



Answers to Your Questions About Common Medical Conditions

Foot Fungus Information Bulletin

What is foot fungus and what are the symptoms?

Fungal infections of the foot, also known as athlete's foot, are common skin infections that can be caused by several different fungi, including *Tinea* and *Candida*. The infection usually starts between the toes, but it can also spread to include the soles and sides of the feet and toenails. Symptoms usually include cracked, flaky skin and peeling at the site of infection, redness, and itching. Other symptoms may include dry skin, burning, scaling, inflammation, blisters, cracked skin, oozing, or crusting.

While fungal infections of the foot are generally easy to treat and rarely result in long-term problems, severe cases may lead to secondary bacterial skin infections. Left untreated, the fungus may spread to other areas of the body including toenails, fingers and palms of the hands. Bacterial infections are the most concerning problem that may occur due to athlete's foot. Signs of a bacterial infection include swelling, redness, skin being warm to the touch, red streaks, pus or other discharge, and fever. If any of these symptoms develop, a physician should be contacted immediately because bacterial infections require treatment with antibiotics to prevent the infection from spreading to other areas of the body.



Risk Factors

Risk factors for development of athlete's foot include wearing tight shoes that can pinch the toes together, damp socks or other warm, humid conditions that cause sweating, or not drying feet after swimming, bathing, or exercising. Additionally, walking barefoot in areas where feet can come into contact with fungus increases the risk of developing an infection. Dressing rooms, showers, and swimming pool locker rooms are probably the most common source of athlete's foot fungus because the floors remain wet for long periods of time and are a good breeding ground for fungus.

While athlete's foot is common in people without underlying medical conditions, people with a depressed immune system may be more susceptible to these infections.

Immunosuppression can be caused by medications such as chemotherapy or long-term steroid use and diseases such as HIV, AIDS, and diabetes. Fungal infections, even athlete's foot, can lead to more serious problems in people with a depressed immune system. People with a depressed immune system who develop athlete's foot should consult a physician for proper diagnosis and treatment.

Prevention

Steps you can take to prevent athlete's foot include not walking barefoot where fungus may be contacted, wearing shower shoes, drying feet thoroughly after bathing or swimming, changing wet socks and shoes regularly, wearing shoes that breathe and are not constrictive, wearing socks made from materials that wick sweat away from the skin and not borrowing shoes from other people. Sprinkling talcum powder in socks and shoes may also help keep feet dry and prevent fungal infections from occurring or becoming worse.

Treatment

Several medications are available to treat athlete's foot. Mild infections are generally treated with an over-the-counter (OTC) antifungal medications containing active ingredients such as terbinafine, clotrimazole, tolnaftate or miconazole. These products are available in creams, ointments, powders, lotions, or sprays.

More severe infections or infections that do not respond to OTC medications may require prescription treatment.

For instance, infections caused by *Candida* can be treated with

topical nystatin powder that is sprinkled on the feet and in foot wear daily. Nystatin powder also contains talc, which also assists in keeping the feet dry. Prescription antifungal creams indicated to treat foot fungus contain the following active ingredients: nystatin, sertaconazole, econazole, naftifine, butenafine, and higher strength miconazole or clotrimazole. Oral antifungals that may be used to treat athlete's foot include fluconazole,



itraconazole, terbinafine, and griseofulvin. However, due to the risk for potentially serious side effects and high cost, oral antifungals are usually reserved for only the most severe cases of athlete's foot or for infections that have not responded to prescription topical medications.

Conclusion

While rarely associated with long-term problems in healthy people, athlete's foot can be uncomfortable and difficult to cure. The best way to treat athlete's foot is to prevent it from occurring by taking the steps outlined above. Many cases can be controlled with OTC topical therapy. However, for infections that do not respond to OTC medications or keep coming back, prescription medications may be necessary. If you have what you think is athlete's foot and have never had it before or if you have an infection of the foot that is not resolved with OTC antifungal medications and preventive strategies, you should consult your physician for a proper diagnosis and appropriate treatment options.

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