

Figure 1. The red patch in the middle of the tongue is caused by yeast infection.



Figure 2. The reddish area in the middle of this patient's tongue caused a burning sensation.



Figure 3. After antifungal treatment, the top of the tongue now appears normal and the burning sensation is gone.



Figure 4. This form of candidiasis has white flecks that can be rubbed off.



DIAGNOSIS • TREATMENT EDUCATION & RESEARCH

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Oral

Candidiasis

(Yeast Infection)

Patient Information



What is oral candidiasis?

Oral candidiasis is an infection of the most superficial part of the lining of the mouth that is caused by the yeast-like fungal organism, *Candida albicans*. Unlike many other infections, candidiasis does not really invade into the living parts of the body – the yeast primarily uses the dead ("keratinized") cells that are normally on the surface of the lining of the mouth for food. This organism also causes vaginal yeast infections in some women. It is important to understand that this is **not** the same yeast that is used for baking bread or brewing beer.

What are the symptoms of oral candidiasis?

Sometimes people can tell that the yeast is present, and in those situations, they may notice a burning or itching sensation. Other times the yeast infection is asymptomatic, and the person is unaware of the infection.

What does oral candidiasis look like?

Generally this condition causes either a red or white (sometimes both) appearance to the lining of the mouth. Redness and cracking of the corners of the mouth is often seen (see cover photo). Some patients will have a red, smooth area that develops in the middle part of the top of the tongue, toward the back (Figures 2 & 3), or on the roof of the mouth. The term "thrush" has been used to describe the type of candidiasis that appears as white flecks that look a little like cottage cheese (Figure 4).

Who gets oral candidiasis?

Just about anyone can get candidiasis, but it seems to occur more often in the very young and in older age groups. Interestingly, this yeast-like fungus is often found in the mouths of otherwise healthy people, although in those situations, there doesn't seem to be any sign of actual infection – the yeast is said to be in a "carrier" state, and no treatment is necessary.

What causes oral candidiasis? Can I spread this disease to my family and friends?

In many cases, this organism takes advantage of special situations that make it possible to cause infection. For example, if a person takes an antibiotic, this kills off the competing bacteria in the mouth, making it possible for the yeast to take over. In some oral diseases that produce extra keratin, the organism will favor infection of that lining area. Patients who wear dentures, especially a complete upper denture, are more likely to have the yeast in their mouths. Problems with the immune system can also cause a tendency for yeast infection, and this includes patients who are taking cortisone-type drugs. Diabetic patients seem to be more likely to develop oral yeast infections as well. As for spreading to your family or friends, it is likely that they already have the yeast living in their mouths anyhow, and it probably isn't causing any problems.

How do doctors diagnose oral candidiasis?

This disease may be diagnosed based on the clinical signs and symptoms. A culture (swab) or cytology (scraping) may be necessary to confirm that the yeast is actually present in some situations.

How is oral candidiasis treated?

Several good antifungal drugs are available for treating this infection. Some can be taken as a daily pill that is swallowed, while others are used as a mouth rinse or lozenge that is dissolved in the mouth four or five times daily.

For people who wear complete dentures ("full upper and lower plates"), the dentures must be disinfected by soaking them overnight, each night, for one week using a mild bleach solution (approximately one tablespoon of bleach in a glass of water). Make sure that you rinse the dentures well before putting them back in your mouth. Do not put partial dentures (those that have metal) in a bleach solution because this will ruin them!! There is a special disinfecting solution available for partial dentures, but this usually has to be ordered from a dental supply store.

Can oral candidiasis be cured?

This infection typically is quickly cured by any of the antifungal drugs that are commonly used. There is no evidence that "home remedies", such as eating yogurt, will treat oral candidiasis. Similarly, there is no reason to avoid foods that use baker's or brewer's yeast, as a different type of yeast is used in those situations. However, because the yeast *Candida albicans* is a common organism, and because some patients are prone to develop this infection, it is not unusual for the problem to return at some time. Should that happen, the signs and symptoms of the yeast infection can be recognized, and the infection can be treated again with appropriate antifungal drugs.