BC Cancer Agency
CARE & RESEARCH
An agency of the Provincial Health Services Authority

*N*utritional Guidelines For Symptom Management

XEROSTOMIA

DEFINITION: Dryness of the mouth due to lack of normal salivary secretion. Xerostomia can result in dysphagia, taste changes and dental caries. A dry mucosa is more susceptible to pain, infections and irritation.

POSSIBLE CAUSES

Tumor:
Salivary gland tumors may cause some degree of xerostomia if the tumor interferes with the flow of saliva.

Radiation:
Salivary glands within the field of radiation (including total body irradiation) can be permanently destroyed during therapy. Saliva can be reduced in amount and altered in consistency. Reduction is dependent upon the total dose of radiation and degree of salivary gland involvement in the field of radiation. Flow may be reduced 50% by the end of the first week, and further reduction in volume (up to 100%) may occur. The saliva produced is more mucinous, acidic, and may circulate less easily throughout the mouth. Xerostomia is permanent, although some patients may perceive an improvement in salivary output over time (see Oral Management of the Cancer Patient - A guide for the health care professional, UMKC - School of Dentistry, 1992, p. 10.).

Medications:
Analgesics, anti-nausea, anti-histamines and anti-anxiety medications can cause xerostomia temporarily. Patients may complain of decreased or viscous saliva. This may be a result of a lowered pH and other alterations of the saliva. The duration of xerostomia is associated with the length of therapy, other medications and the health of the patient. (Oral Management of the Cancer Patient - A guide for health care professionals, UMKC - School of Dentistry, 1992, p. 5).

Surgery:
Surgical removal of the major salivary glands (parotid and submandular glands) may also result in xerostomia.

Dehydration:
Mucosal secretions will thicken with dehydration.

NUTRITIONAL GOALS

1. Maintain adequate nutritional status.

2. Minimize discomfort associated with eating.

3. Minimize the effect of diet on dental caries.

STRATEGIES OR NUTRITIONAL MANAGEMENT

- Assess hydration status. If oral intake is inadequate encourage (non-caffeinated) cold fluids to help relieve mouth dryness.
- Increased liquid consumption may provide symptomatic relief but liquids have no lubricating properties, therefore sauces, gravies, salad dressings and other high fat liquids should be encouraged for their lubricating effects and high calorie content.
- Recommend sips of fluid with each mouthful of food to aid in chewing and swallowing.
- In general, dietary texture and consistency changes (soft, moist, bland, not too salty) help minimize the discomfort associated with xerostomia.
- Foods not well tolerated include: plain, roasted or baked meats, poultry etc.; bread; crackers; bananas; dry cake; alcohol; extremely hot (temperature) foods.
- If xerostomia is only a temporary condition, mint or tart sugar-free gum/candy may help stimulate saliva. Citric acid containing beverages (preferably sugar-free) such as lemonade, orange flavored soft drinks, frozen juice bars and sherbets may also help increase secretions.
- Foods or drinks containing sugar should be taken *with* meals and teeth should be cleaned afterwards.
- Discourage the intake of sweet, sticky, cariogenic foods such as dried fruits, candies, chocolates, honey, jams, jelly and sugar coated nuts.
- Xylitol (artificial sweetener), dairy products (especially cheddar cheese) and peanuts have been shown to have a protective effect on tooth decay. If patient is unable to clean teeth after eating a potentially cariogenic food consumption of one of the above products afterwards may provide some protection.
- Encourage patient to use fluoride gel applications daily and to clean teeth and mouth after every meal and snack.
- Suggest methods of moistening mouth throughout the day:
    - rinse mouth with water or baking soda rinses often (1 cup water : 1/4 tsp baking soda)
    - suck on ice chips or sugar-free popsicles
    - avoid alcohol based mouthwashes
    - carry a water spray or mouth wetting agent with them
    - swab mouth with a tasteless cooking oil or water soluble lubricant
    - use a humidifier at home, especially at night to help moisten the air

- keep lips moist with water based gels such as K-Y Jelly®, Surgi-Lube®, Oral Balance®, or Mouth Moisturizer®. Lanolin-based or cocoa butter based lip
- moisturizers may also be used if patient is not prone to mouth sores.

NUTRITION EDUCATION MATERIALS

- **Coping with Dry Mouth (BCCA)**

Good handout for patients who are finding it hard to manage mouth dryness. General advice, mouth rinse recipes, eating tips and food ideas included. Food ideas listed are moist, "lubricating" and low in sugar. Food ideas may need to be modified for a patient who requires high calorie, high protein or for a patient who also has mucositis.

- **Easy to Chew, Easy to Swallow Ideas (BCCA)**

No specific advice given in this handout re: dry mouth, however food ideas are soft, moist, bland, high calorie and high protein.

- **Easy to Chew, Easy to Swallow Recipes (BCCA)**

No specific advice given in this handout re: dry mouth, however food ideas are soft, moist, bland, high calorie and high protein.

- **Non-Chew Cookbook, by Randy Wilson (BCCA -VCC Library and 2nd floor office)**

Recipes in this book are soft, moist and low in sugar.

MEDICATIONS OFTEN PRESCRIBED

Mouthwetting Agents:
- Xerolube®
- Moi-Stir®
- Salivart®
- Mouth-Kote®
- Oral Balance® (probably the most popular/helpful)
- Biotene products (toothpaste, mouthwash, chewing gum)
- Thayers® Dry Mouth Spray

Saliva Stimulants:
- Sialor

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