

CUTERA®



## A New Laser Treatment for Nail Fungus

genesis*plus*™

Finally Clear Nails for Men and Women



Nail fungus, also called onychomycosis, is a common condition estimated to affect up to 10% of the population worldwide. It can cause nails to become yellow or discolored. As the infection advances the nail can become thick, brittle and separate from the nail bed. It can also cause pain when wearing shoes or walking.

This brochure provides information about the causes of nail infections and available treatment options. The benefits, disadvantages and risk of each treatment is discussed. You should discuss your medical condition and treatment with your doctor.

### What is GenesisPlus?

GenesisPlus is a Nd:YAG 1064nm laser that has been cleared by the FDA to be both a safe and effective solution for the treatment of nail infection (onychomycosis), more commonly known as toenail fungus. This laser is also a safe and effective treatment for scar reduction and warts.

### What causes nail infection? (onychomycosis)

Dermatophytes are the fungi most commonly responsible for causing this condition. They are specialized organisms that live off of keratin which is the main component of nails and skin. The most common fungi that cause nail infection disease are *Trichophyton rubrum*, *Trichophyton mentagrophytes*, and *Candida albicans*. Everyone is at risk for infection because fungus is present everywhere in the environment.

### Where does nail infection come from?

Nail infection is caused by contact with dermatophytes which are everywhere in our environment. Common sources of infection include swimming pools, public showers, gyms and nail spas. Tight fitting shoes and nail trauma can also lead to infection. Genetic susceptibility, poor health and increasing age are also factors that increase the risk of nail infection.

### What are the symptoms of nail infection?

You may suffer from nail infection (onychomycosis) if you have one or more of the following symptoms:

- Discolored nails
- Yellow streaks under the nail
- Distorted or thickened nails
- Brittle, crumbly or ragged nail
- Nails separated from the underlying skin
- Buildup of debris (nail fragments, skin) under the nail
- White spots or streaks on the nail surface



### What treatments are available for nail infections?

Current treatment options for nail infection include oral drugs, topical drugs and laser. No single treatment is effective in all patients and there are risks and benefits associated with each one. Be sure to discuss all your treatment options with your doctor.

**Oral drugs** can be very effective in eliminating nail infections and restoring clear nails. The drugs must be taken for 6 to 12 weeks and may cause side effects including headache, diarrhea, upset stomach and skin rash. Serious side effects include risk of liver damage and heart failure. Weekly blood tests may be required to monitor liver function. These drugs are not used for patients in poor health or who have liver disease.

**Topical drugs** are less effective in treating nail infections and restoring clear nails. The drugs are applied directly to the nails daily for up to 12 months. In some patients, the drug is ineffective because it cannot pass through the nail to reach the infection. There are no significant side effects.

**Laser** treatments are effective in eliminating nail infections and restoring clear nails. Most patients experience at least some improvement. During treatment most patients experience a warm feeling in their toes. A clinical study reported no adverse effects related to the laser.<sup>1</sup>

## How does GenesisPlus work?

Laser light from GenesisPlus passes through the nail and the surrounding tissue. The laser light is absorbed by pigment in the fungi, which causes the pigment to heat, and this heat kills or damages the fungal organism. This can result in your nail growing normally.

## What can you expect?

The treatment involves passing the laser beam over the infected nails and surrounding skin. Your physician will repeat this several times until enough energy has reached the nail bed. Your nail will feel warm during the treatment.

Treatment Session Time	A single treatment session takes approximately 40 minutes to treat 5-10 nails. Treatment times will vary, so please ask your doctor for more information.
Number of Treatments	Most patients show improvement after one treatment. The required number of treatments will vary depending on how severely each digit is infected.
Before the Procedure	It is important to remove all nail polish and decorations the day before the procedure.
During the Procedure	Most patients describe the procedure as being comfortable with a small hot pinch at the end that resolves quickly.
After the Procedure	Immediately following the procedure your nail may feel warm for a few minutes. The majority of patients can resume normal activities immediately.
Long Term	If the treatment is successful, as the nail grows you will see new, healthy nail. Nails grow slowly, so it may take up to 12 months to see an entirely clear nail.

## Are there any clinical studies?

In a clinical study, 68% of patients treated for toenail fungus showed improvement in the percent of nail clear of infection.<sup>1</sup> The amount of nail improvement you may experience is dependent on your individual circumstances and should be discussed with your doctor.



## Will the fungus come back?

Your nail infection should improve following treatment but you will need to continue with home care techniques to reduce recurrence of the infection as advised by your doctor. There is a chance of re-infection because the fungus is present everywhere in the environment.

<sup>1</sup> Gupta et.al., Onychomycosis Therapy: Past, Present, Future, Journal of Drugs in Dermatology, Vol.9, 9, 2010.  
Photos courtesy of Jeffrey Kleis, DPM