What is burning mouth syndrome?

Primary burning mouth syndrome (BMS) is a benign condition that presents as a burning sensation in the absence of any significant clinical findings. BMS affects approximately 1% of the population with women being three to seven times more likely to be diagnosed than men. The majority of female patients are menopausal or post-menopausal, although men and premenopausal women may also be affected.

For the majority of patients, the burning sensation is most frequently associated with the tongue, roof of the mouth, and/or the inside surface of the lips. However, the burning may occur anywhere in the mouth. Patients often compare the sensation to having scalded or burnt the mouth with hot food; this may be accompanied by a sensation of swelling of the tongue or throat and/or a sour, bitter, acid, or metallic taste. Some patients may also have a “draining” or “crawling” sensation in the mouth. Food may not taste the way it used to and the mouth may also feel dry. Some patients report that food has less flavor.

Although dental treatment does not cause BMS, many patients report that the onset of their BMS symptoms coincides with a recent extraction, root canal, filling, use of a new denture or other dental procedures. In many cases, however, the onset is gradual with no known precipitating factor or event.

Three clinical patterns have been well characterized:

1. No or little burning upon waking in the morning, with burning developing as the day progresses, and worst by evening.
2. Continuous symptoms throughout the day from the time one awakes.
3. Intermittent symptoms with some symptom-free days.

What causes BMS?

No one really knows what causes BMS. However, it is believed to be a form of neuropathic pain. This means that nerve fibers in your mouth, for now, are functioning abnormally and transmitting pain despite the fact that there is no painful stimulus. It has been suggested that the nerves in your mouth that are responsible for feeling pain, are easily stimulated and excited.

Contributing factors seen in half to three-quarters of patients include menopause (in females), adverse life events (such as loss of job, divorce, illness or death of a family member or spouse), anxiety, depression and psychiatric disorders (such as post-traumatic stress disorder), TMJ problems, chronic fatigue syndrome and fibromyalgia. Some patients will also report trouble going to sleep and staying asleep throughout the night. Other symptoms often described by patients include headache, fatigue, shoulder pain, back pain, irritable bowel syndrome, burning of the skin or genital area, panic attacks, palpitations, ringing in the ears and other symptoms. BMS is not caused by dentures (although sometimes wearing dentures makes the burning worse) or infections, and hormone replacement therapy is not effective in managing BMS in post-menopausal women.

How do we know it is BMS?

Many oral inflammatory conditions may cause burning in the mouth (“secondary” burning mouth syndrome). These include lichen planus, geographic tongue and yeast infections (especially in patients who wear dentures). Oral burning that is associated with a specific diagnosis is not considered BMS as symptoms can be effectively managed by treating the underlying disorder.

It is therefore important to have an experienced oral health care specialist rule out any other potential causes of burning or discomfort such as oral mucosal diseases, infections, or dental pathology.
How do we treat BMS?

There is no cure for BMS. We can however, reduce the discomfort using a variety of medications, many of which are used to treat anxiety, depression, or other neurologic disorders (though usually at very low doses). The medications help to reduce the activity of nerve fibers.

One of the medications that you may be prescribed is clonazepam (Klonopin™), which is similar to diazepam (Valium™) and lorazepam (Ativan™). Clonazepam is generally considered first-line therapy for BMS and can be taken as a pill or used topically as an oral rinse. While this is a very safe medication, clonazepam has abuse and dependency potential. Therefore, the prescription should be followed carefully and patients with a substance dependence problem should be sure to discuss this with their doctor. Alternatives to clonazepam include amitriptyline (Elavil™), nortriptyline (Aventyl™, Pamelor™) and gabapentin (Neurontin™). You may experience some drowsiness when you start taking any of these medications; however, this usually subsides within 1-2 weeks and your prescription is usually taken at night just before bedtime to take advantage of this side effect. If you experience drowsiness this may increase your risk of falling. Please do not drink alcohol or drive after taking these medications.

Several over-the-counter remedies have also been reported that might offer some amount of symptom relief. Alpha lipoic acid (300 mg twice a day or 600 mg once a day) is used to treat other neuropathic pain conditions, although study results in BMS have been mixed.

Another treatment that may help you is topical capsaicin, an ingredient in hot chili peppers, Tabasco sauce, and a medication called Zostrix™. A simple regimen is to dissolve 5-6 drops of Tabasco sauce in 1 teaspoon of water and rinse your mouth with it four times a day. The initial feeling is one of increased burning but within a few minutes, some patients report that the burning is reduced significantly. Some patients find that chewing sugarless gum also lessens the burning sensation. Dry mouth products (e.g. Oral Balance, a Biotene™ product) may help relieve the sensation of dryness and often lessen the burning feeling. Some patients experience pain relief with a topical anesthetic such as viscous lidocaine. You may also wish to consider using a mild toothpaste such as a children's toothpaste or Biotene™ dental care products.

Because BMS is a chronic problem, non-pharmacologic approaches used alone or in addition to the above medications are often very helpful. These include stress management/reduction, meditation, yoga, exercise, psychotherapy and cognitive behavioral therapy. If stress, anxiety and/or depression are contributing to BMS, routine use of these techniques or regular counseling may help better manage symptoms. The effectiveness of acupuncture and other complementary and alternative therapies is unclear. With any therapy for BMS, it may take several weeks or even months before maximum benefits are achieved.

What can I expect?

One-half to two-thirds of patients will experience at least partial improvement in symptoms within a few months of treatment. For those with long-term symptoms (that may last 6-7 years, or longer), the intensity of burning tends to remain fairly stable at a manageable level, although some patients will return to normal without any residual burning. Patients who experience improvement with treatment can expect good control for years. Although many patients with BMS may be concerned that their burning represents oral cancer, there is no association between BMS and cancer.