

# Topical Anti-fungals

## What is a Fungal Infection?

Superficial fungal infections of the skin are referred to as dermatophytoses. They are common infections, which are usually caused by dermatophytes and referred to as tinea. Dermatophytes digest and invade keratin and may infect skin, nails, and hair. Infections may be acquired through human-to-human spread, animal-to-human spread, or soil-to-human spread.

Dermatophyte infections are more common in association with hot, humid environments, sweating or maceration of the skin, occlusive footwear, use of hair greases or oils, diabetes mellitus, and defects of cellular immunity (e.g., AIDS).

## Types of Common Fungal Infections

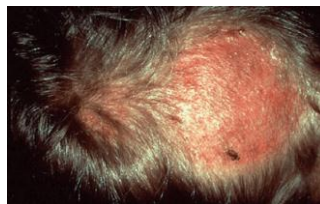
Name	Affected Area
tinea pedis	feet or "athletes's"
tinea cruris	thighs and buttocks or "jock itch"
tinea capitis	scalp and hair follicles
tinea barbae	hairs and follicles of beards and mustaches
tinea corporis	trunk and extremities or "ringworm"
tinea unguium	nails
tinea manuum	palm of hands
tinea versicolor	trunk and extremities

## Images of Common Fungal Infections

tinea pedis



tinea capitis



tinea unguium



tinea corporis



## **Topical Treatment Options**

The following antifungal ingredients can be combined with anti-inflammatory, keratolytic, or other ingredients.

### **Antifungal ingredients:**

Damages the fungal cell wall membrane and altering its permeability; as a result, loss of essential intracellular elements occur

- Econazole
- Ketoconazole
- Itraconazole
- Undecylenic Acid

### **Anti-inflammatory:**

Decreases inflammation (swelling, itching, and redness)

- Betamethasone
- Desonide
- Hydrocortisone
- Triamcinolone

### **Keratolytics:**

Softens and facilitates exfoliation of epidermal cells

- Salicylic acid

### **Other:**

- Ibuprofen
- Menthol/Phenol
- Tea Tree Oil

These ingredients can be compounded in the following bases:

- vanishing cream/lotion
- emollient cream/lotion
- ointment
- nail solution

## **Examples of Compounds**

### **Fungi-stat**

This compound is in a cream base

and is a combination of the following ingredients:

- Clotrimazole 2%
- Ibuprofen 2%
- Tea tree oil

### **Econazole & undecylenic acid**

This combination is provided as a nail solution

### **General Information**

Treatment of dermatophyte infections generally requires patient education as to avoidance of factors which predispose to infection as well as the use of an antifungal agent in either a topical or systemic form. Patients should be advised to avoid exposure to hot, humid conditions and situations which may result in excessive perspiration. Loose clothing, non-occlusive footwear (e.g., sandals), and the use of absorbent powders in areas where skin may rub or touch should be recommended.