WHAT ARE CANKER SORES?
Canker sores are painful shallow ulcers in the mouth. Unlike cold sores, they are not contagious. Canker sores are typically:
- Covered by a whitish grey membrane and surrounded by a halo of very red tissue.
- Found on the inside of the mouth, including the tongue, inner cheeks, inner lips, soft palate (the back portion of the roof of the mouth), and gums. Unlike cold sores, canker sores do not occur on the outer lips.

WHAT ARE THE SYMPTOMS?
Symptoms may vary from mild to severe.
- Painful ulcers may sometimes affect eating, drinking, and or talking.
- A tingling or burning sensation may occur a day or two before the sores appear.
- Flu-like symptoms like fever, listlessness, and swollen lymph nodes may occur.

Canker sores may be classified as minor, major, or herpetiform:
- **Minor canker sores** are the most common. They are usually oval & small. Most people have no more than 3-4 episodes a year. These sores heal on their own within 1-2 weeks.
- **Major canker sores** are larger and deeper with irregular edges. They may occur on a monthly basis and take up to 6 weeks to heal. Sometimes new sores will develop as old ones are healing. Scarring may be extensive. Fortunately, this type of canker sore is much less common.
- **Herpetiform canker sores** occur in clusters of 10 to 100 pinpoint sores, which may merge to form larger ulcers. They usually heal without scarring in 1-2 weeks.

WHO GETS CANKER SORES?
Anyone can develop canker sores. Minor canker sores affect about 20% of Americans at some point in their lives. The first occurrence is usually between the ages of 10 and 20. The frequency of disease decreases with age.

Risk factors include being female and having a family history of canker sores. Having a family history may be due to heredity or to shared environmental factors, like certain foods or allergens.

WHAT CAUSES CANKER SORES?
The exact cause of canker sores is unknown. It is likely that a combination of several factors contributes to outbreaks. These may include:
- Minor trauma to the mouth (from dental work, braces, vigorous brushing, sports injuries, etc.)
- Food sensitivities (eg. chocolate, caffeine, strawberries, eggs, nuts, cheese, cinnamon, other spices, & acidic foods, like pineapple and citrus)
- Toothpastes and mouth rinses containing sodium lauryl sulfate
- Chewing gum, tobacco products
- Emotional stress
- Hormonal shifts during menstruation
- An allergic response to certain bacteria in the mouth
- Heartburn or reflux

A specific cause may be identified in 20% of cases of major canker sores. These include:
- Vitamin deficiencies (eg. B12, zinc, folate, iron)
- Diseases of the intestinal tract (eg. inflammatory bowel disease, celiac disease)
- Immunosuppression (eg. HIV/AIDS, certain medications)
- Autoimmune diseases that attack healthy cells in the mouth
HOW ARE CANKER SORES DIAGNOSED?
No specific testing is needed for diagnosis. A visual exam is usually sufficient. However, further testing to identify other problems may be considered if ulcers are severe or persistent.

WHAT IS THE TREATMENT?
No specific treatment is needed for minor canker sores, which usually heal on their own without scarring in 1-2 weeks.

FOR MILD SYMPTOMS:
■ Treat your mouth gently.
  • Avoid acidic, spicy, or irritating foods.
  • Use a mild toothpaste, like Biotene, Sensodyne ProNamel, Rembrandt Canker Sore, or Tom’s of Maine.
■ Rinse your mouth 3-4 times a day with:
  • Salt water (1/2 teaspoon of salt in 8 ounces of water). Use plain water if you cannot tolerate the salt water; or
  • A baking soda mixture (1 teaspoon of soda in 1/2 cup of warm water); or
  • A mixture of 1 part hydrogen peroxide to 1 part water; or
  • A mixture of 1 part (eg. 1 teaspoon) liquid diphenhydramine (Benadryl) to 1 part Maalox or Milk of Magnesia.
  • Be sure to spit out the mixtures after rinsing.
■ Dab a small amount of baking soda paste, milk of magnesia, or diluted hydrogen peroxide on the canker sore a few times a day with a q-tip. Avoid eating or drinking for 30 minutes after.
  • To make the paste, mix baking soda with a small amount of water.
  • To dilute hydrogen peroxide, mix it with equal parts water.
■ Apply ice by allowing ice chips to dissolve over the sores.
■ Try over-the-counter products.
  • Topical agents containing benzocaine, such as Anbesol, Orabase, Orajel, and Zilactin-B, can help numb lesions and also provide a protective coating. Do not eat or drink for 30 minutes after using these products to avoid washing them away.
  • Acetaminophen (Tylenol) or ibuprofen (Advil or Motrin) can be used to decrease pain. Take ibuprofen with food to avoid an upset stomach.

FOR SEVERE SYMPTOMS:
■ A prescription ointment or mouthwash containing a steroid or a numbing medication can reduce symptoms. Early treatment may result in more rapid healing.
■ Steroid medications taken by mouth may be considered for lesions not responding to other forms of treatment.
■ A referral to an oral medicine specialist may be necessary for further evaluation and treatment of severe or resistant ulcers.

WHEN SHOULD I SEEK MEDICAL CARE?
• Frequent outbreaks (>3 times/month or >8 times/year).
• Ulcers that take more than 10-14 days to heal.
• Spreading or unusually large sores.
• High fever with the development of sores.
• Sores that are accompanied by arthritis or diarrhea.
• Pain that is not controlled with the self-treatment measures described above.

HOW CAN I PREVENT CANKER SORES?
• Maintain good dental hygiene. Brush your teeth at least twice a day and floss regularly (and gently!). Visit your dentist on a routine basis and if problems arise.
• Avoid toothpaste that contains sodium lauryl sulfate.
• Avoid foods that may trigger symptoms. Keep a food diary to help identify problem foods.
• Maintain a healthy immune system. Eat regularly, get plenty of sleep, and decrease stress.