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**MATRIC NUMBER: 17/MHS01/129**

**COURSE TITLE: GROSS ANATOMY OF THE HEAD AND NECK**

**COURSE CODE: ANA 301**

**ASSIGNMENT TITLE: NOSE AND ORAL CAVITY**

QUESTION 1: Discuss the anatomy of the tongue and comment on its applied anatomy

The tongue is a muscular organ in the mouth. The tongue is covered with moist, pink tissue called mucosa. Tiny bumps called papillae give the tongue its rough texture. Thousands of taste buds cover the surfaces of the papillae. Taste buds are collections of nerve-like cells that connect to nerves running into the brain.

The tongue is anchored to the mouth by webs of tough tissue and mucosa. The tether holding down the front of the tongue is called the frenum. In the back of the mouth, the tongue is anchored into the hyoid bone. The tongue is vital for chewing and swallowing food, as well as for speech. An important function of the tongue is taste sensation, which is derived from taste receptor cells located in clusters within taste buds on the surface of the tongue. In humans there may be anywhere from 50 to 150 taste receptor cells within an individual  taste bud. Taste buds are innervated by nerves that respond to chemicals from food in solution, thereby providing the sensation of taste. There are five fundamental taste sensations: salty, sweet, sour (acid), bitter, and umami, which represents the taste of amino acid. Each receptor cell is sensitive to a particular taste—for example, responding only to salt or only to umami. The total flavour of a food comes from the combination of taste, smell, touch, texture or consistency, and temperature sensations. Small taste buds situated on the tongue’s top surface transmit these flavour sensations to the nervous system

Because of this, all parts of the tongue can detect these four common tastes; the commonly described “taste map” of the tongue doesn’t really exist.

CLINICAL CONDITIONS

Hairy tongue : Papillae can overgrow the surface of the tongue, giving it a white or black appearance. Scraping off the papillae corrects this harmless condition.

* Lichen planus: A harmless condition that can affect the skin or the mouth. The cause is unknown; however, it is believed to be caused by the immune system attacking the skin and lining of the mouth.
* Thrush (candidiasis): *Candida albicans* (a yeast) grows over the surface of the mouth and tongue. Thrush can occur in almost anyone, but it occurs more often in people taking steroids or with suppressed immune systems, the very young, and the elderly.
* Oral cancer: A growth or ulcer appears on the tongue and grows steadily. Oral cancer is more common in people who smoke and/or drink alcohol heavily.

APPLIED ANATOMY

Ankyloglossia(Tongue tie): Failure of deepening of alveololingual sulcus

Lingual thyroid : Failure of migration of median rudiment

Macroglossia

Microglossia

Fissured,plicated or scrotal tongue

QUESTION 2: Write an essay on the air sinuses

Air sinuses also called paranassal sinuses are a group of four paired air filled spaces that surround the nasal cavity. The maxillary sinuses are located under the eye; the frontal sinuses are located above the eye; the ethmoidal sinuses are between the eye and the sphenoidal are between the eyes. The sinuses are named according to the facial bones in which they are located. The functions of the sinuses are not clear. It is thought that may contribute to the humidifying of the inspired air. They also reduce the weight of the skull.

Sinuses are formed in childhood by the nasal cavity eroding into the surrounding bones. As they are outgrowths of the nasal cavity, they all drain back into it- openings to the paranassal sinuses are found on the roof and lateral walls of the nasal cavity. The inner surface is lined by respiratory mucosa.

CLINICAL SIGNIFICANCE

As the paranassal sinuses are continuous with the nasal cavity, an upper respiratory tract infection can spread to the sinuses. Infection of the sinuses causes inflammation (particularly pain and swelling) of the mucosa, and is known as sinusitis, if more than one sinus is affected it is called pansinusitis

The maxillary nerves supplies both the maxillary sinus and the maxillary teeth, and so inflammation of that sinus can present toothache.