



Nail Fungus

What is Nail Fungus?

Also known as: *Onychomycosis* or *Tinea Unguium*

Nail fungus (onychomycosis) is a fungal nail infection of the fingernails and toenails. - These fungal infections usually cause discoloration, thickening and often softening of the nails. - Nail fungus or fungal fingernails is a difficult condition to treat and may often cause permanent damage to the fingernails and possibly nail loss.

Nail fungus is made up of tiny organisms (*Tinea Unguium*) that can infect fingernails and toenails. The nails of our fingers and toes are very effective barriers. This barrier makes it quite difficult for a superficial infection to invade the nail. Once an infection has set in however, the same barrier that was so effective in protecting us against infection now works against us, making it difficult to treat the infection.

Is Nail Fungus Contagious?

Yes, it can be. The organisms can sometimes spread from one person to another because these critters can live where the air is often moist and people's feet are bare. This can happen in places like shower stalls, bathrooms, or locker rooms or it can be passed around on a nail file or emery board. So, don't share them. Nail fungus may also spread from one of your nails to other nails.

Causes of infections are dermatophyte fungi (*tinea unguium*), yeasts such as *Candida albicans*, and non-dermatophyte molds. Factors that may increase the development of fungi include humidity, heat, trauma, diabetes mellitus, and underlying *tinea pedis* (athlete's foot).

How Laser Toenail Fungus Treatment Works

When undergoing a laser toenail fungus treatment, a medical professional will apply a directed focused light source on to a toe that is infected. The laser toenail fungus treatment will target the fungal infection in the toenail and the area below called the toenail matrix. Laser toenail fungus treatment will destroy the fungal infection and should be relatively painless because the toenail is dead cells. The specific wavelength of the laser toenail fungus treatment targets only the living fungi.

Laser toenail fungus treatment is not a cure. A fungal infection is fungus living in cracks and pores of your toenail. If a lifestyle change is not made (throw your old shoes out) the fungi will return to the nails. Therefore laser toenail fungal treatment is part of an overall protocol which a physician will prescribe. This could include topical medicine or changes to your lifestyle.

How soon will I see improvement to my nails after treatment with a laser?

A nail will replace itself every 6 to 9 months through natural growth. Healthy new growth will be visible within the first 3 months as the nail replaces the old.

How does laser nail fungus treatment compare to medical therapy?

No adverse reactions disabilities or known side effects from use of lasers to treat nail fungus infection have been reported. All laser therapy runs the risk of potential burns. The use of oral nail fungus medication available today for treatment of fungus nails carries with it possible systemic involvement (commonly the liver and kidney). This laser nail treatment does not.

How many treatments are required?

Treatment frequencies are dependent on the extent of your disease. The course of treating one nail is different than treating all ten digits. Your success is based on compliance with personal hygiene issues as well.

Restrictions on Laser Toenail Fungus Treatment

Generally there are no health or age restrictions with laser toenail fungus treatments. In clinical studies there were no bad reactions, contraindications or side effects involving laser toenail fungus treatment Medication that are used for fungal infection carries the possibility of kidney or liver failure; laser toenail fungus treatment does not.

Number of Visits to Perform Laser Toenail Fungus Treatment

This depends on the severity of the infection as determined by the physician evaluating your condition. Depending on the type of equipment and physician there could be one **laser toenail fungus treatment** or more.

Informed Consent

I have read the above and agree to undergo the procedure of laser nail therapy for fungus removal. I agree to have photographs taken of my toes and/or fingers if deemed necessary.

By signing below I give my permission for Dr. Kamajian to proceed with laser treatment for toe nail/finger nail fungus treatment. I understand that laser therapy is a treatment and not a cure for fungal disease and that more than one treatment may be required to eradicate my disease.

Signed _____ Dated _____

Witness _____ Dated _____

Nail Fungus Treatments

Nail fungus can be difficult to treat and repeat infections are common.

Oral Medications: success rates average 70%

Treatment of Toenail Onychomycosis

Toenails with or without fingernail involvement: The recommended dose of Sporanox is 200 mg (2 capsules) once daily for 12 consecutive weeks. The recommended dose of Lamisil is one 250 mg tablet once daily for 12 weeks.

Treatment of Fingernail Onychomycosis

Fingernails only: The recommended dosing regimen for Sporanox is 2 treatment pulses, each consisting of 200 mg (2 capsules) b.i.d. (400 mg/day) for 1 week. The pulses are separated by a 3 week period without SPORANOX (itraconazole capsules). The recommended dose of Lamisil is one 250 mg tablet once daily for 6 weeks.

These medications help a new nail grow free of infection, slowly replacing the infected portion of your nail. You typically take these medications for six to 12 weeks, but you won't see the end result of treatment until the nail grows back completely. It may take four months or longer to eliminate an infection. Recurrent infections are possible, especially if you continue to expose your nails to warm, moist conditions.

Antifungal drugs may cause side effects ranging from skin rashes to liver damage. They are not recommended for people with liver disease or congestive heart failure or for those taking certain medications.

Other treatment options

Antifungal lacquer. If you have a mild to moderate infection of nail fungus, an antifungal nail polish called ciclopirox (Penlac) may be prescribed. You paint it on your infected nails and surrounding skin once a day. After seven days, you wipe the piled on layers clean with alcohol and begin fresh

applications. Daily use of penlac for about one year has been shown to help clear up some nail fungus infections.

- **Topical medications:** *Success rates average 70%* You may be advised to use creams with an over-the-counter lotion containing urea to help speed up absorption. Topical medications usually don't cure nail fungus, but they may be used with oral medications. Filing the surface of your nail (debridement) to lessen the amount of infected nail to treat may possibly make the topical medication more effective.
- **Surgery.** If your nail infection is severe or extremely painful, removing your nail may be an option. A new nail will usually grow in its place, though it will come in slowly and may take as long as a year to grow back completely. Sometimes surgery is used in combination with ciclopirox to treat the nail bed.