

NAIL INFECTIONS

Infection of the nail and surrounding skin (paronychia) is caused by various bacteria and yeasts as well as by fungi associated with ringworm infections elsewhere on the body. Paronychial infections can be acute or chronic and differ somewhat in their appearance and treatment.

Acute paronychia is most often due to bacterial infection. Usually there is preceding trauma to the nail, cuticle or skin around the nail (nail fold) such as might occur from nail biting or overly aggressive manicuring. Damage to these tissues will permit entry of germs resulting in a painful, red, swollen nail fold. The infected skin may rupture spontaneously and drain pus. Paronychial infections, unless very mild, should be treated promptly by a doctor. If not draining freely, they may need to be lanced to allow the pus to escape. Warm saline soaks several times daily may relieve some of the discomfort. Usually an oral antibiotic is required; choice of antibiotic will depend on the organism cultured from the pus and its sensitivity to various drugs.

Individuals who have suffered from acute Paronychial infections are more susceptible to the development of chronic nail infections. An acute infection may permanently alter the nail fold and cuticle which become vulnerable to further damage from minor irritants, such as detergents, soaps and cosmetics. Job-related factors such as repeated trauma and repeated exposure to moisture, heat, irritants and strong chemicals may also predispose to chronic paronychia. Finger sucking is a common antecedent of nail infection (particularly yeast infection) in children.

Chronic paronychia can be due to bacteria, but is more often caused by yeast called *Candida albicans*. As this yeast may inhabit the normal mouth and vagina, it may readily contaminate any small cut near the nail or into the crevice between a damaged cuticle and the nail. This yeast grows well in a warm moist environment and, once it takes hold at the base of the nail, can cause an infection that is difficult to eradicate. In these instances, the nail fold may or may not be painful, but it is usually red and swollen, the cuticle is lifted off the nail and the nail may appear discoloured, ridged, roughened or otherwise abnormal. Chronic nail infections require fastidious care in order to achieve healing:

- 1 Protect hands from exposure to moisture and irritants by wearing heavy-duty vinyl gloves over light cotton gloves. Examples of irritating substances are raw foods (particularly citrus fruits), solvents and chemicals.
- 2 Wear heavy cotton gloves while doing dry work.
- 3 Protect hands from chapping and drying in windy or cold weather by leather gloves.
- 4 Use only mild soaps for hand washing. Thoroughly rinse and dry immediately after washing and apply moisturiser.
- 5 Do not manipulate cuticle. Avoid nail cosmetics of all kinds. Nail polish removers are particularly harmful.
- 6 Bacterial infections can be treated with topical antibiotics, and yeast infections with topical antifungal agents. At times, it may be necessary to treat reservoir areas of yeast (GI tract, vagina) with specific medication.
- 7 Attempt to curtail finger sucking in infants and children, although this is often difficult.

Infections of the nails due to the fungi that also cause ringworm involve the nail, but not necessarily the surrounding skin. The nail becomes thickened, distorted and crumbly starting at the free edge near the fingertip and progressing toward the base of the nail. This type of nail infection may accompany athlete's foot or skin infection in other areas of the body. It does not respond to topical therapy, but requires treatment with an oral medication. It is, therefore, extremely important to make sure that the diagnosis is correct and that the infectious organism has been properly identified by culture.

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