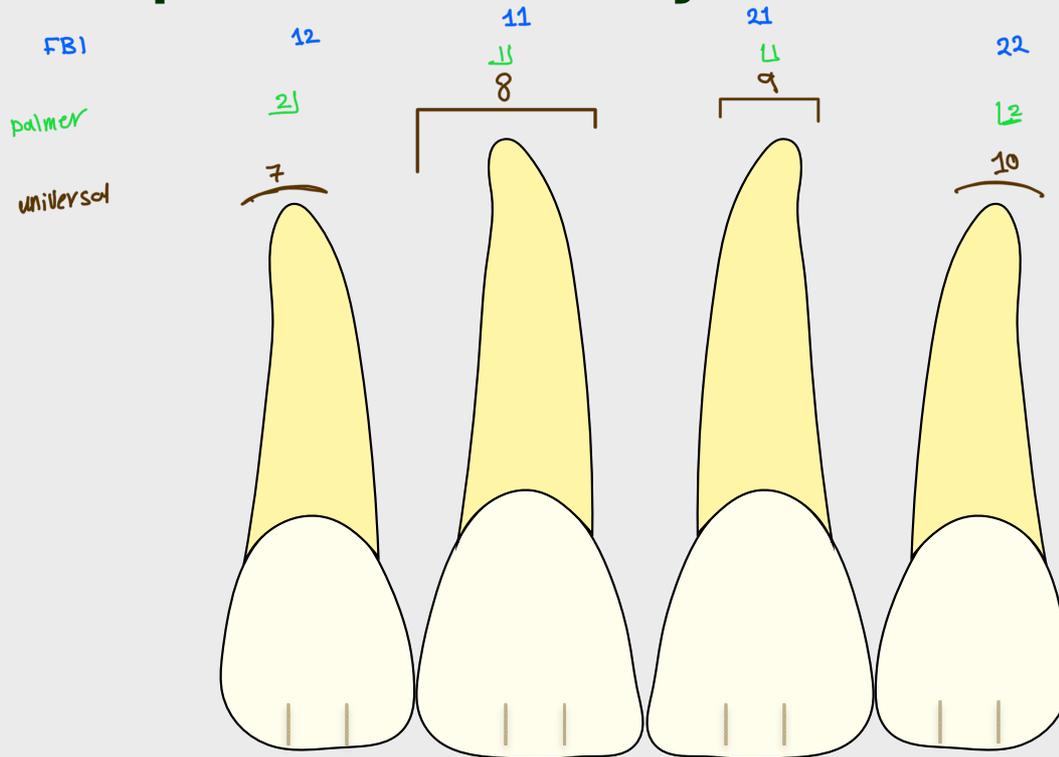


Description of Maxillary Permanent Incisors



Dr Sherif Hassan
2025

central Incisor → closest teeth to the midline

Maxillary Permanent Central Incisor

* most widest *

The *** Broadest *** Anterior Tooth.



Chronology

Maxillary permanent central incisor

- Appearance of Dental Organ 5 ^{month intra uterine} MIU.
- Beginning of Calcification 3-4 months
- ^{4-5 years} Crown Completed ^{enamel completed at eruption} 4-5 years
- Eruption 7-8 years
- ^{Root completed after 2 year of Eruption} Root Completed 10 years

Notes:

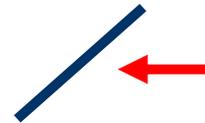
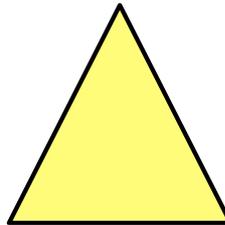
- Eruption begin after formation of cervical root third.
- MIU = month intra-uterine

Geometric outline of crown surfaces

Trapezoid

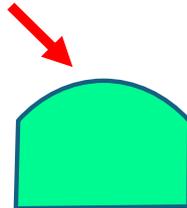


Triangle

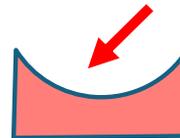


Straight

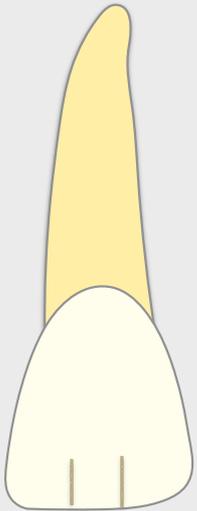
Convex



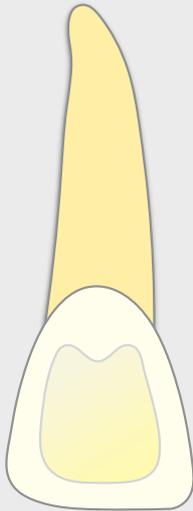
Concave



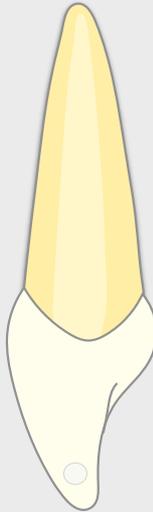
Aspects of Maxillary permanent central incisor



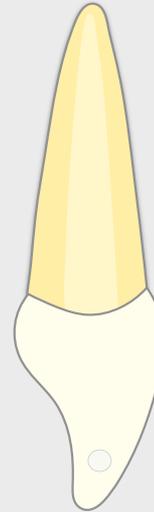
Labial



Lingual



Mesial



Distal



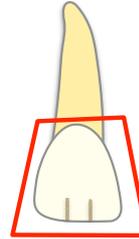
Incisal

Labial Aspect

□ Geometrical outline of the crown:

Trapezoid

- The Short Side Located Cervically.
- The Long Side Located Incisally.



□ Mesial outline:

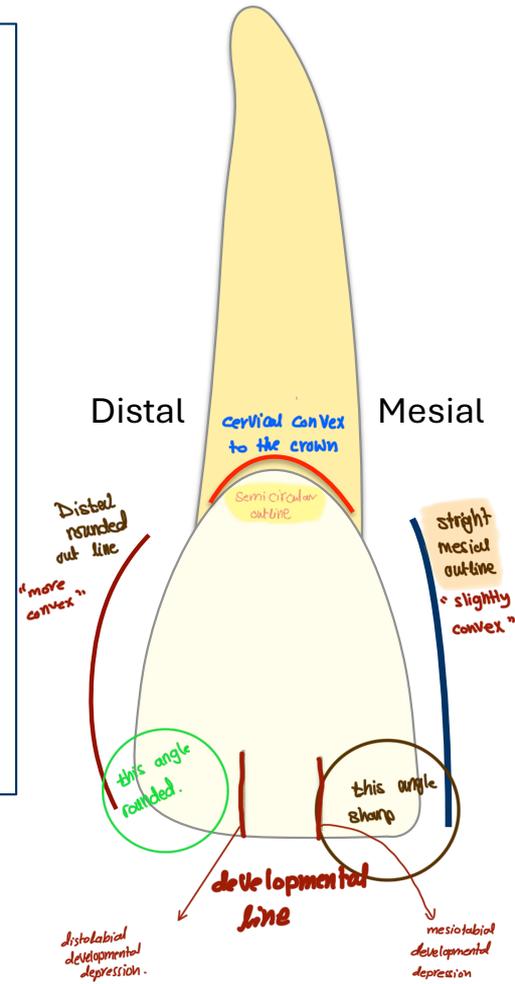
- Slightly convex.
- Maximum of convexity at incisal third.

□ Distal outline:

- More convex.
- Maximum of convexity lie between incisal and middle thirds.

□ Cervical line:

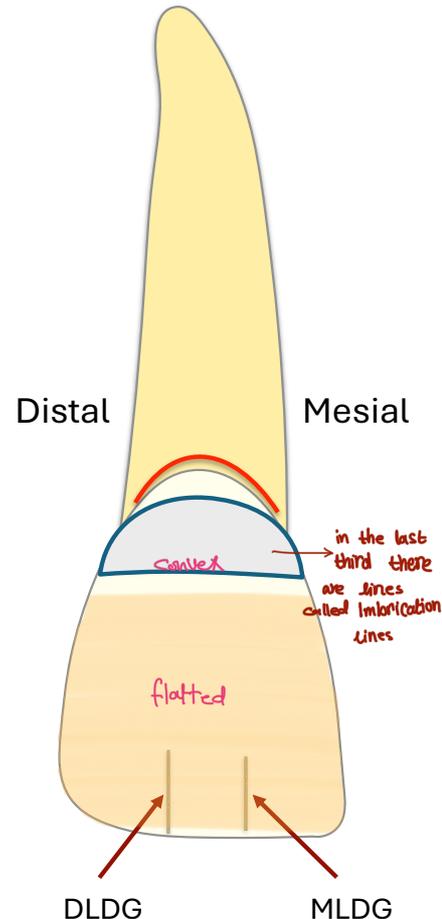
- Convex toward the root.



Labial Aspect

□ Labial Surface Anatomy:

- The surface is smoothly convex at cervical 1/3 forming a ridge termed cervical ridge.
- The labial surface becomes flattened at both middle and incisal 2/3.
- Two labial developmental grooves are found extend from incisal edge at the incisal 1/3 termed:
 1. Mesiolabial developmental groove.
 2. Distolabial developmental groove.



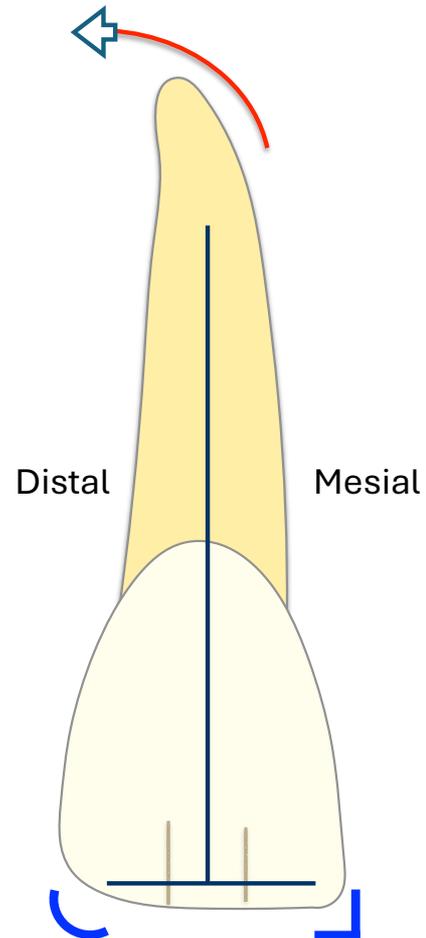
Note: Cervical ridge are found on the facial surface of all teeth.

❑ Incisal outline is straight:

- Perpendicular to the long axis of the tooth.
- The mesio-incisal angle is sharp (right angle).
- The disto-incisal angle is rounded (obtuse angle).
- Newly erupted incisor exhibit three mamelons on its incisal surface.
- Both mesial mamelon and distal mamelon are equal and larger than the middle mamelon.
- These mamelons disappeared gradually by friction of eating.

❑ Root:

- Cone shape Root with blunt apex.
- Root apex is inclined distally.



Lingual Aspect

□ Lingual convergence:

- The lingual surface is narrower than the labial surface.
- The mesial and distal sides of the crown and root converge lingually.
- This convergence is to accommodate with the horse-shoe shaped dental arch.

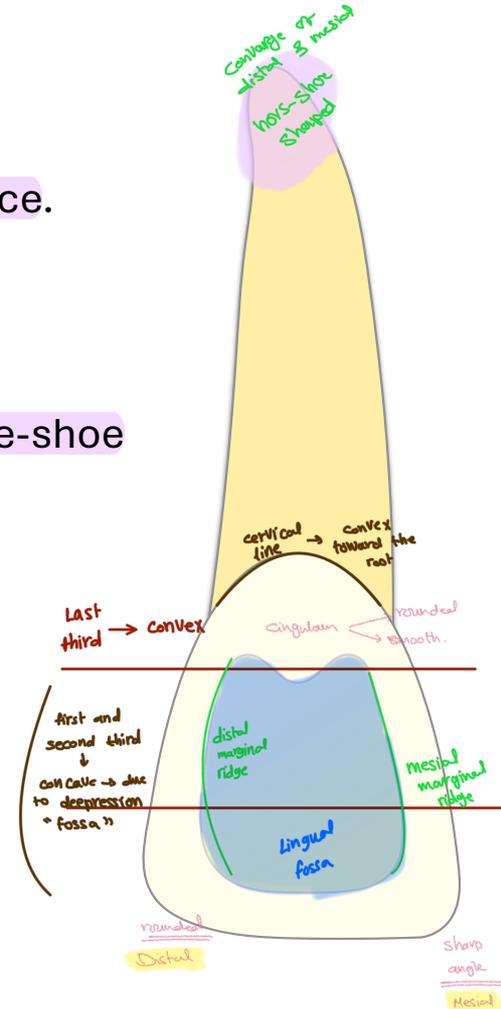
□ Geometrical outline of the crown:

Trapezoid

- The Short Side Located Cervically.
- The Long Side Located Incisally.

□ Mesial, distal and incisal outlines:

- Similar to labial aspect.



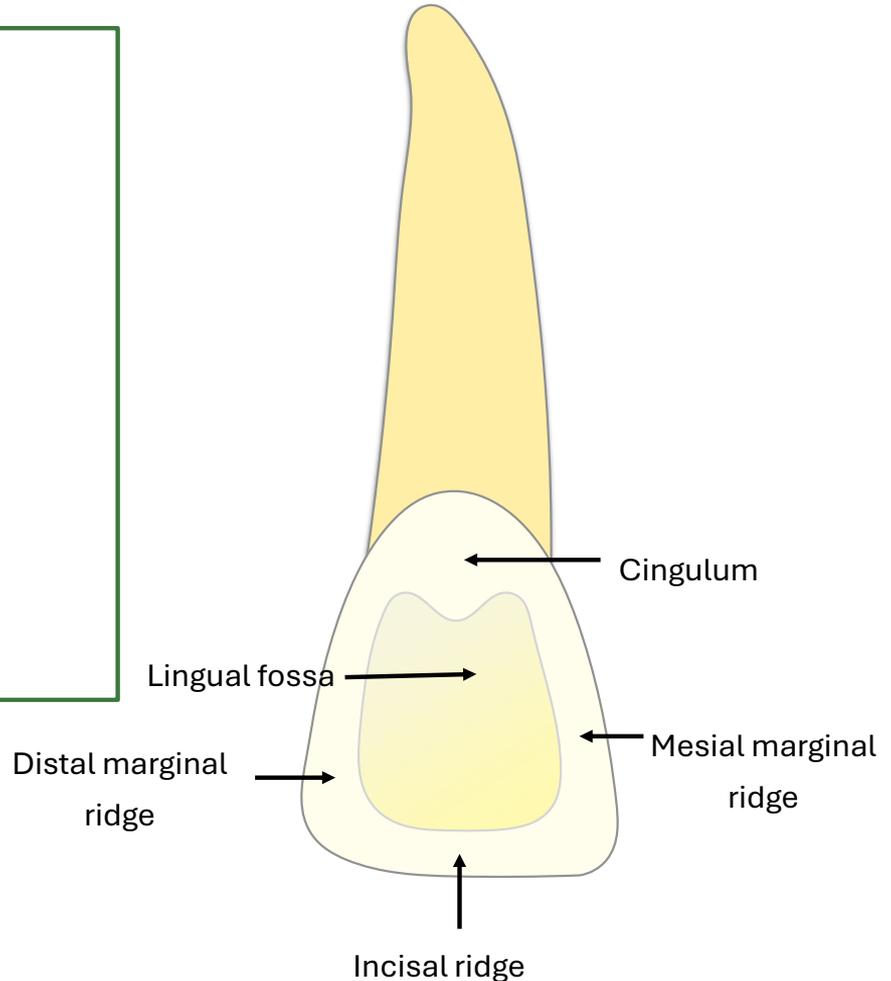
Crown elevations and crown depression of lingual aspect

□ Crown Elevations:

- Incisal ridge.
- Cingulum.
- Mesial marginal ridge.
- Distal marginal ridge.

□ Crown Depression:

- Lingual fossa.

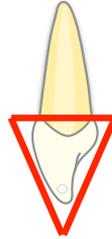


Mesial Aspect

□ Geometrical outline of the crown:

Triangular in shape

- The base of the triangle is located cervically.
- The apex is located incisally.
- The incisal ridge is on a line that bisects the center of the root.

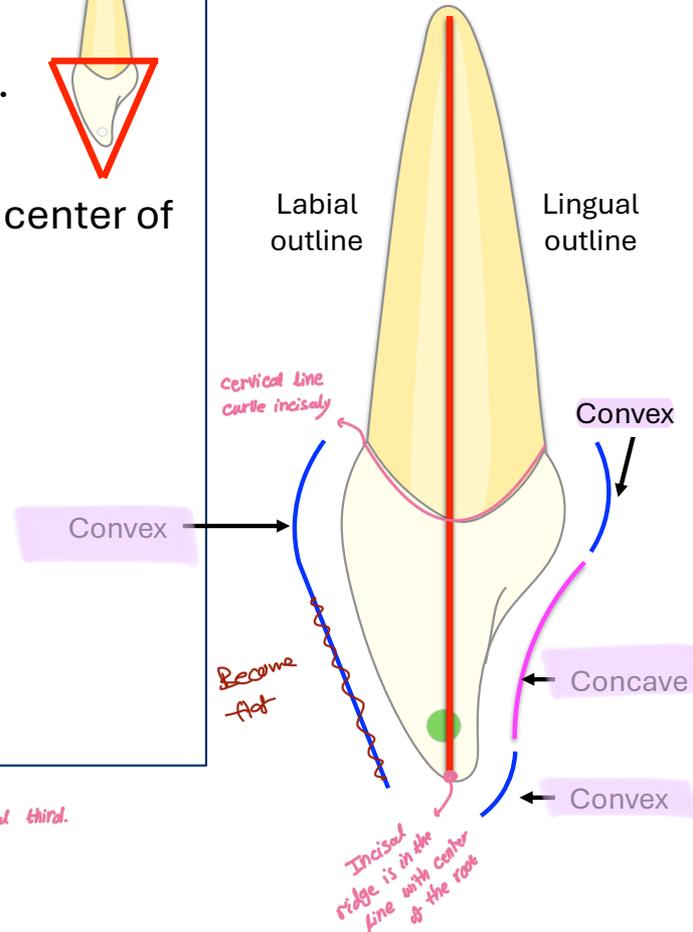


□ Labial outline:

- Convex at cervical 1/3 (cervical ridge).
- Then, become flat to the incisal ridge.

□ Lingual outline:

- Convex at cervical 1/3 (cingulum).
- Then, concave at the lingual fossa.
- Then, slightly convex at incisal ridge.



* crown appears thicker towards the incisal third.

❑ Cervical line

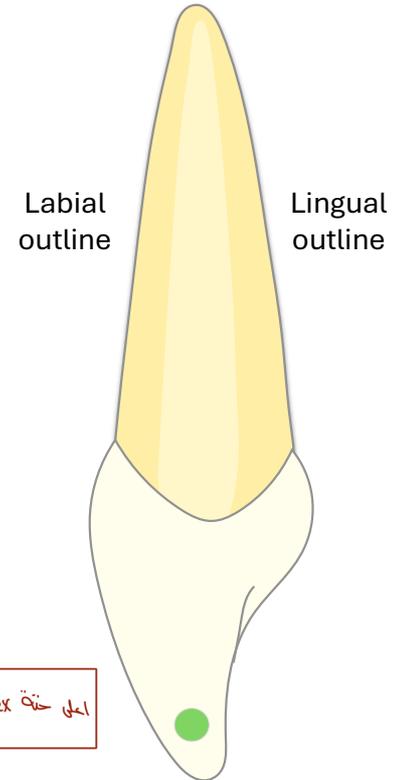
- Convex incisally.
- It is greater than any other teeth in the mouth.

❑ Mesial surface:

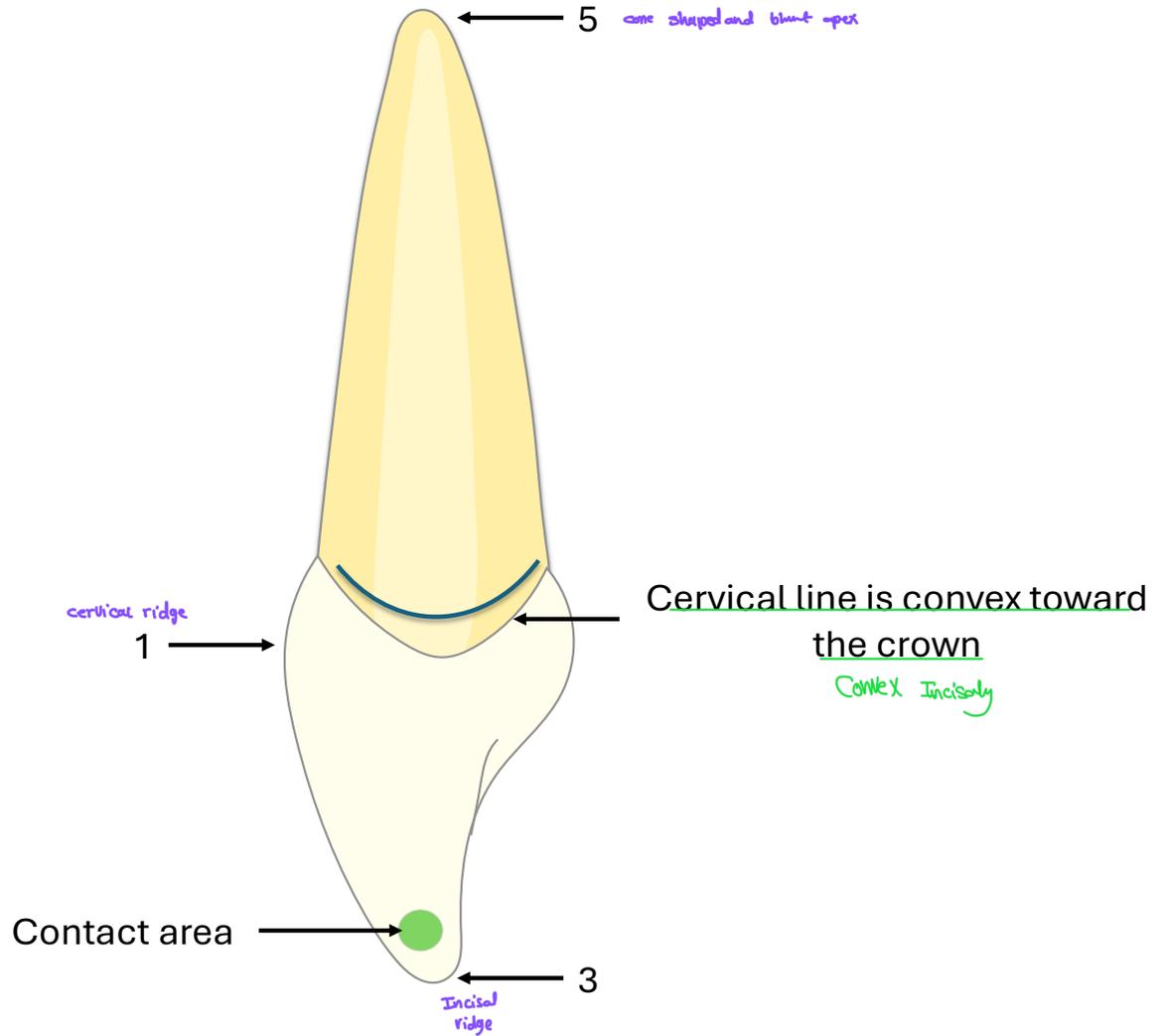
- Convex with the maximum convexity at the **incisal 1/3** (contact area).

❑ root:

- Cone shaped with blunt apex.



الجزء القميّ convex J: Mesial surface هو 2 يكونه ١: منقعة contact مع الحيز التي حده

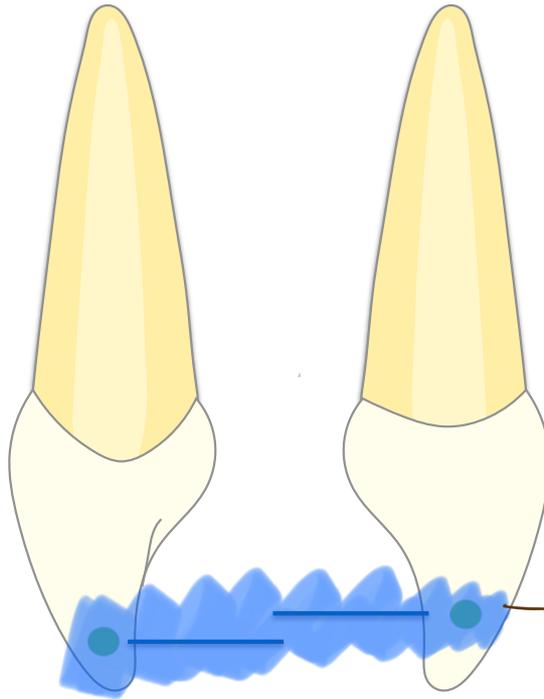


Distal Aspect

□ **Similar to the mesial aspect but differ in:**

- The cervical line curvature is less than mesial (by 1 mm).
- The contact area located at the middle 1/3.

Mesial aspect



Distal aspect

Contact area
Cervix

Incisal Aspect

□ Geometrical outline of the crown:

Triangular

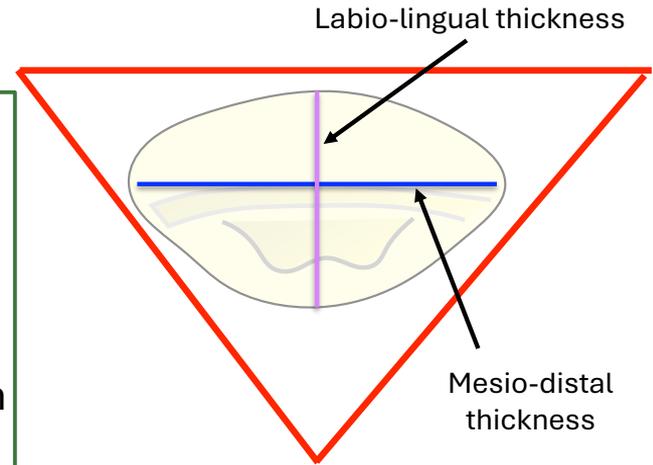
- The base of the triangle is located labially.
- The apex is located lingually.
- The Labio-lingual Thickness is smaller Than Mesio-distal Diameter.

□ Labial outline:

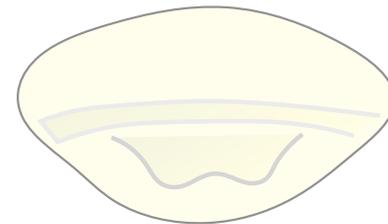
- The labial surface is broad and flat.
- The cervical portion of the crown is convex (cervical ridge).

□ Lingual outline:

- The lingual outline tapers lingually to the cingulum (lingual convergence).



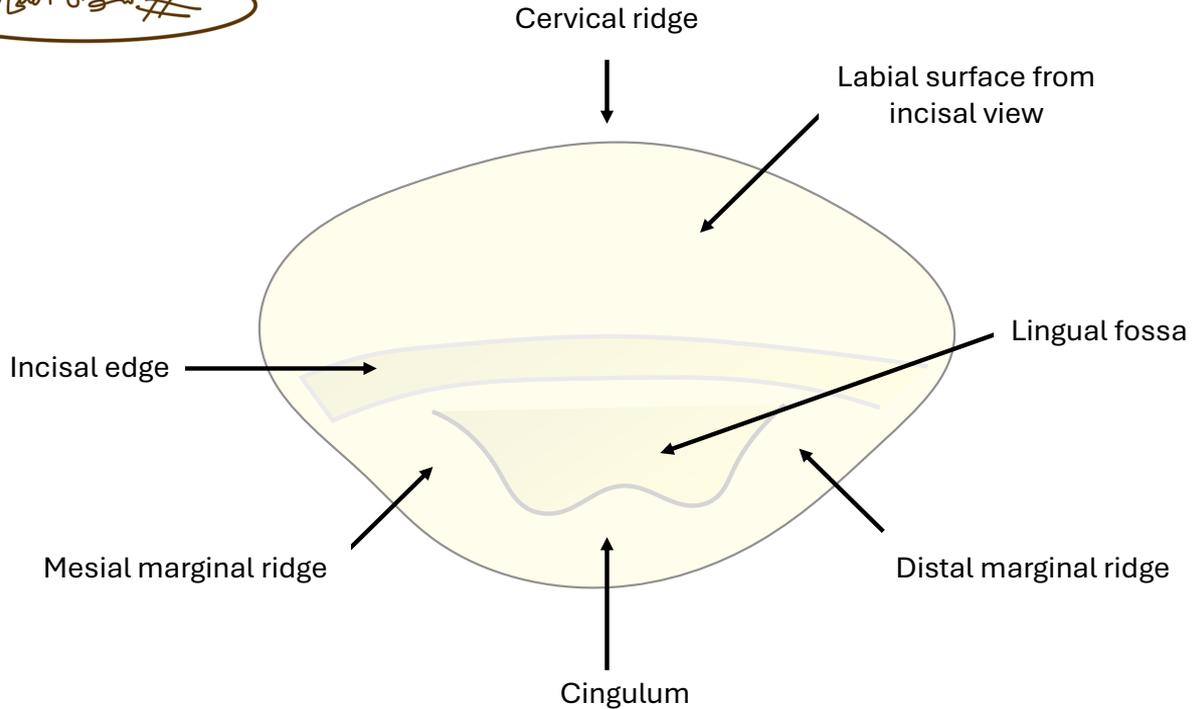
Labial outline



Lingual outline

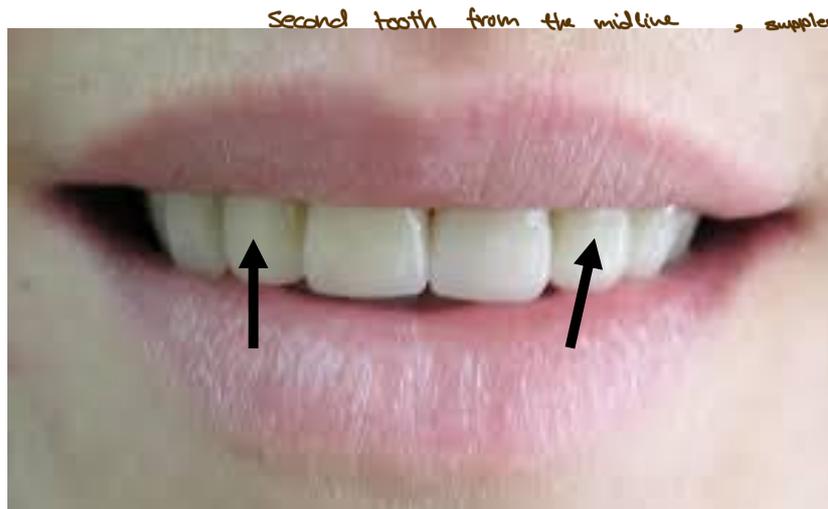
Labial outline

سوال امتحان

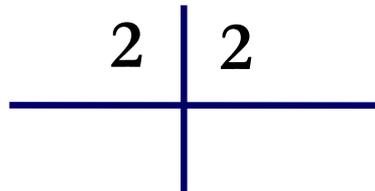


Lingual outline

Maxillary Permanent Lateral Incisor



Second tooth from the midline, supplement central incisor in function → cutting and showing the food



Chronology

Maxillary Permanent Lateral Incisor

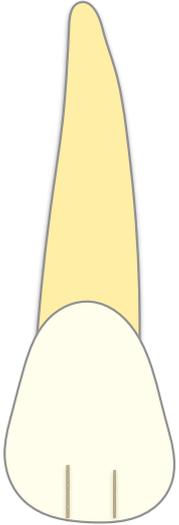
- **Appearance of Dental Organ** 5 ^{month intra uterine.} MIU.
- **Beginning of Calcification** 1 year
- **Crown Completed** 4-5 years
- **Eruption** 8-9 years
- **Root Completed** 11 years

root completed after 2 year of eruption

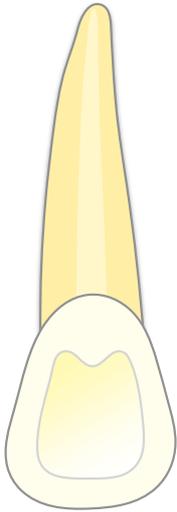
Chronological package for anterior teeth

	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>
Appearance of Dental Organ	5 MIU				6 MIU	
Beginning of Calcification	3:4 M			12M	4:5 M	
Crown Completed	4:5 Y				6:7 Y	
Eruption	6:7 Y	7:8 Y	8:9 Y		9:10 Y	10:11 Y
Root Completed	Eruption +3 Y					

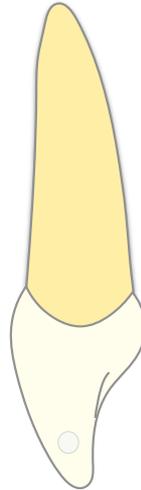
Maxillary permanent lateral incisor



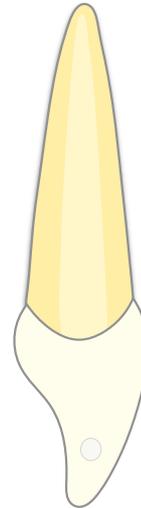
Labial



Lingual



Mesial



Distal



Incisal

Labial Aspect

Geometrical Outline: Trapezoid

- Short Side Cervically, Long Side Incisally.

Mesial Outline: Convex, with Maximum Of Convexity Is at junction Of Incisal and middle Thirds (**mesial contact area**).

Distal Outline: More Convex, with Maximum Convexity Is at Middle Thirds (**distal contact area**).

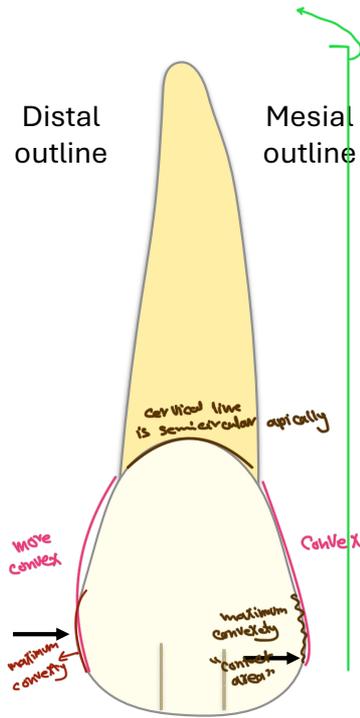
Incisal outline:

Rounded incisal ridge compared with straight in central incisor.

- The mesio-incisal angle is rounded.
- The disto-incisal angle is more rounded.



• in relation to the crown Root is longer than crown.



* Incisal outline is not straight.

☆☆ Lateral Incisor more convex in all dimensions than the central Incisor

Labial Surface Anatomy:

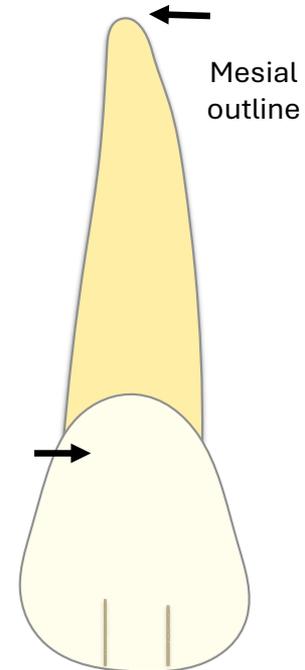
- The surface is more convex than the central incisor.
- Cervical ridge located at cervical third.

Root:

- Single tapered root with pointed apex.
- Curved distally at the apical third.

Cervical line:

Convex toward the root



Lingual Aspect

All Elevations And Depression Are More Developed Than In Maxillary Permanent Incisor.

I- Crown Elevations:

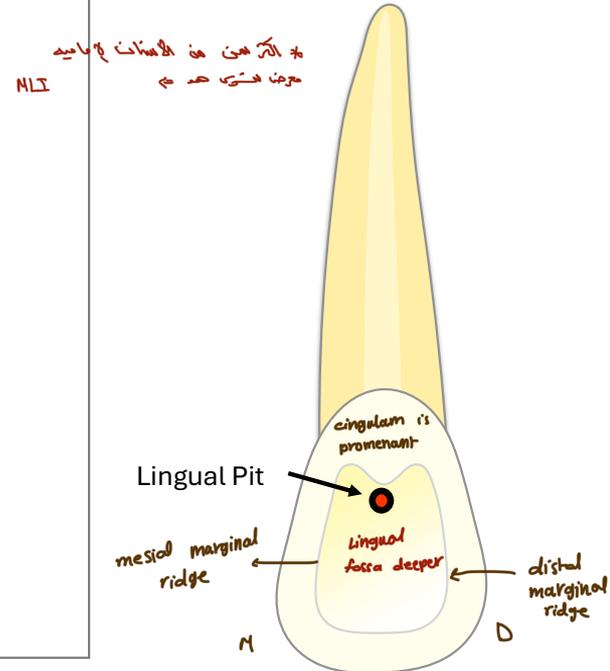
- 1- Cingulum (Cervical 1/3).
- 2- Mesial Marginal Ridges.
- 3- Incisal Ridge.
- 4- Distal Marginal Ridges.

II- Crown Depression:

- 1- Lingual Fossa.
- 2- Lingual Pit May Be present.

Important note:

This tooth is the most common tooth to become carious because the presence of lingual pit.



Mesial Aspect

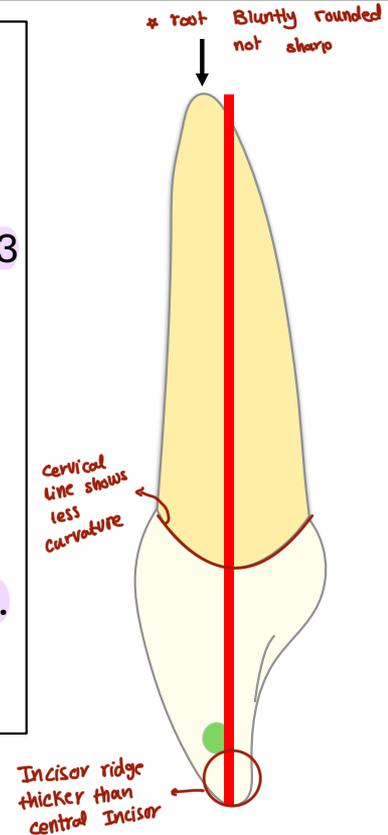
All geometric, labial, lingual, and incisal outlines is the same of the central one except:

The incisal ridge:

- Located lingually to line that bisects the center of the root.
- Contact area is located at the junction between incisal 1/3 and middle 1/3

Root:

- Cone Shape With Blunt Apex.
- Developmental Depression Is present On The Root Surface.
- Appears longer in Relation to crown.

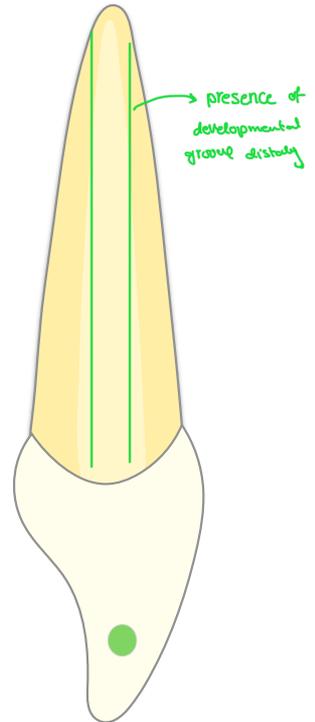


Distal Aspect

☺ Similar To Mesial Aspect

☺ Differ In:

- Smaller And More Convex Than The Mesial.
- Cervical Line Is Less Curved.
- Contact Area Located At The Middle 1/3, (More Cervically).



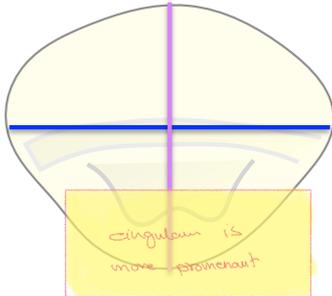
Incisal Aspect

It may resemble either central incisor or small canine.

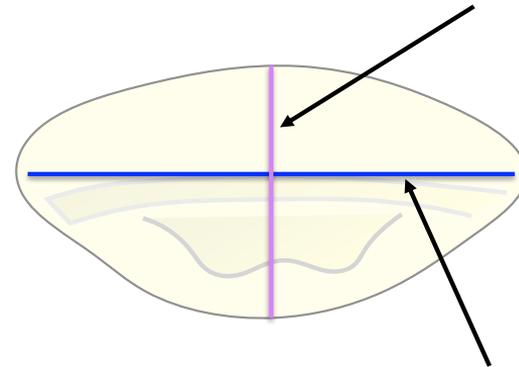
In Lateral incisor:

The Labio-lingual Thickness is Greater Than Mesio-distal Diameter .

more convex
at the labial
and lingual
aspect

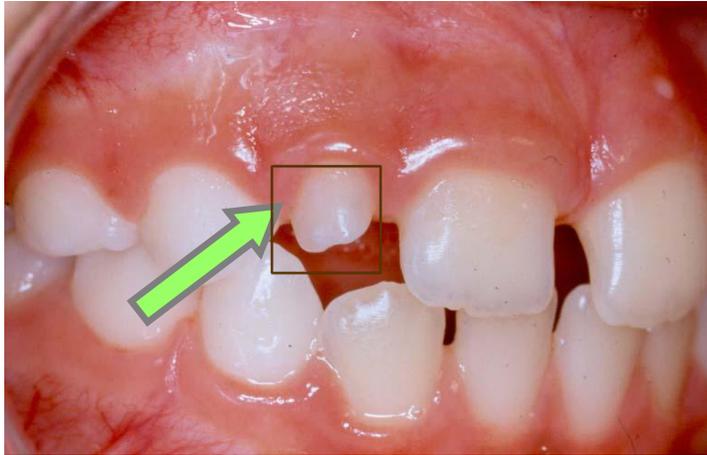


Labio-lingual thickness



Mesio-distal
thickness

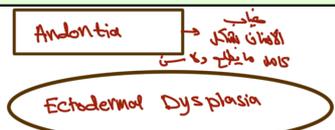
Malformations Of The maxillary Permanent Lateral Incisor.



Smaller lateral incisor

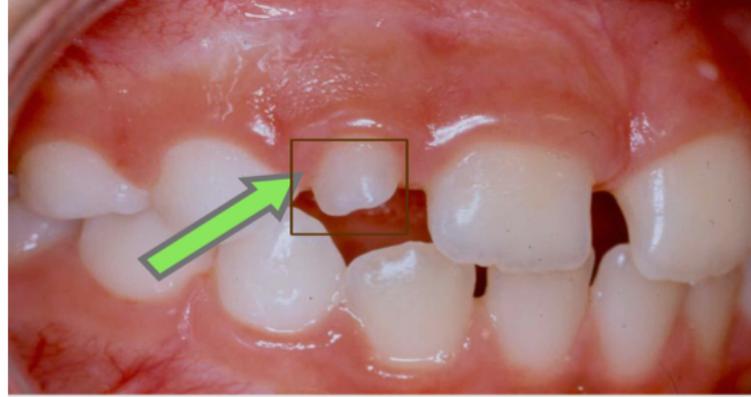
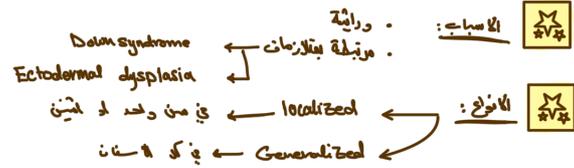


Missing lateral incisor



وهذا احد امراضه انه المريض
ما يطلع له جنات ويزني مع هتي
كان

هي حالة يكون فيها حجم **maxillary lateral incisor** اصغر من الطبيعي و ليس لدينا peg lateral



Smaller lateral incisor

3: **Malocclusion** سوء الاطباق
 2: **زيادة تراكم البلاك**
 1: **مشاكل جارية** **الاستاكن الناتجة**

④ **Composite build-up** كبري شكل السن وكتينها
 ③ **orthodontics** تصحيح الامانة ارا وصبغة تراخبات
 ① **veneers & crown** العلاج

حالة يكون فيها **maxillary lateral incisor** غير موجوده ضاعا بسبب تسلي سكونه انا، تطور الخفن .



- ④ **العلاج:**
1. Orthodontics
 2. Dental implants
 3. Bridge & Maxillary Bridge
 4. Composite restorations.



Missing lateral incisor

	Central Incisor	lateral Incisor
incisal ridge	straight	convex (rounded)
mesiolabial angle	sharp	rounded
distolabial angle	rounded	more rounded
pits	X	✓ (may)
contact area mesially	Incisal (1/3)	Incisal & middle third
contact area distally	Incisal and middle	middle (1/3)