

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Permanent anterior



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Noura Bakr

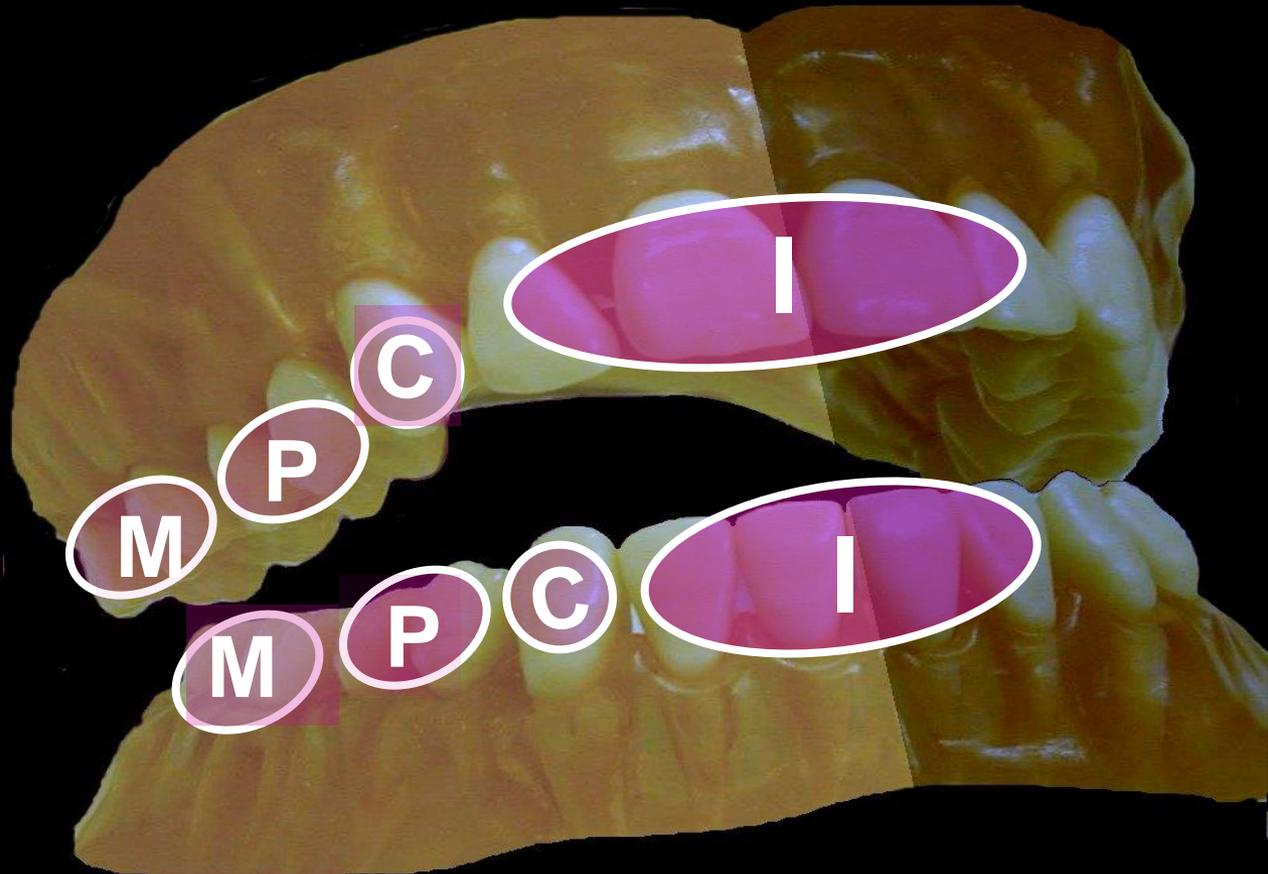
Surface Anatomy of Permanent Teeth

I, for incisor

C, for canine

P, for premolar

M, for molar



Anterior teeth

They are divided into:

Incisors

Canines



and

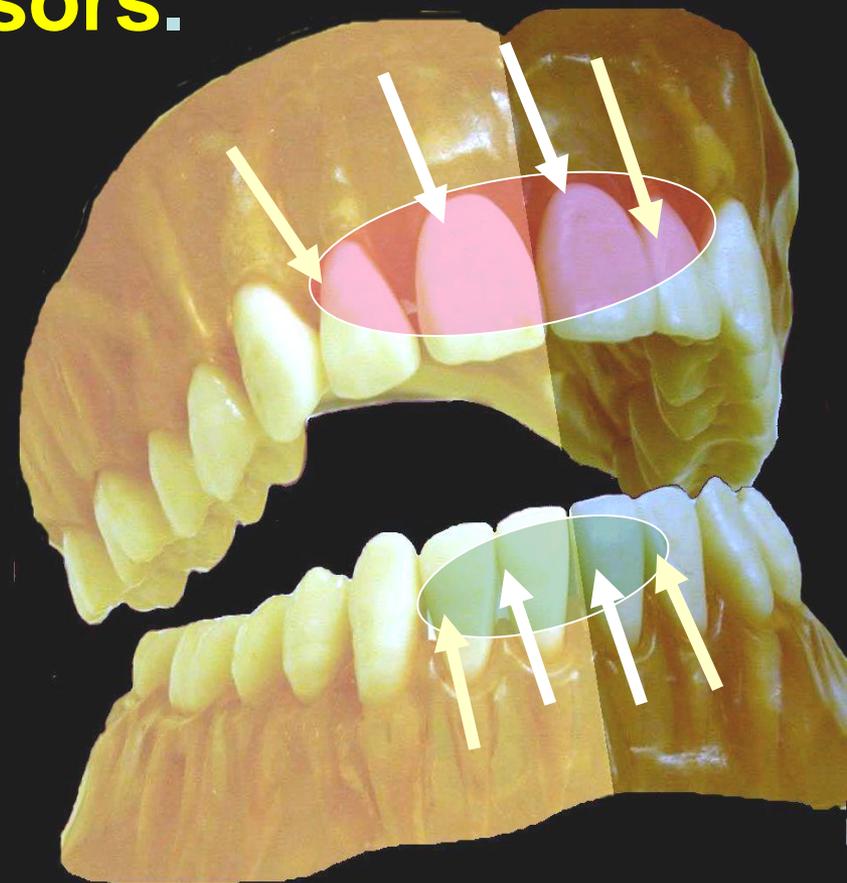


Incisors

There are four maxillary incisors and four mandibular incisors.

♥ *Two central incisors contact with each other in the midline (mesially) and with the lateral incisors distally.*

♥ *Two lateral incisors contact with the central incisor mesially and with the canine distally.*

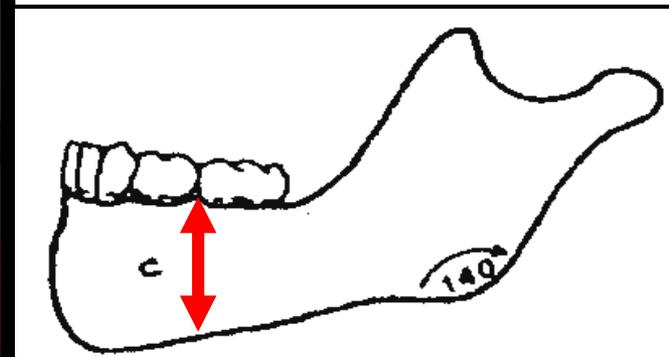
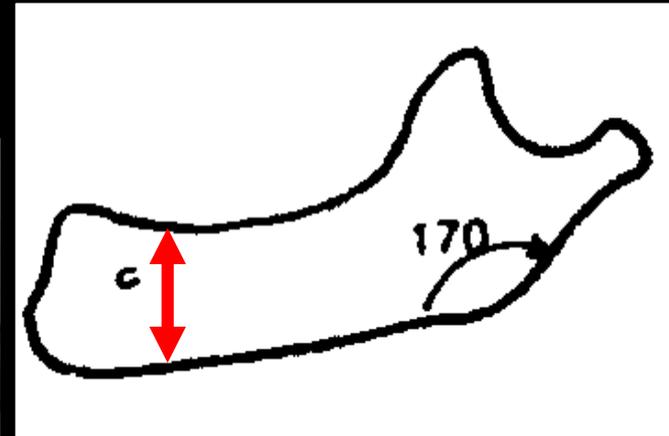


Functions

*Mastication (incising for incisors and tearing for canine),
Esthetic
Speaking
Growth of the jaws.*

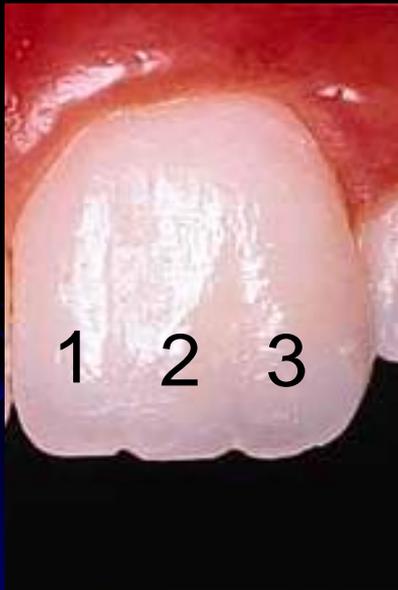


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Number of lobes:

All anterior teeth (incisors and canines) formed of **four lobes**, three labially and one lingually.



•Crown completed.

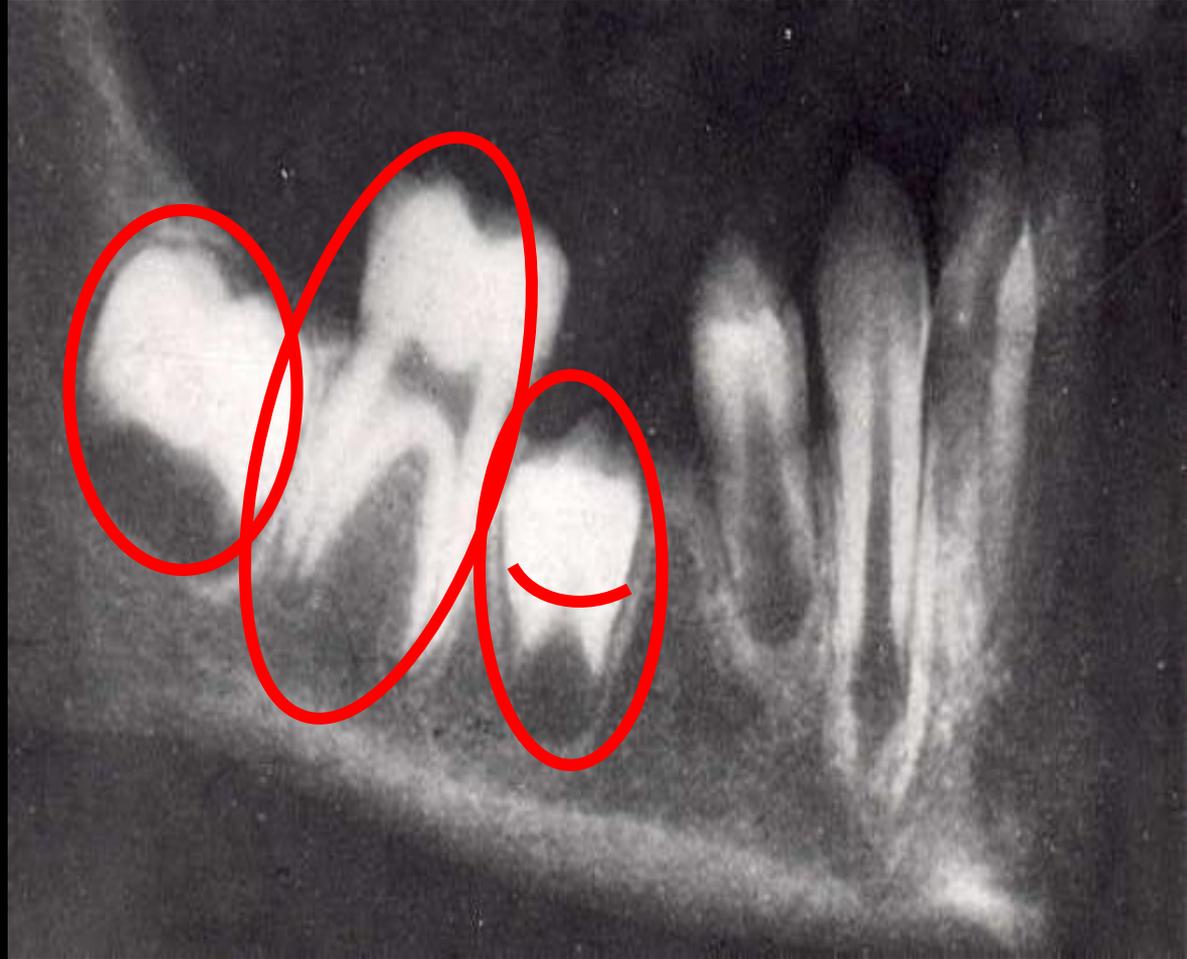
4-5y

•Eruption.

6-8 y

•Root completed.

10-12y

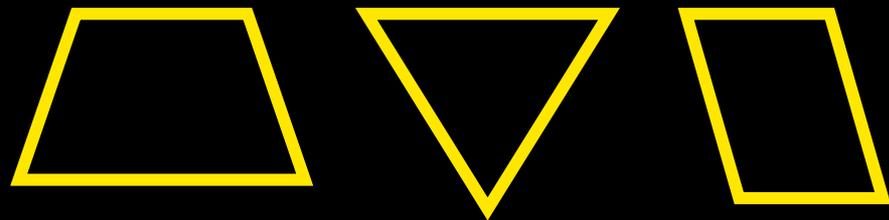


	Beginning of calc. (month)	Crown completed	Eruption Years	Root completed
1 1	3-4	- 3 years	7 6	+ 3 years
2 2	10-12 3-4		8 7	
3 3	4-5		11 9	

For easy teeth description

We have to speak about :

- *Geometric outline of the crown.*



- *Outlines of the crown and root.*

Convex



Concave

- *Surface anatomy of the crown and root (anatomical landmarks).*

All teeth have 5 aspects

1



Facial



Lingual



Mesial



Distal

Incisal



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1

Maxillary central incisor is the first tooth from the midline.



The two upper centrals are the widest of all the incisors.

The crown is the longest of all human teeth.

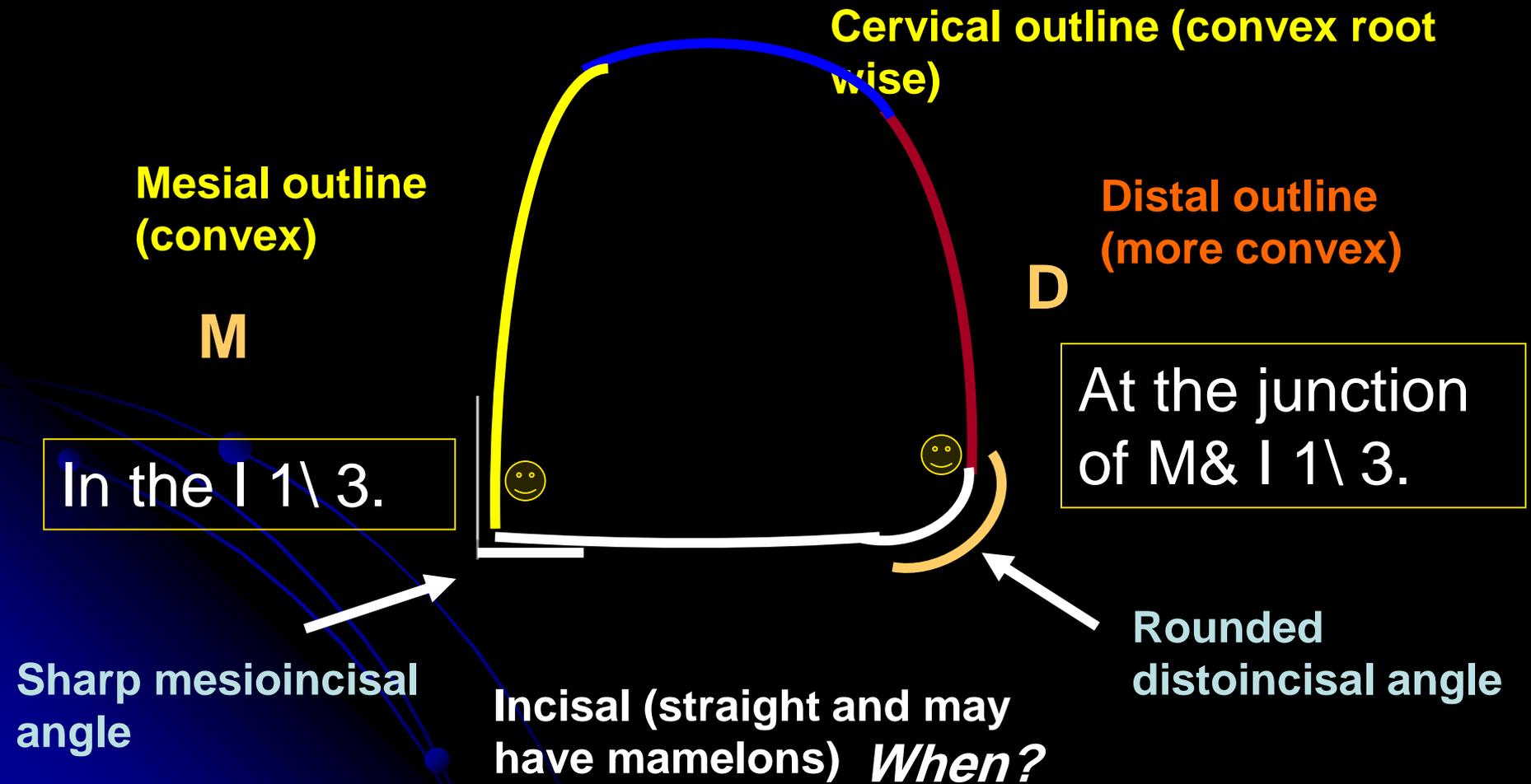
Geometric outline of the crown

Facial and lingual aspects have trapezoidal outline.

Smallest uneven side cervically.

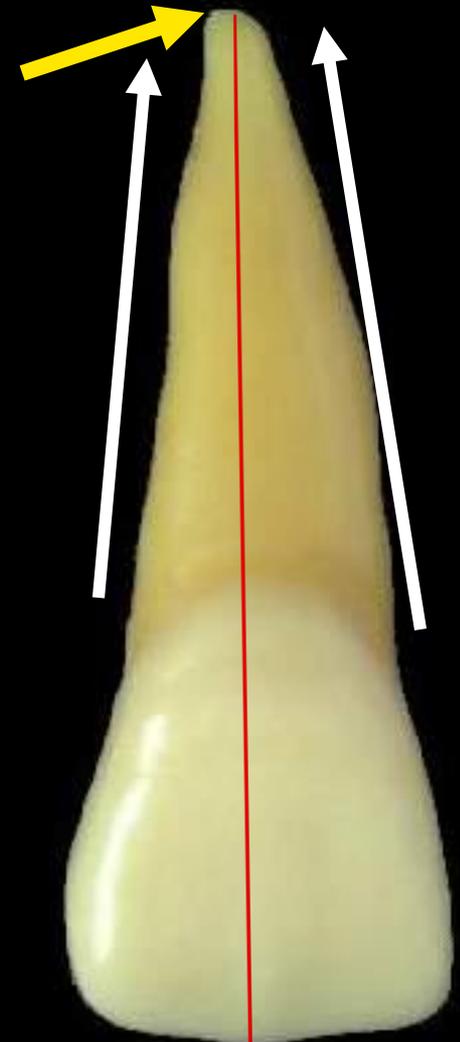


Facial and lingual outlines of the crown



Outlines of the root

- The mesial and distal outline of the root tapered to a **blunt** apex
- The apex is centralized on the long axis **so extraction could be done by rotation movement**



Surface anatomy of the crown and root.

Labial aspect

Elevations:

- The crown surface is smooth and convex with maximum convexity at the cervical third (cervical ridge)

Depressions:

- Shallow developmental grooves could be seen separating mamelons.
- The root surface is smooth and convex



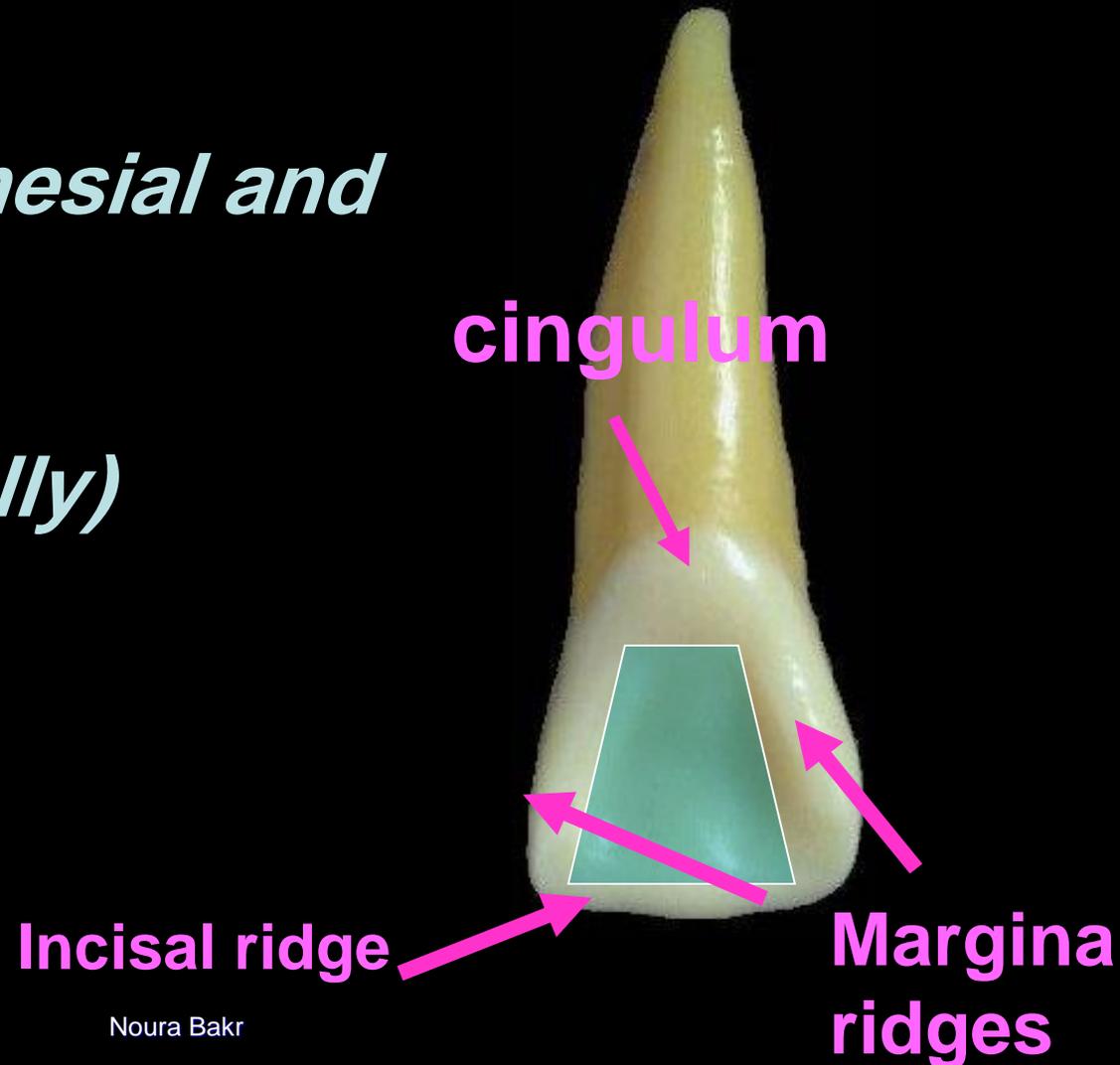
Lingual aspect

Elevations:

- *Marginal ridges (mesial and distal)*
- *Cingulum (cervically)*
- *Incisal ridge*

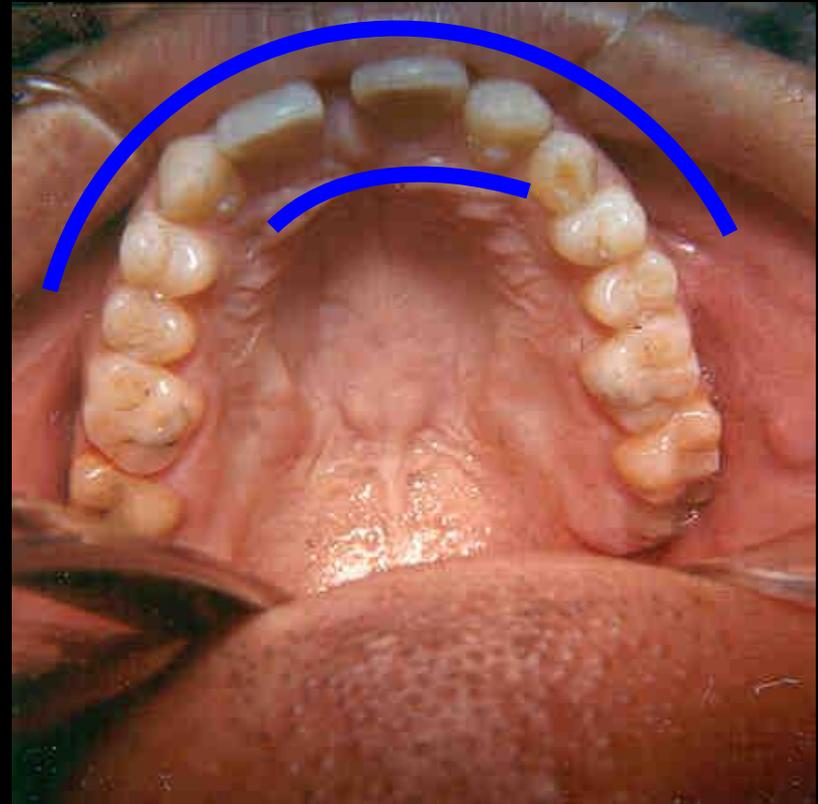
Depressions:

Lingual fossa



😊 You have to notice that the lingual surface of all teeth is smaller in size than the labial due to the lingual convergence.

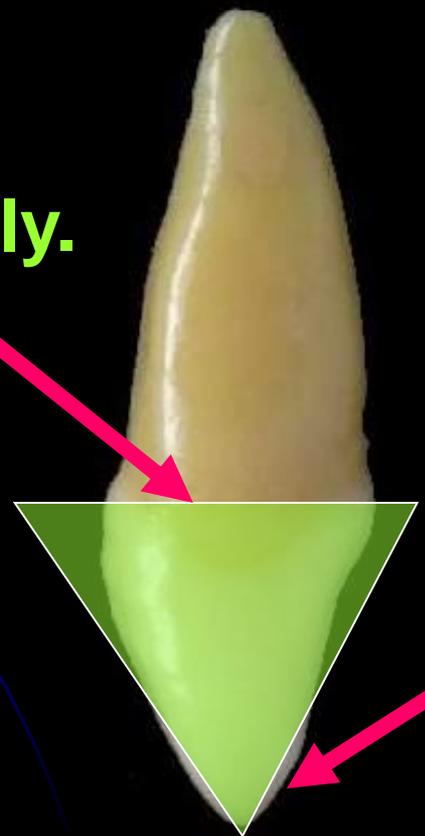
This convergence of the teeth is to accommodate the larger arch size facially than lingually



Geometric outline of the crown

Proximal (mesial and distal) aspects have triangular outline

Base cervically.



Apex incisally.



Mesial and distal Outlines

It's Triangular and formed of

- *Labial outline: convex with maximum convexity at the cervical third which represent*

- *Lingual outline:*

 - *convex incisally which represent.....*

 - *Concave at the middle which represent...*

 - *Convex cervically which represent.....*

- *Cervical outline: Curves incisally.*



Outlines of the root

The outlines tapered from the cervical line to a **blunt rounded apex**



M



The crown has smooth convex proximal surfaces.

D



Contact areas:

Near the **MI** angle.

Cervical line:

Curved incisally.

Near the junction of **I & M 1\3**.

The curvature is shallower than mesially.

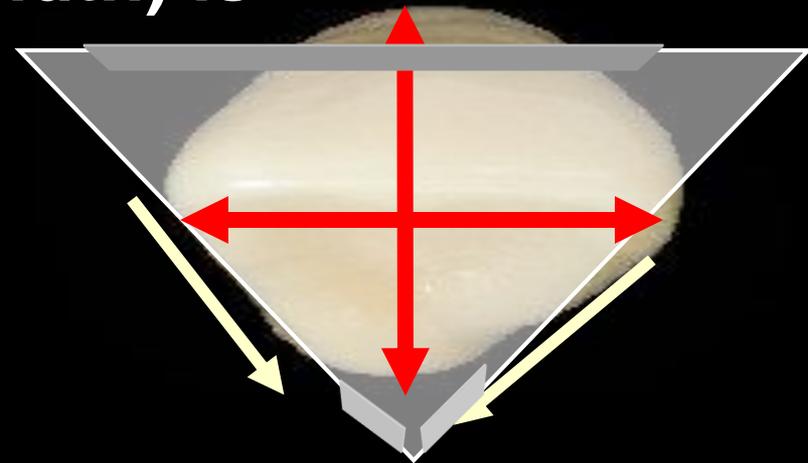
Roots

They have convex smooth surfaces.



Incisal aspect Outline and surface anatomy

- The outline is triangular in shape.
- The base is placed labially and apex lingually.
- The mesiodistal dimension (width) is greater than the labiolingual

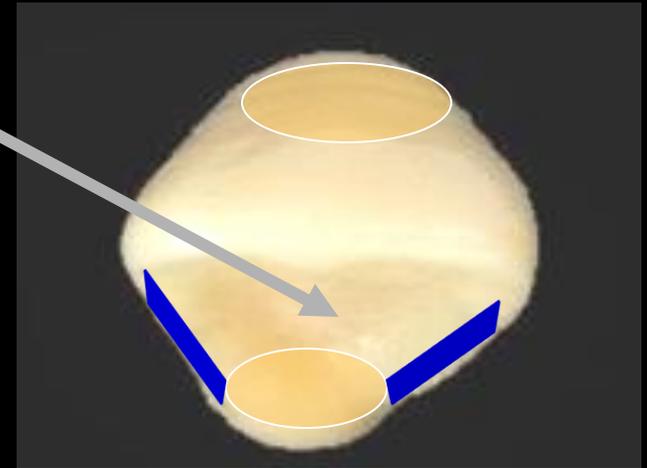


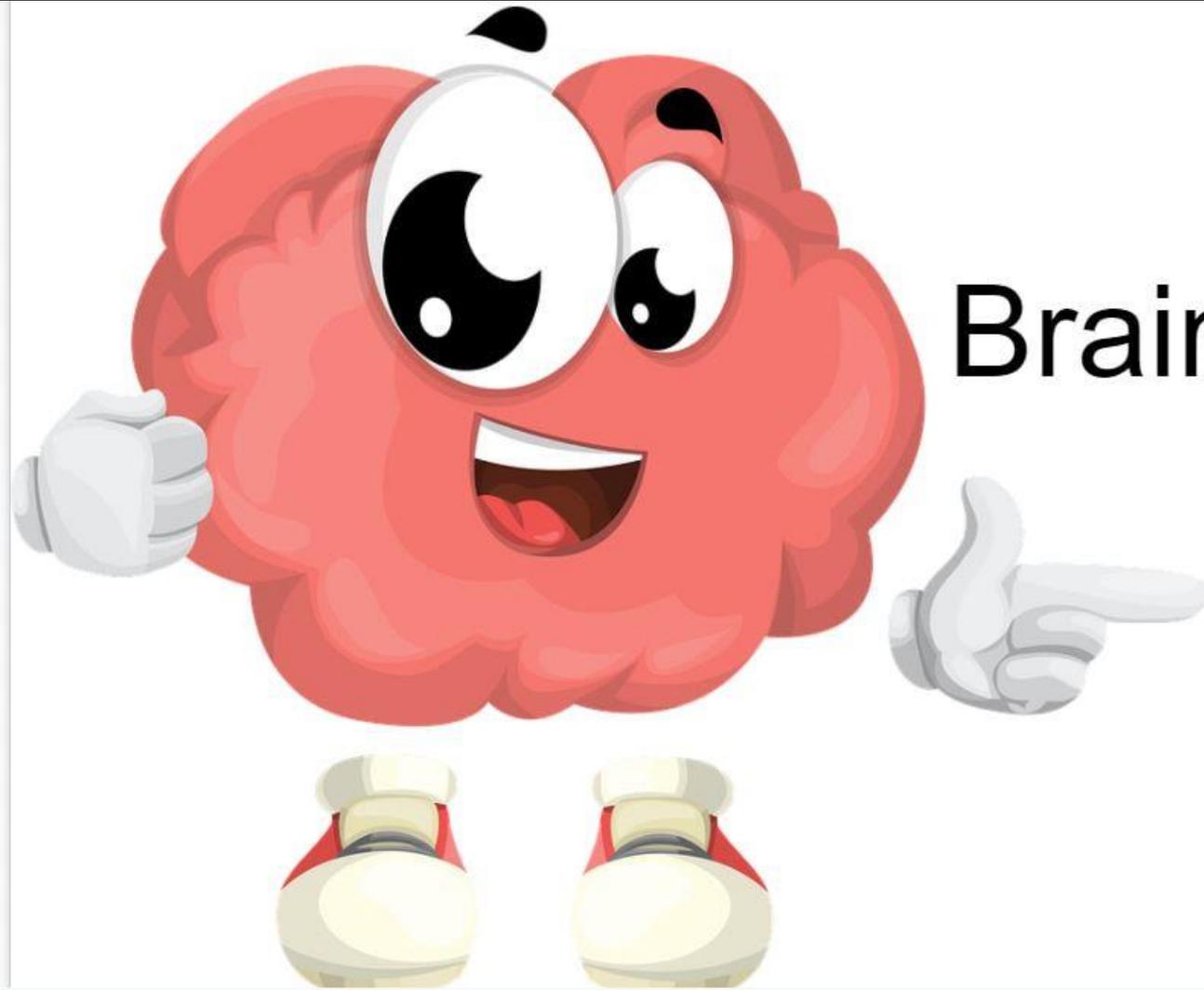
The crown is tapered lingually.

Note:

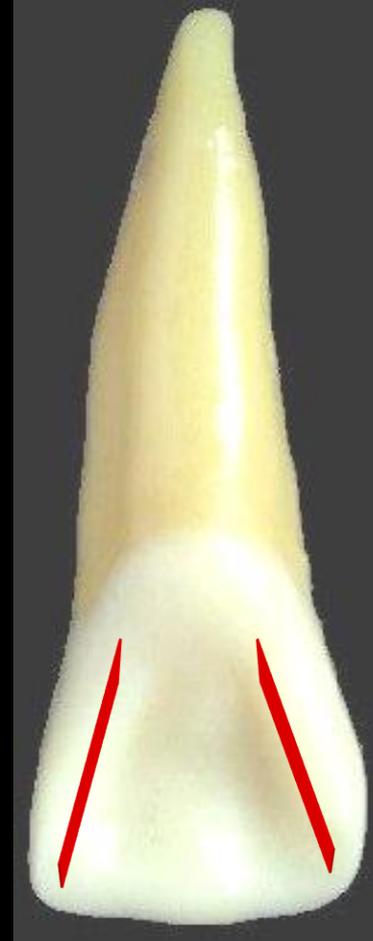
- The elevations and depressions in the crown lingually and labially appeared in this aspect.

Lingual fossa





Brain Breaks



Identify the tooth, the aspect and the anatomical landmark.

”إِنَّا كُلُّ شَيْءٍ خَلَقْنَاهُ بِقَدَرٍ“



Maxillary lateral incisor



Labial



Lingual



Mesial



Distal

Incisal



1



2



*Its crown is the **broadest** of the anterior teeth

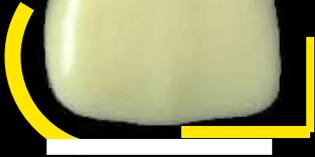
*It is the **longest** tooth of all human teeth

*Its crown is **smaller** in all dimensions than 1 except its **root is longer**

Labial aspect

D

M



sharp M I angle.

rounded D I angle.

Incisal outline

Straight

2

D

M

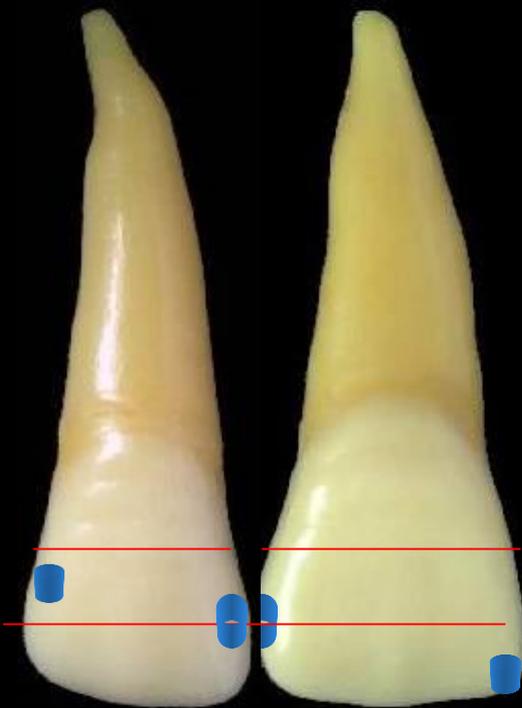


rounded M I angle.

more rounded D I angle.

Rounded (curved)

1



MCA-----in incisal 1/3 near the mesio-incisal angle

DCA-----at the junction of incisal and middle 1/3s

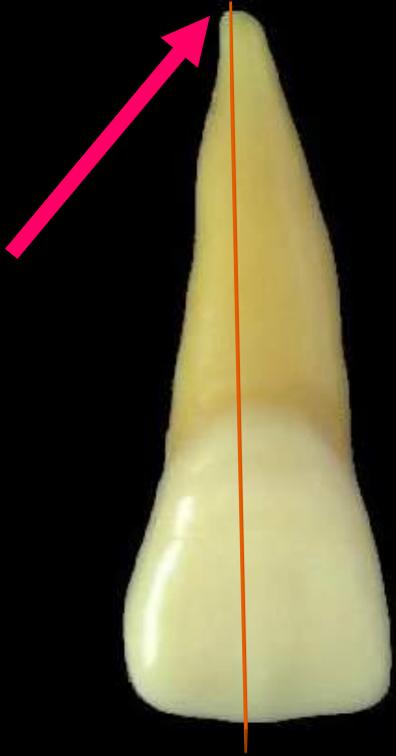
2



MCA----- at the junction of Incisal and middle 1/3s

DCA-----in the center of middle 1/3.

1



Root has **cone** shape with **Blunt** apex

2



Root is **longer, narrower** and has developmental depression on its mesial surface
 -Root **tapers** evenly to apical 1/3 then curve distally with a **pointed** apex.

Lingual aspect

Elevations are well developed

Cingulum

Marginal ridges



Incisal ridge

Depressions:

*Lingual fossa, **more concave and circumscribed***

Note: (characteristic feature)

Lingual pit could be found in the 2 and should notice that all elevations are well developed than 1



Identify the tooth, the aspects and tell FOUR differences between them.

Answer

A- Upper P. central incisor.

B- Upper P.lateral incisor

Lingual aspect

1- Size.

2- The elevations and depressions

3- The incisal angles.

4- The root.



A



B

1



Mesial aspect

2



Lb

Lg

Lb

Lg

The crown long and thick labiolingually.

Shorter and thinner.

The mesial surface is flat

The surface is flatter.

Contact area at I 1/3 near the M I angle.

Near or at the junction of I & M 1/3

1



Distal aspect

2



C.A. at the junction of I &
M 1\3

In the center of the
crown.

Incisal aspect

1



*Geometric outline----

triangular

*M-D > Lab-Ling

*The cingulum is **shifted distally**

2



Geometric outline---

rounded or oval

*M-D = Lab-Ling

*The cingulum is **centered**

**When palatal pit is present;
it is located in the depth of
the lingual fossa**

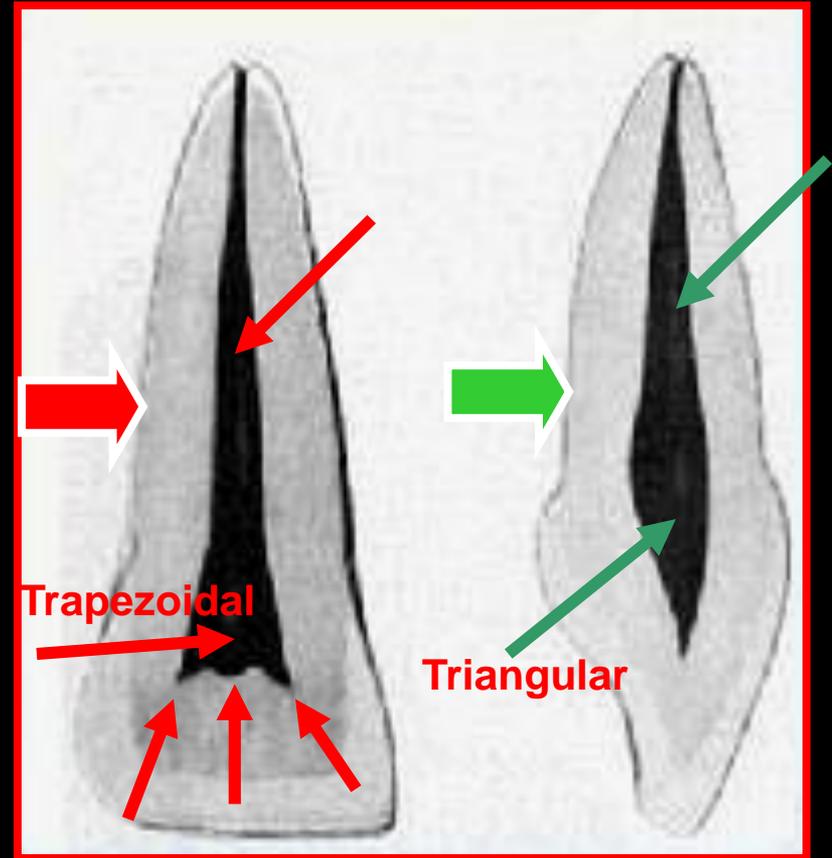
☺ Pulp cavity of Upper central incisor

▶ Mesio-distal section

- The pulp chamber is wide conforming the shape of the crown.
- It presents **three pulp horns** corresponding to the three mamelons.
- The root canal tapers towards the apex.

▶ Labio-lingual section

- The pulp chamber pointed incisally, then follows the increase in the crown dimension cervically.



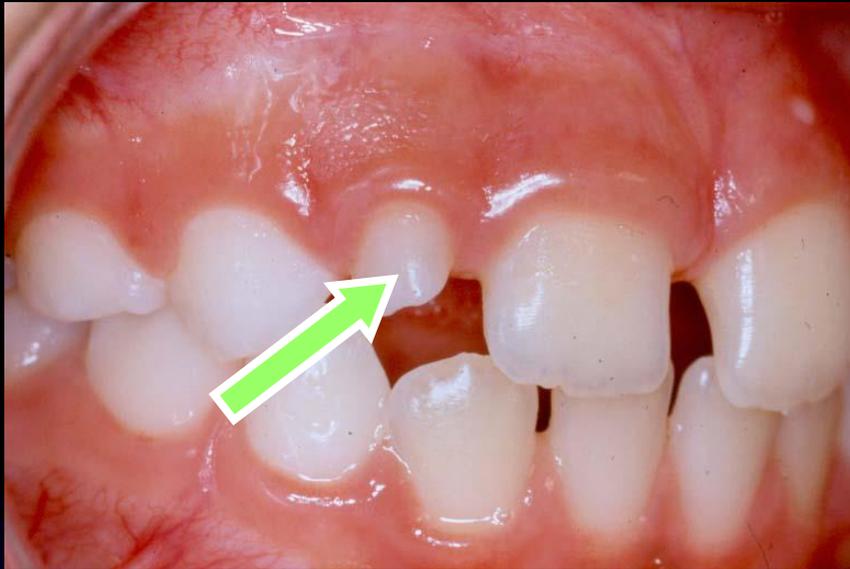
- The root canal tapers gradually as it traverse the root ending in a constriction at the apex (the apical foramen).

☺ Pulp cavity of upper lateral incisor

- Is similar but smaller than that of central incisor.
- It consists of a single root canal and a pulp chamber.



Malformations Of The Upper Permanent Lateral Incisor



Peg-shaped lateral incisor.



Missing lateral incisor.



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Thank you

