

masticatory mucosa (gingiva and hard palate) :-

hard palate :- mucosa is tightly fixed to underlying periosteum and therefore immovable it is pink in color epi. Is well keratinized in the palate there are grooves and ridges all appear to be adaptation of keratinized epi. to resist forces of mastication. various regions in the hard palate differ because of the varying structure of the submucous layer. The following zones can be distinguished :-

- 1- gingival region adjacent to the teeth
- 2- palatine raphe median area extend from incisive papilla posteriorly
- 3- anterolateral area or fatty zone between raphe and gingiva
- 4- posterolateral area or glandular zone between raphe and gingiva

the palatine tissue identical with the gingiva and **raphe do not have submucosa they directly attach to the periosteum** .Submucosa occurs in fatty zone and glandular zone this glandular and fatty tissue act as a cushion is incomparable to subcutaneous tissue of the palm of the hand. The glandular layer of the hard and soft palate are continuous

Gingiva :- extends **from dentogingival junction to the alveolar mucosa** it subjected to the friction and pressure of mastication

Epi. Of gingiva is str. Sq. epi. Either

orthokeratinized (15% }

most often parakeratinized (75%) and may be

non keratinized (10%) of the poulation.

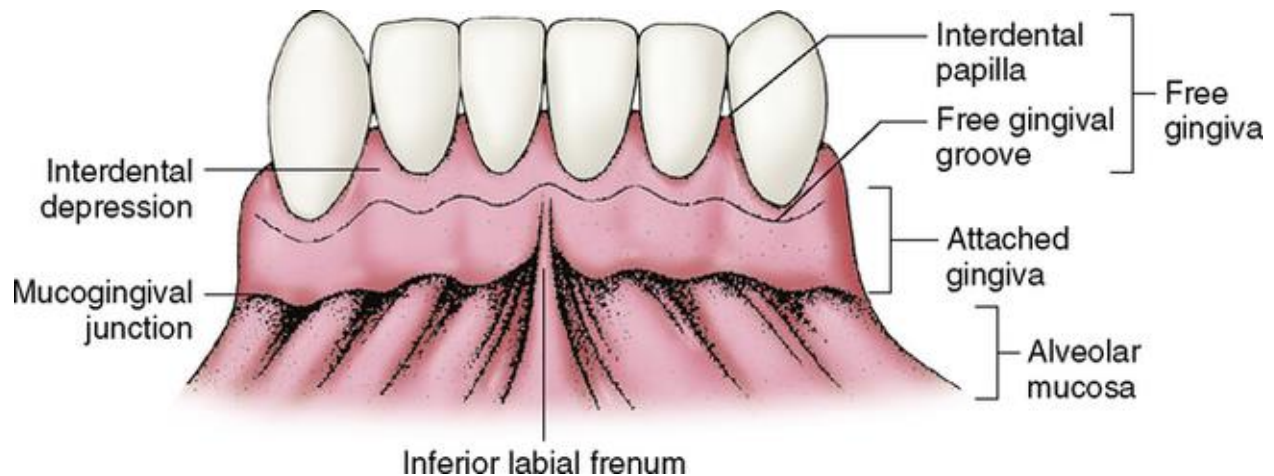
Underlying L.p is dense, the collagen fibers of the lamina propria may either inserted

into alveolar bone and cementum or periosteum. The gingiva is limited on outer surface of both jaws by **mucogingival junction which separates gingiva from alveolar mucosa.**

Gingiva clinically divided into **free gingival, attach gingiva** and **inter dental papilla** the dividing line between free gingiva and attach gingiva **is free gingival groove** run **parallel to the margin of gingiva at a distance 0.5 - 1.5 mm** appears histologically as a shallow v shaped notch at a heavy epithelial ridges. it develops at the level of apical to bottom of the gingival sulcus .The surface of gingiva characterized by **stippled appearance** , portion of epi. appear elevated and between elevation there are shallow depressions the net result is stippling .**The depression correspond to the center of heavier epi. ridges** .These are functional adaptation to mechanical forces **dis appearance of stippling indicated odema and involvement of gingiva in gingivitis.** stippling varies between individuals and age and sex younger female show gingival with more finely texture than male and male tend to have heavily stippled gingivae than do females.

Gingiva appear slightly depressed between adjacent teeth corresponding to depression form vertical folds called interdental grooves .Interdental papilla is that part of gingiva that fill's the spaces between two adjacent teeth it's surface is triangular in 3 dimension the interdental papilla in posterior teeth is tent shaped while it is pyramidal between anterior teeth.

The depressed part of int. d. p. is called col which is covered by non -keratinized epi.



Lamina propria of gingiva consist of **dense c.t.** dose not contain large vessels small number of lymphocytes plasma cells macrophages are present in c.t. of normal gingiva .

Papilla of c.t. are long, slender and numerous .The tissue of the L.P contain few elastic fiber confined to wall of B.V oxytalan fibers are also present.

Gingival fibers of periodontal ligament are dense c.t. consisting of coarse collagen bundle extend from bone to I.p. these referred as gingival ligament which are divided into following groups :-

- 1- dentogingival :- from cervical cementum into lamina propria of gingiva
- 2- alveologingival :- arise from alveolar crest and extend " into the lamina propria of gingiva
- 3- Circular :- a small group of fibers circle the tooth and interface with other fibers
- 4- dentopriosteal:- fibers from cementum into the periosteum of alveolar crest and vestibular and oral surface of the alveolar bone.
- 5- transseptal:- fibers extend interproximally between adjacent teeth these fibers make up the interdental ligament.

The gingival is normally pink but may sometimes have a grayish tin. The color

depends in part on surface (keratinized or not), and its thickness. And in part on the presence of melanine pigment in the epithelium give it brown to black coloration .

Alveolar mucosa : is lining mucosa, the area of tissue beyond the mucogingival junction. It seems less firmly attached and redder than the attached gingiva. It **is non-keratinized** and provides a softer and more flexible area for the movement of the cheeks and lips.

Specialized mucosa

Dorsal surface of the tongue is rough and irregular divided into anterior 2/3 and posterior 1/3 by V-shaped lined called terminal sulcus.

On anterior part

Found numerous papilla

Filiform papilla which are fine pointed epithelial structures containing core of c.t, the covering epith, is **keratinized**, these papilla **do not** contain taste buds.

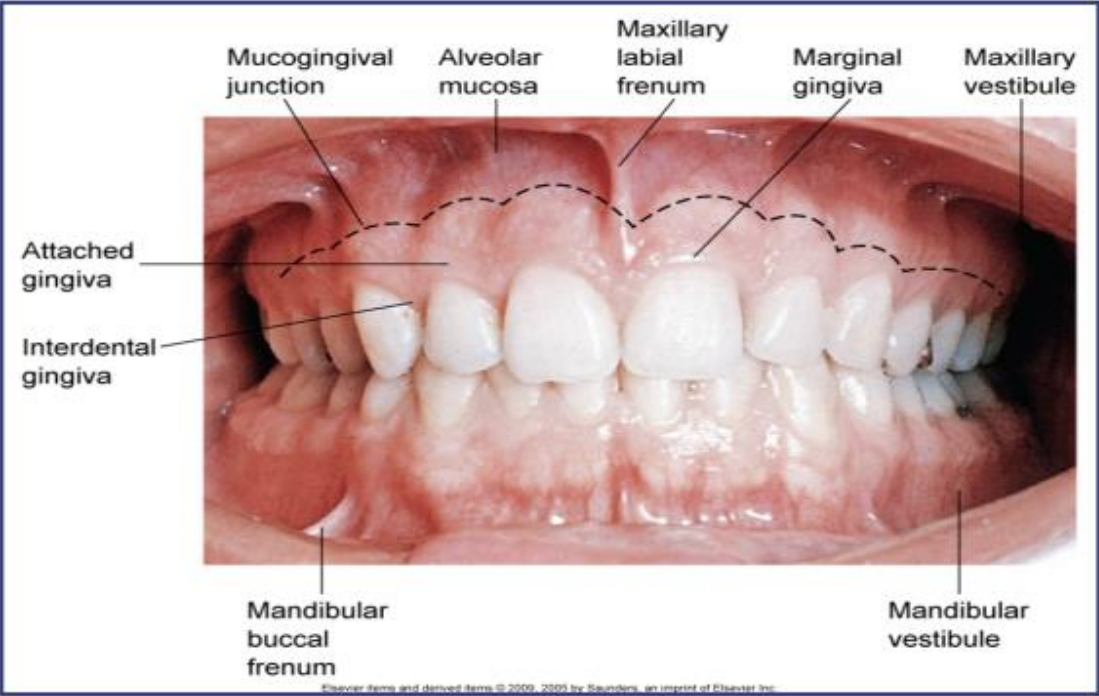
Fungiform papilla

Usually found between filiform .p. isolated, round reddish prominences it contain few

taste buds 1-3 found on their dorsal surface. Its red color due to rich capillary network visible through its their epith.

Circumvallate papilla

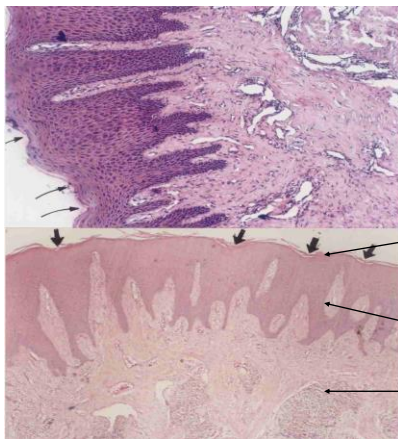
8-10 vallate papilla in front of the V-shaped sulcus bet the body and the base of the tongue connected to the substances of the tongue is at their narrow base, its free surface shows numerous secondary papilla that are covered by a thin, smooth epithelium .The lateral surface of the vallate papillae, the epith contains a numerous taste buds.



gingivitis



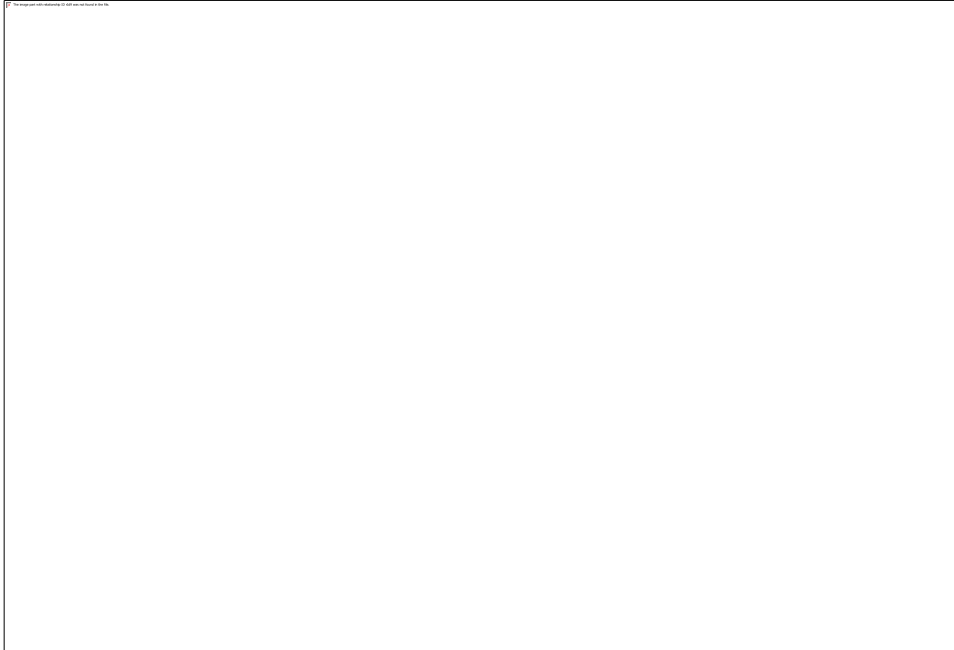
STIPPLING ON THE EPITHELIUM..



Sites of stippling

Surface epithelium(keratinized)

Lamina propria



FILLIFORM PAPILLAE

Orthokeratinized •
surface epithelium..

