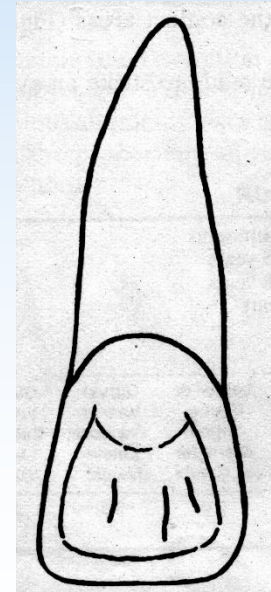
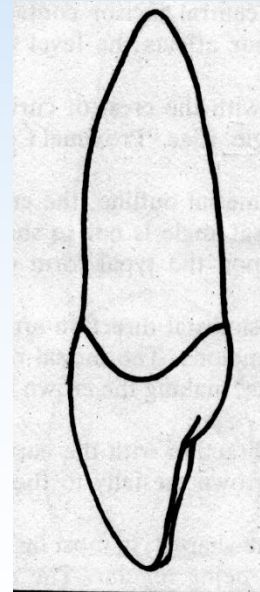
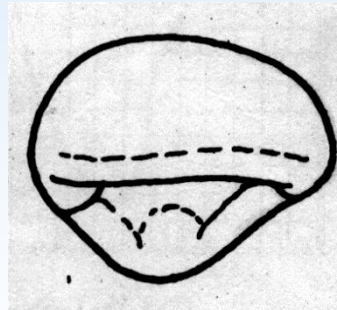
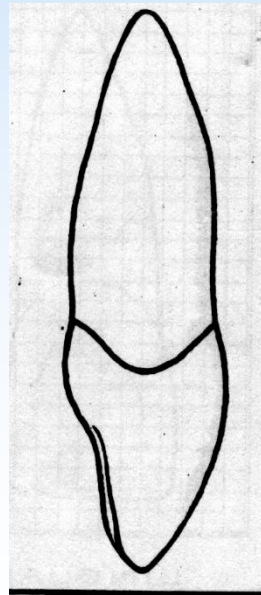
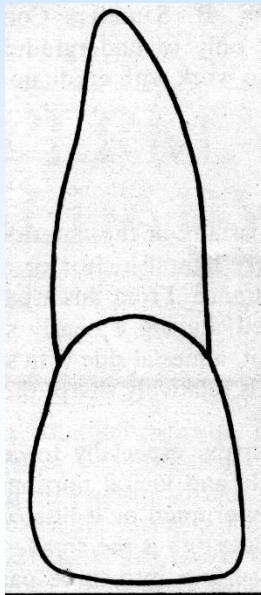


DEPARTMENT OF ORAL
PATHOLOGY

MAXILLARY CENTRAL INCISOR



INTRODUCTION

The maxillary Central Incisor is the widest mesiodistally of any of the anterior teeth. The labial face is less convex than maxillary Lateral Incisor or canine, which gives the Central Incisor a square or rectangular appearance.

- From this aspect, the crown nearly always looks symmetrical and regularly formed, having a nearly straight incisal edge, a cervical line with even curvature toward the root, a mesial side with straight outline, the distal side more curved. The mesial incisal angle is relatively sharp, the distal incisal angle rounded.

- Although the labial surface of the crown is usually convex, especially toward the cervical third, some central incisors will be flat at the middle and incisal portions.
- The enamel surface is relatively smooth. When the tooth is newly erupted or if little wear is evident, mamelons will be seen on the incisal edge. The middle one is the smallest.

- The developmental lines on the labial surface which divide the surface into are most noticeable at the middle portion if they can be distinguishable at all.

- Lingually, the surface form of the maxillary Central Incisor is more irregular. The largest part of the middle and incisal portion of the lingual area is concave . the concavity is bordered by mesial and distal marginal ridges, the lingual portion of the incisal ridge, and the concavity root wise of the cingulum. The lingual topography gives the scoop like form to the crown.

- The maxillary Central Incisor usually develops normally. One anomaly sometimes occurs is a short root. Other variation is unusually long crown.
- The maxillary Central Incisors are the most prominent teeth incisal the mouth. There are two basic forms: the first is relatively wide at the cervix when viewed from the labial aspect, incisal comparison with the mesiodistal width at the contact areas; second form is relatively narrow at the cervix, where the root joins the crown, incisal comparison with the mesiodistal width at the contact areas

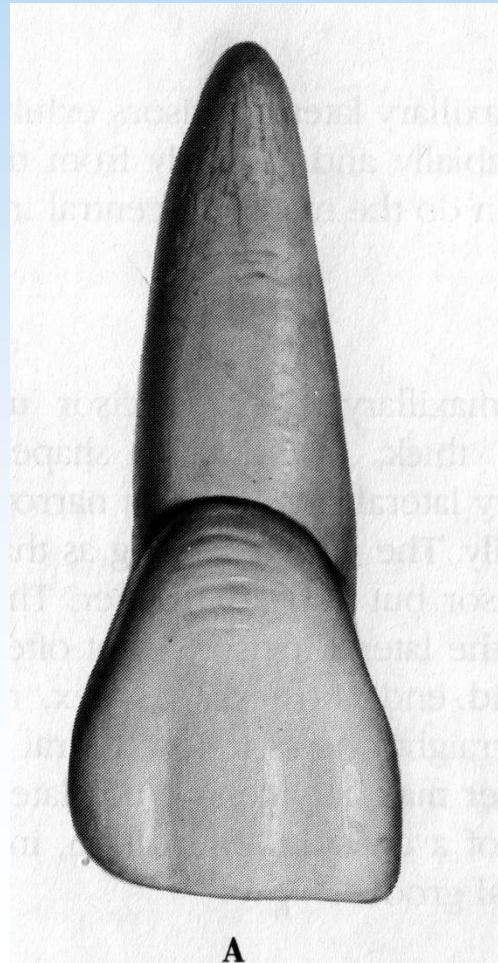
- First evidence of calcification months 3 to 4
- Enamel completed years 4 to 5
- Eruption years 7 to 8
- Root completed 10 years

MEASUREMENT TABLE

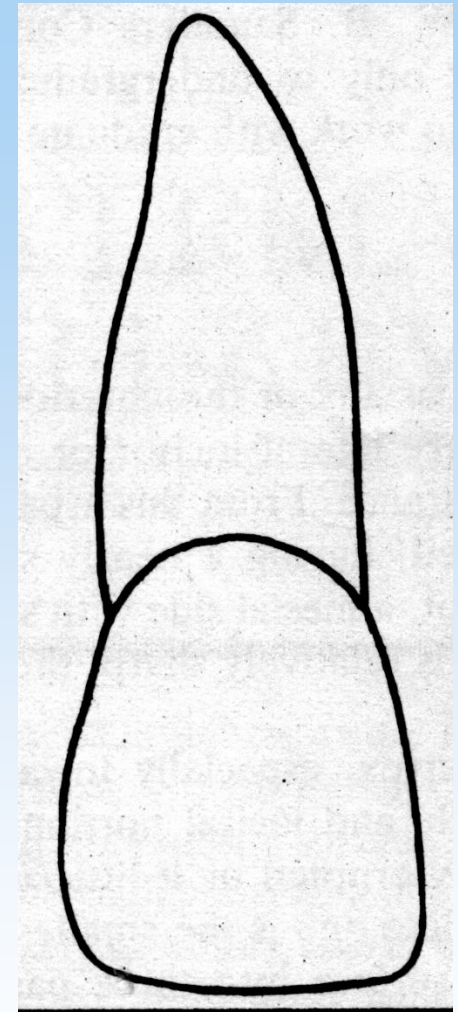
- Cervico incisal length of crown 10.5
- Cervico incisal length Of root 13.0
- Mesiodistal diameter of crown 08.5
- Mesiodistal diameter of crown At cervix 07.0
- Labiolingual diameter of crown 07.0
- Labiolingual diameter of crown At cervix 06.0
- Curvature of cervical line mesial 03.5
- Curvature of cervical line distal 02.5

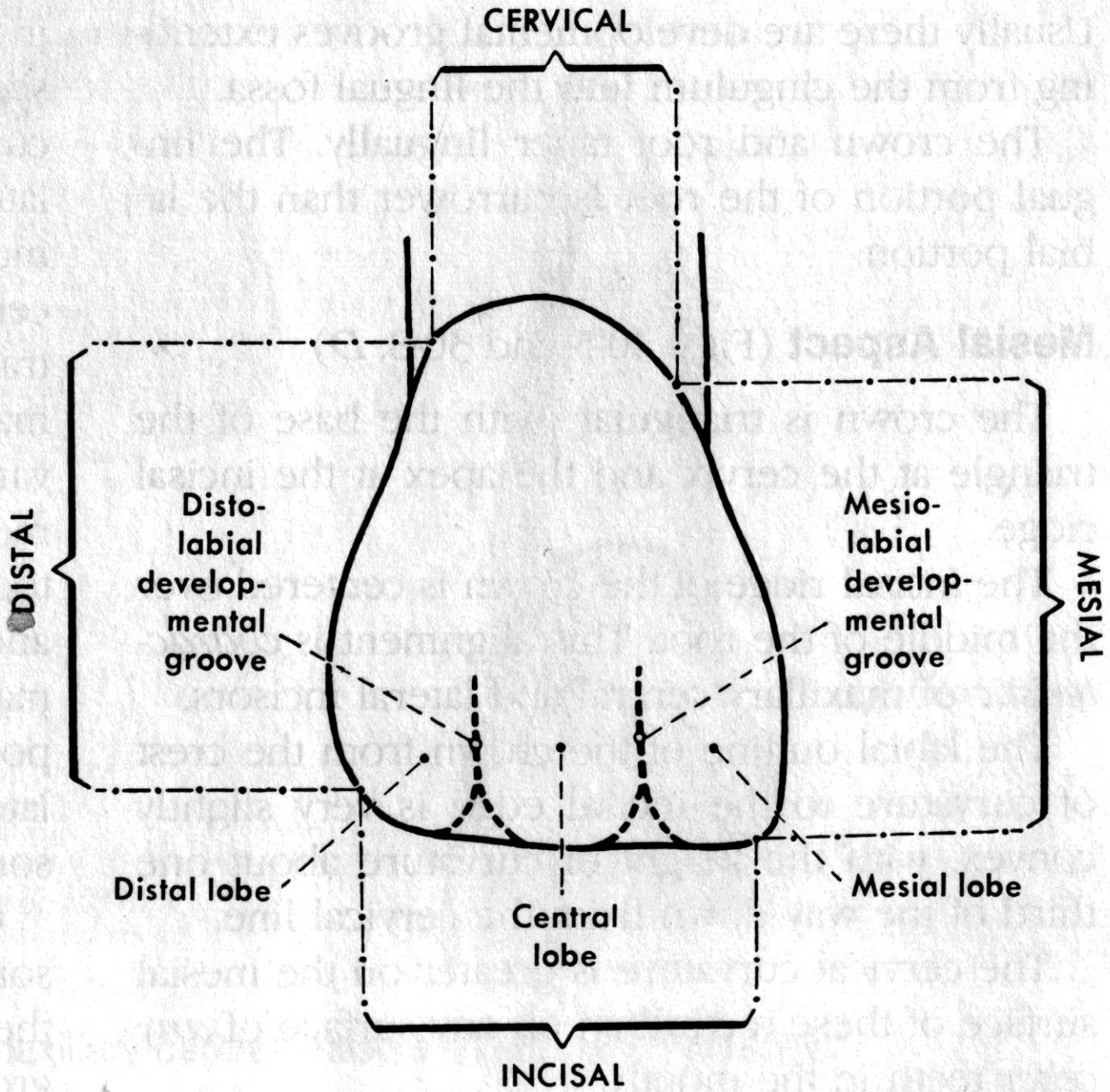
DETAILED
DESCRIPTION FROM
ALL ASPECTS

LABIAL ASPECT

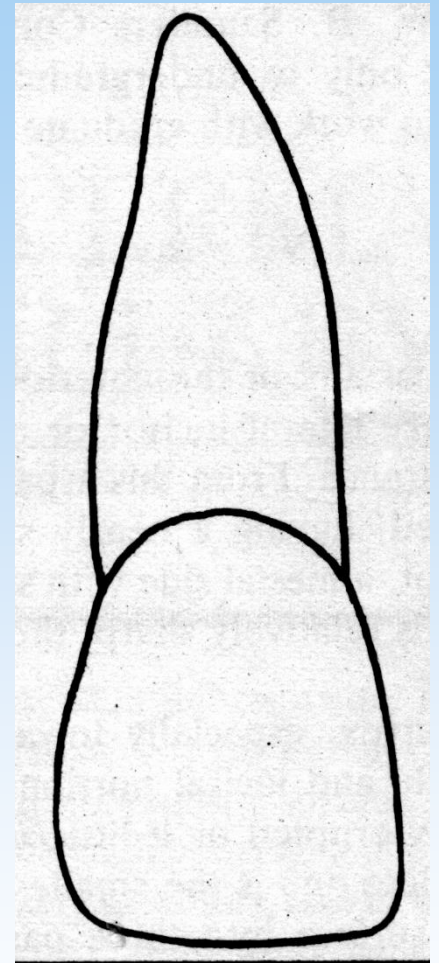


- The crown of average Central Incisor will be 10 to 11 mm long from the highest point on the cervical line to the lowest point on the Incisal edge. The mesio distal measurement will be 8 to 9 mm wide at the contact area. The mesiodistal measurement, where the root joins the crown, will be 1.5 to 2 mm less.

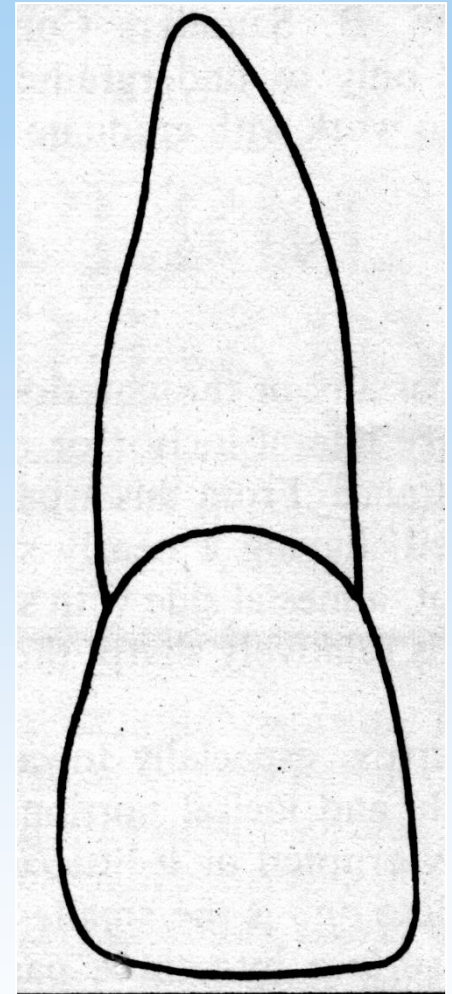




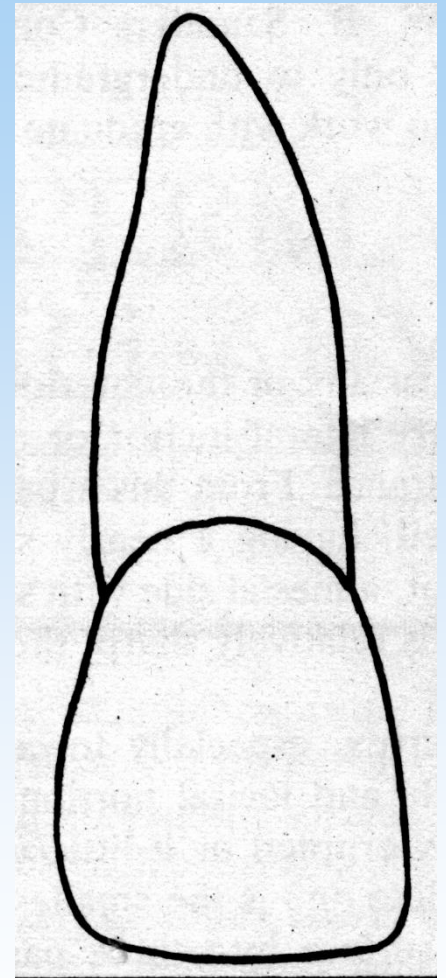
- . The crest of curvature mesially and distally on the crown represent the areas at which the Central Incisor contact its neighbors. Any change in the position of this crest of contour affects the level of the contact area
- The mesial outline of the crown is only slightly convex, with the crest of curvature approaching the mesioincisal angle



- Distal outline of the crown is more convex than the mesial outline; the crest of curvature being higher towards the cervical line, the distoincisal is not so sharp as the mesioincisal angle, the extent of curvature depending upon the typical form of the tooth.



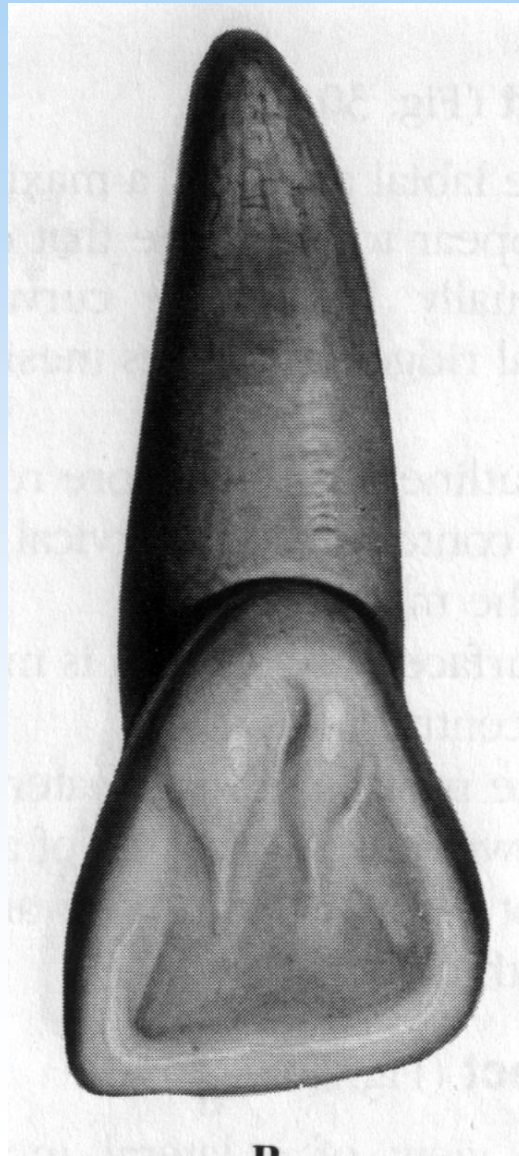
- The Incisal outline is usually regular and straight in a mesiodistal direction after the tooth has been in function long enough to obliterate the mamelons. The Incisal outline tends to curve downwards towards the centre crown outline making the crown length greater at the center than at two mesial angle



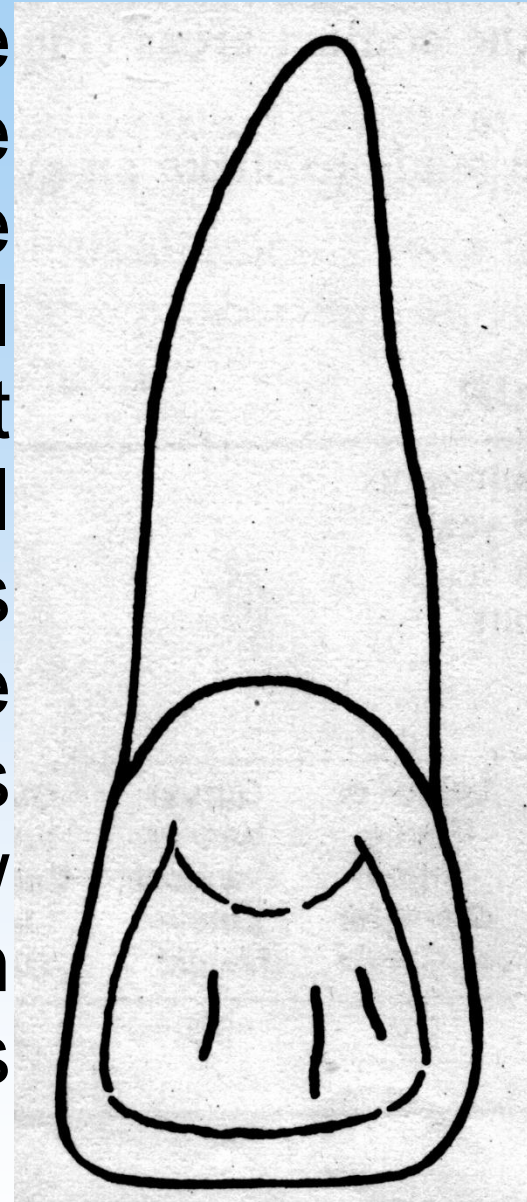
- The cervical outline of the crown follows a semicircular direction with the curvature root wise from the point at which the root outline joins the crown mesially to the point at which the root outline joins the crown distally

- The root of the Central Incisor from the labial aspect is cone shape, in most instances with the relatively blunt apex, the outline mesially and distally being regular. The root is usually 2 or 3 mm longer than the crown, although it varies considerably
- A line drawn through the center of the root and crown of maxillary Central Incisor tends to parallel the mesial outline of the crown and root.

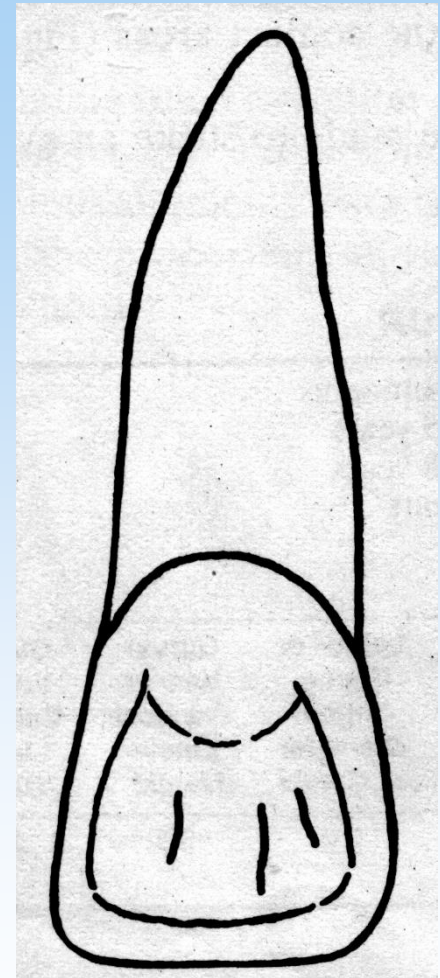
LINGUAL ASPECT



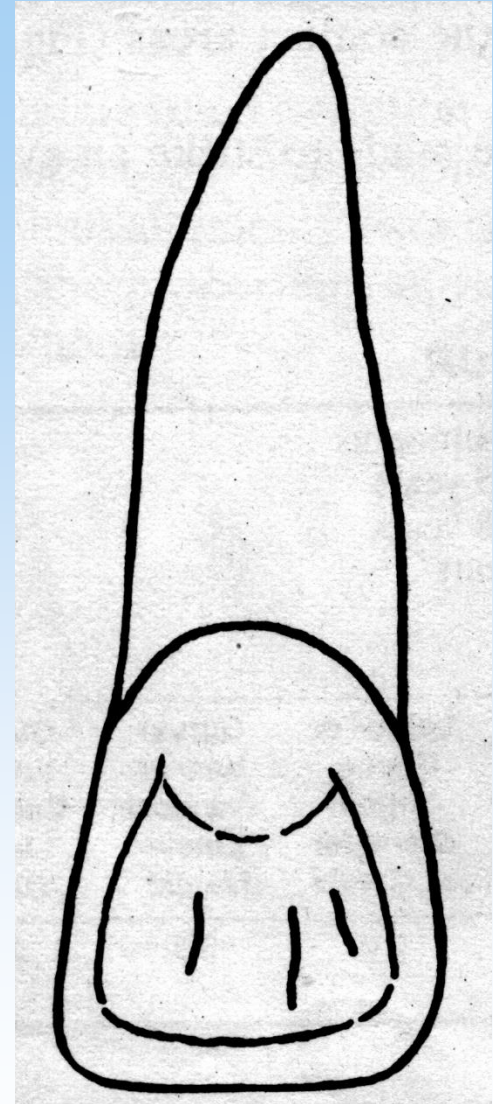
- The lingual outline of the maxillary Central Incisor is the reverse of that found on the labial aspect. The lingual aspect of the crown is different in comparison to the labial aspect. The lingual aspect has convexities and concavity. The outline of the cervical line is similar ,but immediately below the cervical line a smooth convexity is to be found this is called the cingulum



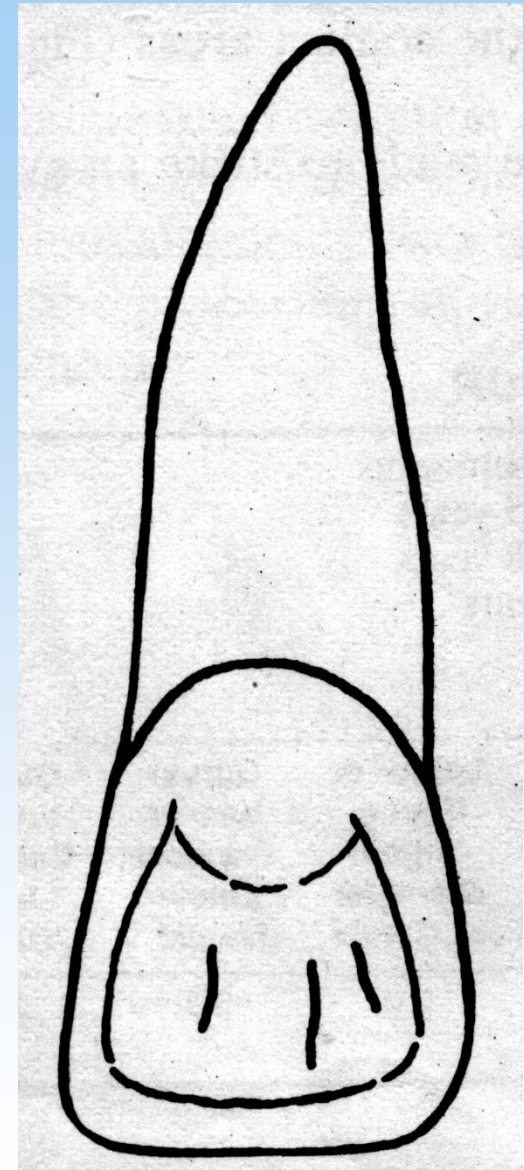
- Mesially and distally confluent with the cingulam are the marginal ridge. Between the marginal ridge, below the cingulam, a shallow concavity is present called the lingual fossa. Outlining the lingual fossa, the linguoincisal edge is raised somewhat, being on a level with the marginal ridge mesially and distally, completing the lingual portion of the Incisal ridge of the Central Incisor



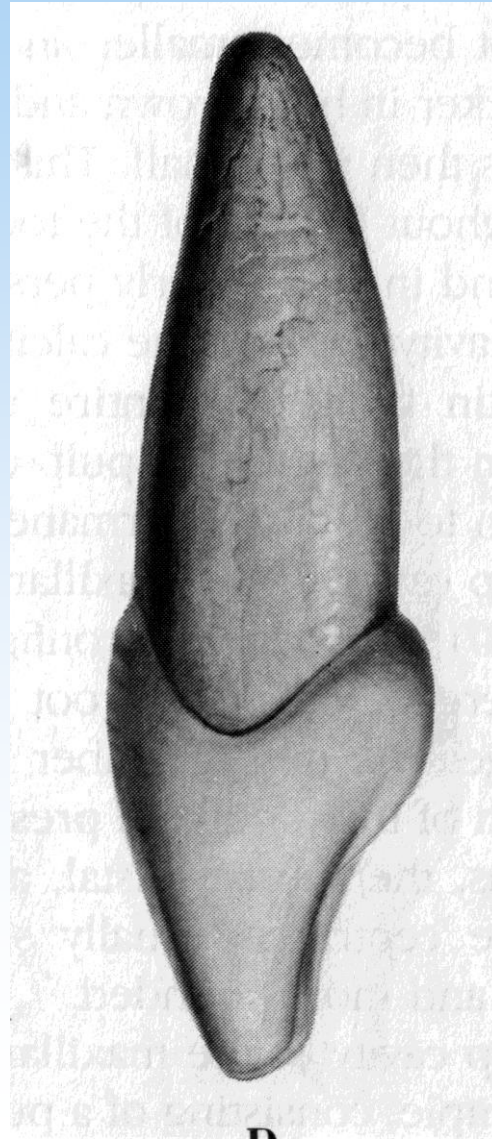
- Lingual fossa is bordered mesially by the mesial marginal ridge, incisally by lingual portion of the Incisal ridge, distally by the distal marginal ridge and cervically by the cingulum. Usually there are developmental grooves extending from the cingulum into the lingual fossa.



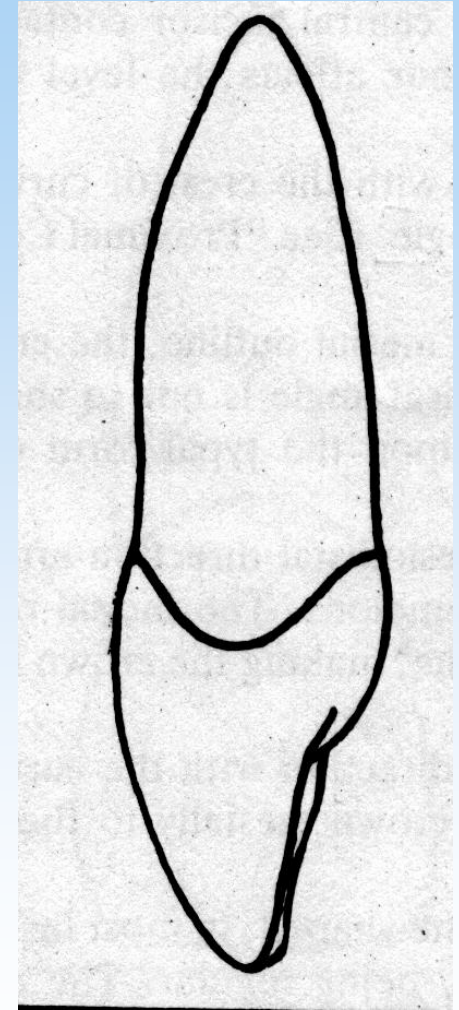
- The crown and root taper lingually, making the crown calibration at the two labial line angle greater than the calibration at the two lingual line angles and making the lingual portion of the root narrow than the labial portion. A cross section of the root at the cervix shows the root to be generally triangular with rounded angles: one side of the triangle is labial with mesial and distal side pointing lingually. The mesial side of this triangle is a trifle longer than the distal side



MESIAL ASPECT



- The mesial aspect of this tooth has the fundamental form of an incisor: the crown is wedge shape , or triangular , with the base of triangle at the cervix and the apex at the Incisal ridge.



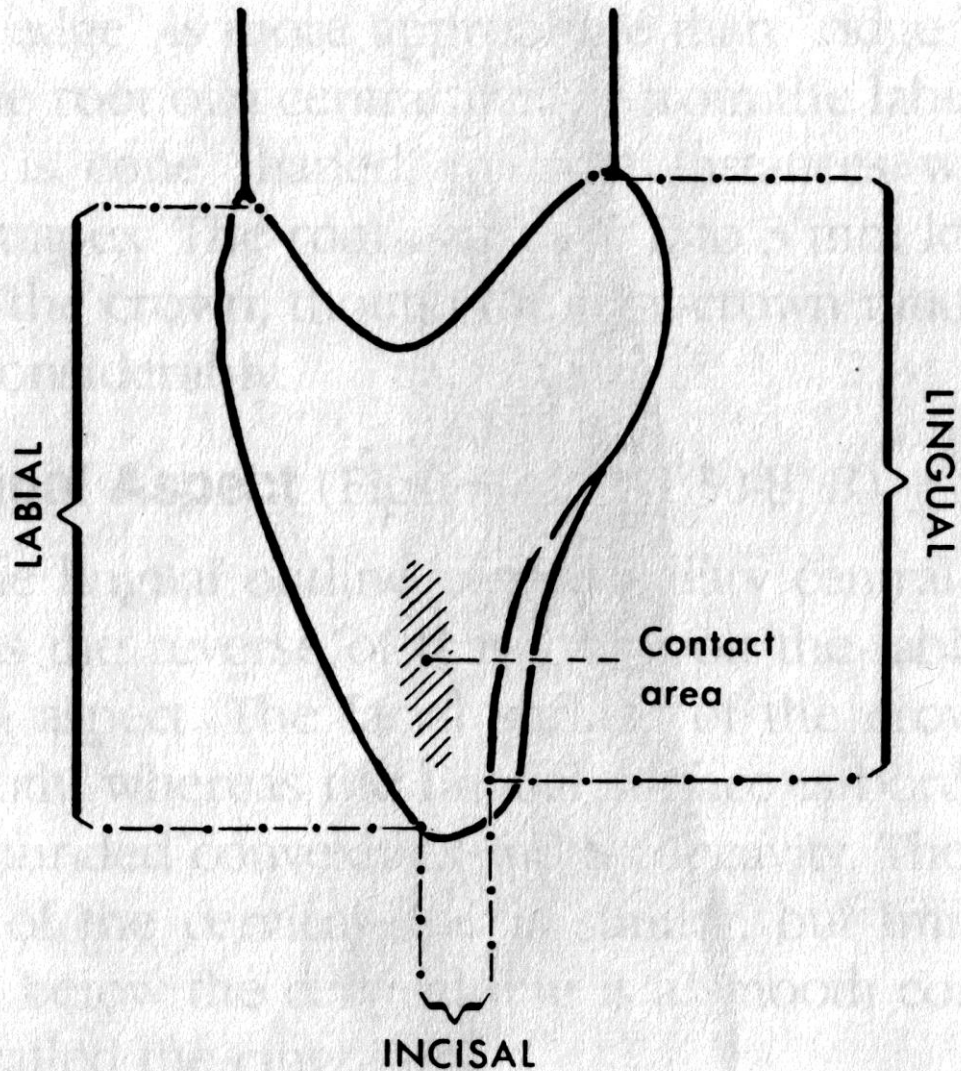
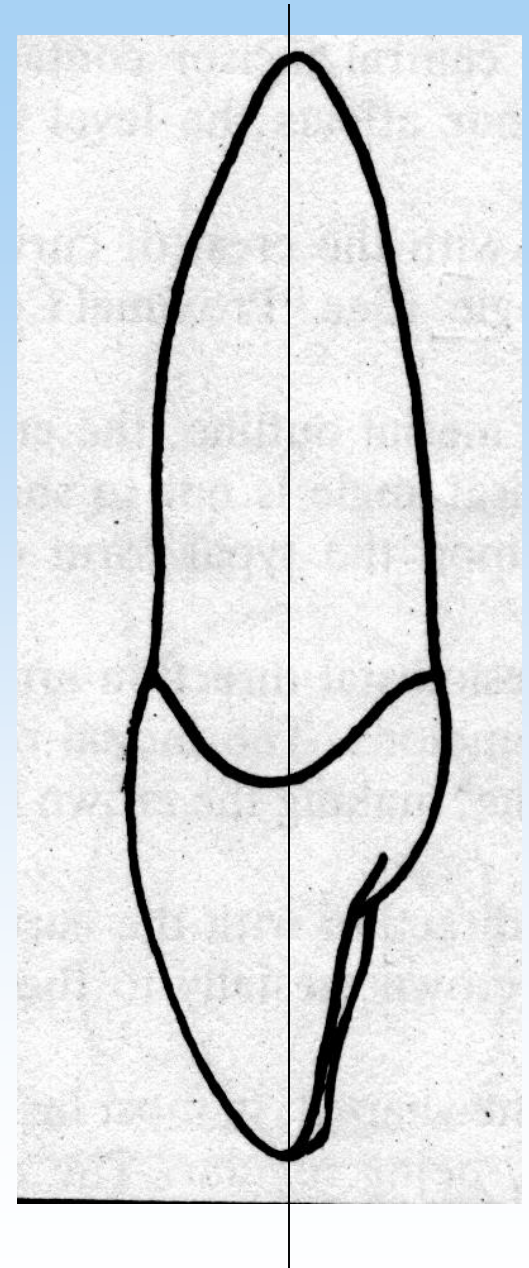
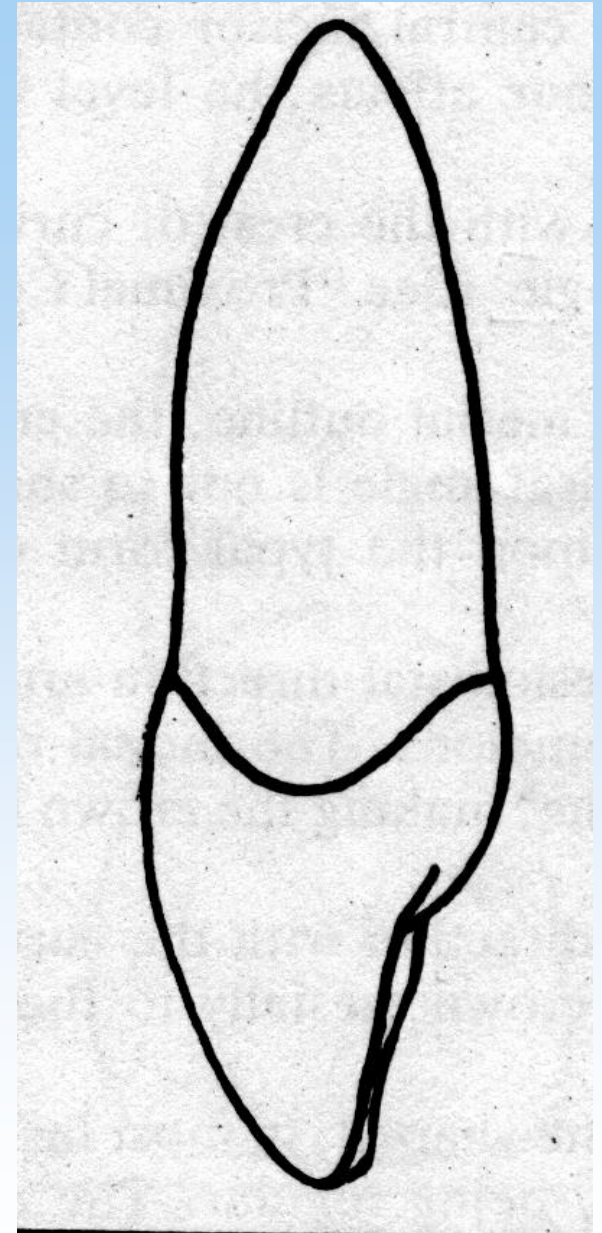


Fig. 30-5 Mesial surface of maxillary right central incisor. (Zeisz and Nuckolls.)

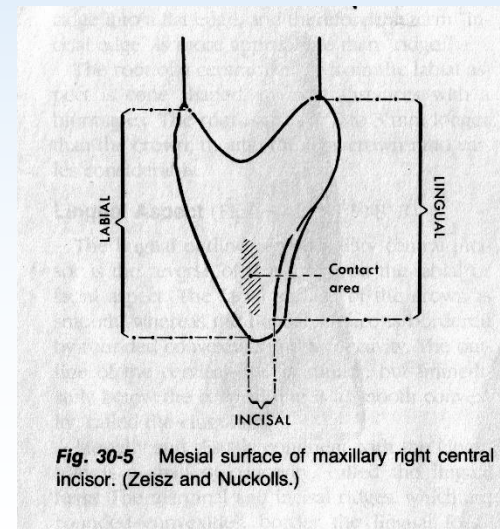
- A line drawn through the crown and the root from the mesial aspect through the center of the tooth will bisect the apex of the root and also the ridge of the crown. This Incisal ridge of the crown is therefore on a line with the center of the root. This alignment is characteristic of maxillary Central Incisor and Lateral Incisor.



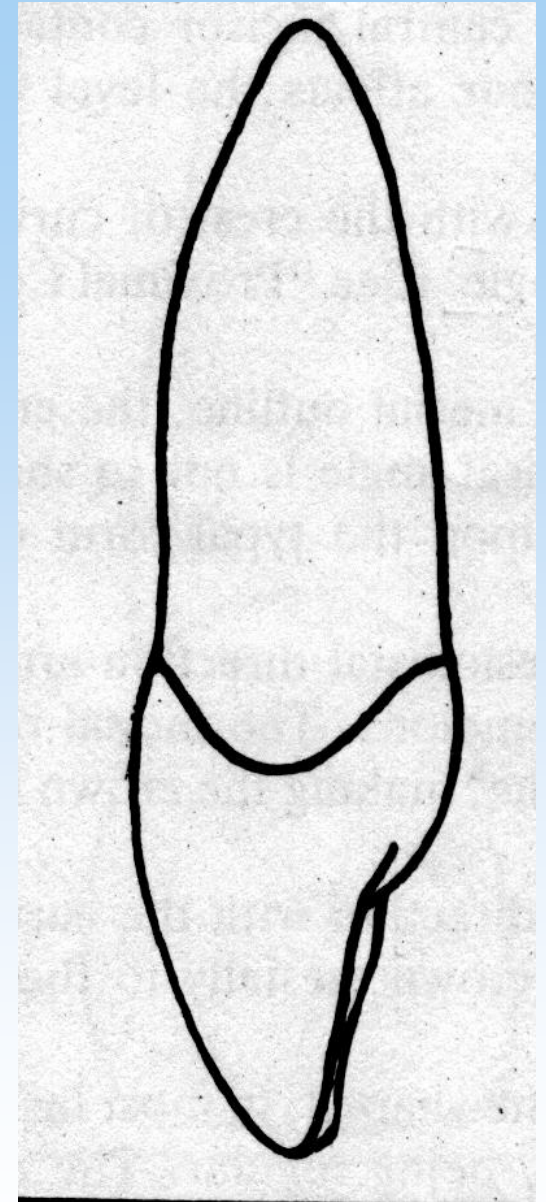
- A straight line drawn through the center of the crown and root from the mesial or distal aspect will rarely if ever pass lingual to the Incisal edge. Maxillary Incisors are occasionally seen with the Incisal ridge lingual to the bisecting line.



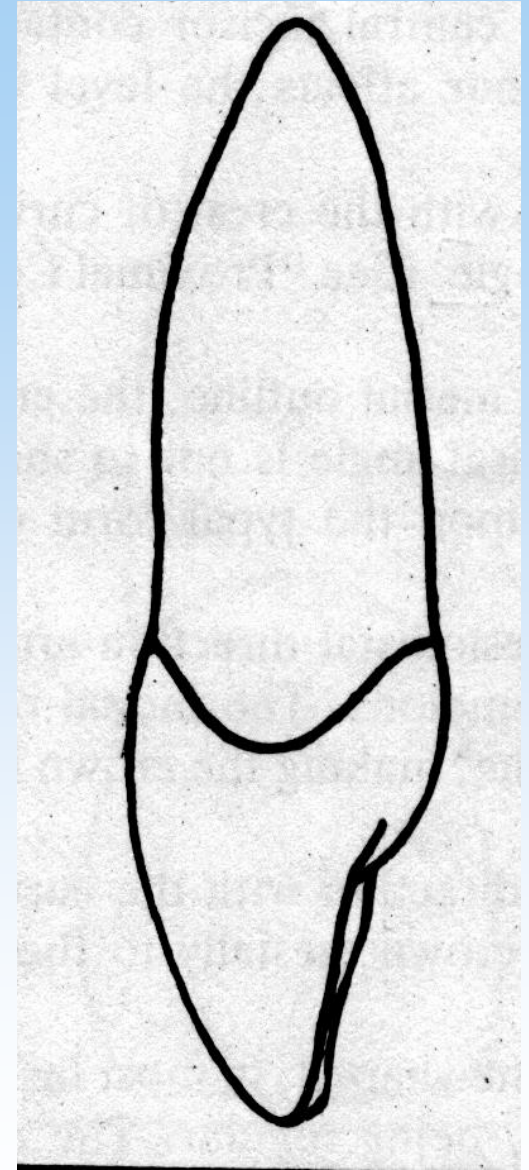
- Labially and lingually, immediately coronal to the cervical line is the crest of curvature of these surfaces. This crest of contour gives the crown its greatest Labiolingually measurements.



- The labial outline of the crown from the crest of curvature to the Incisal ridge is vary slightly convex. The lingual outline is at the point where it joins the crest of curvature at the cingulam; it then becomes concave at the mesial marginal ridge, and it becomes slightly convex again at the linguoIncisal ridge and the Incisal edge.

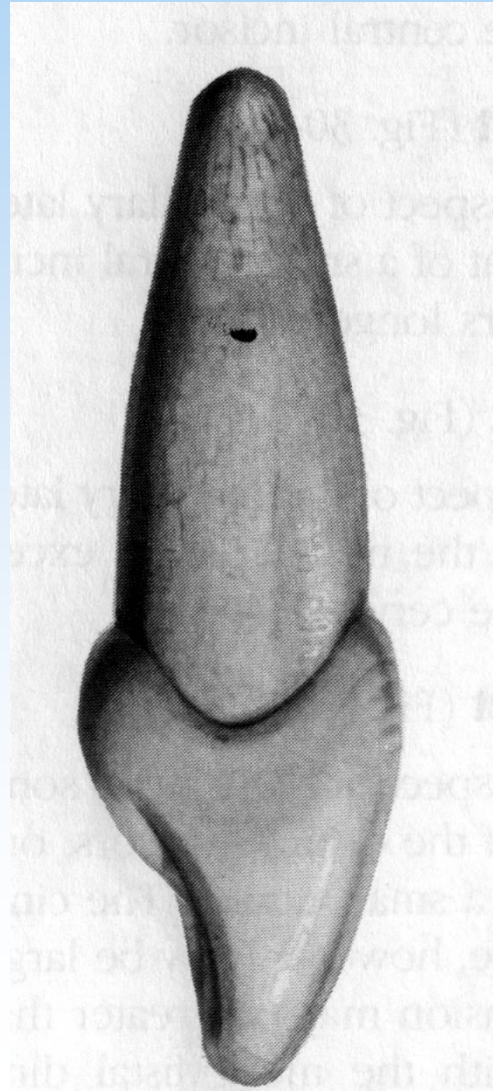


- The cervical line outlining the CEJ mesially on the maxillary Central Incisor curve incisally to a noticeable degree. This cervical curvature is greater on the mesial surface of this tooth than on any surface of any other tooth in the mouth. The curvature varies in extent, depending up on length of the crown and the measurement of the crown Labiolingually



- on an average Central Incisor of 10.5 to 11 mm in crown length the curvature will be 3 to 4 mm
- the root of this tooth from the mesial aspect is cone-shaped, and the apex of the root is usually bluntly rounded.

DISTAL ASPECT



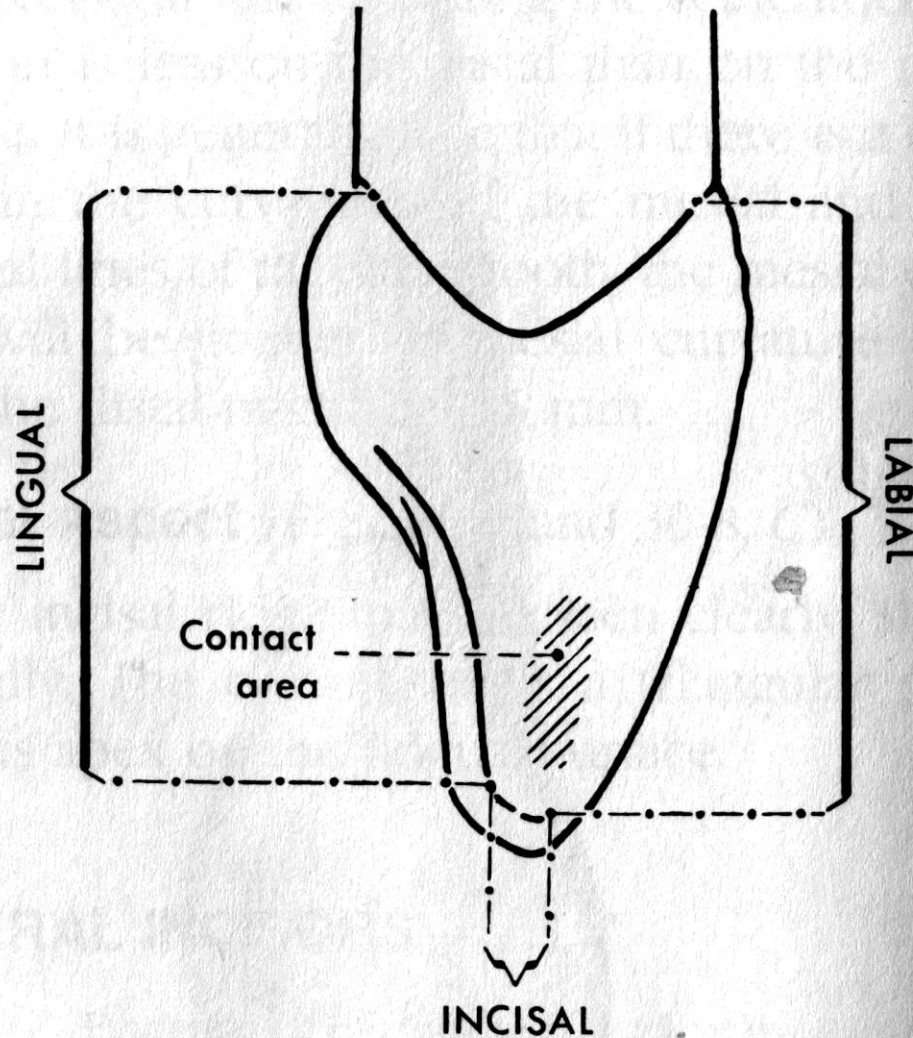
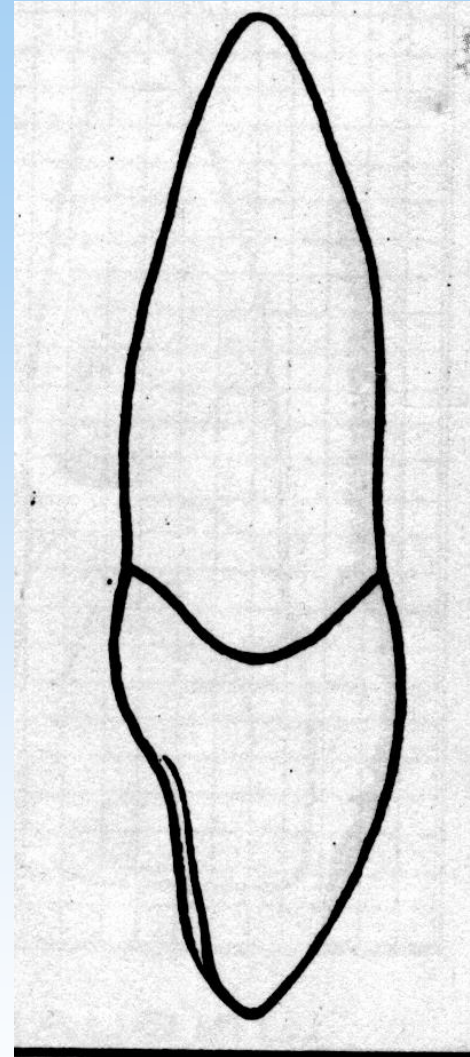
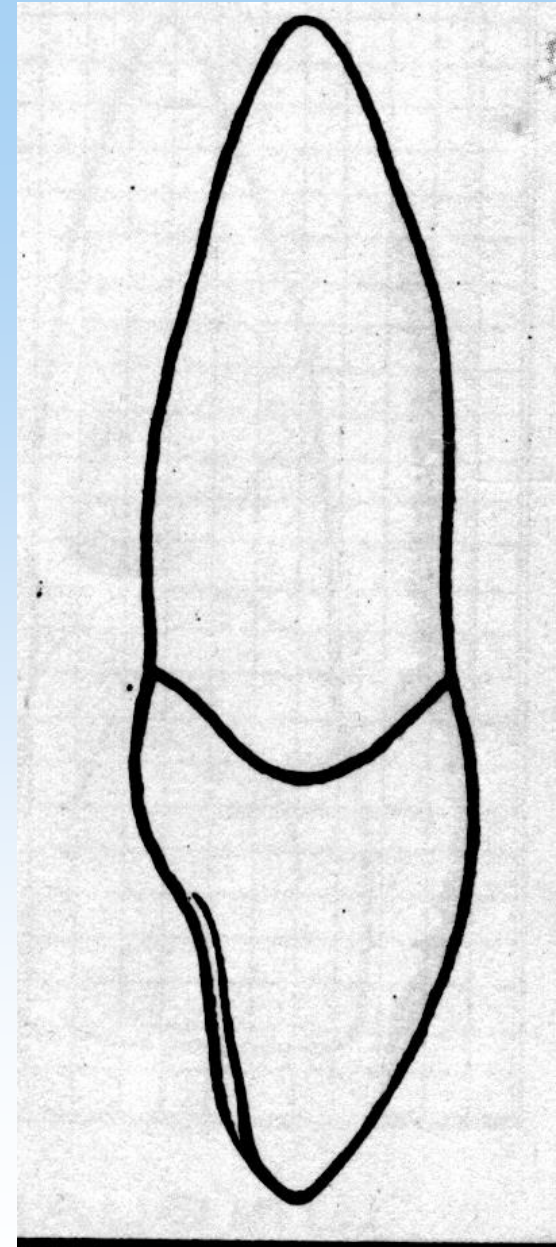


Fig. 30-6 Distal surface of maxillary right central incisor. (Zeisz and Nuckolls.)

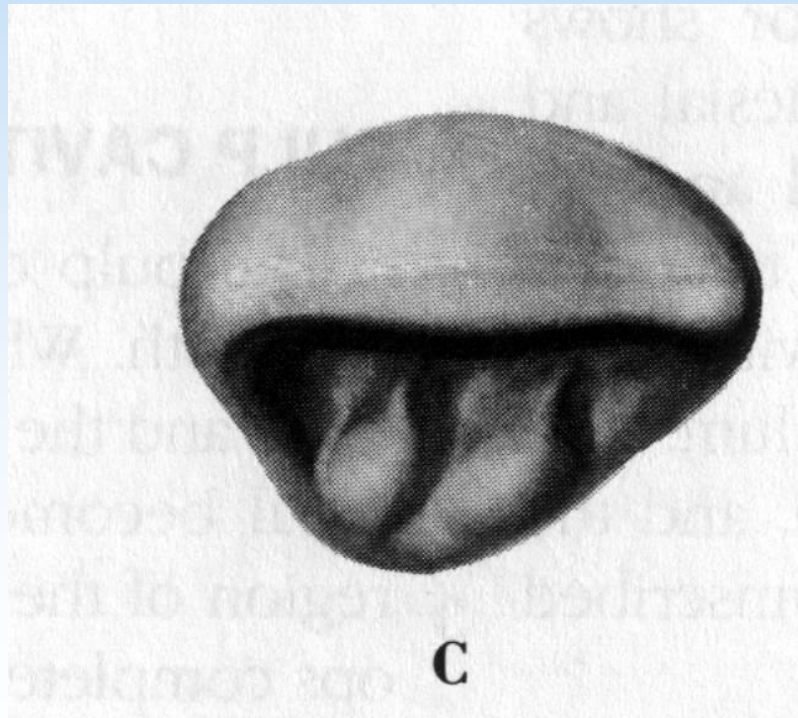
- There is little difference between the distal and mesial outline of this tooth. When looking at the Central Incisor from the distal aspect we may note that the crown gives the impression of being somewhat thicker towards the Incisal third. Because of the slope of the labial surface distolingually, more of that surface is seen from distal aspect;



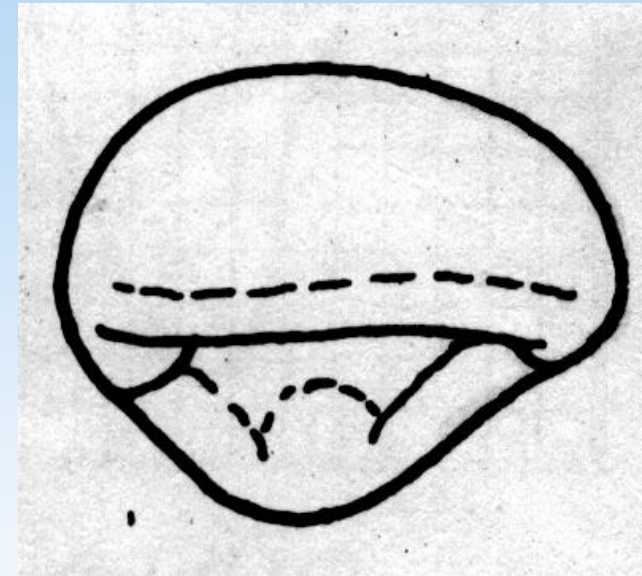
- this creates the illusion of greater thickness, actually most teeth are turned a little on their root bases, in order to the dental arch curvature, The maxillary Central Incisor is no exception
- The curvature of the cervical line outlining the CEJ is less in extent on the distal than on the mesial surface. Most teeth show this characteristic.



INCISAL ASPECT



- From this aspect labial face of the crown is relatively broad and flat in comparison with the Lingual surface, specially towards the Incisal third. Nevertheless, the cervical portion of the crown Labially is convex, although the arc described is broad.



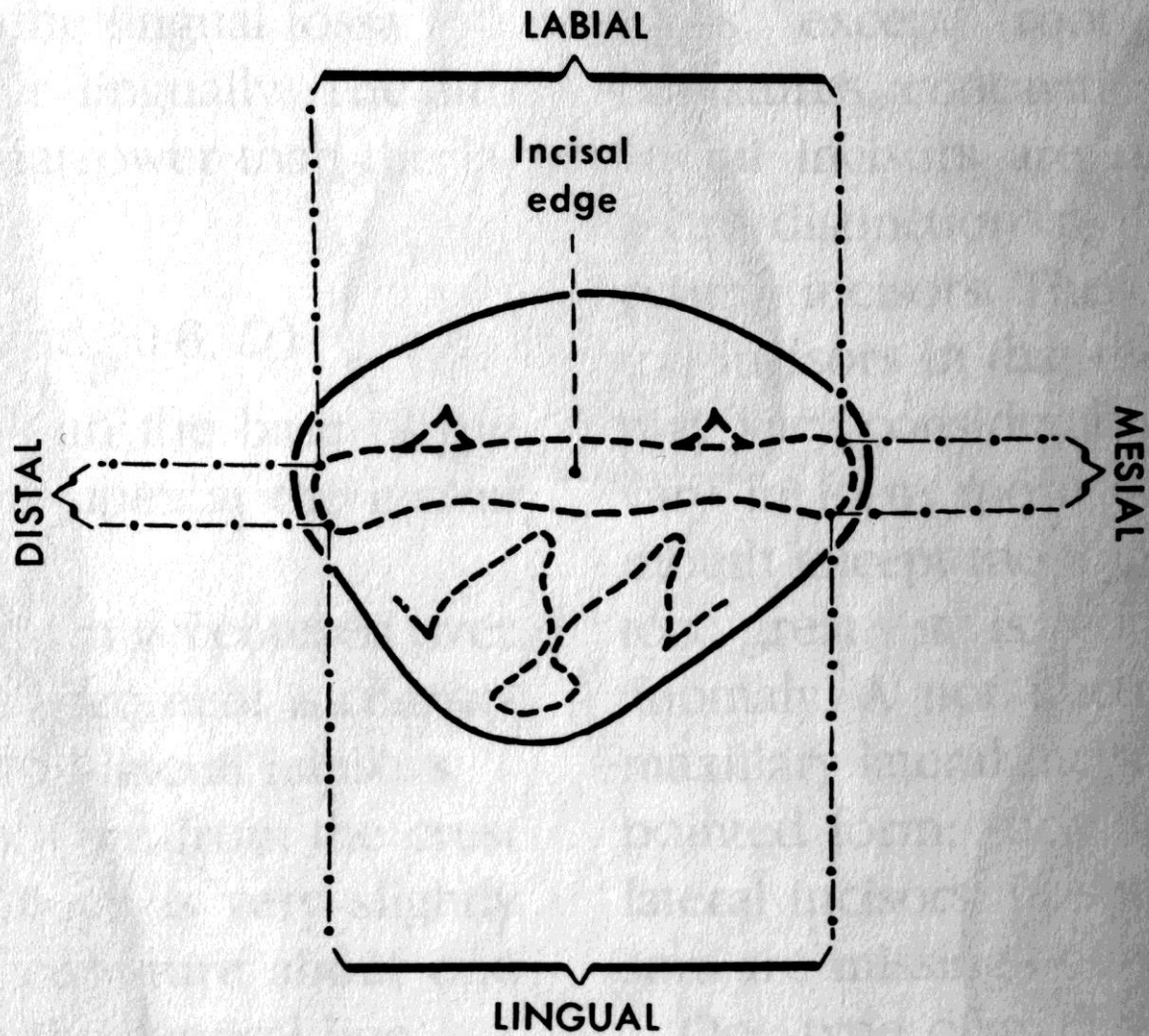
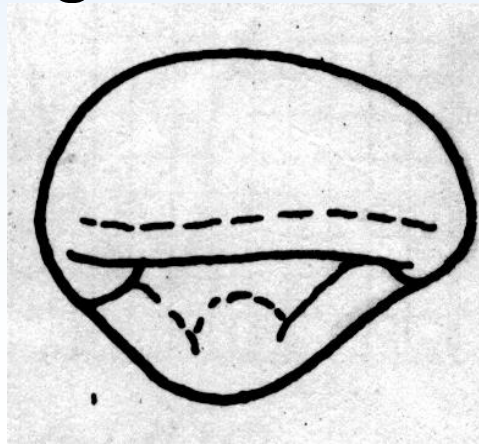
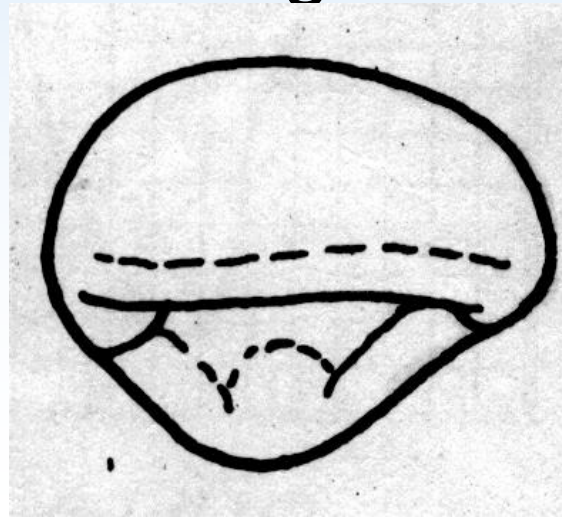


Fig. 30-7 Incisal edge of maxillary right central incisor. (Zeisz and Nuckolls.)

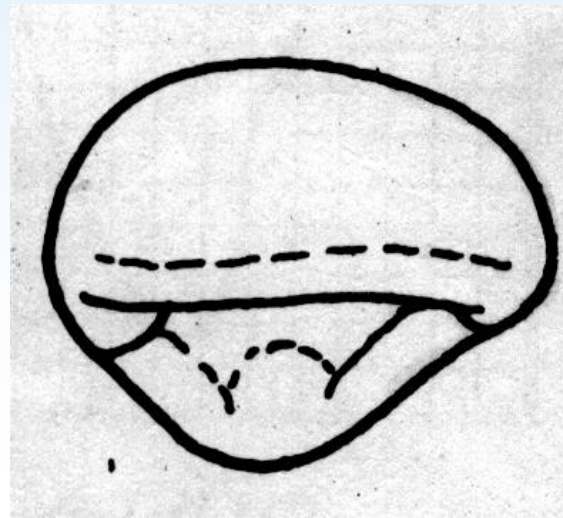
- The Incisal ridge may be seen clearly, and a differentiation between the Incisal edge and the remainder of the Incisal ridge, with its slope towards the Lingual, is easily distinguished..
- The outline of lingual portion tapers lingually towards the cingulum. The cingulum crown makes up the cervical portion of the lingual surface.



- The mesiolabial and distolabial line angle are prominent from the incisal aspect. The relative positions of these line angles should be compared with the mesiolingual and distolingual line angles- which are represented by the borders of the mesial and distal marginal ridges. The mesiodistal calibration of the crown at the labial line angles is greater than the same calibration at the lingual line angles.



- The crown of this tooth shows more bulk from the incisal aspect than one would expect from viewing it from the mesial or distal aspect. There are relatively broad surfaces at the site of contact areas mesially and distally. Comparison should also be made between the dimensions of the crown Labiolingually and mesiodistally. The Labiolingual calibration of the crown is more than two thirds as great as the mesiodistal calibration. A cursory examination would not indicate this comparison.



- Bilaterally, the outline of the incisal aspect is rather uniform. The lingual portion shows some variations, however, in that a line drawn from the mesioincisal angle to the center of the cingulum lingually will be a longer line than one drawn from the same point on the cingulum to the distoincisal angle. The crown confronts to a triangular outline reflected by the outline of the root cross section at the cervix mentioned formerly

