

## Patient information from the BMJ Group

# Burning mouth syndrome

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## Burning mouth syndrome

Burning mouth syndrome can be painful and annoying, but it isn't harmful. We don't know for certain what causes burning mouth syndrome. It might happen because the nerves in your mouth are extra-sensitive. Although there's no definite cure, there are treatments that may help ease the discomfort.

We've brought together the best research about burning mouth syndrome and weighed up the evidence about how to treat it. You can use our information to talk to your doctor and decide which treatments are best for you.

## What is burning mouth syndrome?

If you've got burning mouth syndrome, your mouth feels sore most of the time, as though it's burning.

You may have the feeling in your tongue, your lips, your gums, and the inside of your cheeks. People often describe it as feeling as if they've scalded their mouth on a hot drink. <sup>[1]</sup>



Your doctor will examine your mouth to check that your symptoms aren't caused by another condition.

Your doctor will diagnose burning mouth syndrome only after checking that there's not another reason for the pain. These are some other reasons why your mouth may feel sore: <sup>[1]</sup>

- You have a mouth infection
- You have an allergic reaction

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- You have a reaction to a drug that you're taking for another illness
- You're wearing poorly fitting dentures (false teeth)
- You have a dry mouth because you don't have enough saliva (spit).

If you've been diagnosed as having burning mouth syndrome, it means that your mouth is normal apart from the burning feeling. Some people with burning mouth syndrome are worried that it may be a sign of something serious, such as cancer. But before your doctor diagnoses burning mouth syndrome, they will check that it's not cancer or any other disease.

We don't know for certain why burning mouth syndrome happens. It might be because the nerve endings in your mouth, which allow you to taste and feel, are more sensitive than usual. <sup>[2]</sup> <sup>[3]</sup> <sup>[4]</sup>

Your chances of getting burning mouth syndrome are higher if: <sup>[5]</sup>

- You're anxious or depressed
- You have been under a lot of stress
- You're a woman who has reached the menopause .

### What are the symptoms of burning mouth syndrome?

The main symptom is a hot, sore, or burning feeling in your mouth.

You may also find that: <sup>[6]</sup> <sup>[7]</sup>

- Your mouth feels too dry
- You get a tingling feeling in your mouth
- Things taste different from usual, or you have a nasty taste in your mouth.

The pain may get worse as the day wears on, and you might find it hard to fall asleep.

Your doctor will only diagnose burning mouth syndrome if you've had these symptoms for several months, and they happen most days. <sup>[8]</sup> To make sure there's not another reason for your symptoms, your doctor will examine your mouth and ask about your general health and state of mind.

You may also need some tests. <sup>[8]</sup>

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- You may have blood tests to rule out **anaemia** (when you don't have enough red blood cells) or vitamin deficiencies.
- You may have tests to see if you're **allergic** to something that could be causing the soreness. Your doctor will probably do these tests if you've had other allergic reactions. You may need to wear a patch inside your mouth for a few days.

You may be asked to have a check-up with your dentist and may be referred to a doctor who specialises in diseases of the mouth (a consultant in **orofacial medicine**).

### How common is burning mouth syndrome?

Burning mouth syndrome is common among older women.

As many as 33 in 100 women have symptoms of burning mouth syndrome at some point after the **menopause**.<sup>[9]</sup>

It's much less common in men and in younger women. One study found that 2 in 100 men and 6 in 100 younger women had the symptoms of burning mouth syndrome at one time or another.<sup>[10]</sup>

### What treatments work for burning mouth syndrome?

There's no definite cure for burning mouth syndrome. That's because we don't know exactly what causes it.

Your doctor may suggest different treatments, including having a talking treatment (psychotherapy), taking antidepressant drugs or using mouthwash.

You may feel better once you know that your mouth pain isn't a sign of a serious disease. If you can stop worrying about the pain, you might find that you stop noticing it so much. But if you do decide to go ahead with treatment, this is what we found.

- A kind of talking treatment called **cognitive behaviour therapy** is likely to help some people with burning mouth syndrome.
- A medicine called **clonazepam** may help, but it can have serious side effects and so is not often used.
- We don't know whether any of the other treatments work, because there hasn't been much research.

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

## Treatment Group 1

### Treatments for burning mouth syndrome

#### Treatments that are likely to work

- [Cognitive behaviour therapy](#)

#### Treatments that work, but whose harms may outweigh benefits

- [Clonazepam](#)

#### Treatments that need further study

- [Antidepressants](#)
- [Benzydamine mouthwash](#)
- [Hormone replacement therapy](#)
- [Capsaicin](#)

#### Treatments that are unlikely to work

- [Food supplements](#)

### What will happen to me?

It's hard to say whether your burning mouth syndrome will get better, stay the same, or get worse. That's because different studies have come up with different findings.

It's important to remember that although burning mouth syndrome is uncomfortable, it's not dangerous and it won't damage your mouth or your teeth. There are some treatments that may help your mouth feel less sore. But there hasn't been much research into these treatments. <sup>[11]</sup>

Most people have symptoms for at least six months before seeking help. Some people feel better once they know that it isn't a sign of a serious disease, so they decide not to have any treatment. Others decide to go ahead with one of the treatments, although there isn't a definite cure.

One study found that about 50 in 100 people who have burning mouth syndrome find it improves or goes away eventually, whether they have treatment or not. But this may take as long as seven years. <sup>[12]</sup> Another study found that about 33 in 100 people felt less pain within five years of having treatment. <sup>[13]</sup>

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Even if you have treatment, it may be several weeks or longer before you notice any improvement. In one study, some people found their symptoms were continuing to get better (or that they went away completely) as long as six months after finishing treatment. <sup>[14]</sup>

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### Treatments:

#### Cognitive behaviour therapy

In this section

Cognitive behaviour therapy (CBT) is the treatment that is most likely to help you if you have burning mouth syndrome. CBT is a form of talking treatment.

CBT may help reduce the pain you feel by helping you feel less anxious or depressed. Even if you aren't anxious or depressed, CBT can help you cope with the pain better.

You work with the therapist to make your thinking and behaviour more positive. You usually have one session a week, for six weeks to 12 weeks. Each session lasts about one hour.

Your doctor may refer you to a therapist, but there may be a waiting list for treatment.

We found one small good-quality study (a randomised controlled trial) of CBT in people with burning mouth syndrome. The people had 12 to 15 sessions of CBT over three months. Most of these people found the burning feeling became much less painful during or after the treatment. More than 1 in 4 people found that their pain disappeared, either during the treatment or afterwards. <sup>[15]</sup>

But the study only included 30 people and there were some problems with the quality of the research. This means we can't be sure that CBT will work for everyone with burning mouth syndrome. <sup>[15]</sup>

The study didn't say whether there were any side effects from CBT.

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#### Clonazepam

In this section

Clonazepam (brand name Rivotril) is usually used for treating epilepsy. You need a prescription from your doctor to take this medicine.

One small study looked at whether sucking clonazepam tablets might help people with burning mouth syndrome. <sup>[16]</sup> <sup>[17]</sup> It showed that people had less pain after using clonazepam three times a day for two weeks.

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Clonazepam has serious side effects, including drowsiness, tiredness, dizziness, poor concentration, and confusion. You may also get side effects if you suddenly stop taking it. <sup>[18]</sup>

Clonazepam isn't often used for treating burning mouth syndrome in the UK.

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### Antidepressants

In this section

Antidepressants are medicines that are usually used to treat depression. They're only available with a prescription from your doctor. If your doctor recommends that you try antidepressant tablets for burning mouth syndrome, it doesn't mean they think you are depressed. Besides helping with depression, antidepressants can also relieve some types of nerve pain.

There are several types of antidepressant. But we don't know if they work for burning mouth syndrome.

**Tricyclic and related antidepressants** are the first group of antidepressants that have been studied in people with burning mouth syndrome. Researchers looked at an antidepressant called trazodone (brand name Molipaxin). <sup>[19]</sup>

In the study we looked at, taking trazodone didn't work any better than taking a dummy treatment (a placebo) in people with burning mouth syndrome. But the study was small and there were problems with its quality. So the results are unreliable. <sup>[19]</sup>

Trazodone can cause side effects such as drowsiness and dizziness. <sup>[19]</sup>

**Selective serotonin reuptake inhibitors** (called SSRIs) are the second group of antidepressants that have been studied for burning mouth syndrome. SSRIs are a newer type of antidepressant. The SSRIs that have been tested are sertraline (Lustral), amisulpride (Solian) and paroxetine (Seroxat). <sup>[20]</sup>

The study we found showed that people taking an SSRI or amisulpride felt better after eight weeks of treatment. <sup>[21]</sup> But the study was small, so we can't be certain whether the results are reliable. Also, the drugs were only compared with each other and not with a placebo. So we don't know if the people taking the medicines would have felt better if they hadn't had treatment.

SSRIs can cause side effects, such as sweating, shaking, dry mouth, constipation, dizziness, and stomach upsets. <sup>[20]</sup>

Research has found that taking antidepressants of all kinds can make some people more likely to think about suicide or try to harm themselves. <sup>[22]</sup> Young people under 18 are especially at risk. Thoughts about self-harm are most likely to happen in the early stages of your treatment or if your dose is changed. <sup>[23]</sup> If you're taking an antidepressant and

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are worried about any thoughts or feelings you have, see your doctor or go to hospital straight away.<sup>[23]</sup>

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### Benzydamine mouthwash

In this section

Benzydamine is a painkiller that you can take in a mouthwash. The brand name for this mouthwash is Difflam Oral Rinse or Difflam Sore Throat Rinse. You can buy it from a pharmacy. We don't know whether using this mouthwash works for burning mouth syndrome. There haven't been any good-quality studies that have shown it works.<sup>[17]</sup>

You may find the mouthwash stings your mouth. If this happens, you can dilute it half and half with water.<sup>[18]</sup>

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### Food supplements

In this section

We've looked at the research on two food supplements for burning mouth syndrome.

**Alpha-lipoic acid** (sometimes called ALA) is a food supplement you can buy from health food shops and some pharmacies. There is a theory that it protects your nervous system, which is why it was tested for burning mouth syndrome.<sup>[24]</sup>

Two studies found that taking alpha-lipoic acid on its own or with a multivitamin worked no better than a dummy treatment (a placebo).<sup>[25] [26]</sup>

**Oryzanol** is a food supplement made from rice bran oil, which is used for burning mouth syndrome in China. We didn't find any good evidence that oryzanol works.

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### Hormone replacement therapy

In this section

Burning mouth syndrome is more common in women who are going through or are past the **menopause**. So doctors have looked at whether hormone replacement therapy (HRT) might help.

HRT means taking medicines to replace **hormones** that your body stops making during the menopause. You can take HRT in different forms: tablets, patches, gels, nasal sprays, or vaginal creams. You'll need a prescription from your doctor for this treatment.

There are different types of HRT. Most types contain the sex hormone **oestrogen**. Some contain oestrogen combined with another sex hormone, **progestogen** (these are known as combined HRT). The HRT medicine used in the study we found is a fairly new one, called tibolone (brand name Livial).

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Tibolone is similar to your natural sex hormones, but it's made in the laboratory. It's usually used to treat symptoms of the menopause such as hot flushes and vaginal dryness. It has fewer side effects than ordinary HRT. The most common side effect is spotting or bleeding from your vagina. <sup>[27]</sup>

One small study looked at how tibolone might help some women with burning mouth syndrome who have been through the menopause. But there were problems with the quality of this study, so the results aren't reliable. <sup>[28]</sup>

Tibolone can increase your risk of getting breast cancer but not as much as combined HRT. <sup>[29]</sup> Research also shows that women who had previously had breast cancer were 40 percent more likely to have breast cancer again if they were taking tibolone than if they were taking a dummy pill (a placebo). <sup>[30]</sup> If you have breast cancer, or have had breast cancer in the past, you should not be treated with tibolone. <sup>[31]</sup>

HRT with oestrogen, or oestrogen and progestogen, can also increase your chances of getting blood clots, getting heart disease, or having a stroke. The increase in risk is small, but it does go up the longer you take HRT. There isn't much evidence about whether tibolone increases your risks of getting these conditions. We need more long-term studies of this treatment before we can say for certain.

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## Capsaicin

In this section

Capsaicin is the chemical that makes chillies hot. Gels containing capsaicin can be used to treat joint pain, muscle aches, and some types of nerve pain. By irritating your skin slightly, capsaicin produces a warming sensation that can be soothing. <sup>[32]</sup>

Gels and creams containing capsaicin aren't suitable for use inside your mouth. However, some doctors have suggested mixing one teaspoon of a hot sauce that contains capsaicin (such as Tabasco) with two teaspoons of water. <sup>[33]</sup> You swish the mixture round your mouth and spit it out. You can try a stronger mix if you like, but don't make it more concentrated than one teaspoon of sauce to one teaspoon of water.

There hasn't been much research into the use of capsaicin for burning mouth syndrome. Some people who try this treatment say they don't like the taste. <sup>[33]</sup>

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## Further informations:

### Glossary:

#### infection

You get an infection when bacteria, a fungus, or a virus get into a part of your body where it shouldn't be. For example, an infection in your nose and airways causes the common cold. An infection in your skin can cause rashes such as athlete's foot. The organisms that cause infections are so tiny that you can't see them without a microscope.

#### allergy



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If you have an allergy to something (such as pollen or a medicine), your body always overreacts to it. The reaction happens because your immune system (your body's system for fighting infection) is too sensitive to it.

## **depression**

Depression is a mental illness in which your mood is low and you feel sad most of the time. It can range from a mild illness through to a severe one in which you lose interest in life and may be suicidal.

## **menopause**

When a woman stops having periods, it is called the menopause. This usually happens around the age of 50.

## **anaemia**

Anaemia is when you have too few red blood cells. Anaemia can make you get tired and breathless easily. It can also make you look pale. Anaemia can be caused by a number of different things, including problems with your diet, blood loss and some diseases.

## **randomised controlled trials**

Randomised controlled trials are medical studies designed to test whether a treatment works. Patients are split into groups. One group is given the treatment being tested (for example, an antidepressant drug) while another group (called the comparison or control group) is given an alternative treatment. This could be a different type of drug or a dummy treatment (a placebo). Researchers then compare the effects of the different treatments.

## **Epilepsy**

Epilepsy is a condition that affects your brain. If you have epilepsy, the normal electrical activity in your brain gets disturbed from time to time. This leads to seizures (also called fits).

## **placebo**

A placebo is a 'pretend' or dummy treatment that contains no active substances. A placebo is often given to half the people taking part in medical research trials, for comparison with the 'real' treatment. It is made to look and taste identical to the drug treatment being tested, so that people in the studies do not know if they are getting the placebo or the 'real' treatment. Researchers often talk about the 'placebo effect'. This is where patients feel better after having a placebo treatment because they expect to feel better. Tests may indicate that they actually are better. In the same way, people can also get side effects after having a placebo treatment. Drug treatments can also have a 'placebo effect'. This is why, to get a true picture of how well a drug works, it is important to compare it against a placebo treatment.

## **constipated**

When you're constipated, you have difficulty passing stools (faeces). Your bowel movements may be dry and hard. You may have fewer bowel movements than usual, and it may be a strain when you try to go.

## **hormones**

Hormones are chemicals that are made in certain parts of the body. They travel through the bloodstream and have an effect on other parts of the body. For example, the female sex hormone oestrogen is made in a woman's ovaries. Oestrogen has many different effects on a woman's body. It makes the breasts grow at puberty and helps control periods. It is also needed to get pregnant.

## **heart disease**

You get heart disease when your heart isn't able to pump blood as well as it should. This can happen for a variety of reasons.

## **stroke**

You have a stroke when the blood supply to a part of your brain is cut off. This damages your brain and can cause symptoms like weakness or numbness on one side of your body. You may also find it hard to speak if you've had a stroke.

## **Sources for the information on this leaflet:**

1. Zakrzewska JM. The burning mouth syndrome remains an enigma. *Pain*. 1995; 62: 253-257.
2. Svensson P, Bjerring P, Arendt-Nielsen L, et al. Sensory and pain thresholds to orofacial argon laser stimulation in patients with chronic burning mouth syndrome. *Clinical Journal of Pain*. 1993; 9: 207-215.
3. Jaaskelainen SK, Forssell H, Tenovuo O. Abnormalities of the blink reflex in burning mouth syndrome. *Pain*. 1997; 73: 455-460.
4. Forssell H, Jaaskelainen S, Tenovuo O, et al. Sensory dysfunction in burning mouth syndrome. *Pain*. 2002; 99: 41-47.
5. Bergdahl M, Bergdahl J. Burning mouth syndrome: prevalence and associated factors. *Journal of Oral and Pathological Medicine*. 1999; 28: 350-354.
6. Bergdahl M, Bergdahl J. Burning mouth syndrome: prevalence and associated factors. *Journal of Oral and Pathological Medicine*. 1999; 28: 350-354.
7. Grushka M, Epstein JB, Gorsky M. Burning mouth syndrome. *American Family Physician*. 2002; 65: 615-620.

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8. Zakrzewska JM. The burning mouth syndrome remains an enigma. *Pain*. 1995; 62: 253-257.
9. Zakrzewska JM. The burning mouth syndrome remains an enigma. *Pain*. 1995; 62: 253-257.
10. Bergdahl M, Bergdahl J. Burning mouth syndrome: prevalence and associated factors. *Journal of Oral and Pathological Medicine*. 1999; 28: 350-354.
11. Zakrzewska JM, Forsell H, Glenny AM. Interventions for the treatment of burning mouth syndrome (Cochrane review). In: *The Cochrane Library*. Wiley, Chichester, UK.
12. Grushka M, Sessle BJ. Burning mouth syndrome. *Dental Clinics of North America*. 1991; 35: 171-184.
13. Sardella A, Lodi G, Dermarosi F, et al. Burning mouth syndrome: a retrospective study investigating spontaneous remission and response to treatments. *Oral Disease*. 2006; 12: 152-155.
14. Bergdahl J, Anneroth G, Perris H. Cognitive therapy in the treatment of patients with resistant burning mouth syndrome: a controlled study. *Journal of Oral Pathology and Medicine*. 1995; 24: 213-215.
15. Bergdahl J, Anneroth G, Perris H. Cognitive therapy in the treatment of patients with resistant burning mouth syndrome: a controlled study. *Journal of Oral Pathology and Medicine*. 1995; 24: 213-215.
16. Gremeau-Richard C, Woda A, Navez ML, et al. Topical clonazepam in stomatodynia: a randomised placebo-controlled study. *Pain*. 2004; 108: 51-57.
17. Zakrzewska JM, Forsell H, Glenny AM. Interventions for the treatment of burning mouth syndrome (Cochrane review). In: *The Cochrane Library*. Wiley, Chichester, UK.
18. British National Formulary. Drugs used in status epilepticus. Section 4.8.2. British Medical Association and Royal Pharmaceutical Society of Great Britain. Also available at <http://bnf.org> (accessed on 6 November 2014).
19. Tammiala-Salonen T, Forsell H. Trazodone in burning mouth pain: a placebo controlled double-blind study. *Journal of Orofacial Pain*. 1999; 13: 83-88.
20. Maina G, Vitalucci A, Gandolfo S, et al. Comparative efficacy of SSRIs and amisulpride in burning mouth syndrome: a single-blind study. *Journal of Clinical Psychiatry*. 2002; 63: 38-43.
21. Maina G, Vitalucci A, Gandolfo S, et al. Comparative efficacy of SSRIs and amisulpride in burning mouth syndrome: a single-blind study. *Journal of Clinical Psychiatry*. 2002; 63: 38-43.
22. U.S. Food and Drug Administration. Antidepressant use in children, adolescents and adults. December 2010. Available at <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm096273.htm> (accessed on 6 November 2014).
23. Medicines and Healthcare products Regulatory Agency (MHRA). Implementation of warnings on suicidal thoughts and behaviour in antidepressants. February 2008. Available at <http://www.mhra.gov.uk/NewsCentre/CON2033960> (accessed on 6 November 2014).
24. Femiano F. Burning mouth syndrome (BMS): an open trial of comparative efficacy of alpha-lipoic acid (thioctic acid) with other therapies. *Minerva Stomatology*. 2002; 51: 405-409.
25. Cavalcanti DR, da Silveira FR. Alpha lipoic acid in burning mouth syndrome--a randomized double-blind placebo-controlled trial. *Journal of Oral Pathology & Medicine*. 2009; 38: 254-261.
26. Carbone M, Pentenero M, Carrozzo M, et al. Lack of efficacy of alpha-lipoic acid in burning mouth syndrome: a double-blind, randomized, placebo-controlled study. *European Journal of Pain*. 2009; 13: 492-496.
27. Morris EP, Wilson PO, Robinson J, et al. Long term effects of tibolone on the genital tract in postmenopausal women. *British Journal of Obstetrics and Gynaecology*. 1999; 106: 954-959.
28. Peng JY, Wu YF, Han WN, et al. Clinical efficacy of burning mouth syndrome treated by Livial. *Hunan Yi Ke Da Xue Xue Bao*. 2001; 26: 157-158 [in Chinese].

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29. Beral V. Breast cancer and hormone-replacement therapy in the Million Women Study. *Lancet*. 2003; 362: 419-427.
30. Kenemans P, Kubista E, Foidart JM, et al. Safety of tibolone in the treatment of vasomotor symptoms in breast cancer patients - design and baseline data 'LIBERATE' trial. *Breast*. 2007; 16: S182-S189.
31. Medicines and Healthcare products Regulatory Agency (MHRA). Tibolone (Livial): increased risk of breast cancer recurrence. *Drug Safety Update*. 2009; 2: 2.
32. British National Formulary. Rubefacients, topical NSAIDs, capsaicin, and poultices. Section 10.3.2. British Medical Association and Royal Pharmaceutical Society of Great Britain. Also available at <http://bnf.org> (accessed on 6 November 2014).
33. Grushka M, Epstein JB, Gorsky M. Burning mouth syndrome. *American Family Physician*. 2002; 65: 615-620.

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