Dermatophytoses (Fungal Infections)

The **dermatophytoses** (ringworm) are infections caused by a group of closely related filamentous fungi that invade primarily the stratum corneum, hair, and nails. These are superficial infections by organisms that live on, not in, the skin. They are confined to the dead keratin layers and are unable to survive in the deeper layers. Because keratin is being shed constantly, the fungus must multiply at a rate that equals the rate of keratin production to maintain itself; otherwise the organism would be shed with the discarded skin cells. Table 6-5 outlines common dermatophytoses.

TABLE 6-5
Dermatophytoses (Fungal Infections)

Disorder and Organism	Manifestations	Management	Comments
Tinea capitis: Trichophyton tonsurans, Microsporum audouinii, Microsporum canis (see Fig. 6-12, A)	Lesions in scalp but may extend to hairline or neck Characteristic configuration of scaly, circumscribed patches or patchy, scaling areas of alopecia Generally asymptomatic, but severe, deep inflammatory reaction may occur that manifests as boggy, encrusted lesions (kerions) Pruritic Diagnosis: Microscopic examination of scales	Oral griseofulvin or terbinafine Oral ketoconazole for difficult cases Selenium sulfide shampoos, used twice a week, may decrease infection and fungal shedding (American Academy of Pediatrics, 2015) Kerion: Griseofulvin and possibly oral corticosteroids for 2 weeks to achieve therapeutic effect (American Academy of Pediatrics, 2015)	Person-to-person transmission Animal-to-person transmission Rarely, permanent loss of hair M. audouinii transmitted from one human to another directly or from personal items; M. canis usually contracted from household pets, especially cats Atopic individuals more susceptible
Tinea corporis: Trichophyton rubrum, Trichophyton mentagrophytes, M. canis, Epidermophyton organisms (see Fig. 6-12, B)	Generally round or oval, erythematous scaling patch that spreads peripherally and clears centrally; may involve nails (tinea unguium) Diagnosis: Direct microscopic examination of scales Usually unilateral	Oral griseofulvin Local application of antifungal preparation, such as tolnaftate, naftifine, miconazole, terbinafine, clotrimazole; applied 2.5 cm (1 inch) beyond periphery of lesion; application continued 1 to 2 weeks after no sign	Usually of animal origin from infected pets but may occur from human transmission, soil or fomites Majority of infections in children caused by <i>M. canis</i> and <i>M. audouinii</i> Tinea gladiatorum is commonly seen in wrestlers