XEROSTOMIA
(also known as “dry mouth” and “dry mouth syndrome”)

Is the initiation of non-invasive dental hygiene procedures* contra-indicated?  No
- Is medical consult advised? Yes, if the xerostomia has not yet been assessed by a physician or dentist for definitive diagnosis and management (including potential prescription medication if intraoral infection is present).

Is the initiation of invasive dental hygiene procedures contra-indicated?** No
- Is medical consult advised? ..................................... See above.
- Is medical clearance required? .................................. No
- Is antibiotic prophylaxis required? .............................. No
- Is postponing treatment advised? .............................. No, unless an active intraoral infection (e.g., candidiasis) is suspected.

Oral management implications
- Although treatment depends on the cause, dry mouth is often a hyposalivation side effect of over-the-counter (OTC) or prescription medication. Xerostomia may improve with an adjusted dosage or alternative OTC or prescription medication. Patients/clients should consider discussing this with their pharmacist or prescribing physician, as appropriate.
- Other causes of acute or chronic reduced salivary flow include mechanical blockage, dehydration, infection of the salivary glands, anemia, local surgery, connective tissue disease, Sjögren syndrome, radiation therapy of the head or neck, emotional stress, and congenital factors (e.g., ectodermal dysplasia). Xerostomia may also result from mouthbreathing and other diseases which cause hyposalivation and/or change in saliva consistency. In some cases, there is no identifiable cause.
- Self-care steps to ease oral dryness include drinking plenty of water, letting ice melt in the mouth, chewing sugarless gum, sucking sugarless mints, restricting caffeine intake, humidifying the ambient environment, using lip balm, and avoiding tobacco and alcohol (including mouth rinses containing alcohol).
- Daily therapeutic doses of xylitol-containing mints and gums can be recommended to reduce Streptococcus mutans and stimulate saliva production. Relief of dry mouth and dry throat may also be obtained via the use of artificial salivary substitutes or by being prescribed cholinergic drugs (e.g., pilocarpine) that stimulate salivary flow.
- Supplemental daily fluoride and amorphous calcium phosphate therapy (i.e., remineralizing therapy) to reduce caries and dentinal hypersensitivity may be options for certain patients/clients with chronic xerostomia.
- Xerostomic patients/clients are at elevated risk of oral infections, including periodontitis, gingivitis, and viral and fungal infections. Consequently, there is benefit from the use of daily antimicrobial therapy, such as chlorhexidine and essential oil mouth rinses.
- Given the friability of their mucous membranes (due to decreased lubrication from salivary mucins), xerostomic patients/clients are highly susceptible to oral trauma from toothbrushing, mastication, and rubbing against appliances and dentures. The incidence and severity of associated aphthous ulcers can be reduced with daily preventive use of chlorhexidine and essential oil mouth rinses. Topical pain control for aphthous ulcers and oral mucositis can be achieved through the use of certain over-the-counter and prescription medications, which may contain benzocaine or lidocaine.
- Prescription antifungal therapy (e.g., nystatin) is indicated in xerostomic patients/clients with oral fungal infections (e.g., candidiasis).
Disease/Medical Condition

XEROSTOMIA

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Oral manifestations

- Xerostomia is the subjective feeling of oral dryness, which may be associated with reduced salivary flow (i.e., hyposalivation), change in saliva composition (e.g., from serous to mucous), or have no identifiable cause. While dry mouth is a common problem that may be little more than a nuisance in mild, time-limited cases, it can also alter enjoyment of food and the health of teeth. This is because saliva helps prevent tooth decay by limiting bacterial growth and washing away food particles, as well as enhances ability to taste and swallow.

- Xerostomia is very common. Prevalence is at least 20% in the general population, with increased prevalence in females (up to 30%) and the elderly (up to 50%).

- Because salivary mucins lubricate the oral mucous membranes, protect against ulceration and penetration of toxins, and assist with wound healing and repair, by definition these functions are compromised in patients/clients with hyposalivation.

- Drug-induced xerostomia is a combination of reduced salivary flow and changes in both the nature and quality of the residual saliva. More than 500 medications cause xerostomia, making it a very common reported oral side effect, particularly amongst the elderly.

- Older adults are at increased risk for root caries because of increased use of medications that produce xerostomia, in conjunction with increased gingival recession that exposes root surfaces.

- Xerostomia-induced dental caries are evident along the gingival margin on exposed lingual and buccal root surfaces, at and underneath crown margins, and in root furcations. Caries can lead to extensive tooth destruction and loss. Increased biofilm acidity also contributes to dentinal hypersensitivity.

- Oral infections are more frequent in xerostomic patients/clients. Fungal infections (especially oral candidiasis) may manifest as white plaques overlying reddened oral mucosa, burning mouth syndrome, angular cheilitis, and symptomatic geographic tongue.

- Aphthous ulcers are common in persons with xerostomia, given the friability of their mucous membranes.

- Other oral manifestations of hyposalivation may include dysgeusia (altered taste); halitosis (bad breath); oral dysesthesia (burning/tingling in the mouth); dysphagia (difficulty swallowing); fissured and inflamed tongue with atrophy of filiform papillae; dry, pale, or red and atrophic oral mucosa; oral mucositis; mouth soreness; dry and sore lips and angles of the mouth; and thirst.

- Clinical findings do not always correlate with the symptoms experienced.

- Ascending/suppurative sialadenitis (infection of the major salivary glands – usually the parotid) is associated with hyposalivation, because bacteria are able to ascend the ductal system against the diminished flow of saliva.

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Disease/Medical Condition

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Related signs and symptoms

- Diseases such as diabetes, Parkinson’s disease, Sjögren’s syndrome, and rheumatoid arthritis can affect the salivary glands, in addition to causing other systemic signs and symptoms. Other causes of dry mouth include certain cancer treatments (e.g., radiation therapy of the salivary glands) and damage to the glands’ nerve supply. Dental hygienists should be alert to xerostomia risk factors — both underlying disease conditions and medications — during the medical history-taking process.

- Depending on the underlying pathologic condition, extra-oral symptoms that may occur together with xerostomia include xerophtalmia (dry eyes), inability to cry, dryness of other mucosa (e.g., nasal and/or genital), and dysphonia (voice changes).

- Because salivary mucins and enzymes play a role in initiating the breakdown of food in preparation for swallowing and digestion, xerostomic patients/clients may experience gastrointestinal issues related to their inability to adequately digest food. This may lead patients/clients to make poor food choices and decrease eating due to discomfort, disinterest, or chewing difficulties; these risks are heightened in patients/clients taking medications that cause taste alteration as a side effect. Associated weight loss may alter the fit and comfort of dentures and other oral appliances. Weight loss and poor nutritional status are of particular concern in persons with serious medical conditions or undergoing cancer therapy.

References and sources of more detailed information

- US Centers for Disease Control and Prevention http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5250a3.htm
- National Institute of Dental and Craniofacial Research http://www.nidcr.nih.gov/oralhealth/topics/drymouth/

* Includes oral hygiene instruction, fitting a mouth guard, taking an impression, etc.

** Ontario Regulation 501/07 made under the Dental Hygiene Act, 1991. Invasive dental hygiene procedures are scaling teeth and root planing, including curetting surrounding tissue.

Date: January 28, 2014