Mandibular arch anatomical landmarks

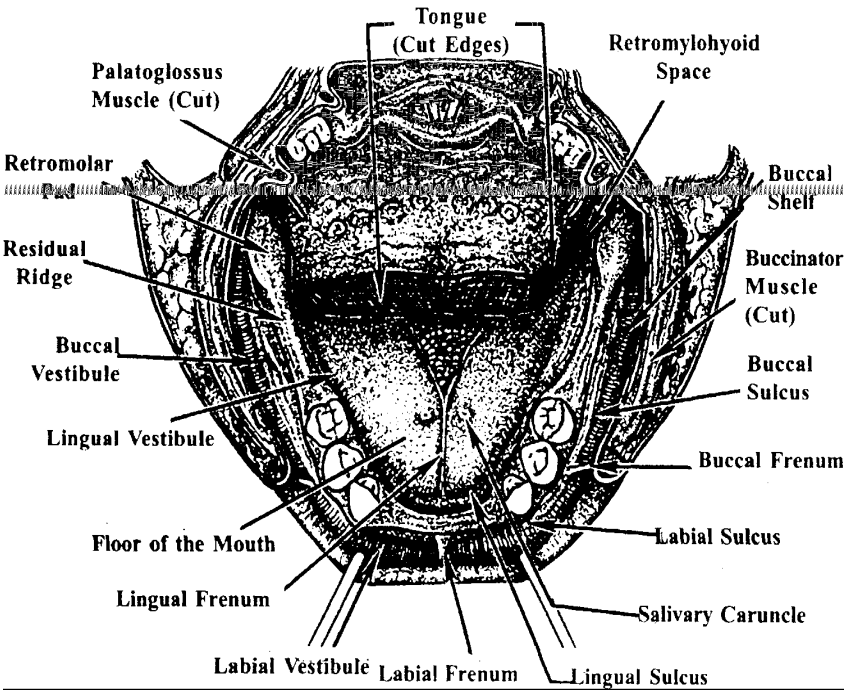
Mandibular arch anatomical landmarks: which is divided into:

A. Supporting structures.

B. Limiting structures.

C. Relief areas.

A. Supporting structures:	B. Limiting structures:	C. Relief Areas:
1. Buccal shelf area.	1. Labial frenum.	l. Mental Foramen.
(Primary)	2. Buccal frenum.	2. Torus mandibularis.
2. Residual alveolar ridge.	3. Labial vestibule.	3. Genial tubercles.
(Secondary)	4. Buccal vestibule.	4. Mylohyoid ridge.
	5. Retro molar pad.	
.	6. Lingual frenum.	
.	7. Alveolingual sulcus.	
.	8. External oblique ridge.	



Buccal shelf area:

It is bounded medially by the crest of residual ridge, laterally by the external oblique line, anteriorly by the buccal frenum and distally by the retromolar pad. It is composed of compact bone therefore it serves as a primary stress bearing area for the lower denture.

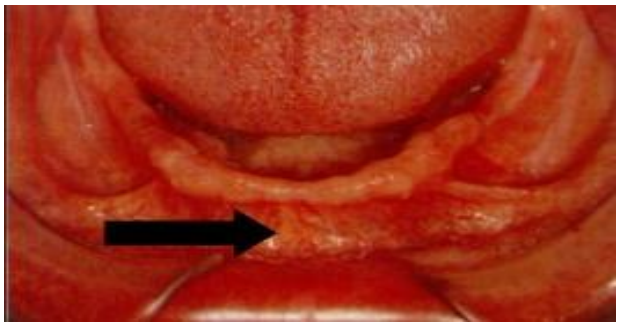
Because it has large surface area and perpendicular to the vertical masticatory force it provide support to the denture.

Labial frenum:

It is a fold of mucous membrane not so pronounced as the maxillary labial frenum. It may be single or multiple, fine or broad but it may contain muscle fiber from the orbicularis oris muscle and therefore it may be active in mastication. It form the labial frenum notch in the impression and in the complete denture.

Labial vestibule:

It extends from the labial frenum to the buccal frenum, limited inferiorly by the mucous membrane reflection internally by the residual ridge and labially by the lower lip. In lower complete denture the labial flang occupy this space.



Buccal frenum:

A fold of mucous membrane extended from the buccal mucous membrane reflection area toward the slopes of residual ridge. It may be single or multiple broad U-shaped or narrow V-shaped, it must have enough space in the denture as it may be activated in

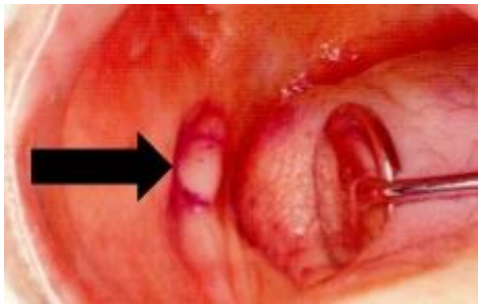
function by muscles. It form the buccal frenum notch in the impression and in the complete denture.

Buccal vestibule:

It extends from the buccal frenum to the distal end of the arch, it is bounded externally by the cheek and internally by the residual ridge. In lower complete denture the buccal flang occupy this space.

Retromolar pad:

It is pear shaped area at the distal end of residual ridge. Histologically; it contains thin non keratinized epithelium, loose areolar connective tissue, glandular tissue, fibers of Muscles (buccinator, superior constrictor muscles, pterygomandibular raphe and temporalis tendon). This pad must be covered by the denture to perfect the seal of the denture.



In the impression and denture it form the retro molar fossa.

The retromolar papilla: is small pear shaped papilla just anterior to the retromolar pad, it is dense fibrous connective tissue.

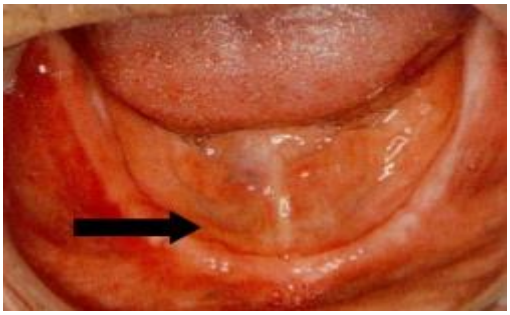
Lingual frenum:

It is a fold of mucous membrane can be observed when the tongue is elevated, it extending along the floor of the mouth to the under surface of the tongue. It will produce the lingual notch in the denture. This frenum is activated when the tongue is

moved therefore it must be molded well in the impression to prevent displacement of the denture or ulceration of the tissue.

Alveololingual sulcus:

It is extended from the lingual frenum to the retromylohyiod curtain and bounded externally by the residual ridge and internally by the tongue. This space is filled by the lingual flange of the denture.



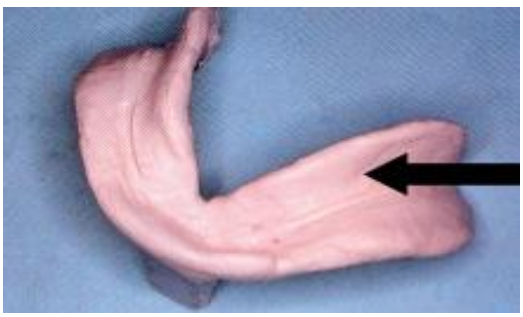
It can be divided into:

A. Anterior portion: It is extended from the lingual frenum to the premylohyoid fossa.

B. Middle region: It is extended from the premylohyoid fossa to the distal end of the mylohyoid ridge.

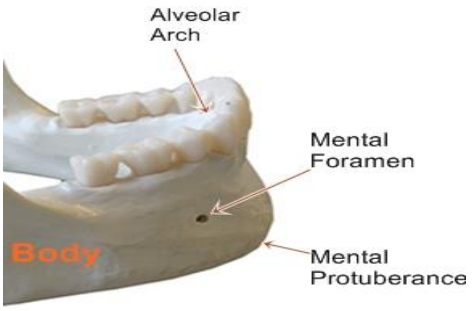
C. Most posterior region: Is the retromylohyoid space or fossa, it is extends from the end of mylohyoid ridge to retromylohyoid curtain, the lingual flange of the denture should extends laterally and fill the retromylohyoid fossa

The lingual flange passes into the retromylohyoid fossa and proper recording of impression gives typical S -shape of the lingual flange.



Mental Foramen:

It is located on the external surface of the mandible between the 1st and 2nd premolar area. In case of sever resorption of residual ridge it will be near ridge crest and the denture should be relieved over the foramen to prevent pressure being applied on the mental nerves and blood vessels.



Genial tubercles:

These are pair of bony structures found anteriorly on the lingual side of the mandible. Prominent in resorbed ridge and adequate relief should be provided or surgical correction may be needed.

Torus mandibularis:

These are bony exostosis composed of dense cortical bone covered by this mucous membrane found on the lingual surface of the mandible at premolar area and about 80% are bilateral. It has to be relieved or surgically corrected.

External oblique ridge:

It is a ridge of dense bone extended from just above the mental foramen superiorly and distally to be continuous with the anterior border of the ramus. In some patient this ridge becomes a guide for the termination of the buccal flange of the denture.

Mylohyoid ridge:

It is an irregular bony crest on the lingual surface of the mandible, this ridge is near the inferior border of the mandible in the incisor region but becomes higher posteriorly until it terminates near the 3rd molar area, it is the area where the mylohyoid muscle arise to the floor of the mouth.

The border of the lingual flange may extend below the mylohyoid line if it slopes toward the tongue.