

Permanent Maxillary Incisors

BLUEPENONLINE.COM

- Maxillary incisors are four in number.
- Maxillary central incisor is larger than the lateral incisor.
- Maxillary and mandibular central incisors are the only neighboring teeth in dental arches with mesial surfaces in contact.
- Incisors are shearing or cutting teeth. Their major function is to punch and cut food material during the process of mastication.
- These teeth have incisal ridges or edges rather than cusps such as are found on canines and posterior teeth.
- Incisal ridge is that portion of the crown which makes up the complete incisal portion. When an incisor is newly erupted, incisal portion is rounded and merges with mesioincisal and distoincisal angles and labial and lingual surfaces.
- Incisal edge is formed by junction of linguoincisor surface and labial surface.

Maxillary Central Incisor

- Maxillary central incisor is widest mesiodistally
- Labial face is less convex than that of maxillary lateral incisor or canine.
- This gives central incisor a squared or rectangular appearance.
- Crown nearly always looks symmetrical and regularly formed, having a nearly straight incisal edge, a cervical line with even curvature toward the root.
- Mesial incisal angle is relatively sharp and distal incisal angle is rounded.
- When the tooth is newly erupted, mamelons can be seen on the incisal ridge, out of those three, middle one is the smallest.
- Maxillary central incisor usually develops normally.
- Some variations that sometimes occurs is a short root or an unusually long crown.
- Shovel-shaped incisor, is a genetically determined variation seen in Mongoloid races.



MAXILLARY CENTRAL INCISOR FROM ALL ASPECTS:

Labial Aspect:

- Crown of average central incisor will be 10 to 11 mm long .
- Mesiodistal measurement is 8 to 9 mm wide at contact areas.
- Mesiodistal measurement, where root joins crown, is 1.5 -2 mm less.
- Distal outline of crown is more convex than mesial outline
- Distoincisal angle is not as sharp as mesioincisal angle, it is rounded
- Root of central incisor from labial aspect is cone-shaped.
- Root is usually 2 or 3 mm longer than the crown.

Lingual Aspect:

- Lingual aspect has convexities and a concavity.
- Immediately below cervical line a convexity is present; this is called the cingulum.
- Mesially and distally confluent with cingulum are marginal ridges.
- Between marginal ridges, below cingulum, a shallow concavity is present, it is lingual fossa.

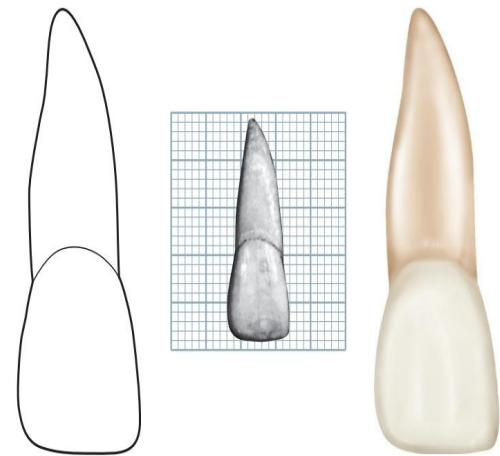


FIGURE 6-2 Maxillary right central incisor, labial aspect. (Grid = 1 sq. mm.)

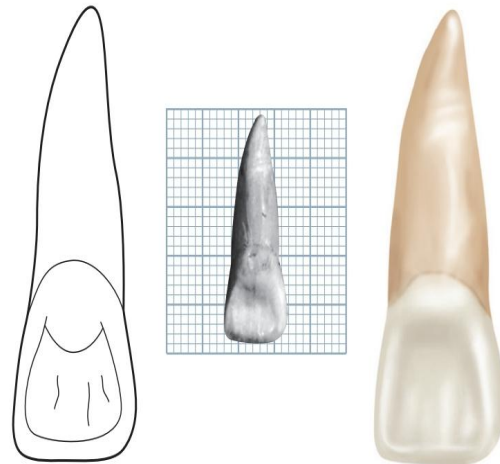


FIGURE 6-3 Maxillary right central incisor, lingual aspect. (Grid = 1 sq. mm.)

TABLE 6-1 Maxillary Central Incisor

First evidence of calcification	3–4 mo
Enamel completed	4–5 yr
Eruption	7–8 yr
Root completed	10 yr

MEASUREMENT TABLE

	CERVICOINCISAL LENGTH OF CROWN	LENGTH OF ROOT	MESIODISTAL DIAMETER OF CROWN	MESIODISTAL DIAMETER OF CROWN AT CERVIX	LABIO- OR BUCCOLINGUAL DIAMETER OF CROWN	LABIO- OR BUCCOLINGUAL DIAMETER OF CROWN AT CERVIX	CURVATURE OF CERVICAL LINE— MESIAL	CURVATURE OF CERVICAL LINE— DISTAL
Dimensions* suggested for carving technique	10.5	13.0	8.5	7.0	7.0	6.0	3.5	2.5

Mesial Aspect:

- Crown from mesial aspect is wedge-shaped, or triangular, with base of triangle at cervix and apex at incisal ridge
- Usually, a line drawn through crown and root from mesial aspect through the center of tooth will bisect apex of the root and also the incisal ridge of the crown. This alignment is characteristic of maxillary central and lateral incisors.
- The root of this tooth from the mesial aspect is cone-shaped, and the apex of the root is usually bluntly rounded.

Distal Aspect:

- Little difference is evident between distal and mesial outlines of this tooth.
- The curvature of the cervical line outlining the CEJ is less curved on the distal than on the mesial surfaces.

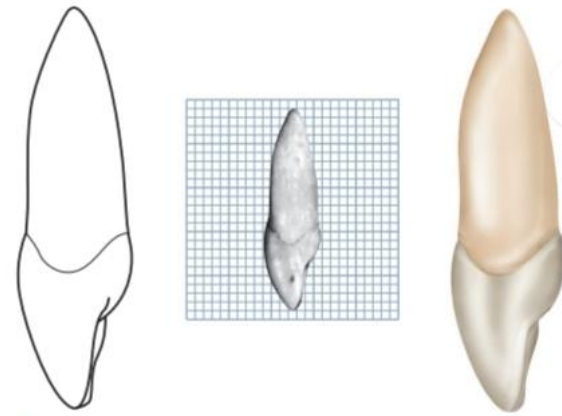


FIGURE 6-4 Maxillary right central incisor, mesial aspect. (Grid = 1 sq. mm)

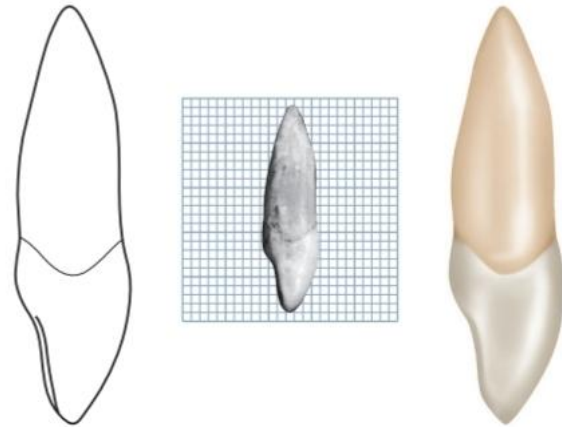


FIGURE 6-5 Maxillary right central incisor, distal aspect. (Grid = 1 sq. mm)

Incisal Aspect :

From this aspect, labial face of the crown is broad and flat in comparison with lingual surface, especially toward the incisal third.

Cervical portion of the crown labially is convex.

Outline of lingual portion tapers lingually toward the cingulum.

Cingulum of crown makes up cervical portion of the lingual surface.

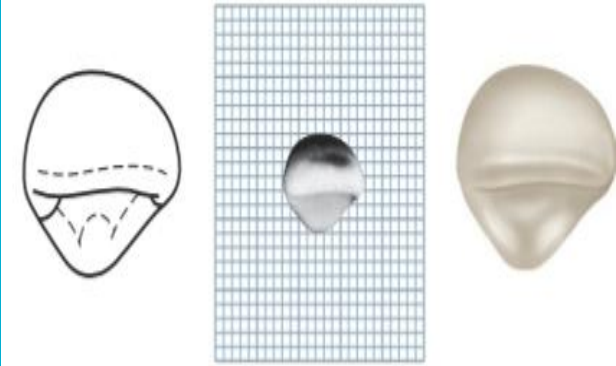


FIGURE 6-6 Maxillary right central incisor, incisal aspect. (Grid = 1 sq. mm)

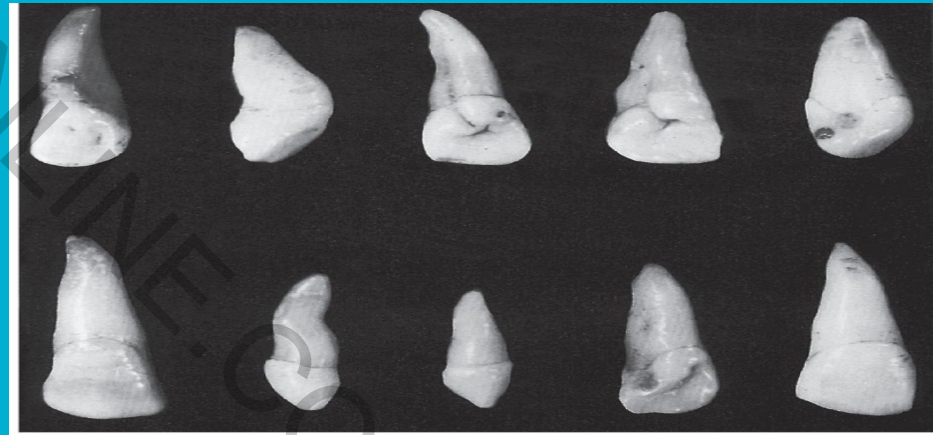
Maxillary Lateral Incisor:

- Because maxillary lateral incisor supplements central incisor in function, crowns bear a close resemblance.
- Lateral incisor is smaller in all dimensions except root length.
- Maxillary lateral incisor vary in form more than any other tooth in the mouth except third molar. If the variation is too great, it is considered a developmental anomaly. A common situation is to find maxillary lateral incisors with a nondescript, pointed form; such teeth are called peg-shaped laterals.

In some individuals, the lateral incisors are missing entirely.

Presence of a palatogingival groove in maxillary incisors may be a predisposing factor in localized periodontal disease.

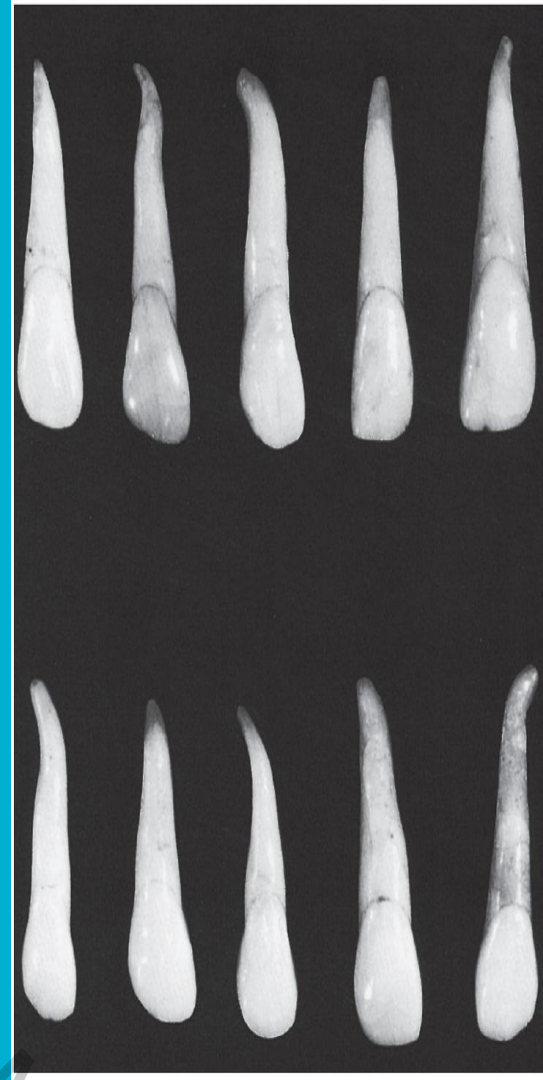
One type of malformed maxillary lateral incisor has a large, pointed tubercle as part of the cingulum; some have deep developmental grooves that extend down on root lingually with a deep fold in cingulum; and some show twisted roots, distorted crowns, and so on



MAXILLARY LATERAL INCISOR FROM ALL ASPECTS:

Labial Aspect:

- Labial aspect of maxillary lateral incisor is almost like that of the central incisor, but usually it has more curvature, with a rounded incisal ridge and rounded incisal angles mesially and distally .
- Crown is smaller in all dimensions as compared to central incisor.
- Mesial outline of crown from the labial aspect resembles that of the central incisor, with a more rounded mesioincisal angle.with crest of contour usually at point of junction of middle and incisal thirds.
- Distal outline is always more rounded, with crest of contour in the center of the middle third .
- Its root length is greater in proportion to its crown length than central incisor.Root is often about 1.5 times length of the crown.In most cases,root curves sharply in a distal direction,but some roots are straight.



Lingual Aspect:

- From lingual aspect, mesial and distal marginal ridges are marked, and cingulum is usually prominent, with a tendency toward deep developmental grooves within the lingual fossa, where it joins the cingulum.
- Linguoincisal ridge is well developed, and lingual fossa is more concave and circumscribed than that found on the central incisor.
- It is common to find a deep developmental groove at side of cingulum, usually on distal side, which may extend up on the root for part or all of its length.

Mesial Aspect:

- Mesial aspect of maxillary lateral incisor is similar to that of a small central incisor except that the root appears longer.
- Crown is shorter, the root is relatively longer
- Root appears as a tapered cone , with a bluntly rounded apical end.
- As in central incisor, a line drawn through the center of the root tends to bisect the incisal ridge of the crown.

Distal Aspect:

It is common to find a developmental groove distally on this crown extending on the root for part or all of its length.

Incisal Aspect :

Incisal aspect of this tooth sometimes resembles that of the central incisor, or it may resemble that of a small canine, depending on the variations seen in development of the tooth.

All maxillary lateral incisors exhibit more convexity labially and lingually from the incisal aspect than do the maxillary central incisors.

TABLE 6-2 Maxillary Lateral Incisor

First evidence of calcification	10–12 mo
Enamel completed	4–5 yr
Eruption	8–9 yr
Root completed	11 yr

MEASUREMENT TABLE

	CERVICOINCISAL LENGTH OF CROWN	LENGTH OF ROOT	MESIODISTAL DIAMETER OF CROWN	MESIODISTAL DIAMETER OF CROWN AT CERVIX	LABIO- OR BUCCOLINGUAL DIAMETER OF CROWN	LABIO- OR BUCCOLINGUAL DIAMETER OF CROWN AT CERVIX	CURVATURE OF CERVICAL LINE— MESIAL	CURVATURE OF CERVICAL LINE— DISTAL
--	--------------------------------------	----------------------	-------------------------------------	--	---	---	---	---

Dimensions*
suggested for
carving
technique

9.0	13.0	6.5	5.0	6.0	5.0	3.0	2.0
-----	------	-----	-----	-----	-----	-----	-----

*In millimeters.