

ENT SURGICAL CONSULTANTS

Thomas K. Kron, MD, FACS
Michael G. Gartlan, MD, FAAP, FACS
Rajeev H. Mehta, MD, FACS
Scott W. DiVenere, MD
Sung J. Chung, MD
Ankit M. Patel, MD

2201 Glenwood Ave., Joliet, IL 60435
(815) 725-1191, (815) 725-1248 fax

1300 Copperfield Ave., Suite 3060, Joliet, IL 60432
(815) 727-6031

119 E. Jefferson St., Morris, IL 60450
(815) 941-1972

DRY MOUTH CARE (12/05)

GENERAL

A healthy mouth contains three pairs of major salivary glands, as well as minor saliva glands. These glands produce saliva, which flow into your mouth as needed. You need more saliva when you are eating, for instance, than when you are sleeping. Saliva is one of those things you do not appreciate until it is gone. Saliva moistens the mouth, and that moisture helps you talk, eat, swallow, and keep your teeth and gums healthy. When your body fails to produce enough saliva or changes the saliva composition, the condition is called xerostomia, or more commonly, *dry mouth*.

Today, dry mouth affects 3 out of every 10 adults, and is therefore considered a fairly common condition. Fortunately, there are many things you can do to lessen its negative effects. Though they may not eliminate the problem completely, these suggestions can help you develop some strategies that work for you to manage the discomfort. If dry mouth is part of your life, please try some of these suggestions.

CAUSES

- Head and neck radiation therapy
- Autoimmune conditions (Rheumatoid arthritis, Sjogren's Syndrome, Lupus, etc)
- Diabetes
- Stress and depression
- Vitamin deficiencies
- Dehydration (inadequate water intake, use of alcohol, use of caffeinated beverages, etc)
- Medications (antidepressants, diuretics, antihistamines, decongestants, etc). There is over 300 over-the-counter (OTC) and prescription drugs that list dry mouth as a major side effect.

COPING STRATEGIES

- Carry a squirt bottle or water bottle so you will always have water at hand.
- Make your own mouth lubricant with a mixture of 1/4 teaspoon of glycerin (available in most drug stores) added to 8 ounces of water.
- Chew sugarless gum or candy.
- Keep a glass of water by your bed for those late night dryness period.
- Rinse your mouth with baking soda solution before and after meals. Mix about 1/4 teaspoon of baking soda in a glass of water. Do not swallow the solution.
- Discuss the necessity and possible alternative prescription and OTC medication with your doctor.
- Avoid sugared or caffeinated drinks. Drinks with caffeine may cause added dryness.
- Avoid alcohol and tobacco, which can irritate and dry your mouth.
- Avoid commercial mouthwashes that contain alcohol.
- Avoid hot foods and beverages.
- Avoid spicy, salty, or acidic foods.

Mealtime Tips

Because dry mouth makes chewing and swallowing difficult, you may find you are not eating enough to get nutrients you need. It is essential that you make every effort to eat well and keep up your strength. Here are some ways you can improve your ability to eat well:

- Moisten food with mayonnaise, sauces, gravies, yogurts, or salad dressings. Try dipping dry foods into whatever you are drinking.
- Soften or thin foods with skim milk, broth, water, or melted margarine. Use your food processor or blender to finely chop or liquefy foods.
- Sip your drink often while eating.
- Use a straw if it helps you swallow.
- Try smooth, soft, creamy foods, like soup, macaroni and cheese, mashed potatoes, casseroles, tender cooked vegetables, canned fruits, pudding, cheesecake, ice cream, and even tender cooked and simmered meats.
- Drink high-calorie, cold liquids, milk shakes, instant breakfast drinks, or liquid supplements for both calories and ease of eating.

- Suck on fruit juice popsicles, ice chips, or other cold foods to help reduce the pain.
- Avoid salty, acidic, or spicy foods.
- Avoid carbonated beverages.
- Avoid hot foods, since room temperature meals are easier to eat.
- Avoid hard, crunchy foods such as tough or crisp meats, dry snack foods, crusty bread, popcorn, or nuts since they can be irritating.

SPECIAL CONSIDERATIONS

Radiation Therapy

Though there are many causes of dry mouth, some of the most severe cases are the result of radiation therapy. When receiving radiation therapy to the head and neck, the salivary glands are often within the treatment area. Since the glands are sensitive tissues, they can be damaged or destroyed by the same radiation that destroys the cancerous tissue. The extent of the dry mouth depends upon which glands are affected and how much they have been injured. The fewer working salivary glands, the worse the dry mouth. Salivary gland damage can be minimized by taking certain saliva stimulants (*Salagen*, *Evoxac*, etc) or microcurrent therapy during radiation therapy.

Dental Care

In addition to making an extra effort to eat well despite your dry mouth, you need to look after your dental health carefully. Saliva helps to reduce bacterial growth and protects your teeth. It also continually rinses your mouth and carries particles, which otherwise stick to your teeth, down your throat when you swallow. Without the benefits of saliva, you will notice that plaque builds very quickly on your teeth. This can cause gum inflammation and tooth decay which may eventually lead to gum disease and tooth loss.

It is strongly recommended that you see a dentist before radiation therapy begins. During your therapy you are at a greater risk of infection of the teeth and jawbone. Therefore, it is important to work with a dentist beforehand to develop a complete plan for oral care throughout and after your treatment. This treatment may include fluoride treatments, dental cleaning, x-rays, and/or tooth extractions. After your radiation treatment, please check with us before scheduling dental cleanings, fillings, root canals, extractions, or denture adjustments. Usually, your doctor will consider having your dentures or partial plates readjusted 6-12 months after treatment.

Tips to help keep your mouth healthy:

- Use fluoride toothpaste.
- Brush your teeth, gums, and tongue at least twice a day with a soft brush.
- Run hot water over your toothbrush to make it softer.
- If a toothbrush is too hard, use a cotton swab or a wet gauze pad.
- Floss daily.
- Clean your mouth before and after meals with a WaterPik or rinse with salt water.
- Avoid commercial mouthwashes that contain alcohol. They can be drying and irritating to your mouth.
- Help keep your mouth clean and moist by chewing sugarless gum or sucking on sugarless candy.
- Wash and brush dentures twice a day.
- Do not use denture adhesives.
- If irritation develops, do not wear your dentures at all during or after therapy unless your doctor instructs you otherwise.

COMMERCIALLY AVAILABLE PRODUCTS FOR DRY MOUTH

Brand name	Generic name	Form	Company
<i>Salagen</i>	Pilocarpine	5 mg Tablets 3-4 times/day	MGI Pharma, Inc. 800-644-4811
<i>Evoxac</i>	Cevimeline	30 mg caps 3times/day	Snowbrand Pharmaceuticals
<i>Salivart</i>	Synthetic saliva	Aerosol spray	Gebauer Company
<i>MouthKote</i>	Oral moisturizer	Cream	Parnell Pharmaceuticals 877-457-4276 www.parnellpharm.com
<i>ORALbalance</i>	Long-lasting moisturizing gel	Gel	Laclede Research Labs 800-922-5856
<i>Biotene</i>	Dental chewing gum 100% alcohol-free mouthwash Dry mouth toothpaste	Gum Mouthwash Toothpaste	Laclede Research Labs 800-922-5856

RESOURCES

- Sjogrens Syndrome Foundation Internet Resource www.dry.org
- Comfort Zone

A newsletter dedicated to helping you cope with dry mouth, specifically dry mouth following radiation treatment for head and neck cancer. It has answers to common medical questions about dry mouth, recipes and nutritional and other helpful advice. To receive a free subscription write to:
Comfort Zone MGI Pharma, Inc. Suite 300E Opus Center, 9900 Bren Road East, Minnetonka, MN 55343-9667 Or fax at: (612) 935-0468.