

**A.R.C.
LASER**

enlighten your surgery.

NAIL FUNGUS?

**FOX: CLEAR NAILS
WITHOUT MEDICATION**



FOX 1064 - Laser Therapy

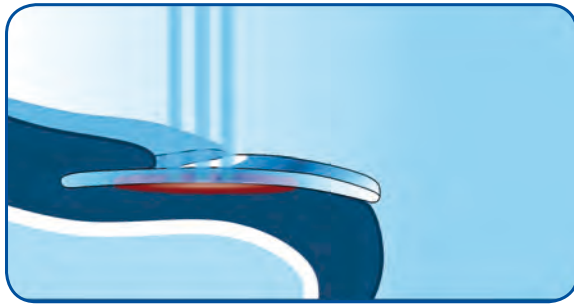
ONYCHOMYKOSIS

FUNGAL NAIL INFECTION (ONYCHOMYCOSIS)

FOX 1064 nm



LASER...INNOVATION
MADE IN GERMANY



FOX Laser offers an effective, pain free method of treating patients with fungal nail infection (onychomycosis) as an alternative to topical or systemic therapy.



FOX Diode Laser
1064 nm



Can the FOX Laser be used to treat nail fungus?

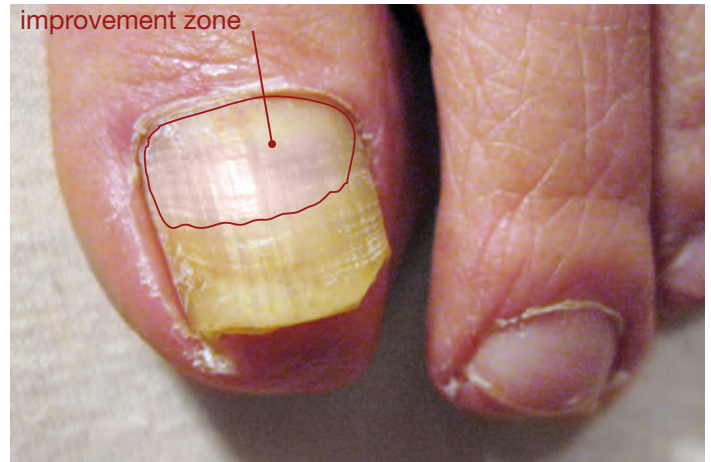
Yes, the A.R.C. FOX Diode Laser is an effective treatment of nail fungus infections caused by dermatophytes (*Microsporum*, *Trichophyton* and *Epidermophyton*), yeasts (*Candida albicans*) or mold fungus. In particular, this includes the most common pathogen: *Trichophyton rubrum* (ca. 80 %) ¹. This fungus subsists, like all other dermatophytes, on keratin and consequently causes nail fungus ².

¹ Ghannoum, M.A., Hajjeh RA, Scher R, et al., "A large-scale North American study of fungal isolates from nails: the frequency of onychomycosis, fungal distribution, and antifungal susceptibility patterns." *J Am Acad Dermatol* 43, 641-648 (2000).

² Elewski, B.E., "Onychomycosis: pathogenesis, diagnosis, and management." *Clin Microbiol Rev.* 1998 Jul;11(3):415-29.

How does the FOX Laser work?

The FOX Laser uses the 1064nm wavelength (close to infrared light) to easily treat and eradicate nail fungus leading to the increase of clear nails in patients with ony-



6 months after laser treatment
A.R.C. Laser Oct. 2012

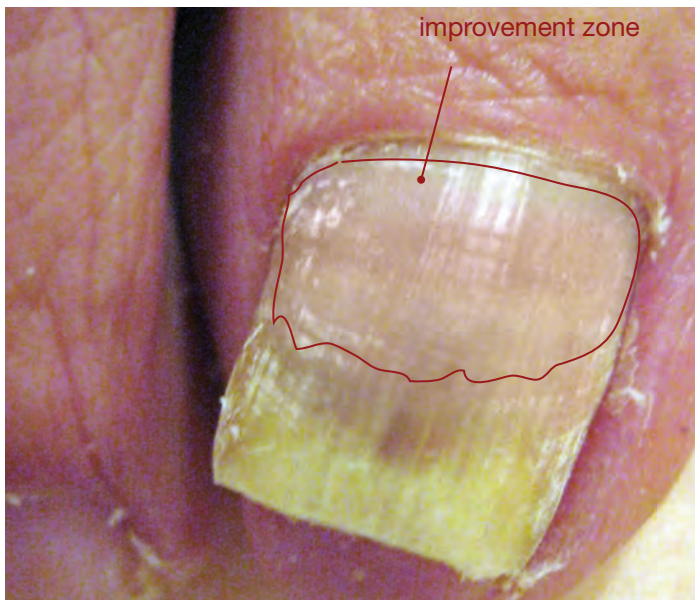
chomycosis (e.g. dermatophytes *Trichophyton rubrum* and *T. mentagrophytes*, and/or yeasts *Candida albicans*, etc.) ³. The laser radiation penetrates the nail plate, the paronychium and the eponychium as it reaches the infected nail bed. The laser energy is only absorbed by the pathogens in the nail bed and not in the surrounding tissue. As a result, the increase in temperature will damage the cell wall causing the cells to die and inhibiting further growth. ⁴

³ Richard T. Bauer, DPM (PGY-2), Eliezer T. Eisenberger, DPM (PGY-2) Faculty: Emilio Goez, DPM, Saint Barnabas Hospital, Bronx NY; The use of a 1064nm laser in the treatment of Onychomycosis

⁴ Christy Badgwell Doherty, MD Sean D. Doherty, MD, and Theodore Rosen, MD; Thermotherapy in dermatologic infections; *J Am Acad Dermatol* 2010;62:909-27

What preparation is necessary for laser treatment?

It is necessary to complete the appropriate podiatric diagnosis (pathology) to confirm that the condition is in fact fungal nail infection. All nail polish must be removed.



15 Years of nail fungus - 6 months after laser treatment
A.R.C. Laser Oct. 2012



Depending upon the degree of severity, it may be necessary to trim and debride the nail (removal of protrusions and reduction of the thickness of the nail plate to ca. 1 mm). It is recommended for the patient to wear freshly washed socks (60° C) after the laser treatment.

Can it treat all types of infections?

It is common for nail fungus to coexist with other types of fungal infections of the skin. In fact, this occurs in approximately 50 % of all nail anomalies and in one third of all fungal infections of the skin.⁵ If there is any evidence of the coexistence of tinea pedis in the treatment area (paronychia, eponychium, etc.), treatment with the FOX laser is not recommended.

Due to the tinea pedis, the skin may already be inflamed and the laser could worsen the condition. Other conditions to take into account prior to treatment include traumatic injury to the nail, Diabetes mellitus, peripheral vascular diseases (PVD) or ingestion of immuno-suppressive agents.

⁵ Szepietowski, JC, et al. "Factors Influencing Coexistence of Toenail Onychomycosis with Tinea Pedis and other Dermatomycoses." Arch Dermatol (2006). 142:1279-1284.

Is the treatment painful?

Vital for the success of the FOX laser treatment is the warming of the nail bed to approximately 45°C and that the warmth be maintained for at least 40 seconds. Even

though the patient will feel the warming sensation, no anesthesia is necessary. By using a moderate pulse energy and a constant motion over the the nail, the desired dosage of laser energy can be uniformly delivered into the nail bed with minimal patient discomfort.

Can this treatment be performed on all skin types?

During the FOX laser treatment, the paronychia and eponychium will be uniformly irradiated to destroy fungal structures. The laser radiation will be absorbed more quickly by a patient with darker skin leading to a faster temperature rise. Therefore, it will be necessary to speed up the motion to avoid over treating.

What are the contraindications?

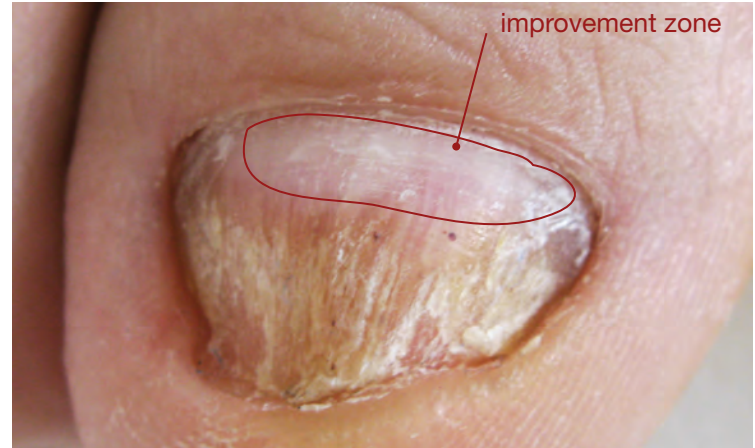
- patients with neuropathy (e.g. due to wound healing deficits or circulatory disorders, and possibly diabetics)
- patients with inflamed tissue or extensive tinea pedis in the area to be treated



Nail fungus - 3 month after 1st laser treatment
A.R.C. Laser Oct. 2012



2 months after 1st laser treatment
A.R.C. Laser Sept. 2012



3 months after 1st laser treatment
A.R.C. Laser Oct. 2012

How long will the treatment last?

Depending upon the size of the nail, the FOX laser treatment typically takes 1-3 minutes per nail or 15-20 minutes to treat all 10 nails. The laser beam is continuously in motion over the targeted area during the treatment. Depending upon the severity of the nail fungus, up to 3 treatment sessions at 6-8 week intervals may be necessary.

What will be the predicted cure rate?

In clinical studies, improvement has been observed in 68-80% of patients after 3 treatment sessions, but there is no guarantee of success. Results depend upon minimizing the risk of recurrence with adequate hygiene precautions (disinfection of the shoes, washing of the socks with 60° C, etc.). In addition, it is recommended to use an anti-mycotic cream between the toes and on top of the nails.

Are there any limitations after the FOX laser treatment?

After laser treatment, there will be a persistent sensation of warmth in the nail bed which may be uncomfortable. However, patients can return to normal activities.

Shoes and nail polish can be worn immediately after treatment.





More that 500 systems are in use worldwide
..... the procedure is safe, quick and easy to perform.

FOX laser therapy is well tolerated and very effective for the temporary increase of clear nail in patients with onychomycosis. Since it is small and lightweight, the FOX Laser is truly portable.

The laser beam penetrates through the nail, elevating the temperature to a level which destroys the fungal infection.



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1064 nm



FOX – safe & effective laser therapy!

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1064 nm

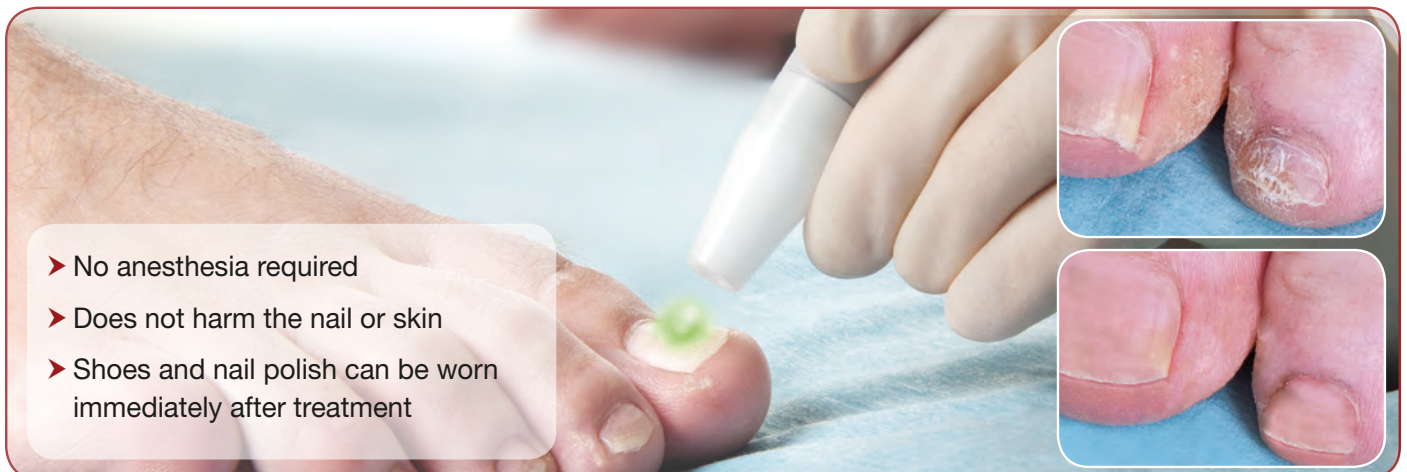
- Made in Germany
- Small and Portable
- Proven Results
- Best Value
- Fast Return on Investment
- NO Consumable Expense



Ease to operate – Minimum risk of complications

FOX laser treatment is safe and effective.

- No anesthesia required
- Does not harm the nail or skin
- Shoes and nail polish can be worn immediately after treatment

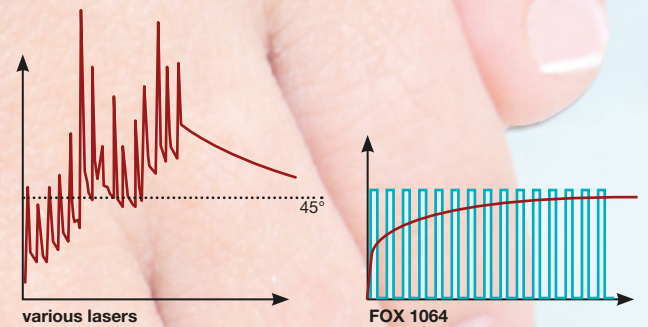




FOX 1064

No Peaks - No Pain

Continuous output power from the FOX Laser avoids spikes of high power and enables a gentle treatment. The energy is delivered in precisely metered amounts into the nail bed creating pain-free warmth for your patients.





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