous candidiasis, is a fungal infection caused by Candida yeast. Small amounts of Candida normally live on the skin and in areas such as the mouth and digestive tract without causing problems.

An infection can develop when Candida grows more than usual. This is most likely in warm, moist areas where skin touches skin. Common locations include the groin, armpits, abdominal folds, beneath the breasts, between the buttocks, and between the fingers or toes.

Candida can also contribute to diaper rash and to inflammation around a fingernail or toenail. Inflammation around a nail is called paronychia.

A Candida skin infection is usually limited to the outer layers of the skin. It is different from

invasive candidiasis, a serious infection involving the bloodstream or internal organs. A routine skin infection does not usually become invasive in an otherwise healthy person.

The rash can be uncomfortable and may return if moisture, friction, or another contributing condition is not addressed. Several other skin conditions can look similar, so an examination may be helpful before treatment, especially when a rash is persistent, painful, widespread, or recurrent.

Symptoms

The appearance depends on the location and how irritated the skin has become. In a skin fold, Candida often causes a bright red or deep red rash with a moist surface and a clear border.

Typical symptoms may include:

On darker skin tones, redness may be less obvious. The affected area may look deep red, purple, brown, gray, or darker than the surrounding skin. Changes in texture, moisture, tenderness, and small nearby bumps can be important clues.

Candida diaper dermatitis often affects the skin folds as well as the more exposed diaper area. The rash may be vivid red, with small spots around its edges. This differs from many simple irritation rashes, which often spare the deepest folds.

When Candida affects the skin around a nail, the nail fold may become red, swollen, and tender. The cuticle may separate from the nail, and the nail can develop ridges or discoloration over time. Repeated exposure to water or irritants often contributes.

Symptoms are not specific to Candida. Contact dermatitis, psoriasis, bacterial infections, eczema, and other fungal infections can cause similar changes. Ringworm, for example, is caused by a different group of fungi and may need a different treatment approach.

- Itching, burning, tenderness, or soreness
- Red, moist, or softened skin
- Small cracks, peeling, or areas where the top layer of skin has worn away
- Small red bumps or pus-filled spots near the main rash, sometimes called satellite lesions
- A mild odor in an affected skin fold
- Discomfort that becomes worse with heat, sweating, movement, or tight clothing

Causes and risk factors

Candida grows best in warm, damp environments. Skin folds can trap sweat and reduce airflow. Friction then damages the skin barrier, making it easier for yeast to overgrow. A rash caused by moisture and rubbing within a skin fold is called intertrigo; Candida may develop as a secondary infection in that irritated area.

Factors that may increase the chance of a Candida skin infection include:

Infants are more likely to develop Candida diaper dermatitis because the diaper area is warm, moist, and exposed to urine and stool. Older adults and people who need help with personal care may also have difficulty keeping skin folds clean and dry.

Candida is not generally considered a sexually transmitted infection when it affects the skin. It can sometimes pass between people through close contact, but overgrowth related to moisture and skin conditions is more common than direct transmission.

Recurrent infections do not automatically mean that a person has a serious health problem. However, repeated or difficult-to-treat rashes may lead a clinician to look for contributing issues, such as diabetes, medication effects, ongoing moisture, or an immune system condition.

- Frequent sweating, hot weather, or consistently damp clothing
- Deep skin folds or skin surfaces that rub together
- Tight or nonbreathable clothing
- Incontinence or prolonged contact with urine or stool
- Frequent hand washing or repeated exposure of the hands to water
- Recent antibiotic use, which can change the normal balance of microorganisms
- Diabetes, especially when blood glucose is not well controlled
- Pregnancy or other hormonal changes
- Medicines or health conditions that weaken immune defenses
- Limited mobility that makes skin care or drying difficult

Diagnosis

A clinician can often identify candidal skin infection by examining the rash and asking where it began, how long it has been present, and what makes it better or worse. It is helpful to mention recent antibiotics like amoxicillin or doxycycline , new skin products, diabetes, immune-suppressing medicines, repeated water exposure, or previous treatment.

When the diagnosis is uncertain, the clinician may gently scrape the surface of the rash. The sample can be examined under a microscope after treatment with potassium hydroxide, often shortened to KOH. This test helps reveal yeast or fungal structures.

A fungal culture may be used when the rash keeps returning, has not improved with treatment, or has an unusual appearance. Culture can identify the organism, although Candida found on the skin is not always proof that it is causing the rash.

A clinician may also consider bacterial testing if there is drainage, crusting, marked tenderness, or concern for a second infection. Blood tests are not routinely needed for a small, uncomplicated Candida skin infection. Testing for diabetes or another underlying condition may be considered when infections are recurrent or extensive.

Treatment and management

Treatment usually combines an antifungal medicine with steps that reduce moisture and friction. Addressing only the yeast may provide temporary improvement if the area remains damp or irritated.

Topical antifungal medicines are commonly used for limited skin infections. Depending on the location and clinical findings, a clinician or pharmacist may recommend an azole antifungal or nystatin. These medicines come in forms such as creams, ointments, or powders. The appropriate product and treatment length depend on the affected area, age, skin condition, and whether the diagnosis is certain.

A thin layer is generally applied to clean, dry skin according to the product directions or a clinician's instructions. More medicine does not make the infection clear faster and may increase irritation.

Oral antifungal medicine may be considered for extensive, severe, recurrent, or treatment-resistant infection. These medicines can interact with other drugs and may not be suitable for everyone. They should be selected by a clinician rather than used from another person's prescription.

Helpful skin-care measures include:

For diaper dermatitis, frequent diaper changes, gentle cleaning, diaper-free time, and a protective barrier can reduce moisture and irritation. A clinician should advise which antifungal like fluconazole or terbinafine product is appropriate for an infant.

For nail-fold infection, reducing prolonged water exposure may be as important as antifungal treatment. Protective gloves can help during wet work, but hands should not remain sweaty inside them for long periods.

Avoid applying a corticosteroid cream to an undiagnosed rash unless a clinician recommends it. Steroids like prednisone or hydrocortisone can reduce redness while allowing some fungal infections to spread or become harder to recognize. In selected cases, a clinician may recommend a short course of a low-strength steroid together with antifungal treatment for significant inflammation.

Treatment should also address contributing conditions when possible. This may include improving diabetes management, reviewing medicines with a clinician, adjusting incontinence care, or finding safe ways to reduce moisture in skin folds.

- Gently washing the area and drying it thoroughly without vigorous rubbing
- Changing damp clothing, socks, underwear, or diapers promptly
- Wearing loose, breathable clothing when practical
- Separating skin folds with clean, dry material if advised by a clinician
- Using a barrier product when urine, stool, or friction is contributing to irritation
- Cleaning reusable towels and clothing regularly and avoiding shared personal towels

Complications

Most Candida skin infections improve without lasting harm when treated and kept dry. Possible complications include painful cracks, bleeding from fragile skin, and temporary changes in skin color after the rash has healed.

Damaged skin can allow bacteria to enter. Signs of a possible bacterial infection include increasing warmth, swelling, pain, pus, rapidly spreading redness, or red streaks extending from the area.

The rash may also become chronic or keep returning if moisture, friction, incontinence, repeated water exposure, or an underlying health condition continues. Persistent nail-fold inflammation can gradually change the shape, color, or texture of the nail.

People with severely weakened immune systems need more prompt medical assessment because skin findings may be harder to control or may have another cause. However, invasive candidiasis is a separate condition that mainly affects people who are seriously ill or receiving complex medical care.

Follow up

For a small and otherwise mild rash, routine follow-up is appropriate if symptoms do not begin to improve with correctly used treatment, if they return soon after treatment, or if the diagnosis remains uncertain. Arrange a clinical review sooner for a widespread rash, significant pain, repeated infections, nail changes, or a rash in a person with diabetes or reduced immune function.

An infant should be assessed if a diaper rash is severe, blistering, draining, associated with fever, or not improving with usual care. A clinician can check for Candida and other causes of diaper-area inflammation.

Seek urgent medical care for rapidly spreading redness, worsening swelling, severe pain, fever, pus, red streaks, or a person who appears acutely unwell. Emergency care is appropriate for symptoms such as confusion, fainting, severe weakness, or difficulty breathing.

At follow-up, a clinician may confirm whether the infection has cleared, reconsider the diagnosis, review how treatment was used, or test for another fungal or bacterial condition. Recurrent cases may require a plan for moisture control and evaluation of contributing health factors.

Sources

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