

Xerostomia and Hyposalivation (“dry mouth”)

What is xerostomia and hyposalivation?

Xerostomia is the sensation of having a dry mouth. Many (but not all) patients who have this sensation will also have a noticeable and measurable decrease in the amount of saliva in their mouths, a condition referred to as “hyposalivation” or “salivary gland hypofunction”. Many doctors use the terms “xerostomia” and “hyposalivation” interchangeably because most (but not all) patients with xerostomia also have hyposalivation. Sometimes your mouth may feel dry without it actually being dry (xerostomia without hyposalivation). Saliva not only lubricates the mouth but also helps to fight infections, so a reduction in the amount of saliva puts you at risk for discomfort in the mouth, and also may increase tooth decay and yeast infections.

Although it is normal to produce less saliva while sleeping, patients with dry mouth commonly describe their mouths as feeling “parched”, “like sandpaper” or “like a desert” at all times and typically carry a water bottle with them everywhere they go. Patients report that there is a film or more than usual dental plaque on the teeth, that their tongue and lips stick to their teeth, that their mouths feel rough or swollen, or that there is pain, burning and sensitivity. Patients may notice they have a “bitter” or “metallic” taste, or even reduced or no taste sensations. Some patients have difficulty talking and chewing food and may lose weight as a result. In severe cases, patients have difficulty swallowing with food getting stuck in their throats. These symptoms are due to decreased lubrication from reduced saliva flow. The oral mucosa, especially the tongue may appear dry and red with minimal saliva pooling under the tongue; occasionally mouth sores are present. The saliva is often frothy, thick, pasty and sticky, or the tongue may be coated and white.

What causes hyposalivation?

The three most common causes of hyposalivation are medications, chronic anxiety or depression, and dehydration. Some medications that cause dry mouth are treatments for sinusitis, high blood pressure (such as “water pills”), anxiety and depression, psychiatric disorders, or a hyperactive bladder. Patients on multiple medications are particularly prone to getting a dry mouth. An uncommon but important cause of dry mouth is radiation therapy for head and neck cancer, during which the salivary glands are irreversibly damaged. In diseases such as Sjögren syndrome (an autoimmune disease) and chronic graft-versus-host disease seen in bone marrow transplant recipients, the patient’s own immune system can damage the salivary glands.

How do we know you have hyposalivation?

An experienced clinician can usually make the diagnosis by listening to the history and examining the patient. In some cases, biopsies may be taken and blood tests ordered to rule out a diagnosis of Sjögren syndrome. Although salivary flow is not routinely measured, this may be performed as part of the evaluation.

How do we treat xerostomia and hyposalivation?

There are many ways to treat dry mouth symptoms. Staying well-hydrated by drinking 6-8 cups of water daily is a simple and effective way to treat this, and something you can easily do for yourself. Alcoholic

and caffeinated beverages should be avoided or minimized as they cause dehydration. If you have trouble with food getting stuck in your throat, it is helpful to drink water with your meals, avoid dense and dry foods like crackers and bread, and to cut meat into small pieces and chew well before swallowing. The use of sugar-free or xylitol-containing gum and hard candy is helpful in stimulating the salivary glands to produce more saliva. Many patients get symptomatic relief using Biotene™ products (such as Oral Balance™ gel and the mouthwash) and these can be ordered by your local pharmacist without a prescription. However, there are many other dry mouth products that are available and your pharmacist should be able to direct you to some of these.

In some cases, your doctor may prescribe a medication that works by stimulating the salivary glands to produce more saliva, such as pilocarpine (Salagen™) or cevimeline (Evxac™). These medications are taken three times a day, before meals, and in many cases may take several weeks before their full benefit is felt. Although uncommon, side effects include excessive sweating, increased need to use the bathroom to pee, or rarely, an upset stomach. Please let your doctor know if you have uncontrolled asthma, narrow-angle glaucoma, or obstructive pulmonary disease since these medicines may not be right for you.

It is important to try to prevent tooth decay and yeast infections, two common side-effects of dry mouth. You should reduce the consumption of sugar-containing drinks, such as fruit juices and soft drinks, because they contribute to the development of cavities. All patients with significant dry mouth will be given a prescription for a home fluoride treatment such as 1.1% sodium fluoride (e.g. Prevident™, to help prevent cavities. This is available either as a toothpaste or as a gel. After routine tooth brushing, the gel is applied to the teeth with a toothbrush at night and left for at least 2 minutes before rinsing out. In some cases, soft trays, like those used for teeth whitening, may be fabricated by your dentist for application of the fluoride. This is especially important for patients undergoing radiation treatment to the head and neck. For routine tooth brushing, you may find that using a children's toothpaste or Biotene™ toothpaste is helpful if your normal toothpaste is too irritating. It is very important that you see your dentist regularly for examinations, x-rays and cleanings. All cavities should be treated as soon as possible.

Some patients get recurrent yeast infections from dry mouth and this makes the sensitivity and soreness even worse. Eating yogurt 2-3 times a day helps reduce yeast infections in some patients. Others may need to be treated with medications such as nystatin, clotrimazole, or fluconazole tablets. Nystatin and clotrimazole in the U.S. contain sugar and chronic use may lead to cavities. Fluconazole 100 mg is very effective and can be taken once a day for 5-10 days for acute infections or once a week to prevent recurring infections.

Lack of flavor of food is usually caused by a decreased sense of smell from dry oral and nasal mucosa. You should still be able to taste the usual five tastes of saltiness, sweetness, acidity and bitterness. Saline nasal sprays (such as OCEAN™) performed several times a day and before meals to moisturize the nasal lining may improve your senses of taste and smell.

What can I expect?

In general, hyposalivation tends to be chronic. In some patients, discontinuing a medication causing dry mouth may reverse this condition. However, since many patients are taking the medications for chronic conditions (such as high blood pressure, depression or bladder problems), the dry mouth usually lasts for years if not for life. Many patients report that they do become accustomed to the feeling of dryness and over time, they are less bothered by it.