



Serving North Florida Since 1979. Licensed as a not-for-profit hospice since 1980.

# Nutrition Nuggets

Provided by Verna Groger, Registered Dietitian, Haven Hospice

## Dry and Sore Mouth

These are two conditions that are very prevalent at end of life and in those undergoing chemotherapy. A sore mouth and throat and a lack of saliva can make many foods difficult to chew and swallow. Care must be taken to ensure the patient is getting an adequate diet.

### Causes and Incidence

Approximately three pints of saliva are produced every 24 hours in normal, healthy adults, but 30 to 40 percent of people aged 60 to 80 experience some degree of reduction in the flow of saliva. This is more prevalent in women and is associated with many medications as well as Alzheimer's, depression and anxiety disorders, stroke, and diabetes.

Many drugs, such as those used for nausea, can cause dry mouth. A sore or ulcerated mouth or throat is a frequent side effect of chemotherapy as the mucosal lining is one of the most sensitive areas of the body. During or after chemotherapy, a cancer patient may experience problems with insufficient saliva or inflammation of the mucosa, called mucositis. Treatment with corticosteroids is often helpful for reducing the inflammation and pain.

### Oral Care

When saliva is reduced, foods can taste different. Also, the natural flow of oral fluids is part of the body's way of keeping the mouth and teeth cleaner. When saliva is diminished, tooth decay and gum disease can become a problem if extra attention is not given to oral hygiene. Those that have their own teeth should avoid sugary food and drink to minimize dental problems.

### Inside this issue

Causes and incidence	1
Oral Care	1, 2
Comfort and promoting adequate intake	2-4
For further information	4



### Special Points of Interest:

- Many factors affect saliva production.
- Dry and sore mouth impact food and drink intake.
- Oral hygiene is critical for those suffering from dry and sore mouth.
- Different foods can either enhance or diminish the effects of dry and sore mouth

## Oral Care

There are 3 primary issues in mouth care for those who still have teeth:

- Rinse the mouth before and after meals with plain water or a mild rinse made up of 1-quart water mixed with ½ to 1 teaspoon salt, and 1 teaspoon baking soda.
- Use a soft toothbrush to clean the teeth and gently brush the tongue after every meal and snack.
- Floss regularly.

The above rinse is also effective for preventing infections and improving healing of a sore mouth and throat. Rinse after every meal and frequently during the day if drinking juices and other caloric beverages to remove residues that breed oral bacteria.

Avoid commercial mouthwashes in the case of dry mouth as these often contain alcohol and can have a dehydrating effect. Dentures should also be cleaned after meals. It's very important to keep the mouth hygienic to promote healing and prevent infection when ulcerations are present.

## Increasing Comfort and Promoting Adequate Intake

Most of the nutritional strategies for dealing with dry and sore mouth are very similar with one exception. Tart foods, such as citrus or vinegar are helpful for promoting the flow of saliva (as well as prompting the swallowing reflex), but acidic foods are very irritating to inflamed tissues so should be avoided when sores are present.

When dry mouth is present, it's important to pay extra attention to getting enough fluids. Drink 8 to 12 cups of water a day. Carry a water bottle around and sip from it all day long. This helps to loosen mucus that can become thick when saliva is reduced.



Good oral care is critical to prevent decay.

*“Approximately 3 pints of saliva are produced every 24 hours in healthy individuals.”*



Don't forget to drink plenty o water!

## *Increasing Comfort and Promoting Adequate Intake*

The use of lip salve as well as sucking on ice chips can aid in decreasing the sensation of dryness. Sugar-free gum or sugarless hard candy can help stimulate the flow of saliva.

Caffeinated drinks such as colas, coffee, and tea should be avoided as caffeine has a dehydrating effect and can promote further irritation. The same goes for tobacco and alcohol.

Foods that are soft and moist and that are lukewarm to cold are easiest to chew and swallow. Cook food until it's very tender. Cream soups, mashed potatoes, cooked cereals, casseroles, applesauce, bananas, and smoothies are easy to eat. Cook meat with moist heat and serve foods with broth, soup, sauces, gravy, or butter to moisten.

Cold foods can be soothing to inflamed tissues. Good things to try include cottage cheese, pudding, watermelon, Jell-O, canned fruit, yogurt, Popsicles, and ice cream. Try freezing fruits such as seedless grapes, banana pieces, melon balls, peach slices, or mandarin orange slices (less acidic than fresh citrus).

Tart, acidic or salty foods and drinks can be very irritating to a sore mouth or throat. Avoid citrus, pickles, tomatoes, and salted snack items. Best tolerated fruit beverages include peach, pear, and apricot nectars as well as grape and apple juice. 100% pure, papaya juice can stimulate salivary flow and aid in breaking up thickened mucus.

A cool mist humidifier will help moisten the air and is especially helpful to prevent mucosal drying overnight. Care must be taken in keeping it clean to avoid spreading mold or bacteria in the air.



Try hard candy to decrease the effects of dry mouth.

*“Decreased saliva from dry mouth can promote gum recession and decay.”*



Soft, cold foods are a great pick for those suffering from sore mouth.

## Increasing Comfort and Promoting Adequate Intake

Here are a few more ideas for coping with a sore or dry mouth:

- Don't try to eat quickly, take small bites, and chew thoroughly.
- Avoid dry and hard or rough textured foods such as toast, hard fruits and vegetables, popcorn, and crackers. Muffins or cake must be moistened.
- Avoid irritating spices and condiments such as chili powder, cloves, curry, hot sauces, nutmeg, horseradish, and pepper.
- Drinking liquids through a straw bypasses mouth areas with sores and tender areas.
- Gargling with ginger ale can help clear mucus that is stuck in the throat.

Attention to proper nutrition and oral hygiene can do much to promote health and healing for those with dry and/or sore mouth. The physician can also prescribe medications that can numb and soothe a sore mouth and throat.

### For Further Information:

- Nutrition: Helpful Facts. Nutrition During Cancer Treatment: Sore or Irritated Mouth or Throat. (2005). University of Pennsylvania [On-line]. Available: <http://www.penncancer.org/pdf/education/During%20Treatment.pdf>
- Nutrition: Helpful Facts. Nutrition During Cancer Treatment: Dry Mouth or Thick Saliva. (2005). University of Pennsylvania [On-line]. Available: <http://www.penncancer.org/pdf/education/During%20Treatment.pdf>
- Rosenbaum, E., et. al. (October 31, 2007). Mucositis – Chemotherapy problems and solutions. Sore Mouth and Throat (Mucositis). Cancer Supportive Care Programs. [On-line]. Available: <http://www.cancersupportivecare.com/drug.php>
- Rosenbaum, E., et. al. (October 31, 2007). Mucositis – Chemotherapy problems and solutions. Oral Hygiene. Cancer Supportive Care Programs. [On-line]. Available: <http://www.cancersupportivecare.com/drug.php>
- Rosenbaum, E., et. al. (October 31, 2007). Mucositis – Chemotherapy problems and solutions. What You Can Do If You Have Mucositis. Cancer Supportive Care Programs. [On-line]. Available: <http://www.cancersupportivecare.com/drug.php>
- Treatments: Dry Mouth (June 2000). CancerStory.com. [On-line] Available: [http://www.cancerstory.com/servlets/hp\\_treatment\\_nutrition.jsp](http://www.cancerstory.com/servlets/hp_treatment_nutrition.jsp)
- Treatments: Sore Mouth (June 2000). CancerStory.com. [On-line] Available: [http://www.cancerstory.com/servlets/hp\\_treatment\\_nutrition.jsp](http://www.cancerstory.com/servlets/hp_treatment_nutrition.jsp)



