



**02**

**CHAPTER**

## ***DENTAL ANATOMY LECTURE 2***

**المحاضرة الثانية في تشريح الأسنان**

### ***TOPICS***

- ① Surfaces of the teeth**
- ② Anatomical landmarks of the tooth crown**



**Scientific content prepared by**  
***Booknerd Team***



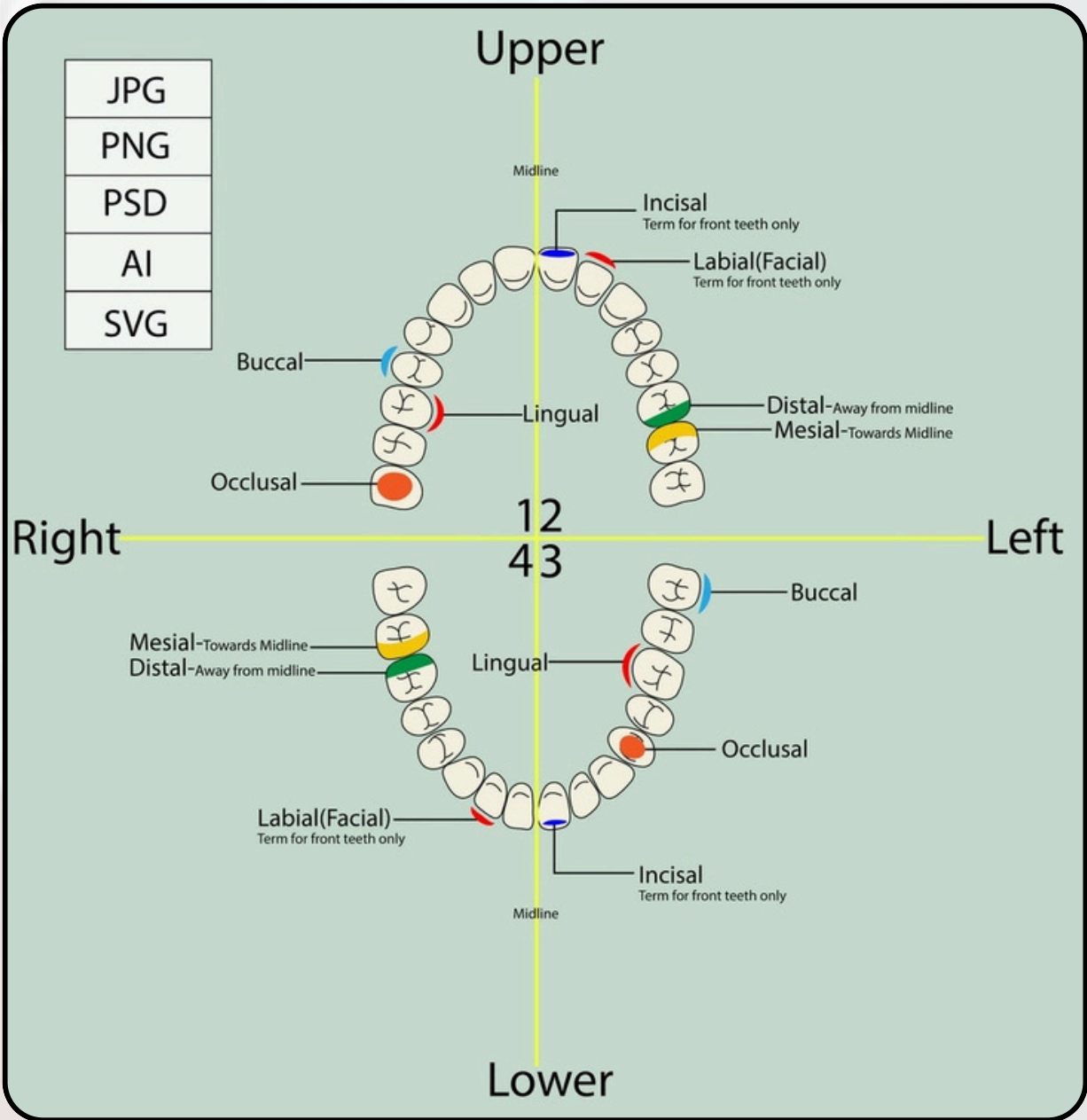
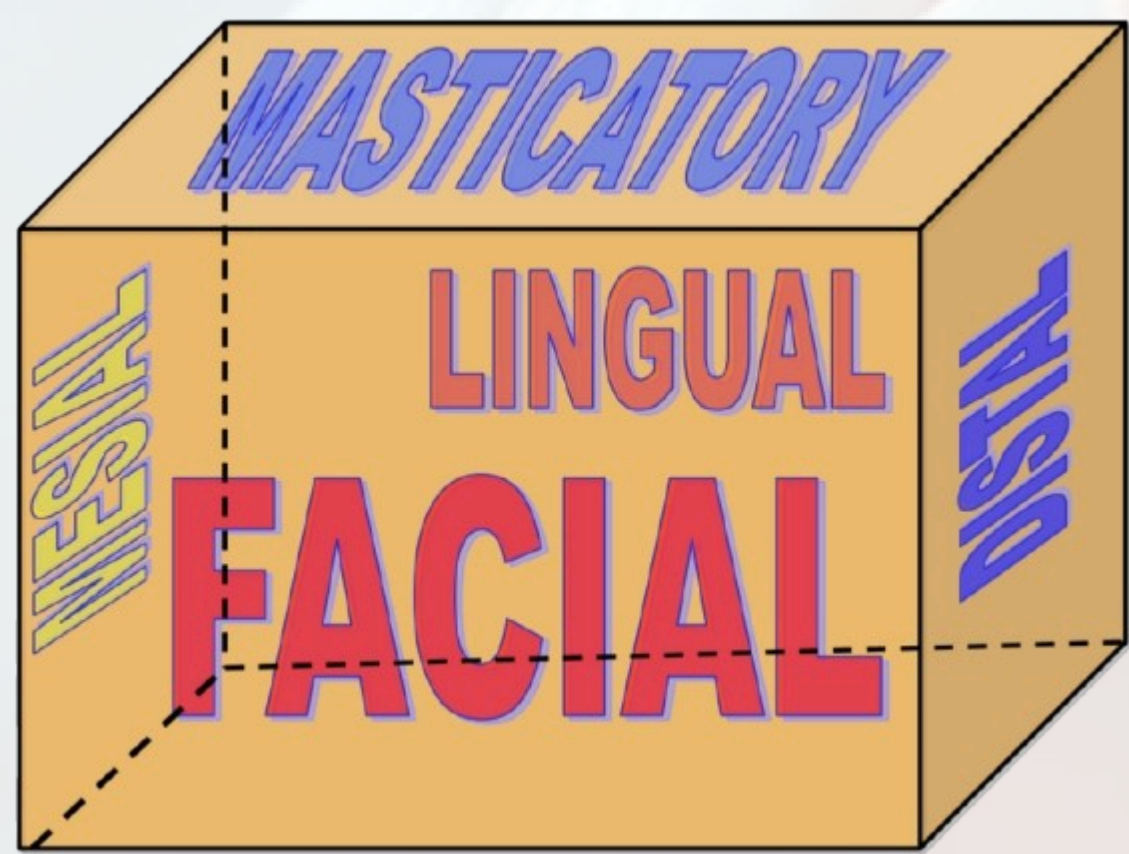
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**DENT - 6 OCT**



Surfaces of the teeth

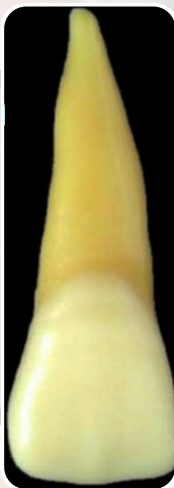
Each tooth has five surfaces like a box with 4 sides and a roof.



1 facial

1 LABIAL

Towards the lip  
FOR ANTERIOR TEETH

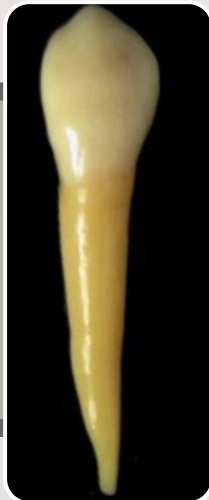


OR



2 BUCCAL

Towards the cheek  
POSTERIOR TEETH



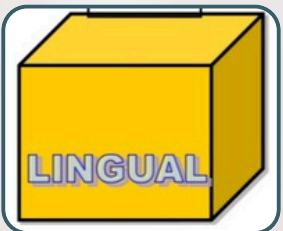
2 LINGUAL

1 PALATAL

towards the palate

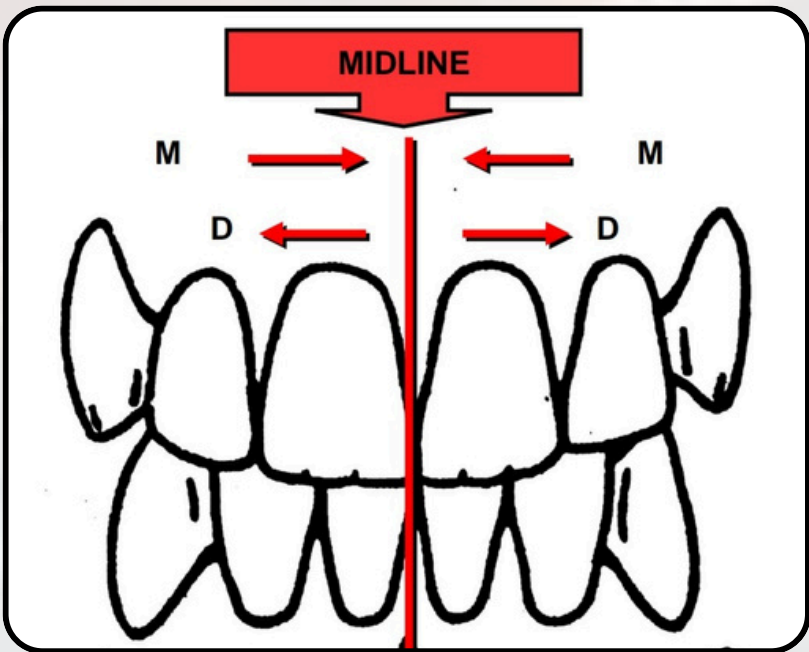


OR



2 LINGUAL

towards the tongue

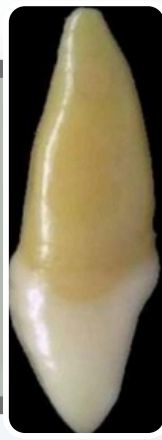




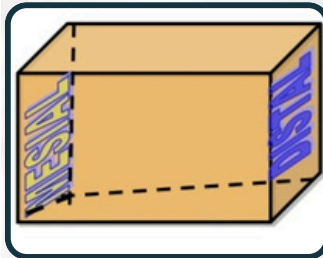
### 3 Proximal

#### 1 MESIAL

towards the midline

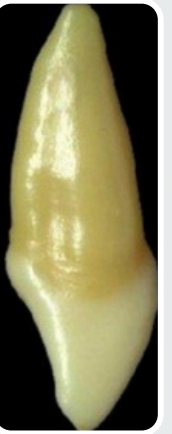


OR



#### 2 DISTAL

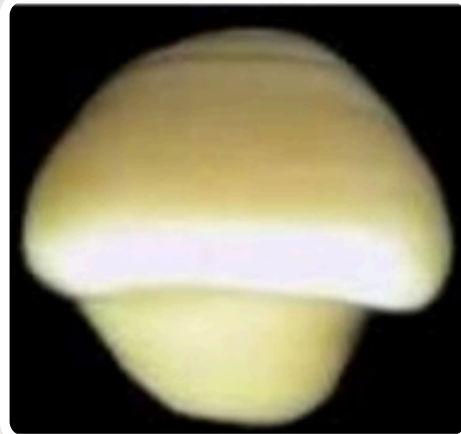
away from the midline



### 4 MASTICATORY

#### 1 INCISAL

For anterior teeth

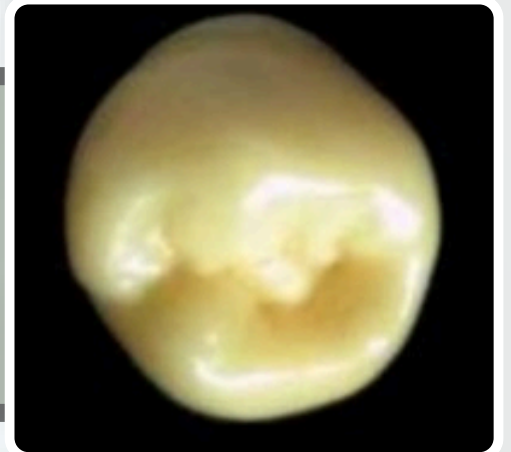


OR



#### 2 OCCLUSAL

For posterior teeth



## Anatomical landmarks of the tooth crown

Crown Elevations

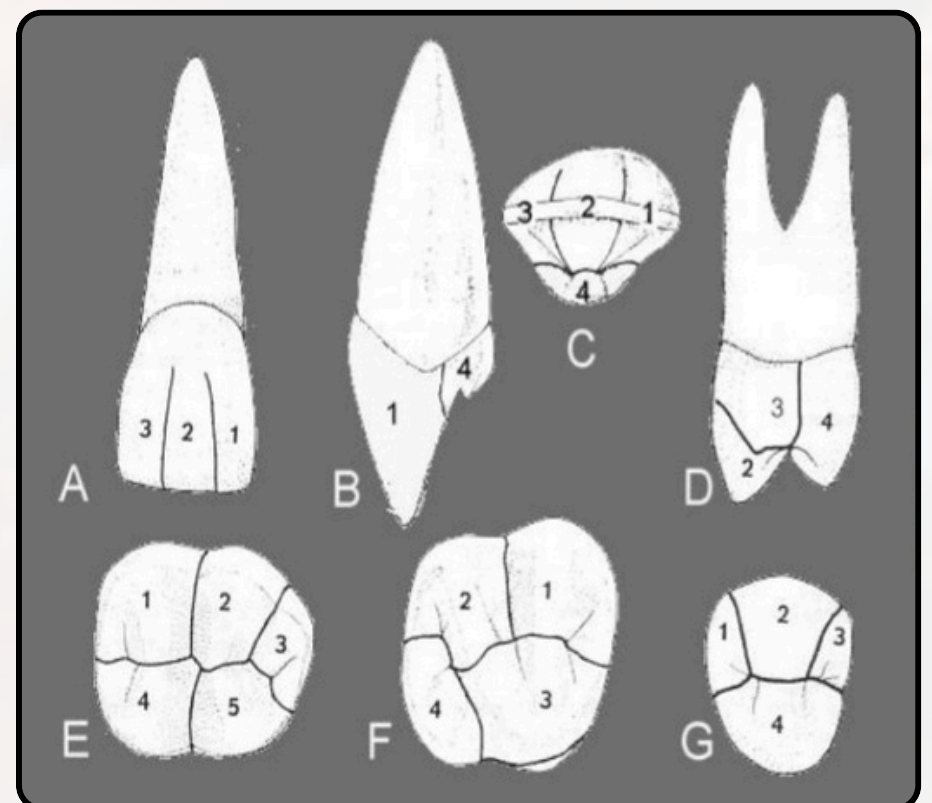
Lobe.

Tubercle.

Ridge.

#### 1 Lobe

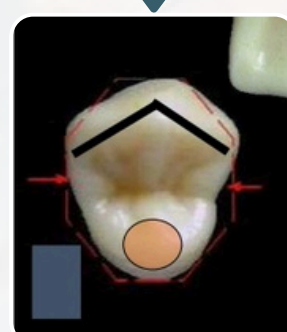
- It is one of the primary centers of calcification and growth formed during the crown development.
- There are three, four or five lobes.
- The pulp chamber has pulp horns corresponding to these lobes.



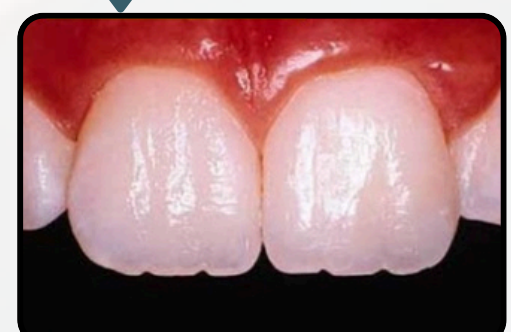
Lobe



Cingulum



Cusps



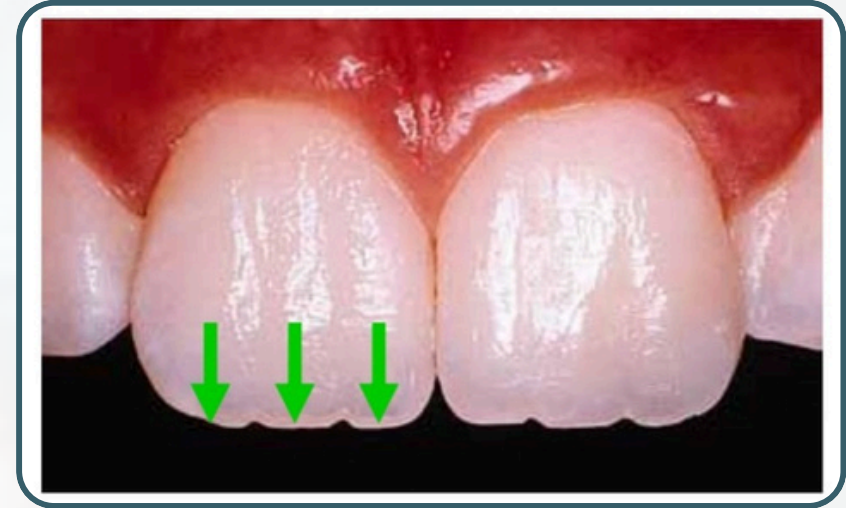
Mamelons





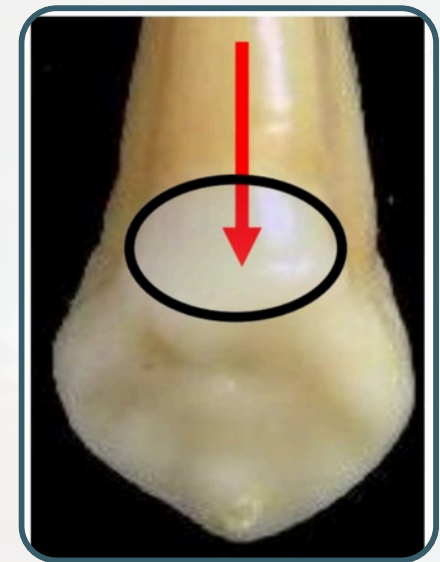
### A Mamelones:

- They are **three small round projections of enamel** present in the incisal third of **newly erupted incisors**.
- After normal use, eventually the mamelones wear down into a flat edge.



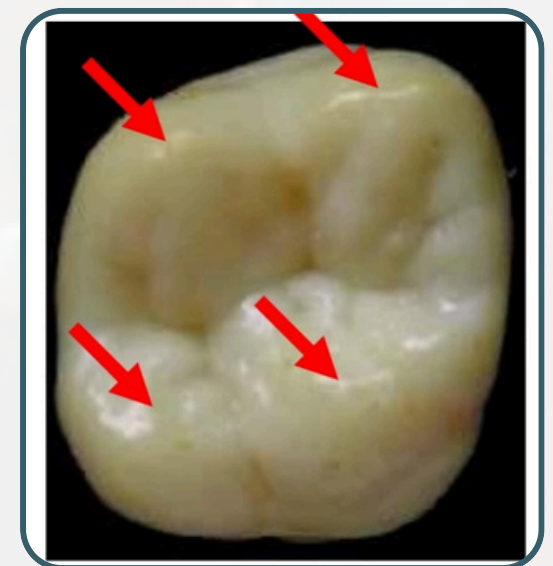
### B Cingulum :

- It is the **enlargement or bulge on the cervical third of lingual surface of the crown in anterior teeth**.



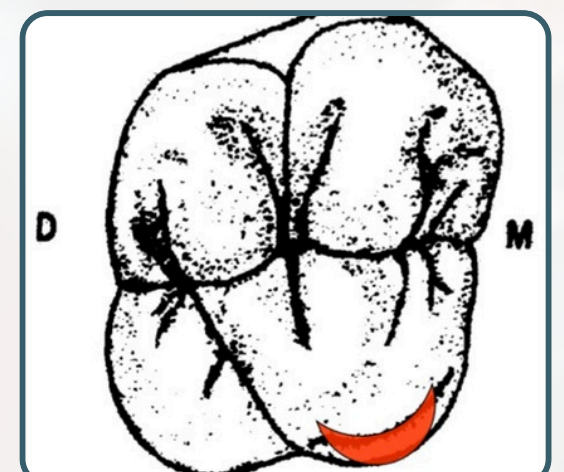
### C Cusp :

- Elevation of **various shape & size present on the occlusal surface of post. Teeth and incisal portion of canine**.
- It is formed of **enamel, dentin & pulp**.



### 2 Tubercle.

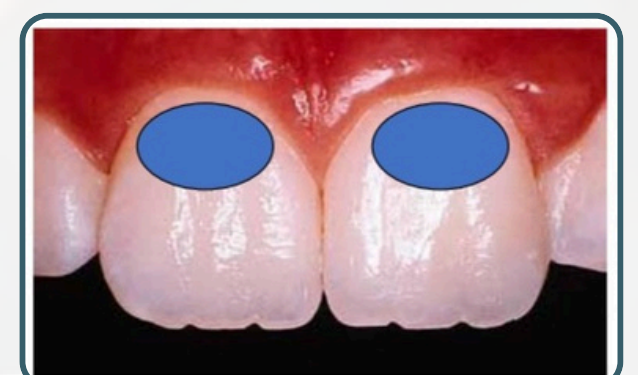
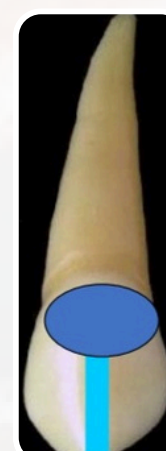
- It is a **small elevation**. It is produced by **excessive formation of enamel**.
- Tubercle differs from **cusp** as it is formed of **enamel only** while cusp is formed of **pulp horn covered by dentin and enamel**.



### 3 Ridge It is a linear elevation on the different surfaces of the crown.

1- Ridges can be found on the Facial surfaces:

- A- **Labial** (that exist in canines) or **Buccal** (that exist in premolars).
- B- **Cervical**: in all teeth at the C1/3
- C- **Cusp ridge**: in canine and posterior teeth called cusp slopes





### ③ Ridge It is a linear elevation on the different surfaces of the crown.

2- Ridges can be found on the Lingual surfaces:

- A- **Lingual** (that exist in canines).
- B- **Marginal**: in all anterior teeth.
- C- **Incisal**: in all incisors.
- D- **cusp ridge**: in canine and posterior teeth



### ③ Ridge It is a linear elevation on the different surfaces of the crown.

3- Ridges can be found on the Occlusal surfaces:

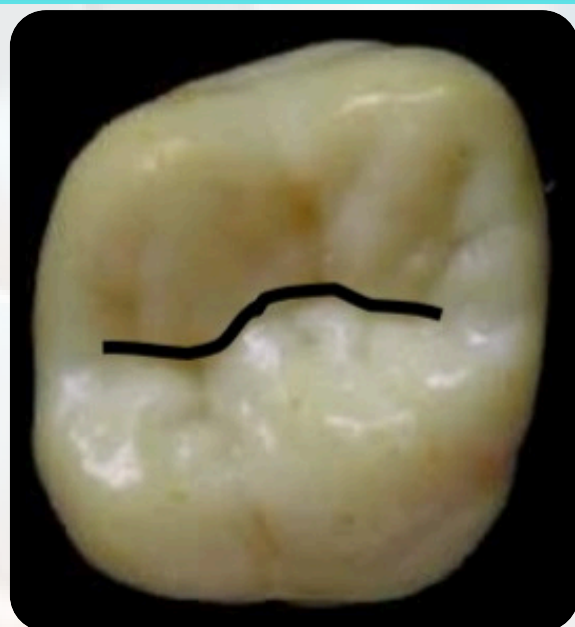
- A- **Triangular** (that exist in all posterior teeth).
- B- **Marginal**: in all posterior teeth.
- C- **Transverse**: in lower premolars.
- D- **Oblique**: in upper molars.



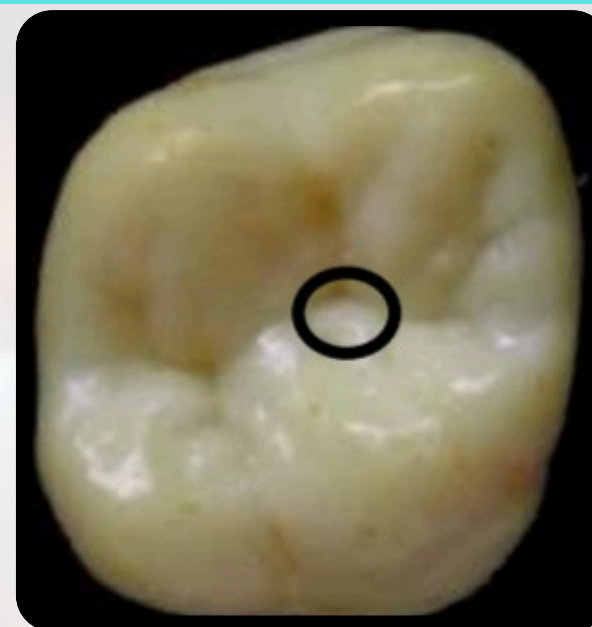
## B- Crown Depressions

### Crown Depressions

#### Linear depression



#### Circumscribed depressions



### Linear depression

#### Developmental grooves

Denoting union of lobes.



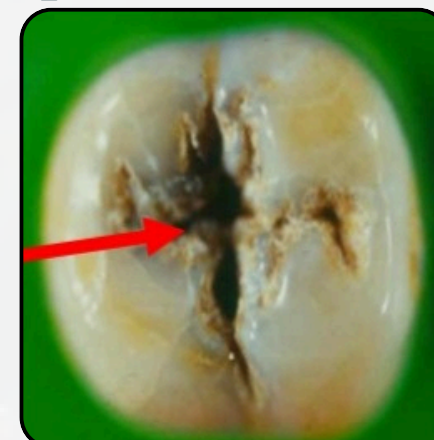
#### Supplemental grooves

They do not denote union of lobes.



#### Fissures

Incomplete enamel union.

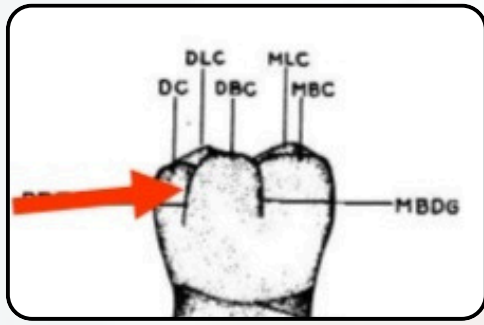




## B- Crown Depressions

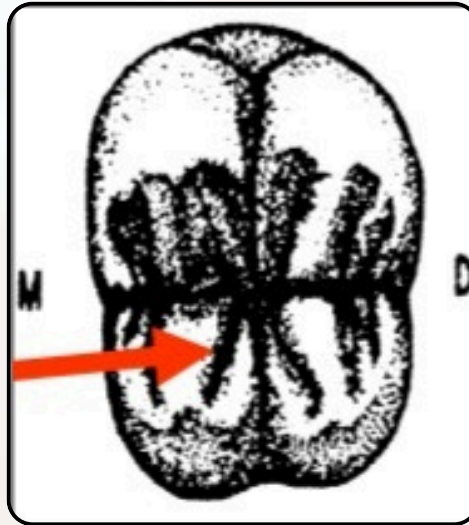
### ① Linear depression

#### Developmental grooves



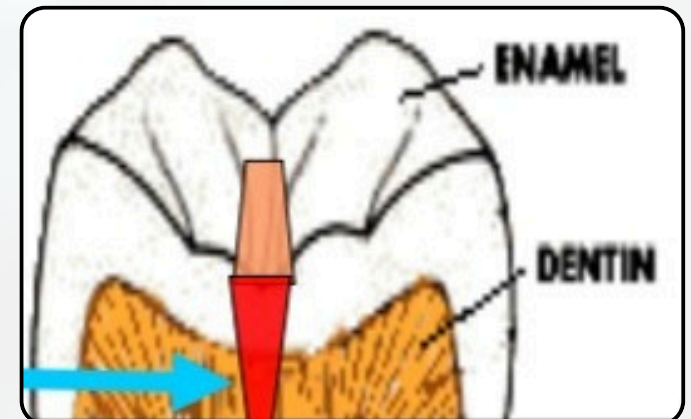
- It is shallow linear depression represents the site of union of primary lobes.
- Grooves are **found on the occlusal surface of posterior teeth** and may extend to the buccal or lingual surfaces

#### Supplemental grooves



- They do not denote union of lobes.
- They are **auxillary grooves radiating from the developmental groove**

#### Fissures

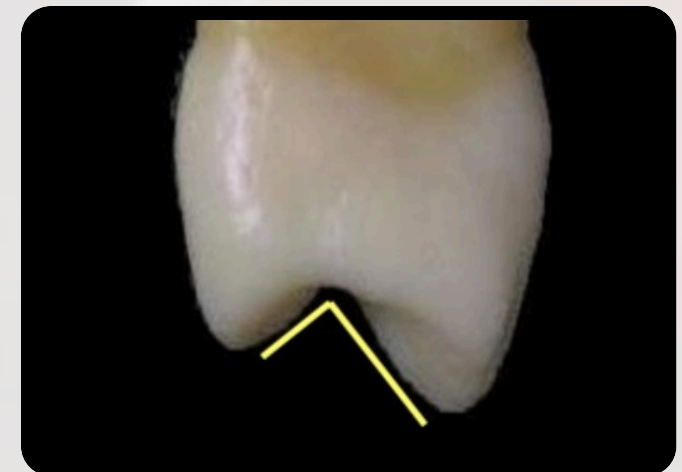


- It is a linear depression found in the bottom of developmental groove as a result of incomplete union of the primary lobes.
- It is a **fault in enamel**.
- Dental **caries** often begins in a deep fissure.



### SULCUS

- It is a broad depression or valley on the occlusal surfaces of posterior teeth.
- Its inclines meet in a **developmental groove** and **extend to the cusp tips**.



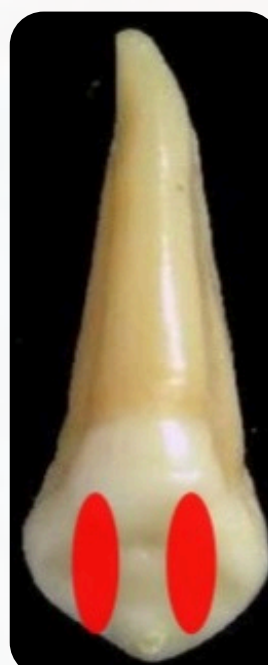
### ② circumscribed depressions

#### Fossa

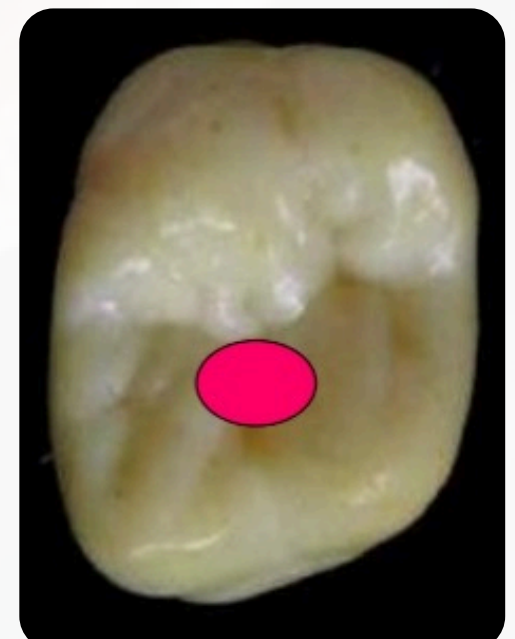
##### Mesial & distal fossae On occlusal surfaces



##### Lingual fossa In all anterior teeth



##### Central fossa on occlusal surfaces



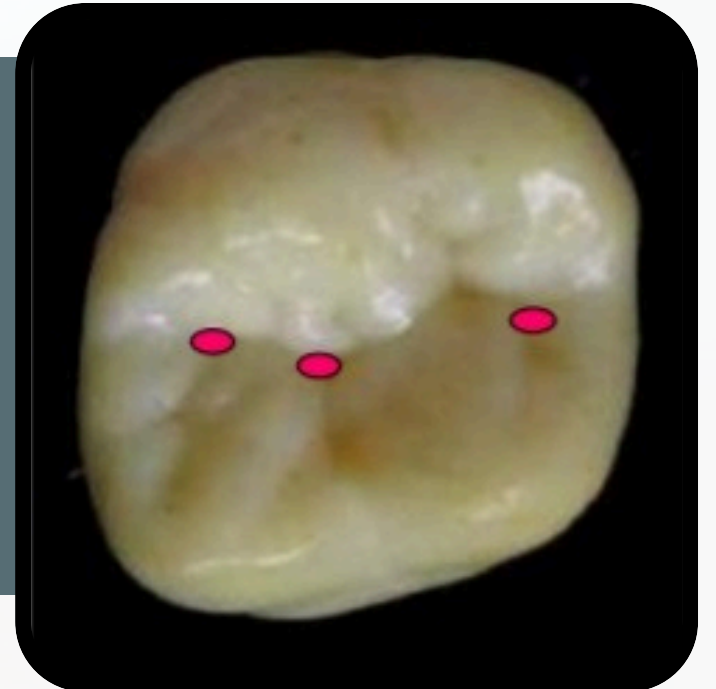


## B- Crown Depressions

### ② circumscribed depressions

#### *pit*

**True Pit** It is a small pinpoint depression present at the junction the developmental grooves. They may be found at the bottom of the central fossa (central pit) or at the bottom of mesial and distal triangular fossae (mesial and distal pits).



**Faulty pit** incomplete formation of enamel.

at the end of buccal developmental grooves of lower molars or palatal developmental grooves of the upper molars.

It a start point of caries.

