

MANDIBULAR INCISORS (central incisor)

- The mandibular incisors are *four* in number. The mandibular central incisors are the **smallest** teeth in the permanent dentition.



c) lower left central incisor; (d) lower left lateral incisor

Labial Aspect of mandibular central incisor

1. **The shape of the crown:** The shape of the crown is trapezoidal from the labial aspect.
2. The labial surface is smooth and flat, unlike the maxillary incisors in the incisal third. The middle third shows mild convexity and gradually merges with the root surface
3. **Incisal outline:** The incisal outline is straight mesiodistally. Mamelons are present in the newly erupted teeth.

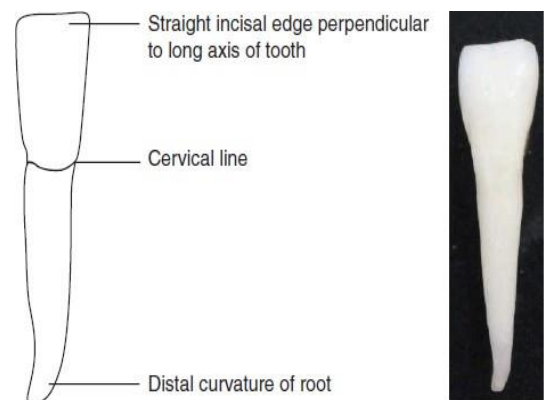


Figure 14.18 Labial aspect of the mandibular central incisor.

Lingual Aspect

1. Lingual surface: The lingual surface exhibits bordered by marginal ridges, but they are not as prominent as in maxillary incisors.

2. Outlines of the root: The outlines are similar to the labial aspect, but there is a lingual taper along the entire length of the root. This leads to a decrease in dimension towards the lingual side because of the lingual convergence.

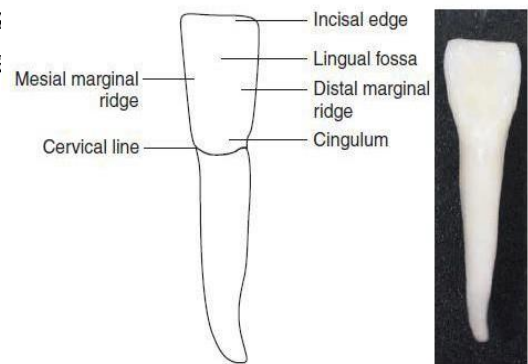


Figure 14.19 Lingual aspect of the mandibular central incisor.

Mesial Aspect

1. **Shape of the crown:** The crown is triangular or wedge-shaped in this aspect.

2. Incisal outline: The incisal ridge forms the apex of the triangular shape of the mesial aspect of the crown and it is placed lingual to the root axis. Thus, the crown demonstrates a **lingual tilt**.

3. Contact area: The contact area in the mesial aspect is present in the incisal third.

4. Outlines of the root: Root **concavity** is present on the mesial aspect of the root, extending from the cervical third of the root to the apical third.

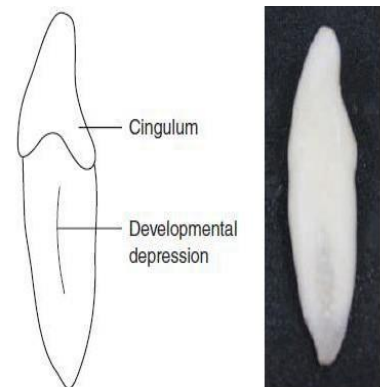


Figure 14.20 Mesial aspect of the mandibular central incisor.

Distal Aspect

1. **Contact area:** The contact area is located at the incisal third of the crown.

2. **Outlines of the root:** The outlines of the root are similar to those of the mesial

aspect.

Incisal Aspect

1. **Shape of the crown:** The crown is **roughly ovoid** when viewed from the incisal aspect and bilaterally symmetrical which aids in distinguishing this tooth from the mandibular lateral incisor.

2. **Outlines of the crown:** The crown is bilaterally symmetrical from this aspect.

(a) **Labial outline:** The labial outline is **straight** and is **at right angles** to a line drawn labiolingually. This feature helps in differentiating between the central and lateral mandibular incisors.

(b) **Lingual outline:** The lingual outline is convex.

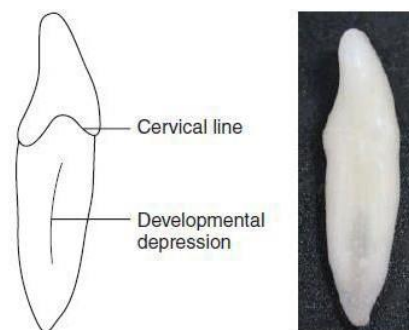


Figure 14.21 Distal aspect of the mandibular central incisor.

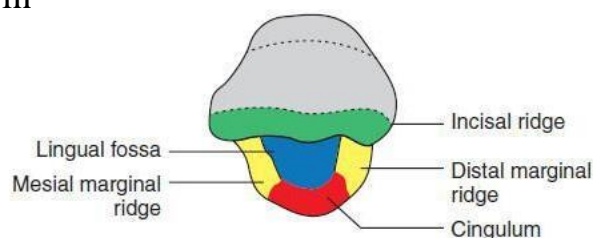


Figure 14.22 Incisal aspect of the mandibular central incisor.

Dental Anatomy

MANDIBULAR LATERAL INCISORS

The mandibular lateral incisors are located in mesial relation to the central incisors and distal to the canines. These are similar to the mandibular central incisors but have **increased** mesiodistal and inciso-cervical height in comparison.



Labial Aspect

1. Shape of the crown: The shape of the crown is **trapezoidal**.
2. Labial surface: The labial surface is more **rounded** mesiodistally than the mandibular central incisors. Developmental grooves are present on the labial surface.
3. Shape of the root: The root is cone-shaped and has a blunt apex.

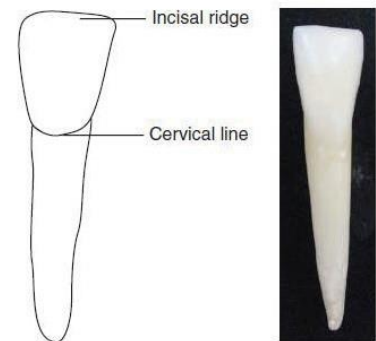


Figure 14.23 Labial aspect of the mandibular lateral incisor.

Lingual Aspect

Lingual surface: The lingual surface exhibits a cingulum and a lingual fossa bordered by marginal

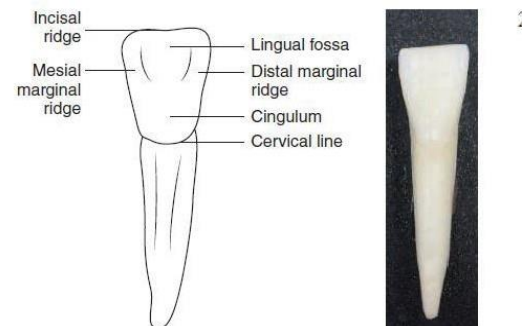


Figure 14.24 Lingual aspect of the mandibular lateral incisor.

ridges, and these are more prominent than those present in the mandibular central incisors. The mesial marginal ridge is longer than the distal marginal ridge.

Mesial Aspect

1. **Shape of the crown:** The crown is triangular or wedge-shaped from this aspect.

2. Outlines of the crown

(a) Labial outline: The labial outline from the crest of curvature is straight from the incisal edge to the cervical third and is slightly convex in the cervical third.

(b) Lingual outline: The lingual outline is **S-shaped**.

(c) Incisal outline: The incisal ridge forms the apex of the triangular shape of the mesial aspect of the crown and is situated lingual to the root axis.

3. Contact area: The contact area in the mesial aspect is present **at the incisal third**.

Distal Aspect

Shape of the crown: The crown is **triangular** or wedge-shaped from this aspect.

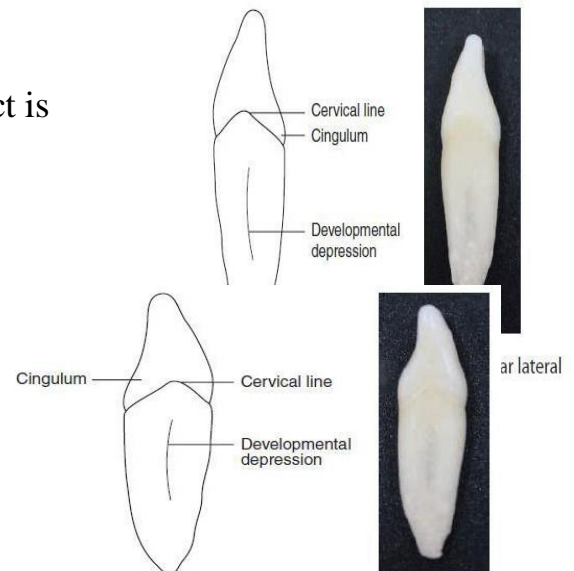


Figure 14.26 Distal aspect of the mandibular lateral incisor.

Incisal Aspect

1. **Shape of the crown:** The crown is **roughly ovoid** in this aspect.

2. **Outlines of the crown:** The crown is **not bilaterally symmetrical**, unlike the crown of the mandibular central incisors.

a. *Labial outline:* The labial outline **curves towards the distal side** because of the distal developmental lobe and **is not straight** as in the mandibular central incisor.

b. *Lingual outline:* The lingual outline is convex, with the mesial and distal marginal ridges converging towards the cingulum.

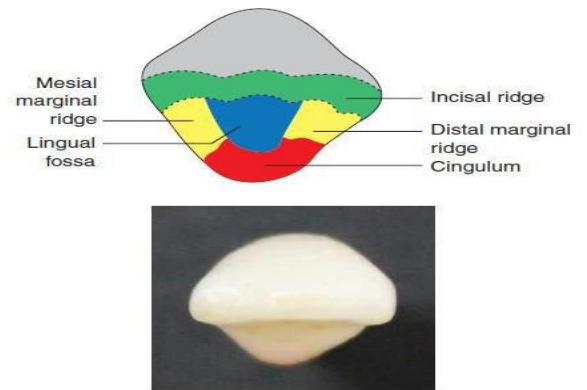


Figure 14.27 Incisal aspect of the mandibular lateral incisor.

Table 14.1 Differences Between Mandibular Central and Lateral Incisors		
Aspect	Mandibular Central Incisor	Mandibular Lateral Incisor
Incisal aspect	Mesiodistal width is lesser than that in the lateral incisor	Mesiodistal width is more than that in the central incisor
Labial aspect	Mesioincisal and distoincisal angles are at right angles	Distoincisal angle is rounded
	Bilaterally symmetrical	Bilaterally asymmetrical
Lingual aspect	Cingulum is centred	Cingulum is slightly distal
	Mesial and distal marginal ridges are equal in length	Mesial marginal ridge is longer than the distal marginal ridge

THANK YOU