



**What are fungal infections?** Fungal infections are very common skin conditions that develop when fungal organisms invade and multiply in the skin or nails. They are called the following different names depending on where the infection is located:

**Body:** tinea corporis or "ringworm"

**Hair/Scalp:** tinea capitis or "ringworm"

**Groin:** tinea cruris or "jock itch"

**Feet:** tinea pedis or "athlete's foot"

**Nails:** tinea unguium or "onychomycosis"

**Why do fungal infections develop?** The types of fungus that cause these infections are universally present throughout our environment. They can be transferred to our skin from inanimate objects, dirt, animals and other humans. Though we are all exposed, not everybody will develop skin or nail infections as a result. Our individual immunity also plays a role in determining whether we are affected or not. Fungus tends to like warm, moist environments. Sweating, not drying the skin well after bathing or swimming, tight shoes and clothing, and a warm climate all contribute to the condition.

**What do fungal infections look like?** The appearance of fungal infections depends on the area of the body that is affected.

**Body:** Red or brown, scaly patches that often have a ring-like (annular) appearance (i.e. the borders are active and the center looks like normal skin).

**Hair/Scalp:** Red to brown, scaly patches with broken off hairs or hair loss. Usually, it is seen on the scalp in children.

**Groin:** Red to brown, scaly patches with a sharp border on the inner thighs. Most common in men and can co-exist with athlete's foot.

**Feet:** Scaly, cracked, and red skin on the soles and along the sides of the feet. The skin between the toes is typically involved. It occurs mostly in teenage boys and adult men, but can also develop in women and children.

**Nails:** White, yellow or brown nails with thickening, brittleness, and debris under the nail plate. The incidence increases with age.

**How are fungal infections treated?** With proper treatment, fungal infections usually improve in a few weeks.

For infection of the **body, feet** and **groin:**

- Lamisil, clotrimazole, or miconazole cream are available over the counter from your local pharmacy or drugstore. You will not need a prescription.

- Apply the cream to the affected areas twice a day until the rash clears. Successful treatment may take 2-4 weeks.

For infection of the **scalp** or **nails**:

- To confirm the diagnosis and identify the infection, tests of hair or nail clippings may be used.
- Mild infections may respond to topical medication, but most of the time, hair and nail fungus is difficult to treat and requires an oral antifungal agent. This needs to be taken for weeks to months. Hair and fingernail infections are usually cured more quickly and effectively than toenail infections.
- Oral antifungal medications (e.g. Lamisil, Sporonox, Diflucan) interact with other drugs and can cause serious side effects. Your doctor will discuss the risks and benefits with you. You may need to do periodic lab tests to monitor for side effects.

**What can I do to prevent fungal infections?** Unfortunately, fungal infections tend to recur after treatment in susceptible individuals. You can minimize your chances of recurrence by following these simple instructions:

For infection of the **body, feet** and **groin**:

- Fungus does not like to live on dry, normal skin. Use a blow dryer on a low setting to dry the feet and groin area after bathing.
- Sprinkle a drying powder such as Zeasorb-AF or Tinactin on your groin, feet, and into your shoes.
- Wear cotton socks and underwear. Change them if they become damp from sweating.
- Avoid tight shoes and clothing, especially in the summer. If possible, wear sandals and loose-fitting underwear.
- Avoid going barefoot in public places (i.e. swimming pools, gym locker rooms, public showers).

For infection of the **scalp** or **nails**:

- Discard or sterilize all hair combs and brushes.
- Keep finger and toenails trimmed short to prevent trauma.
- Use an antifungal cream on the feet to prevent spread from the nails to the surrounding skin. Use an antifungal powder in your shoes or replace the shoes you were wearing when your infection developed.
- Keep feet dry as above.
- Please keep in mind that nail fungus often does not bother patients except for its appearance. Many people choose not to treat fungal nail infections due to frequency of recurrence, cost, and risk of side effects from the medication.

**For more information on fungal infections go to:**

[www.aad.org/public/publications/pamphlets/common\\_fungal.html](http://www.aad.org/public/publications/pamphlets/common_fungal.html)

[www.dermnetnz.org/fungal](http://www.dermnetnz.org/fungal)