

FUNGUS INFECTIONS DUE TO CANDIDA ALBICANS

TREATMENT:

GENERAL: These infections create a great deal of inflammation and soreness. Because of this, you need to clean your skin very gently. Avoid soap and most anti-fungal chemicals. During Acute stages of infections, use large tap water compresses. When your infection is almost well, stop compresses. Warm air or heat from a fan or blower may be used to improve the drying effect at any stage of the infection.

Before modern pharmacy, gentian violet, a purple dye, was painted on the lesions. This was effective, but the staining was most unpleasant. If the bottle was left uncapped, the liquid evaporated and left a stronger residue that produced irritation.

Modern treatment, which is much more acceptable than gentian violet, makes use of Nystatin in the form of a cream, ointment, powder, or lotion.

SKIN: In treating areas of skin that rub against other skin, it is best to separate the areas and to keep them dry with warm, moving air for 10 to 15 minutes several times daily. A loose cotton bra that holds the breasts high is helpful and better than one made of nylon, orlon, or other synthetic fabrics that stimulates sweating.

Men should wear boxer shorts rather than tight-fitting shorts of the jockey type. Diapers in infants should be changed frequently and left off whenever possible. Diapers may be treated with special rinses which supposedly help this problem.

Never clean under your nails with a wooden or metal stick. Clean nails with a soft brush occasionally. Let your cuticles grow out. Clip off any loose, non-adherent skin tags around the nails.

VAGINAL INFECTIONS AND PENILE INFECTIONS: Medication can be purchased as vaginal suppository. Very dilute vinegar douches, (1 tsp. per quart of water), may also be recommended. The male applies ointment before and after intercourse, washes and then reapplies the medication. He must also use the medication two to three times daily until well.

ORAL INFECTIONS are treated with Nystatin suspension. It should be applied with a cotton tipped applicator several times a day. Tablets may also be given.

BACKGROUND INFORMATION:

Infections with Candida Albicans generally involve skin, mucous membranes, and more rarely internal organs. The organisms are similar to small plants that need warmth and moisture to multiply. They rarely grow on dry skin but are normally found in the mouth, intestines, and vagina. There are many different types of fungi, yet only a very few cause disease in man. Candida Albicans is among the most common to cause human illness. Candida are yeast-like cells which reproduce by budding and which also form small, thread-like structures. They can be identified by culture and microscopic examination of the scrapings placed on a slide. More specific identification is only rarely attempted.

There are conflicting data regarding body defenses to candida infections. Hopefully, we will learn more about this in the near future.

FORMS OF YEAST INFECTIONS:

1. **INTERTRIGINOUS CANDIDIASIS (Including diaper rash).** This form involves opposing surfaces of the skin such as between the breasts and chest, thighs and groin, axillae, abdominal creases, toewebs, and fingerwebs. Yeast infections in these sites must be differentiated from similar rashes: seborrheic dermatitis, psoriasis, erythrasma, contact dermatitis, and other fungus infections (ringworm, jockey itch athlete's foot). Prolonged contact of the diaper area with urine, feces residual soap and detergents, and some "medicines" promotes usually shiny, thin, scaly, tender, and show at the border small, pale yellow pustules. More than one type of fungus infection can occur simultaneously.

Another body fold area that can become infected is the protective fold surrounding the fingernails. Where the cuticle has been abused by manicuring or trauma, or where the hands are used in water, detergents or strong chemical solution repeatedly, the protection of the cuticle has been lost and infection can occur in this small space. Often these are complicated by bacterial infection and become painful. The nailplates themselves may become infection and become brittle, thickened, ridged transversely, dull, white, yellow or brown.

2. **ORAL CANDIDIASIS or ORAL THRUSH,** affecting the newborn, debilitated or aged. The tongue, palate, buccal mucosae, and other oral surfaces show patches of creamy pseudomembrane composed of the germs. Removal of this germ mass leaves a red oozing surface. There may be pain and difficulty in swallowing. The lesions often begin within a few days after birth just before or after the infant has been sent home from the hospital. At the other extreme is a similar disease in debilitated patients, people having B-vitamin deficiency and sick people who have been on certain antibiotics, steroids, or antimetabolic (cancer) drugs. The germs may be associated with black, hairy tongue but do not cause it.

Another form of oral infection is called **PERLECHE** or **ANGULAR CHEILITIS**. Here the folds of the lips tend to overhang. If saliva drools out through these folds, it creates a moist area on which germs thrive. Often such patients wear dentures, and like older people in general, they have lost some of the substance of the bones supporting the mouth so that deeper than normal folds occur at places where the lips meet. Occasionally a new set of dentures may be necessary.

3. **VULVO-VAGINAL CANDIDIASIS AND PENILE CANDIDIASIS.** Lesions occur with slight redness and minimal symptoms and may progress to severe pustule formation with tears in the skin surface. Lesions may be covered with a gray pseudomembrane as in the mouth. This form of candidosis is seen most often in women with a tendency toward diabetes, before menses, during pregnancy during periods when oral contraceptives or antibiotics are used, or occasionally as a shared infection with a sexual partner. Sexual partners pass this problem back and forth. The vagina contains many folds of skin which can hide and provide a home for the organisms. Similarly, the uncircumcised male has a natural home for candida under the foreskin.

4. **BRONCHIAL CANDIDIASIS AND PULMONARY CANDIDIASIS.** Infections of the main airway and lung produce cough, varying amounts of sputum and abnormal x-ray findings. *Candida Albicans* is almost always present in any chronic abnormal condition of the respiratory tract, and its presence is thus of doubtful significance. When the organisms are present in massive numbers, they point to trouble from this cause. Accurate laboratory diagnosis is very difficult.

5. **ENDOCARDITIS.** Infection of the heart occurs mostly in patients who have artificial heart valves or who have intravenous catheters during illness. Successful management requires removal of the heart valve or catheter.

6. **SEPTICEMIA or BLOOD INFECTIONS WITH CANDIDA.** These infections occur generally in patients who are quiet ill.

7. MENINGITIS. Candidal meningitis is quite rare and again, serious predisposing illnesses are generally present.
8. PYLONEPHRITIS, CYSTITIS, KIDNEY INFECTIONS. Here again, the problem is one of predisposing illnesses.
9. KERATOCONJUNCTIVITIS. Infections of the eye, often worse in persons who unwittingly used antibiotic and steroid eye preparations for much too long a time without proper supervision.

RARELY ENCOUNTERED CONDITIONS ASSOCIATED WITH STUBBORN CANDIDAL INFECTIONS

This information is offered for the sake of completeness. People with any of the following may be more susceptible to candida infections: Below normal function of the thyroids, para-thyroid or adrenal glands, auto-immune endocrine disease, diabetes mellitus, cirrhosis of the liver, chronic granulomatosis, drug addiction, obesity, Down's syndrome, blood dyscrasias, and cancers including leukemia and lymphoma large burns of the skin.

1. CHRONIC MUCOCUTANEOUS CANDIDIASIS begins in infancy or early childhood. it is associated with some of the glandular disorders mentioned in the previous paragraph. This condition involves mucous membranes, nails, face, scalp, and perioral areas. Such patients have an immune defect with partial inability to resist candida. It has been possible to treat them with a substance called transfer factor, and this has improved their condition miraculously.
2. CANDIDAL GRANULOMAS are a generalized development of horns or heavily crusted nodules that are seen on the scalp, face, fingers and elsewhere. They disappear after systemic therapy with Amphotericin B, but recur when the therapy has been stopped. This condition may also respond to transfer factor.
3. ACRODERMATITIS ENTEROPATHICA is a condition of infancy in which there is symmetrical candidal dermatitis around the body openings and on the hands, feet, nails, and scalp. There is also monstrous hair loss and diarrhea. Until good treatment was devised, children with this condition were very sick indeed.