

Dry mouth (Xerostomia)

Saliva is produced by our salivary glands, and helps us with chewing, tasting, swallowing and talking. In addition, saliva starts the digestion process by breaking down food in the mouth, and prevents mouth infections by cleaning the teeth and gums. When there is a reduced amount of saliva in the mouth (a condition known as **dry mouth** or **xerostomia**), these actions become difficult to achieve. If severe, dry mouth may even affect a person's nutritional status.



Causes of Dry mouth

The severity of dry mouth can range from mild to severe, and possible causes include:

- **Radiation therapy to the head, neck or mouth area.** This can damage the salivary glands and affect the amount or flow of saliva produced during the first 2-3 weeks of radiation therapy. You may see improvements in your dry mouth during the first year after treatment, but some people continue to experience a certain extent of dry mouth in the long term, especially if the treatment was directed at the salivary glands.
- **Chemotherapy.** This is usually temporary and will improve in about 2-8 weeks after the treatment ends.
- **Surgery that removes the salivary glands.** Examples include surgery for salivary gland or mouth cancer. These cause permanent dry mouth.
- **Medications.** Certain medicines such as those for allergies (antihistamines), mood (antidepressants), increasing urination (diuretics) and pain (opioids) can cause dry mouth.
- **Mouth infection**
- **Dehydration**
- **Graft versus host disease of the mouth.** This may occur after a stem cell transplant, when the transplanted cells from the donor attack the salivary glands and soft tissues in your mouth.
- **Smoking and drinking alcohol can worsen dry mouth.**

What you need to look out for

Depending on the cause and other associated conditions, signs and symptoms can include:

- Dryness, sticky or burning feeling in the mouth and/or throat
- Dryness and cracking over lips or corners of the mouth
- Dry, cracked, red or painful tongue
- Thick saliva that may stick to your lips when you open your mouth
- Difficulty in chewing, tasting, swallowing and/or talking
- Bad breath
- Increased thirst
- Mouth sores or infections
- More frequent tooth decay
- Gum irritation and gum disease
- Difficulty wearing dentures

How it can be treated

Dry mouth can be managed based on its cause. For instance, treatment of a mouth infection will improve dry mouth that is caused by the infection. Your doctor or nurse may recommend moisturizing mouth products that you can use, for instance artificial saliva rinses, sprays or gels. Discuss with your doctor or nurse if it is advisable for you to visit the dentist, particularly if you are undergoing anticancer treatment. Dental procedures should be done preferably 2-3 weeks prior to starting anticancer treatments.

What you can do

Below are some tips you may find helpful, in managing dry mouth:

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<p><i>Maintaining oral hygiene</i></p> <ul style="list-style-type: none">• Rinse your mouth with water (or salt water mouth rinse with ½ teaspoon of salt to a cup of water) before and after meals• Clean your mouth and teeth after each meal and before bedtime. Use a soft-bristle toothbrush to clean the teeth and tongue gently	<ul style="list-style-type: none">• Avoid mouth rinses that contain alcohol – these can worsen dry mouth

- Floss gently with unwaxed dental floss once a day
- Apply mouth moisturizer as advised by your doctor or nurse
- Apply a water-based lip moisturizer or lip balm regularly to soothe cracked lips and keep them moist

Maintaining good hydration and nutrition

- Drink plenty of liquids (8-12 glasses of fluids a day), unless otherwise advised by your doctor. Carrying a water bottle makes it more convenient for you to sip water frequently throughout the day
- Suck on ice chips, sugar-free sweets or popsicles to stimulate the salivary glands to produce more saliva
- Take small sips of fluids in between bites of food – this moistens your mouth and makes it easier to chew and swallow foods
- Select moist foods or use milk, soup, gravy or sauces to moisten solid foods before eating - this also makes chewing and swallowing easier
- Take small bites and chew your food thoroughly when eating
- Try liquid nutritional supplements if you are having trouble taking solid foods. Speak with your dietician, doctor or nurse for more information regarding this

- Avoid sugary foods or drinks as they can contribute to tooth decay
- Avoid drinks containing caffeine as caffeine can worsen dry mouth
- Avoid dry, coarse or hard foods like biscuits or crackers
- Avoid alcohol and smoking as these worsen dry mouth
- Avoid hot, spicy or acidic foods as they may burn your tongue

Environment

- Use a room mist humidifier especially when you sleep at night. This helps relieve dryness

When to call your cancer care team

Please inform your doctor or nurse as soon as you notice any of the following, which can indicate complications from dry mouth:

- Unable to take medications or swallow pills
- Unable to eat or drink
- Painful mouth ulcers
- Difficulty breathing

If you have any questions regarding the above, please call Cancer Helpline at **+65 6225 5655** or approach your doctor or nurse for further details.

The above contents are made available as part of TEMASEK FOUNDATION-ACCESS (Accessible Cancer Care to Enable Support for Survivors) PROGRAMME, a holistic care programme to support cancer patients during their care and recovery journey.

The contents have been approved by the Cancer Education Information Service, National Cancer Centre Singapore (NCCS), for people with cancer and their families and caregivers. However, this information serves only as a guide and should not be used as a substitute for medical diagnosis, treatment or advice. For specific medical conditions, please seek expert medical advice from your healthcare team.

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