

RINGWORM (Tinea)

What is ringworm?

Ringworm is a common infection of the skin and nails that is caused by fungus. The infection is called “ringworm” because it can cause an itchy, red, circular rash. Ringworm is also called “tinea” or “dermatophytosis.” The different types of ringworm are usually named for the location of the infection on the body. For example, ringworm on the feet is called tinea pedis or athlete’s foot. Ringworm is not dangerous and can be treated easily. Approximately 40 different species of fungi such as *Trichophyton*, *Microsporum*, and *Epidermophyton* can cause ringworm.

Who gets ringworm?

Anyone can get ringworm. People who have a weakened immune system are especially at risk for infection and may have problems fighting off a ringworm infection. People who use public showers or locker rooms, athletes (particularly those in contact sports), people who wear tight shoes and have excessive sweating, and people who have close contacts with animals may also be more likely to come in contact with the fungi that cause ringworm.

What are the symptoms?

Ringworm can affect skin on almost any part of the body as well as fingernails and toenails. Symptoms depend on which part of the body is infected and generally include itchy skin, a ring-shaped rash; red, scaly, and cracked skin; and hair loss. Symptoms typically appear between four and 14 days after the skin contacts the fungi that cause ringworm.

The symptoms of ringworm by location on the body are:

- **Feet (tinea pedis or “athlete’s foot”):** The symptoms of ringworm on the feet include red, swollen, peeling, itchy skin between the toes (especially between the pinky toe and the one next to it). The sole and heel of the foot may also be affected. In severe cases, the skin on the feet can blister.
- **Scalp (tinea capitis):** Ringworm on the scalp usually looks like a scaly, itchy, red, circular bald spot. The bald spot can grow in size and multiple spots might develop if the infection spreads. Ringworm on the scalp is more common in children.
- **Groin (tinea cruris or “jock itch”):** Ringworm on the groin looks like scaly, itchy, red spots, usually on the inner sides of the skin folds of the thigh.
- **Beard (tinea barbae):** Symptoms of ringworm on the beard include scaly, itchy, red spots on the cheeks, chin, and upper neck. The spots might become crusted over or filled with pus, and the affected hair might fall out.

How is ringworm spread?

The fungi that cause ringworm can live on skin and in the environment. There are three main ways that ringworm can spread:

1. **From a person who has ring worm:** People can get ringworm after contact with someone who has the infection. To avoid spreading the infection, people with ringworm should not share clothing, towels, combs, or other personal items with other people.
2. **From an animal that has ringworm:** People can get ringworm after touching an animal that has ringworm. Many kinds of animals, including dogs and cats and especially kittens and puppies, can spread ringworm to people. Other animals such as cows, goats, pigs, and horses can also spread ringworm to people.
3. **From the environment:** The fungi that cause ringworm can live on surfaces, particularly in damp areas like locker rooms and public showers. For that reason, walking barefoot is not recommended in those places.

How is ringworm diagnosed?

Your health care provider might suspect you have ringworm by looking at the affected skin and asking questions about your symptoms. Your health care provider will generally take a small skin scraping or nail sample to examine under a microscope or send to a laboratory for further testing.

What is the treatment for ringworm?

The treatment for ringworm depends on its location on the body and the severity of the infection. Some forms of ringworm can be treated with non-prescription (“over-the-counter”) medications, but other forms need treatment with prescription antifungal medication.

- Ringworm on the skin like athlete’s foot (tinea pedis) and jock itch (tinea cruris) can usually be treated with non-prescription antifungal creams, lotions, or powders applied to the skin for two to four weeks. There are many non-prescription products available to treat ringworm, including Clotrimazole, Miconazole, Terbinafine, and Ketoconazole.
- For non-prescription creams, lotions, or powders, follow the directions on the package label. Contact your health care provider if your infection does not go away or gets worse.
- Ringworm on the scalp (tinea capitis) usually needs to be treated with antifungal medication prescribed by a health care provider and taken by mouth for one to three months. Creams, lotions, or powders do not work for ringworm on the scalp.

Do not use corticosteroids/steroid creams to treat rashes that may be ringworm.

Steroid creams can be helpful for some skin problems and can even temporarily reduce ringworm symptoms like itching and redness. However, steroid creams do not kill the fungus that causes ringworm. Steroid creams can make ringworm worse because they weaken the skin's defenses. Steroid creams can allow ringworm infections to spread to more areas of the body. Ringworm that has been treated with steroid creams can have an unusual appearance, making it hard for health care providers to diagnose. In rare cases, steroid creams can allow the fungus that causes ringworm to invade deeper into the skin and cause a more serious condition.

How can ringworm be prevented?

Prevent ringworm by following these recommendations:

- Keep your skin clean and dry.
- Wear shoes that allow air to circulate freely around your feet.
- Do not walk barefoot in areas such as locker rooms or public showers.
- Clip your fingernails and toenails short and keep them clean.
- Change your socks and underwear at least once a day.
- Do not share clothing, towels, sheets, or other personal items with someone who has ringworm.
- Wash your hands with soap and running water after playing with pets. If you suspect that your pet has ringworm, take it to a veterinarian. If your pet has ringworm, follow these steps to prevent spreading the infection:
 - Wash your hands with soap and running water after playing with or petting a pet.
 - Wear gloves and long sleeves if you must handle animals with ringworm, and always wash your hands after handling the animal.
 - Vacuum the areas of the home that the infected pet commonly visits. This will help to remove infected fur or flakes of skin.
 - Disinfect areas the pet has spent time in, including surfaces and bedding. The spores of this fungus can be killed with common disinfectants like diluted chlorine bleach (1/4 cup per gallon of water), benzalkonium chloride, or strong detergents. Never mix cleaning products because that can cause harmful gases.
 - If one of your pets has ringworm, make sure you have every pet in the household checked for ringworm infection.
- Athletes involved in close contact sports should shower immediately after a practice session or match, and keep sports gear and uniforms clean. Do not share sports gear (helmet, etc.) with other players.

Should an infected individual be excluded from work or school??

Individuals can return to work or school after treatment begins.

Resources

Centers for Disease Control and Prevention:

- Ringworm Home Page, <https://www.cdc.gov/fungal/diseases/ringworm/index.html>
- Healthy Pets, Healthy People: Ringworm page, <https://www.cdc.gov/healthypets/diseases/ringworm.html>

Division of Public Health's Child Care Manual, "Managing Infectious Disease in Childcare Settings," <https://www.dhss.delaware.gov/dhss/dph/epi/files/ChildCareManual2021.pdf>