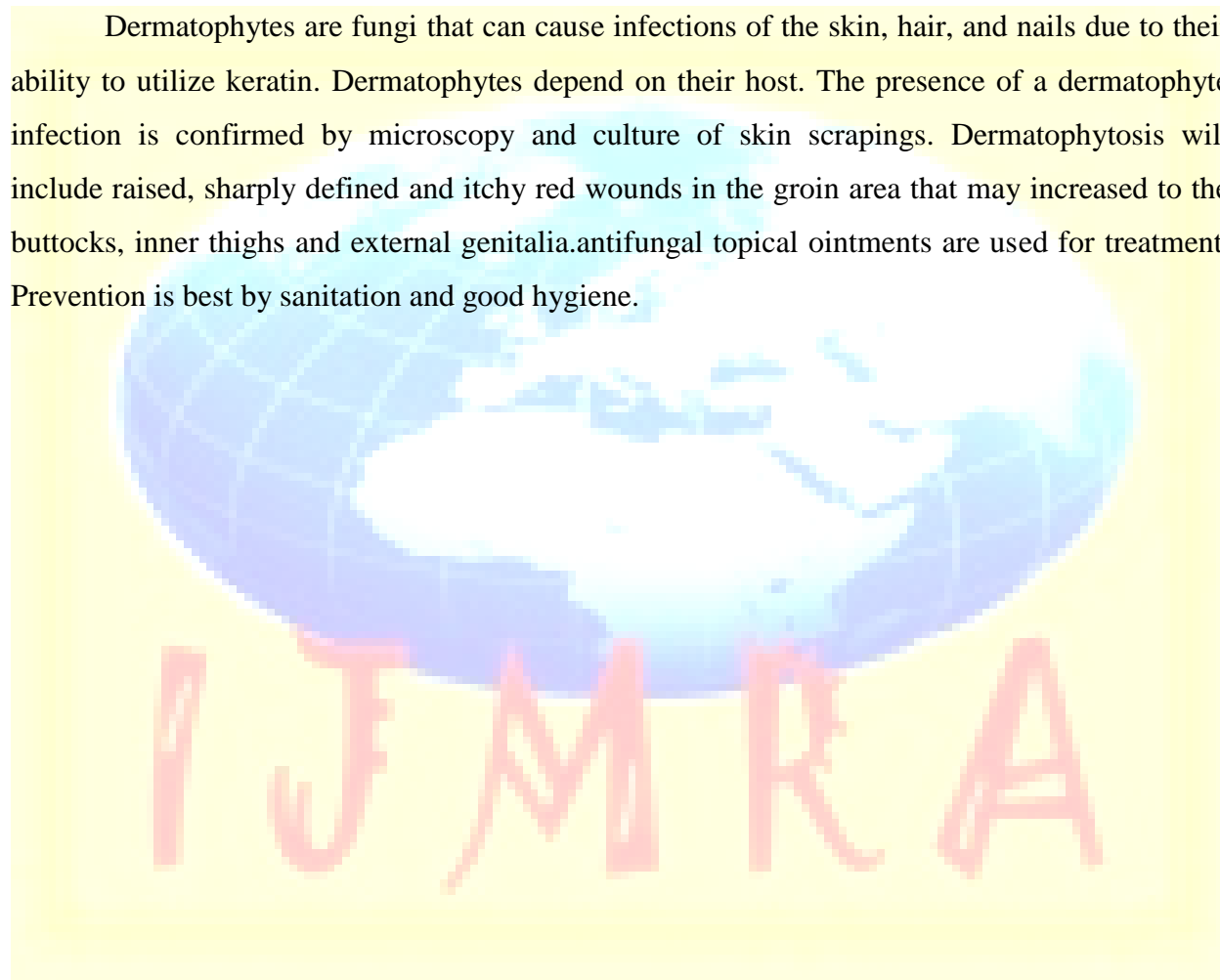


## A GENERAL REVIEW ON DERMATOPHYTES

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### Abstract

Dermatophytes are fungi that can cause infections of the skin, hair, and nails due to their ability to utilize keratin. Dermatophytes depend on their host. The presence of a dermatophyte infection is confirmed by microscopy and culture of skin scrapings. Dermatophytosis will include raised, sharply defined and itchy red wounds in the groin area that may increased to the buttocks, inner thighs and external genitalia. antifungal topical ointments are used for treatment. Prevention is best by sanitation and good hygiene.



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### **Dermatophytes cause skin, hair, nail infections**

Dermatophytes are fungi that can cause infections of the skin, hair, and nails due to their ability to utilize keratin. The organisms colonize the keratin tissues and inflammation is caused by host response to metabolic by-products. These infections are known as ringworm or tinea, in association with the infected body part. Occasionally the organisms do invade the subcutaneous tissues, resulting in kerion development. These infections lead to a variety of clinical manifestations, including tinea capitis, tinea pedis, tinea corporis, tinea cruris, and Majocchi's granuloma. The major types of dermatophyte infections include: involvement of the scalp (tinea capitis), feet (tinea pedis), groin (tinea cruris), and other body surfaces (tinea corporis). These are typically superficial, involving the epidermis. However, in some patients dermatophyte infections may penetrate the hair follicle and involve the dermis; this condition is termed Majocchi's granuloma. The most common organisms are:

- *Trichophyton rubrum*, *Trichophyton tonsurans*, *Trichophyton interdigitale* and *Trichophyton mentagrophytes*.
- *Microsporum canis*.
- *Epidermophyton floccosum*.

### **Habitat**

Dermatophytes depend on their host, which may be an animal ("zoophilic") or a human ("anthropophilic") and need to spread from one host to another to survive. Dermatophytes may also prefer to live in the soil ("geophilic").

### **Diagnosis**

The presence of a dermatophyte infection is confirmed by microscopy and culture of skin scrapings. Histopathological examination of skin or nails using periodic acid-Schiff (PAS) stains can reveal fungal elements.

### **Symptoms**

Dermatophytosis begins at the tip of one or more nails. Fingernail infection is much not occur generally. Examine will reveal gradual thickening, discoloration and crumbling of the nail. Eventually, the nail may be completely destroyed. Dermatophytosis will include raised, sharply defined and itchy red wounds in the groin area that may increased to the buttocks, inner thighs and external genitalia. The symptoms of dermatophytosis are as follow:

1. Depending on the condition, itchiness may be absent, or quite severe.
2. May be subtle or dramatic hair loss. it may be symmetric, or not. This is generally seen on the back & neck but can also occur on other parts of the body.
3. Crusting and scaling on the body may be severe, and thick crusts may occur on the face, ears, and nail beds.
4. Blackheads may be seen in some condition and may resemble chin acne.
5. Hyperpigmentation and redness may also appear.

### Application of topical ointments against dermatophytes

#### Topical Therapy for Dermatophyte Infections

Agent	Formulation	Frequency of application
<b>Allylamines</b>		
Naftifine (Naftin)	1% cream	Once daily
	1% gel	Once or twice daily
Terbinafine (Lamisil)	1% cream or solution	Once or twice daily
<b>Benzylamine</b>		
Butenafine (Mentax)	1% cream	Once or twice daily
<b>Imidazoles</b>		
Clotrimazole (Lotrimin)	1% cream, solution, or lotion	Twice daily
Econazole (Spectazole)	1% cream	Once daily
Ketoconazole (Nizoral)	1% cream	Once daily
	1% shampoo	Twice weekly
Miconazole (Micatin)	2% cream, spray, lotion, or powder	Twice daily
Oxiconazole (Oxistat)	1% cream or lotion	Once or twice daily
Sulconazole (Exelderm)	1% cream or lotion	Once or twice daily
<b>Miscellaneous</b>		
Ciclopirox (Loprox)	1% cream or lotion	Twice daily
Tolnaftate (Tinactin)	1% cream, solution, or powder	Twice daily

### Prevention is better than cure

- Good skin hygiene.
- Good nail hygiene.
- Avoiding prolonged wetting or dampness of skin and feet.
- Avoid trainers, which can retain sweat and promote a warm, moist environment.
- Treatment of tinea pedis helps prevent onychomycosis.[8]
- Wear clean, loose-fitting underwear.

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