



Pretoria ENT

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The Oral Cavity

Anatomy

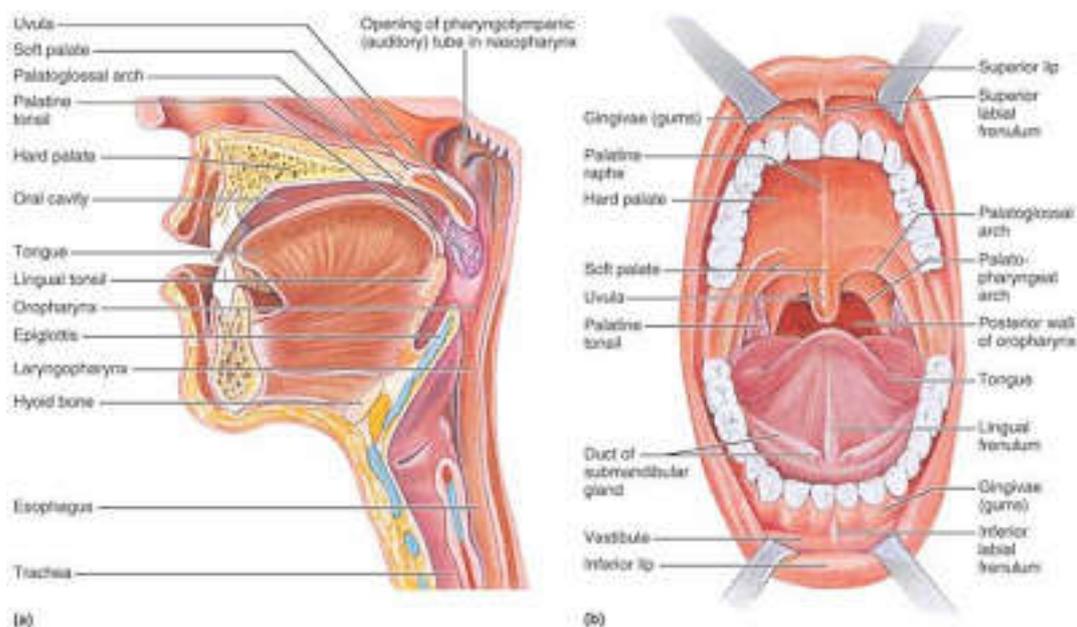


Image source: <http://anatomyforlayla.blogspot.co.za/2007/04/blog-post.html>

The major structures of the oral cavity are the lips, the teeth, the alveolar ridges (bony areas that contain the teeth), the tongue, the floor of the mouth (soft area underneath the tongue), and the palate (hard palate and soft palate).

The oral cavity assists with the first part of the eating and swallowing process. The tongue also enables us to taste. The mouth is a secondary airway through which we can breathe during exertion or nasal obstruction.



Oral conditions

The most important thing to keep in mind, is that when an ulcer/sore/mass/red lesion/white lesion has been present for more than two weeks without improvement, urgent referral to a specialist is necessary to exclude cancer. Oral cancers can cause extensive damage and early detection can spare a patient debilitating intervention.

Ulcers/sores in the mouth and lips

The causes of ulcers/sores in the mouth and lips, include:

- **Aphthous ulcers**, which can be large or small, single or multiple and can be recurrent. They are usually very painful and can take up to 2 weeks to resolve. The cause of aphthous ulcers is poorly understood.
- **Infections** that can cause ulcers include viral organisms (Coxsackievirus, Epstein-Barr virus, hand foot and mouth disease, herpes simplex virus, varicella zoster virus and even HIV) and bacterial organisms (tuberculosis and syphilis). The most common fungal organisms that can affect the oral cavity is candida.
- **Oral or lip cancer** may present with a persistent ulcer. It is important to make an urgent, early diagnosis. Persons who smoke has a very high risk for developing cancer of these areas.
- **Nutritional deficiencies**, especially vitamin B12, folate and iron deficiencies.
- **Autoimmune disorders** (Behcet's disease, Kawasaki disease, systemic lupus erythomatosis, Chron's disease, etc).
- **Lichen planus**.
- **Blood disorders**.
- **Immune disorders**.
- **Medication** can cause ulcers/sores as a side-effect (chemotherapeutic drugs, non-steroidal anti-inflammatories, etc.).
- **Inherited conditions** that affect the skin and soft tissue lining of the digestive system.
- **Chronic kidney disease**.

Other causes for sore mouth

- **Dry mouth** (xerostomia).
- **Trauma** (burn, tongue biting, ill-fitting dentures).
- **Infections** (hand, foot and mouth disease).
- **Dental problems** and **gum disease**.
- **Allergies** or **hypersensitivity reactions**.



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- **Hormone deficiencies.**
- **Nutritional deficiencies**, especially vitamin B12, folate and iron deficiencies.
- **Geographic tongue** (benign migratory glossitis) is a common condition with an unknown cause, which presents with map-like red areas on the tongue (due to atrophy of the papilla) and deep fissures. The pattern of the lesions change constantly. Although it is mostly asymptomatic, it can cause oral discomfort or mild pain.
- **Burning mouth syndrome** is a condition with an unknown cause which is usually diagnosed when no other causes for the symptoms can be found. It is characterized by a burning sensation of the tongue or other parts of the mouth. Dry mouth and taste disturbances may also be present. The symptoms are sometimes relieved by eating or drinking.
- **Auto-immune conditions** (Kawasaki disease).

Causes for a dry mouth (Xerostomia)

- **Age-related** dry mouth is caused by the decreased ability of the salivary glands to produce adequate sputum to lubricate the mouth.
- **Stress induced** dry mouth is common, and can be related to a specific event.
- There is a myriad of **medications** that can cause chronic dry mouth, but it is very important never stop or change your medication without discussing it with your doctor.
- **Salivary gland disease.**
- **Sjogren's syndrome** is an auto-immune condition (can be associated with other auto-immune conditions) that damages the tissue of the salivary gland which is responsible for sputum production.
- Current or previous **radiotherapy** for cancer in the region of the mouth can cause destruction of the salivary gland tissue, resulting in severe dry mouth.

Swellings in the mouth

- **Salivary gland swelling of the large salivary glands** can be caused by infections, salivary gland stones, chronic inflammatory conditions, cystic changes in the salivary gland (may be related to HIV), or tumors which may be benign or malignant.
- **Salivary gland swelling of the small salivary glands** can be caused by a mucous collection (mucocele), pus collection, or a tumor which may be benign or malignant.
- **Dental conditions** that can present as a swelling include infections of the teeth or gums, unerupted teeth, cysts, or tumors that arise from the dental tissues or jaw bones.



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- **Congenital** or **developmental conditions** (present at or soon after birth) can be responsible for many different kinds of swellings/tumors in the mouth (hemangioma, lymphangioma, hereditary gingival fibromatosis, Von Recklinghausen's neurofibromatosis).
- **Traumatic swellings** (epulis, fibro-epithelial polyp, denture granulomas).
- **Bony diseases** (fibrous dysplasia, Paget's disease).
- **Tumors** (benign or malignant), including lymphomas and leukemia.
- **Hormonal** (pregnancy epulis, pregnancy gingivitis, oral contraceptive pill).
- **Allergic reaction** or **hypersensitivity**.
- **Angioneurotic edema**.
- **Granulomatous conditions** (sarcoidosis, pyogenic granuloma, Wegener's granulomatosis).
- **Side-effects from medications**, for instance phenytoin, calcitonin, and calcium-channel blockers.
- **Rare systemic disorders** like amyloidosis.

Red lesions of the mouth

- **Cancer** of the mouth can present as a red lesion.
- **Smoking** can cause red areas in the mouth which can be cancerous or pre-cancerous, and therefore need to be investigated by a specialist urgently.
- **Candidiasis** is a fungal infection of the surface lining of the mouth. It can affect the gums, tongue or throat.
- **Erythroplakia** is a red, velvety patch. This is a premalignant or malignant lesion of the mouth, and therefore it is important to see a specialist if a red lesion is noted. It tends to affect older patients above 60 years of age and smoking is a risk factor.
- **Small blood vessel abnormalities** can sometimes cause a red lesion.
- **Burns** and **local trauma**.
- **Kaposi sarcoma** is a kind of tumor of the skin or soft tissue lining of the digestive system. It is a very vascular lesion and therefore it bleeds easily.
- **Anemia**, a shortness of red blood cells, can cause redness of the tongue.
- **Nutritional deficiencies**, especially vitamin B12, folate and iron deficiencies.
- **Irradiation** of the head and neck area for cancer can cause chronic inflammation and redness of areas in the mouth.
- **Lichen planus** and **systemic lupus erythematosus** are rare cause of lesions in the mouth.



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White lesions of the mouth

- **Leukoplakia** is a white lesion of the mouth that is formed by an overproduction of keratin (a component of the soft tissue lining of the mouth). It can be caused by smoking (in which case it has a high risk of transforming into cancer) or trauma (due to friction from the teeth, cheek biting or tongue thrusting).
- A **cancer** of the mouth can present as a white lesion.
- **Candidiasis** is a fungal infection of the surface lining of the mouth. It can affect the gums, tongue or throat.
- **Oral papillomas** are wart-like lesions with small finger-like projections and it is caused by certain types of human papilloma virus.
- **Oral hairy leukoplakia** forms white flat or feathery lesions with prominent folds or projections on the tongue and cheek. It is associated with Epstein-Barr Virus and immunosuppression (mostly HIV).
- **White sponge nevus** is a hereditary condition that presents with thick white lesions of the tongue and cheek. The lesions seldom cause any symptoms and are harmless.
- **Syphilis** can present with white oral lesions.
- **Lichen planus**.

Halitosis (bad breath)

- **Dental problems** (poor oral hygiene, gingivitis and periodontal disease) is the commonest cause for halitosis. If there is any suspicion of bad breath, the person should firstly go to his dentist for a check-up.
- **Smoking** or **chewing tobacco**.
- **Acute or chronic tonsillitis**.
- **Tonsilliths** (stones that form in the furrows of the tonsils).
- Reflux of acid (gastroesophageal reflux disease or laryngopharyngeal reflux disease).
- **Lung disease** (bronchiectasis, lung abscess, etc.).
- **Diabetes mellitus**.
- **Chronic liver disease**.
- **Psychological** bad breath is when a person firmly believes he has a bad breath and that it affects the behavior of the people around him/her. However, several doctors have usually examined the person of which none could detect a bad breath.

Dental problems

If you suspect any problems related to your teeth or gums, a consultation with a dentist will be part of the management plan.