CHRONICLE PATIENT PRIMER

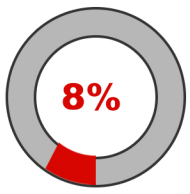
A tool for patient counselling and adherence. Online at www.derm.city/primer

CAUSES

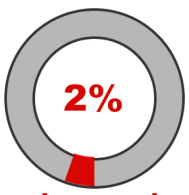
Fungal nail infection is caused by three main classes of organisms:

- Fungi that infect hair, skin, and nails and feed on nail tissue (dermatophytes)
- Yeasts
- Non-dermatophyte molds

All three classes cause the very similar early and chronic symptoms or appearances, so the visual appearance of the infection may not reveal which class is responsible for the infection. Dermatophytes (including Epidermophyton, Microsporum, and Trichophyton species) are, by far, the most common causes of fungal nail infection worldwide.

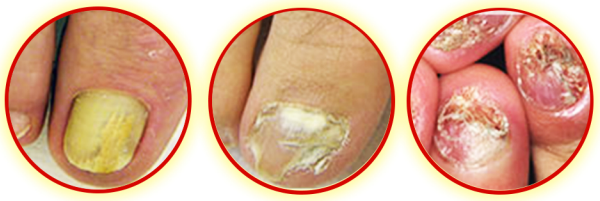


Yeasts cause 8% of infections



non-dermatophyte mold cause 2% of fungal nail infections

Fungal nail symptoms and signs

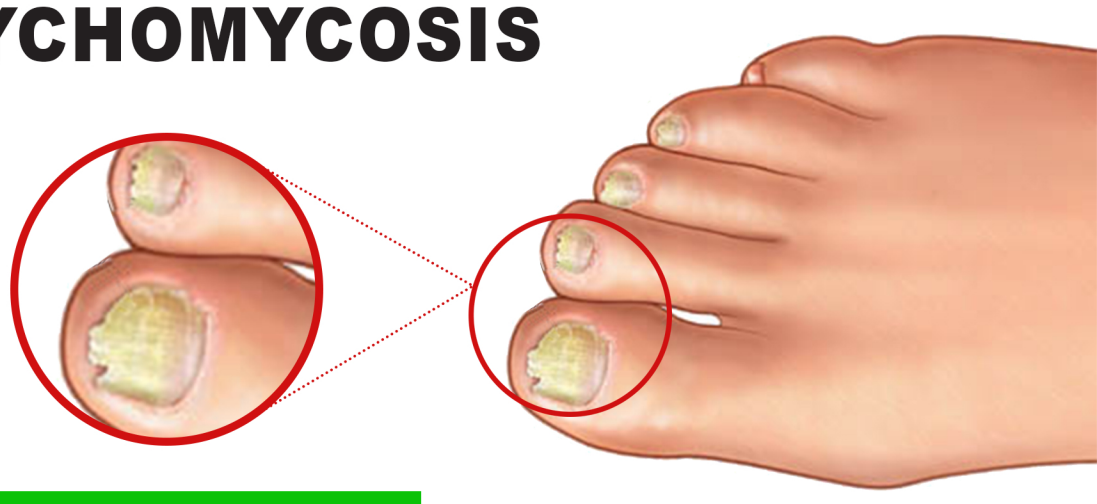


Distal subungual onychomycosis | Proximal subungual onychomycosis | Candidal onychomycosis

ONYCHOMYCOSIS AND QUALITY OF LIFE

Onychomycosis may cause a substantial decrease in quality of life. An understanding of the disorder and updated management is important for all healthcare professionals. Onychomycosis is the most common nail disorder in adults. It is four to seven times more frequent in toenails, where it often involves several nails. It is a progressive disease, and although not life threatening it is inappropriately considered purely a cosmetic problem, with some physicians still believing there is no need to treat. The fungal infection usually begins in the nail bed, and often extends to the nail plate. Onychomycosis is unsightly and can be uncomfortable; with discolouration of the nail plate and more severe disease resulting in loss of the nail plate altogether. Onychomycosis may become a source of more widespread fungal lesions, spreading to other nails, body sites (groin, skin, scalp), and even to family members.

ONYCHOMYCOSIS



TREATMENT

Treatment of onychomycosis depends on the clinical type of the onychomycosis, the number of affected nails, and the severity of nail involvement. A systemic treatment is always required in proximal subungual onychomycosis and in distal lateral subungual onychomycosis involving the lunula region. White superficial onychomycosis and distal lateral subungual onychomycosis limited to the distal nail can be treated with a topical agent. A combination of systemic and topical treatment increases the cure rate. Because the rate of recurrence remains high, even with newer agents, the decision to treat should be made with a clear understanding of the cost and risks involved, as well as the risk of recurrence. Photodynamic therapy and lasers may represent future treatment options.

Systemic treatment recommendations for adults are as follows:

- Terbinafine as first line of treatment for dermatophyte onychomycosis and generally preferred over itraconazole; not recommended for patients with active or chronic liver disease (level A)
- Itraconazole as first line of treatment for dermatophyte onychomycosis (level A)
- Fluconazole may be a useful alternative in patients unable to tolerate terbinafine or itraconazole (level B)
- Griseofulvin is no longer a treatment of choice owing to lower efficacy and higher relapse rates compared with terbinafine and itraconazole (level C)
- Combination treatment recommended if response to topical monotherapy is likely to be poor (level D)
- Efinaconazole is a triazole antifungal. It is approved for use in Canada as a 10% topical solution for the treatment of onychomycosis

Topical treatment recommendations for adults are as follows:

- Amorolfine or tioconazole are useful for superficial and distal onychomycosis (level D)
- Ciclopirox is useful for superficial and distal onychomycosis and for patients in whom systemic therapy is contraindicated (level D)

Other adult treatment recommendations are as follows:

- Surgical avulsion, debridement alone, and photodynamic therapy (PDT) not recommended

Systemic treatment recommendations for children are as follows:

- Terbinafine as first line of treatment for dermatophyte onychomycosis and generally preferred over itraconazole (level A)
- Itraconazole is first line of treatment for dermatophyte onychomycosis (level A)
- Fluconazole considered as second line if itraconazole and terbinafine contraindicated or not tolerated (level B)
- Griseofulvin considered as second line if itraconazole and terbinafine contraindicated or not tolerated (level C)