

Recurrent Aphthous Stomatitis

What is recurrent aphthous stomatitis (“canker sores”)?

Recurrent aphthous stomatitis (RAS), or what is commonly referred to as “canker sores”, is a form of benign inflammation of the mouth. Although the term “canker sores” is commonly used by patients to describe any abnormality in the mouth, the term, strictly speaking, refers to these painful open mouth sores (ulcers) that come and go over time. It affects 1 in 5 persons and usually begins in adolescent and teenage years. During an episode, there may be 1-5 painful ulcers that last 5-14 days. These ulcers are located on the inner cheeks, inner lips, underside of the tongue, or soft palate. Just before an ulcer appears, you may notice a burning sensation or a lump in the area. Ulcers may be considered *minor* if they are less than ½ inch and heal in less than 2 weeks without scarring, or *major* if they are greater ½ inch, take longer than 2 weeks to heal and leave scars. Some patients may have multiple recurrent crops of small, pinpoint, painful ulcers which are called *herpetiform RAS*; such ulcers are NOT related to herpes virus infection. Patients are considered to have *severe* RAS when they have continuous ulcers with few, if any, ulcer-free periods, regardless of the size and/or number of lesions.

What causes RAS?

Unfortunately, no one really knows what causes RAS, although it is likely that this is a result of a mild problem with your immune system that is not enough to make you sick in any other way. Factors that have been linked to RAS include family history, low levels of iron, folic acid, or vitamin B12, other deficiencies of the immune system, food allergies and allergies to toothpastes containing sodium lauryl sulfate. Stress (such as emotional stress or physical illness) and trauma (such as from biting) often brings on a sore. Patients with inflammatory bowel disease (such as Crohn disease and ulcerative colitis), Behcet disease, and HIV/AIDS may develop oral ulcerations identical to RAS. In children, RAS is sometimes associated with a periodic fever syndrome. In most cases, however, even if many tests are done, the cause remains unknown. **We do know that RAS is NOT an infection and is NOT caused by herpes (the “cold sore” virus);** you cannot spread RAS to others through kissing or sharing foods.

How do we know it is RAS?

Usually an experienced dental professional can diagnose RAS by the appearance and location of the ulcers, and by your description. In some cases, a biopsy may be taken to rule out other conditions. Blood tests may be ordered to rule out some of the conditions discussed above.

How do we treat RAS?

Very rarely, RAS can be managed by simply correcting an underlying deficiency or avoiding certain foods. For the overwhelming majority of patients in whom RAS occurs without a known cause, the goal is to lessen the severity and/or frequency of the painful ulcers. Unfortunately there is no cure for RAS.

Relatively mild cases may be treated by simply covering the ulcers with a protective ointment (such as Orabase™), pharmaceutical-strength cyanoacrylate (a “Superglue-like substance) and Oradisc™. Topical anesthetics (such as viscous lidocaine) may be used for temporary pain relief. Many over-the-counter medications (such as Orajel™, Zylactin™) contain an effective topical anesthetic called benzocaine. You may notice in your research that many other substances are said to be effective but studies have not shown them to be consistently effective.

In more severe cases, topical steroid gels or rinses may be prescribed to help speed the healing time. The most commonly prescribed topical steroids are *fluocinonide* or *clobetasol gel*, or *dexamethasone* solution. Patients presenting in severe pain or with multiple ulcers may be prescribed steroid pills such as prednisone for several weeks until the ulcers have healed. Other medications that may be prescribed to prevent or reduce future outbreaks include pentoxifylline, colchicine, azathioprine and thalidomide, which all function by modulating the immune system. Sometimes if there is large ulcer, your doctor may recommend treating the area “intralesionally” with a steroid injection to speed up the healing process.

Instructions for applying a gel or ointment: After rinsing your mouth with water, gently pat the affected area(s) dry with some cotton gauze. Place a small amount of gel on a clean finger, dab it onto the area that hurts and do not eat or drink for 15 minutes for the steroid to be absorbed. It will not hurt you to swallow some of this gel. You may also apply the gel to gauze and place the gauze against the affected area that you are treating. If the gums are involved, a custom tray, like those used for teeth bleaching, may be worn with the steroid in it 30 minutes twice a day.

You may notice that the packaging of the steroid may have the following warning: “Not for internal use” or “For external use only.” Such topical steroids have been used for decades to treat OLP in the mouth effectively. The warning is there because these steroids are not FDA-approved for this use although there are many studies that demonstrate their effectiveness and safety for treating oral diseases.

Instructions for using a mouth rinse: If you have extensive or difficult to reach oral lesions, you may be prescribed a topical steroid solution (typically dexamethasone) that is used as a mouthwash. A teaspoon of solution should be rinsed for 5 minutes then spat out, and you should not eat or drink for 15 minutes afterwards. You may also be prescribed tacrolimus compounded into a rinse by a special compounding pharmacy. You would use it the same way as the dexamethasone.

Any of these topical gels or rinses may cause slight stinging when applied or rinsed. Your doctor may ask you to combine the gel or rinse you are using with topical numbing medicine called *viscous lidocaine* to ease this burning or stinging sensation. Any of these treatments, especially steroids, may cause you to develop a yeast infection (“thrush”) in your mouth. Your doctor may prescribe an anti-yeast (anti-fungal) rinse such as *nystatin*, *clotrimazole troches* or *fluconazole tablets* to treat the yeast infection. You are particularly susceptible to this if you have diabetes or a history of yeast infections.

After symptoms have been brought under control, you may reduce the frequency of therapy to the lowest amount needed to maintain comfort, increasing the frequency during flare-ups as needed. It is a good idea to stop treatment completely if you have no discomfort to let your mouth rest rather than use the topical therapy continuously.

What can I expect?

Most patients develop fewer ulcers with flare-ups less often as they get older. For the majority of patients, RAS is simply an annoyance and no treatment is necessary. For patients with bothersome lesions, the treatment regimens mentioned above are often enough to keep symptoms manageable.