

# Caring for Your Mouth during and after Radiation Therapy

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During and after radiation therapy to the head and neck area, patients often experience changes in oral health including:

- Reduction in the amount of saliva (hyposalivation).
- A sensation of oral dryness (xerostomia or dry mouth).
- Taste changes.
- Tissue trauma (ie ulcerations).
- Oral discomfort.
- Increased risk of infection.
- Increased risk of healing complications, especially following invasive dental procedures.

Some symptoms may improve with time, however, some oral changes may be permanent. Due to increased risk for oral health complications, establishing routine care with a dentist and having your mouth examined every 3 months will be important and is highly recommended. This will allow for identification of any problems as early as possible which may make the problems easier to treat and less severe for you.

The following guide will help you to manage common oral complications that may occur during and after radiation therapy.

## **What is radiation-induced hyposalivation (reduced salivary flow) and xerostomia (dry mouth)? What may I experience when my mouth is dry?**

Radiation may lead to loss of functional salivary gland tissue, resulting in decreased saliva and changes in salivary consistency. Hyposalivation and xerostomia may contribute to problems such as:

- Alteration or reduction in taste.

- Difficulty with chewing, swallowing, and/or speaking.
- Inability to tolerate medications or oral hygiene products.
- Increased risks for infections.
- Increased acidity of the oral environment.
- Decreased resistance to dental decay.
- Damage from attrition, abrasion, or erosion.
- Increase soft tissue trauma.
- Oral discomfort.
- Difficulty with denture retention and/or comfort.

Some patients feel that they have “more” saliva when quantities are lower due to thicker consistency. Stimulating salivary flow with the methods below may help to thin out thick saliva, even if it feels contrary to intuition. Rinsing with a mild saltwater rinse may also help thin out sticky saliva.

**Over-the-Counter (OTC) options for managing dry mouth:**

Several over-the-counter dry mouth products are available at most grocery stores and pharmacies. Some products are only available online. Product types include lozenges, mints, rinses, sprays, and gels. Patients have also reported benefit from spraying their mouth or rinsing and spitting with edible oils (ie grapeseed, olive, or coconut), especially prior to eating or sleeping for assistance with eating or oral discomfort overnight. As you are choosing an OTC option, please keep in mind that over-consumption of sugar alcohols or oils may lead to an upset stomach, loose stools and/or weight changes.

**Diet modifications:**

Due to oral dryness and increased risks for dental decay, it is important to:

- Use fluoridated water.
- Avoid acidic and sugar-containing beverages, including “diet/sugar-free” options.
- Avoid frequent sipping of any non-water beverage.
- Choose foods that are lower in sugar and are not sticky.

- Consume natural fruits and vegetables.

Additionally, try to stick to regular meals and avoid frequent snacking. Keep in mind that eating or drinking anything other than water increases the acidity in the mouth which may contribute to increased decay/cavity development and erosion of teeth.

**Oral hygiene modifications:**

**Use of prescription-strength fluoride:** The fluoride concentration of over-the-counter toothpastes may not be enough to prevent dental decay during or after radiation. Your dentist may recommend using a prescription-strength fluoride toothpaste, gels, and/or varnish in addition to over-the-counter products.

**Guidelines for choosing over the counter fluoride-containing products:**

- Choose a neutral sodium fluoride gel because stannous fluoride is acidic.
- Choose a toothpaste without strong flavors. Teeth and/or gums may be sensitive to flavoring agents.
- Check ingredients for the presence of Sodium Laurel Sulfate (SLS). Teeth and/or gums may be sensitive to SLS which may cause sloughing of the tissue.

If your teeth or gums are sensitive, you may prefer toothpaste made for tooth sensitivity, “dry mouth” or non-mint flavored children’s toothpaste w/ fluoride.

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