



**IN THE NAME OF ALLAH THE MOST
GRACIOUS THE MOST MERCIFUL**

OCCLUSION

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Is the relation of the upper and lower teeth during various activities of the mandible as in mastication and swallowing

Occlusion

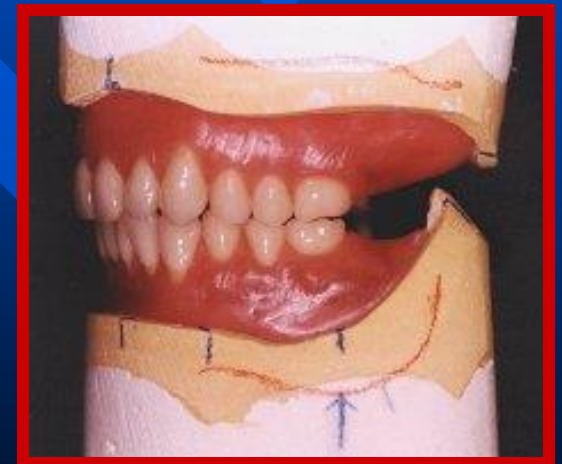
- Contact of teeth in opposing dental arches:
 - When the jaws are closed=
"static occlusal relationships"
 - During various jaw movements=
"dynamic occlusal relationships".

Why Learn Concepts of Ideal Occlusion ??

- Ideal “anatomical” occlusion of teeth makes them best serve their **function**.
- Dental professionals must learn **concepts** of ideal occlusion in order to **identify** malocclusion and **restore** normal occlusion.

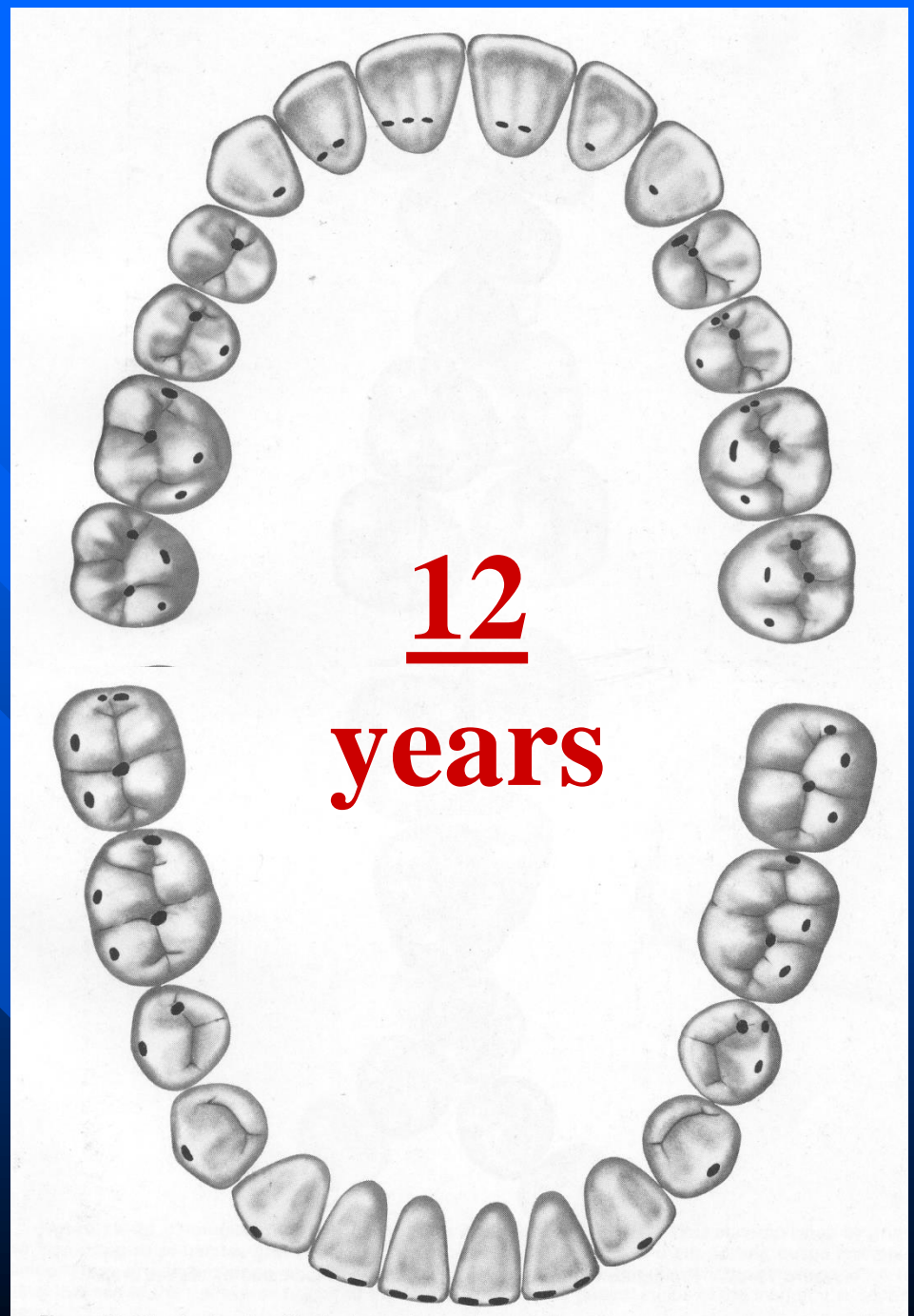
Importance of Ideal Occlusion

- The **masticatory loads** are evenly distributed over the teeth
- Good **pronunciation** of letters
- Good **appearance** of teeth, symmetry of face.
- **Stability** of the jaws.



Normal
occlusion is
established
by the end of

?



Main positions of the mandible in occlusion with the maxilla

- Centric occlusion (static)
- Lateral occlusal relation
(right and left).
- Protrusive occlusal relation.
- Retrusive occlusal relation.
(non functional)



Dynamic Occlusal Relationships

★ Bilateral symmetrical movement:

- Opening & closing (elevation & depression)
- Forward: (protrusive)
- Backward: (retrusive)

★ Bilateral assymmetrical movement:

- Right & left lateral movement

Centric occlusion

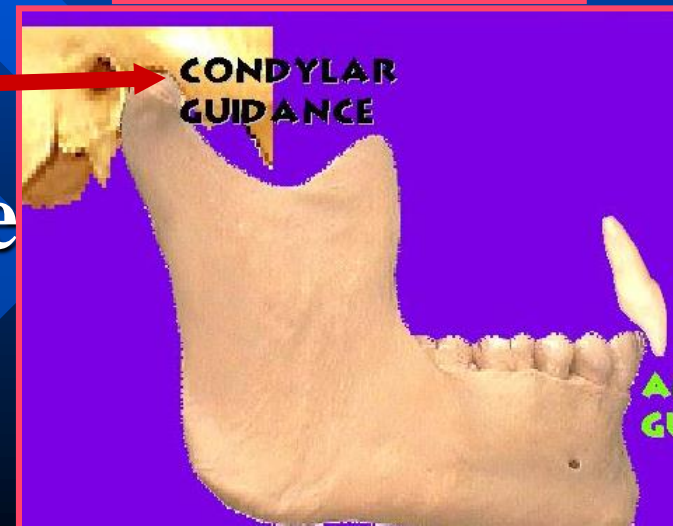
It is the **relation** of the upper and lower teeth

When:

they are **intercusped** together

and:

the **condyles** are resting in the most retrusive **unstrained** position in the glenoid fossa .

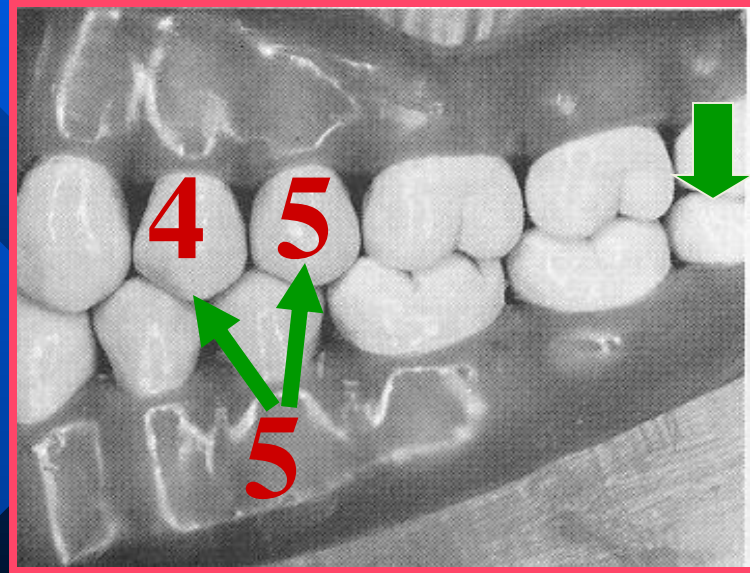
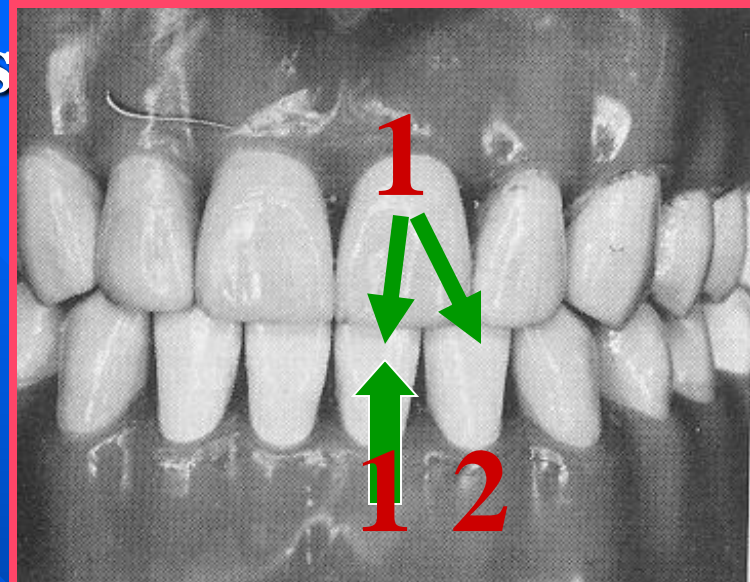


In normal centric occlusion

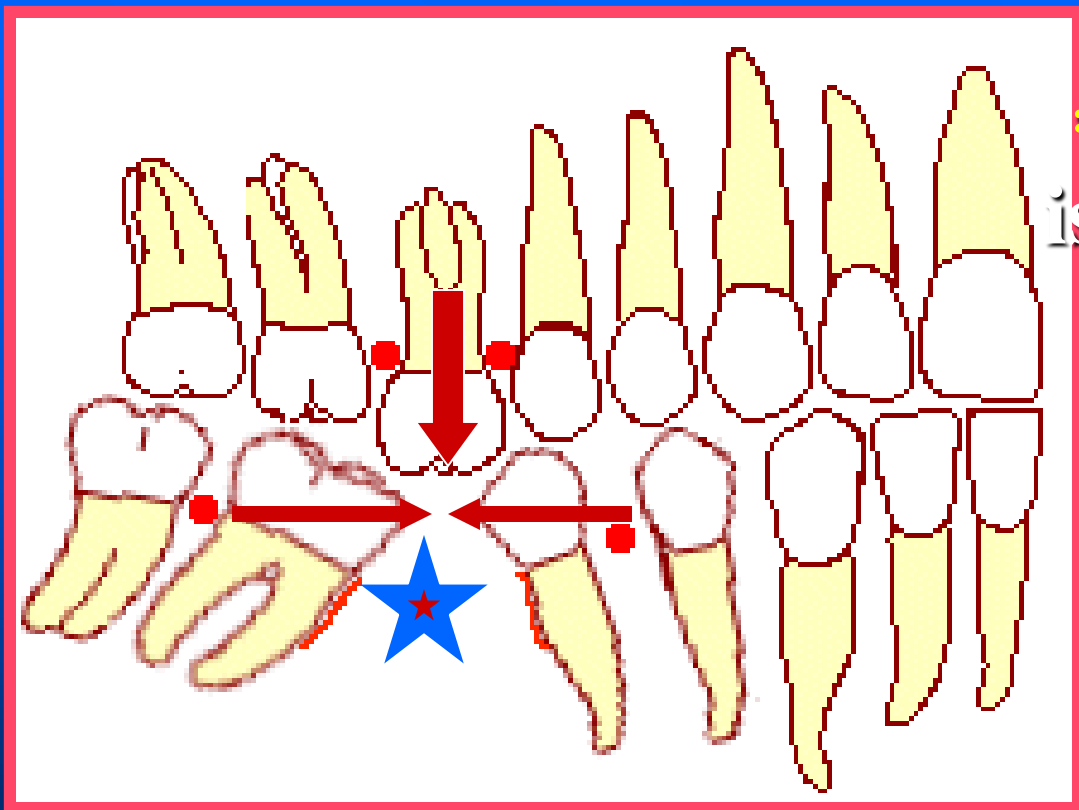
Each tooth of one arch contacts with parts of two opposing teeth

Except $\bar{1}$ & $\underline{8}$

This arrangement *distributes* the force and *preserves* the occlusal contact after loss of one tooth.



Loss of tooth leads to:



* The opposing tooth is elongated.

* The neighboring teeth migrate, to fill the space.

This results in: disturbance in the centric occlusion, caries and periodontitis.



Key of Occlusion

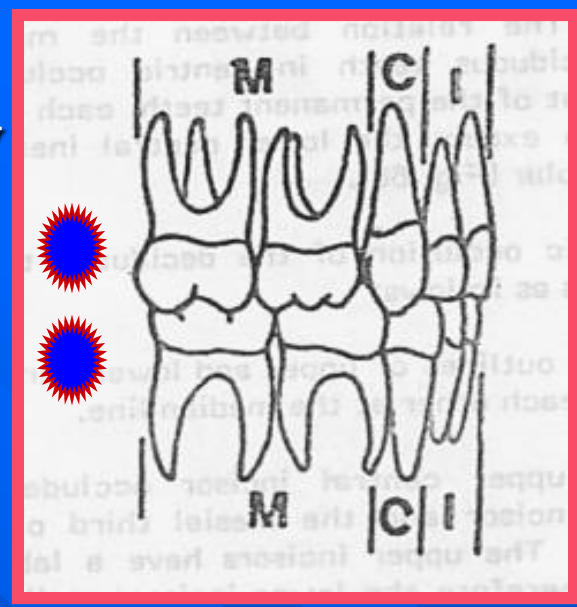
6 followed by $\overline{6}$ are considered as key for occlusion for the following reasons:

1- They are the **first** permanent teeth developed and erupted in the oral cavity.

2- They are the **largest** teeth in the dental arch.



3- Their positions are **guided** by the presence of the deciduous molars preceding them.



4- Their eruption is not disturbed as they have **no predecessors**.

5- 6 is considered more accurate than $\overline{6}$ one as it is attached to a **bone fixed** in the base of the skull.

Classification of Occlusion (Angle's Classification)



Classification of Occlusion

Angle's Classification:

Class I :
Centric occlusion:

MB cusp 6



MB groove 6



Classification of Occlusion

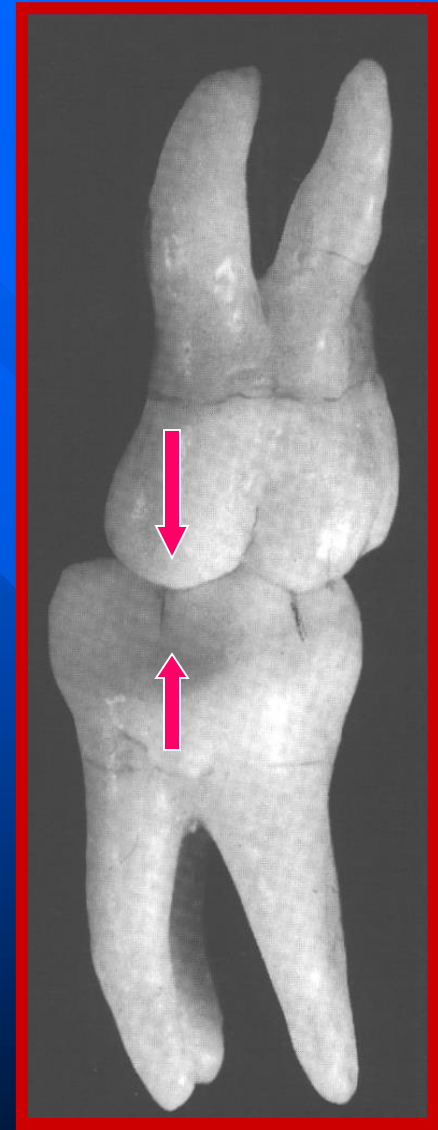
MB cusp 6 → MB groove 6



Class I : centric occlusion



Normal lower jaw



Orthognathic profile

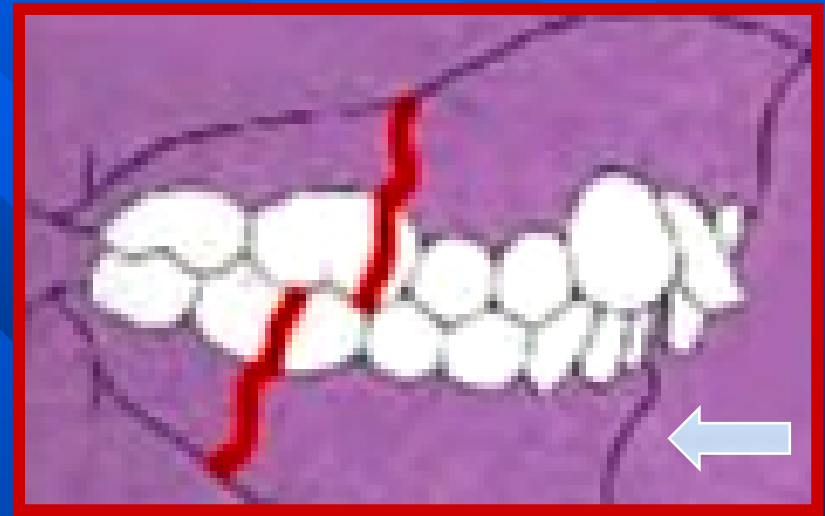
Classification of Occlusion

MB cusp 6 ^{Mesial} → MB groove 6

Class II malocclusion



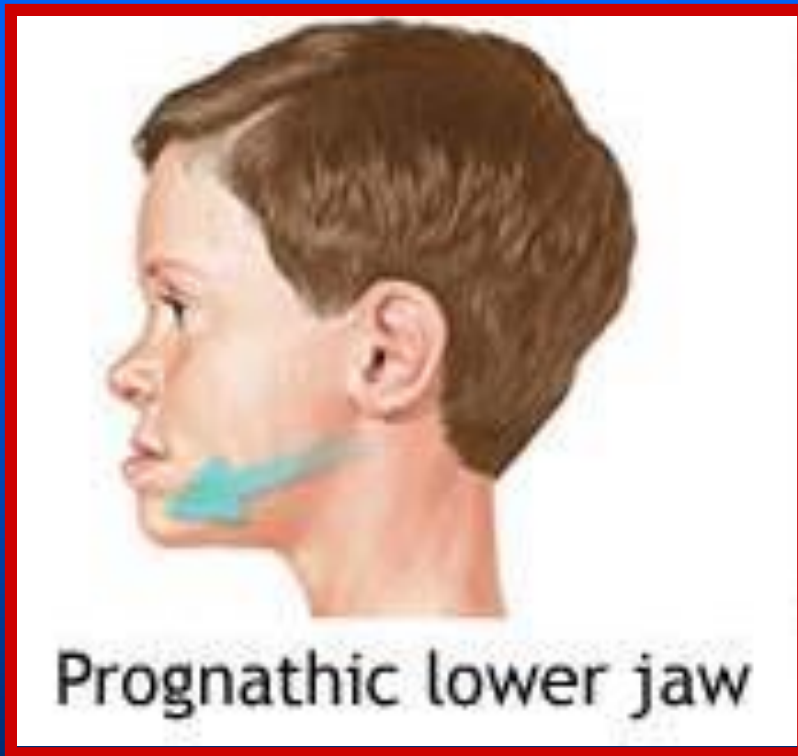
Retrognathic profile



(B groove of 6 is distal to MBC of 6)

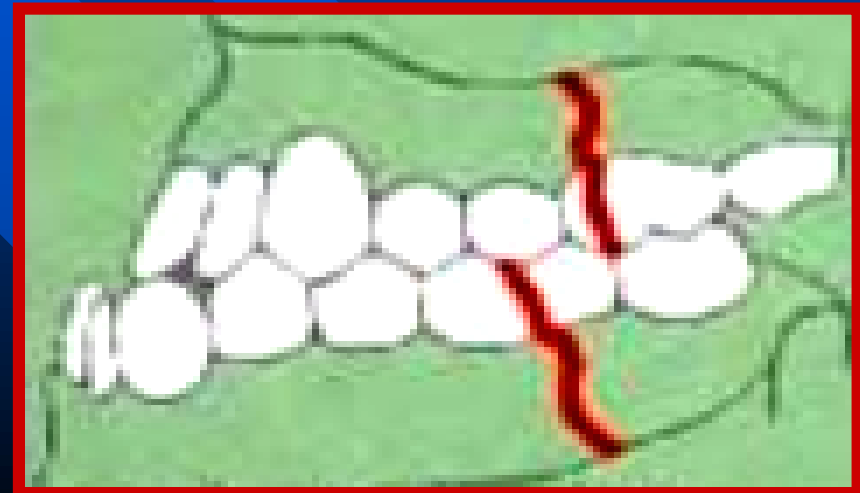
Class III malocclusion

MB cusp 6 ^{Distal} → MB groove 6

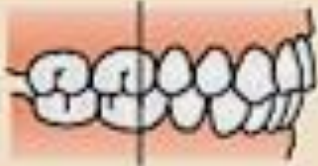




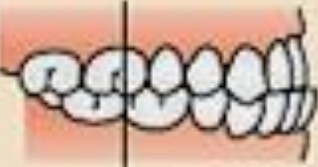



Anterior cross bite

(B groove of 6 is mesial to MBC of 6)

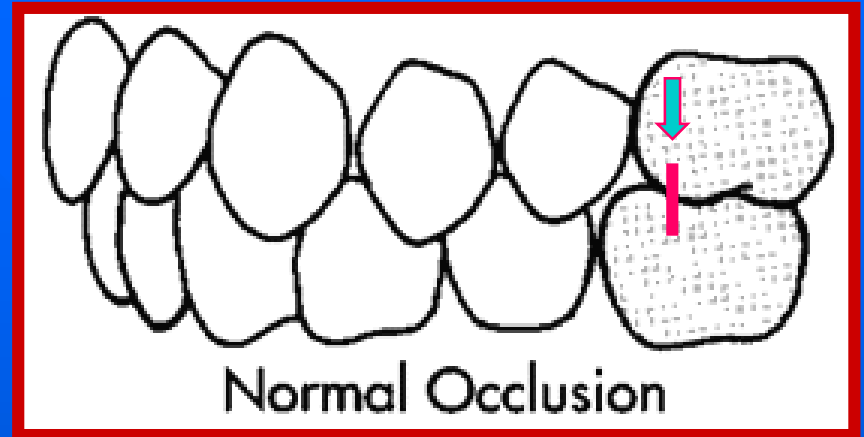


ANGLE'S CLASSIFICATIONS OF MALOCCLUSION AND FACIAL PROFILES

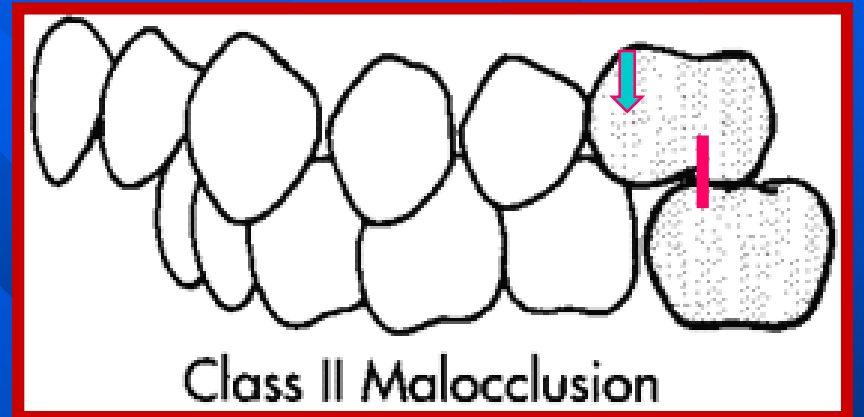
Class Name	Molar Relationship	Description	Illustration	Facial Profile
Neurooclusion	Mesiobuccal cusp of maxillary first permanent molar occludes with the buccal groove of the mandibular first permanent molar.	Similar to normal occlusion with individual teeth or groups of teeth out of position.	 <p>Class I</p>	<p>Mesognathic</p> 
Distocclusion	Buccal groove of the mandibular first permanent molar is distal to the mesiobuccal cusp of the maxillary first permanent molar.	Division 1— Maxillary teeth in labioversion	 <p>Class II, Division 1</p>	<p>Retrognathic</p> 
		Division 2— Linguoversion of mandibular teeth	 <p>Class II, Division 2</p>	<p>Retrognathic</p>
Mesiocclusion	Buccal groove of the mandibular first permanent molar is mesial to the mesiobuccal cusp of the maxillary first permanent molar.	Mandibular teeth mesial to normal position	 <p>Class III</p>	<p>Prognathic</p> 

Angle's Classification:

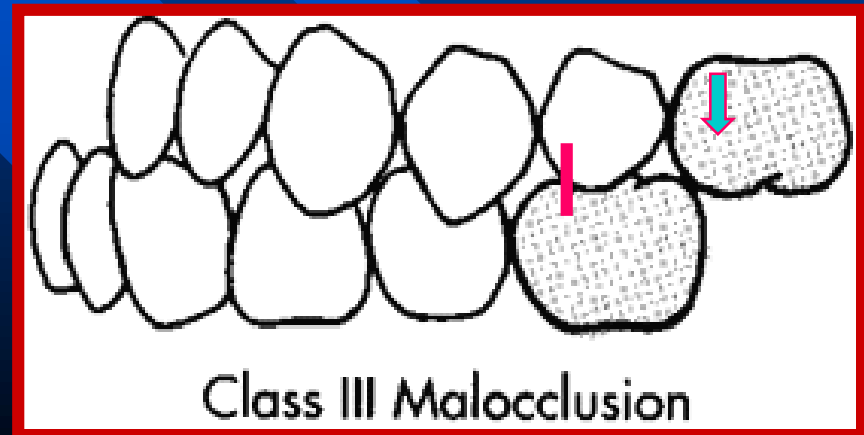
Class I



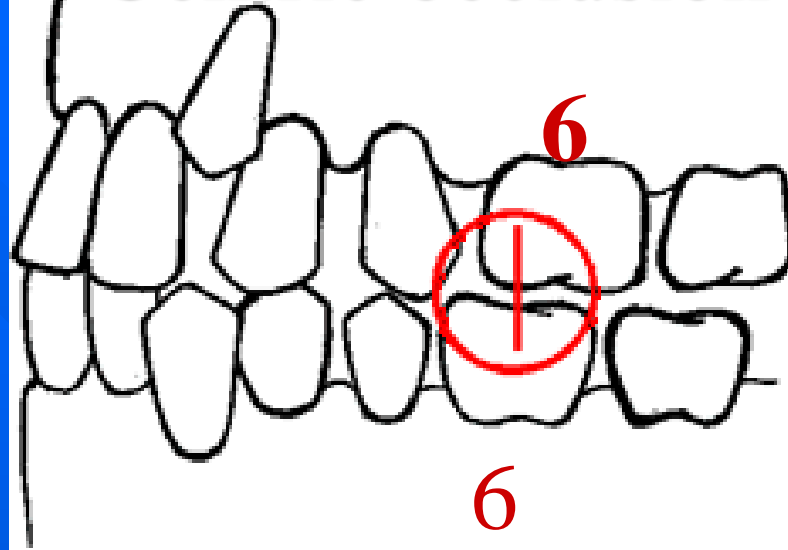
Class II



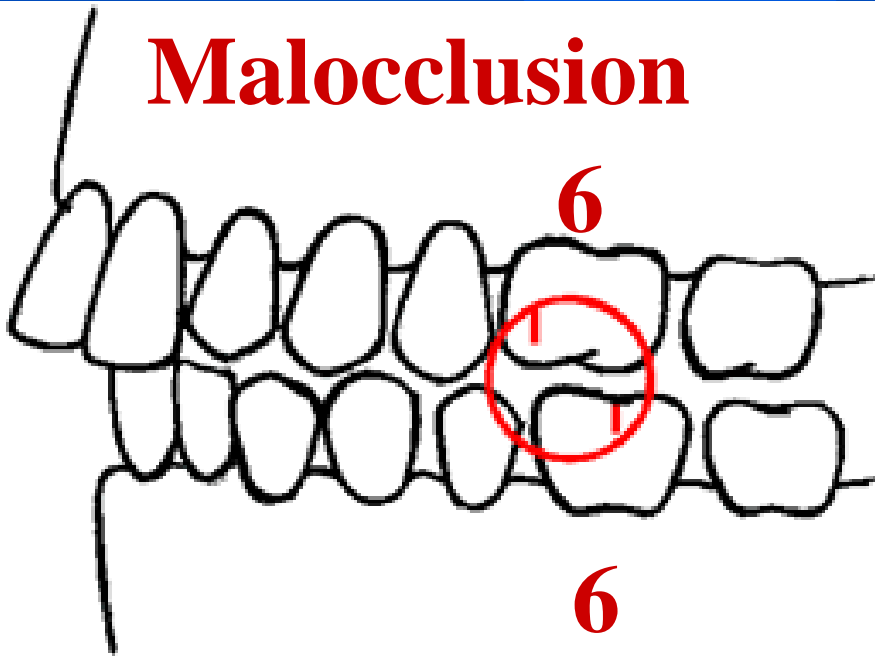
Class III



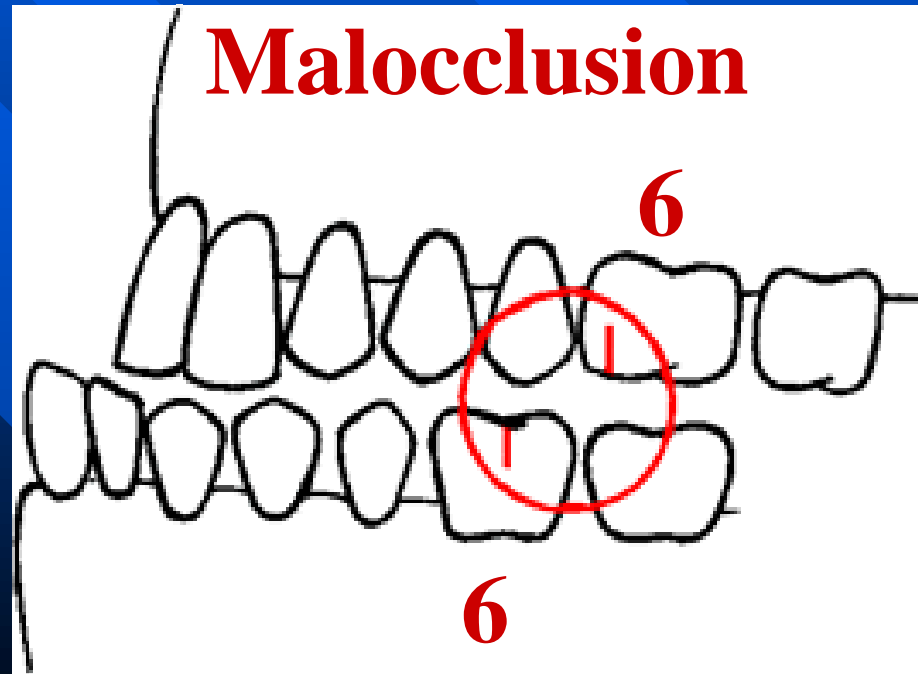
Centric occlusion



Malocclusion



Malocclusion



The Contact Relation of the Teeth in Centric Occlusion



Relationship of Anterior Teeth

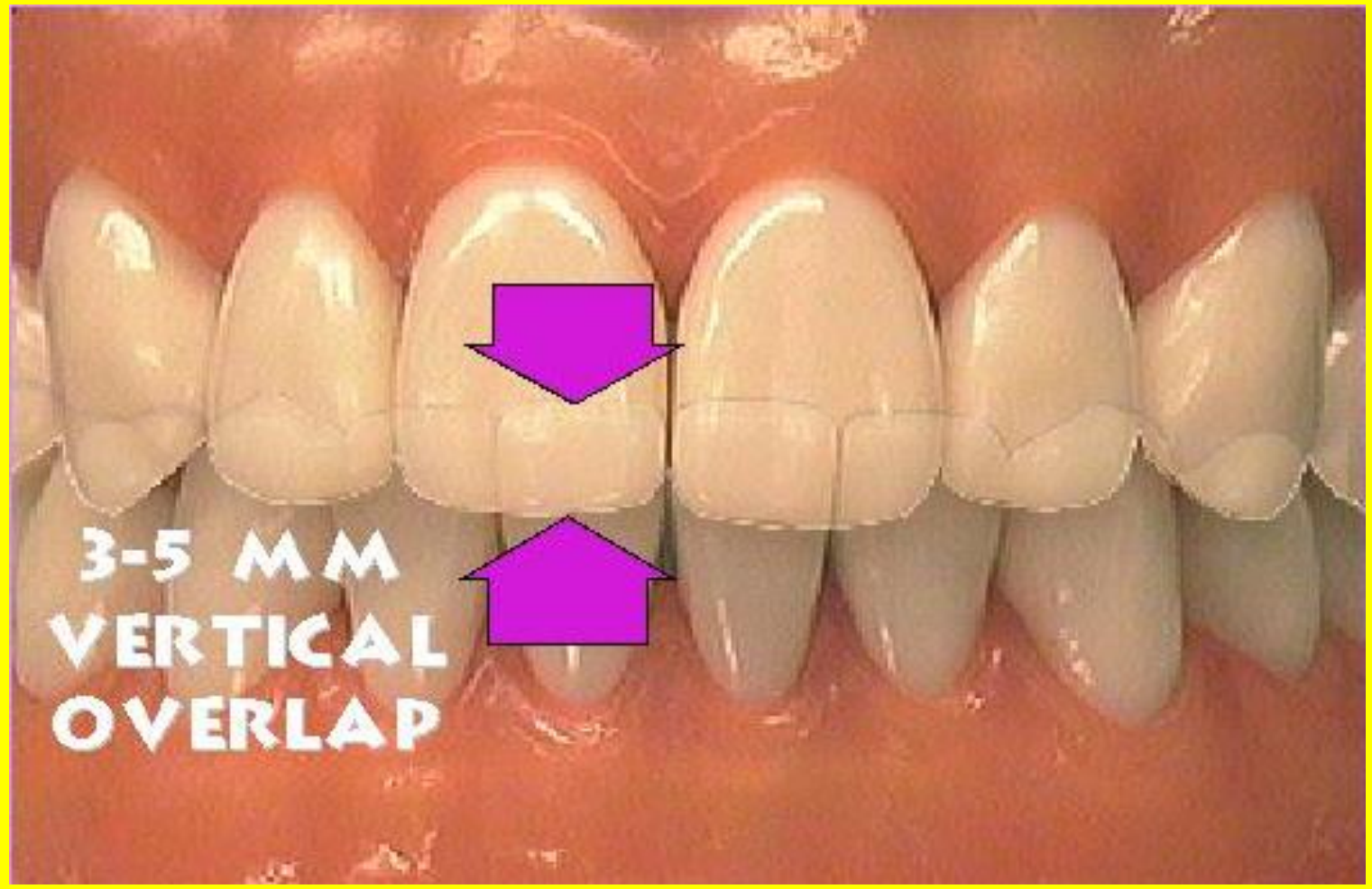
- The **incisal edges** of Max. ant. teeth are **labial to** and extended **below** the incisal edges of the Mand. teeth .

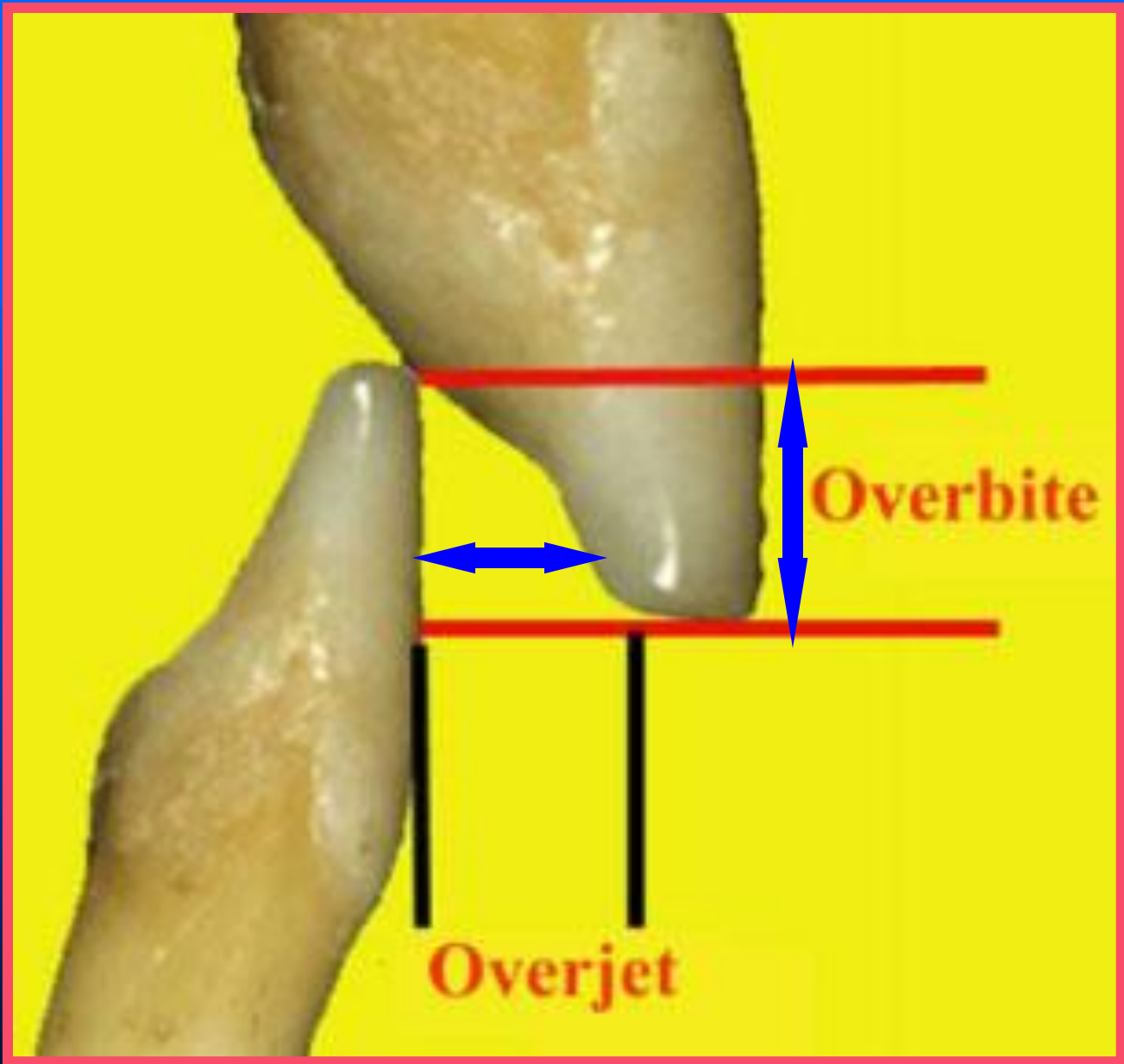
- The horizontal overlap is called **overjet** .
- The vertical overlap is called **overbite** .
- It is due to the **large parabolic curve** of the Max. arch than the Mand. arch .

Occlusion of the Anterior Teeth

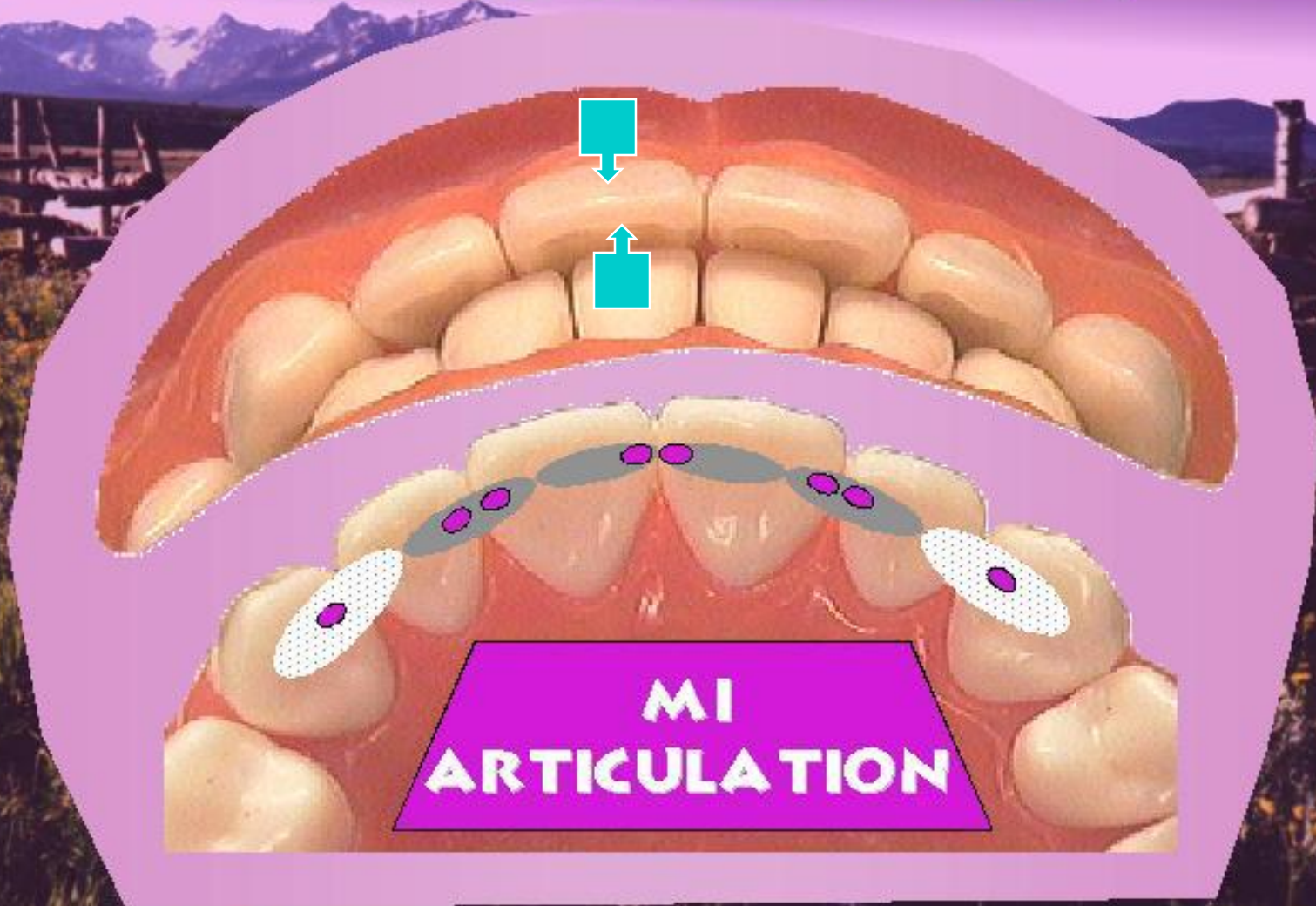


Overjet





ANTERIOR OCCLUSION

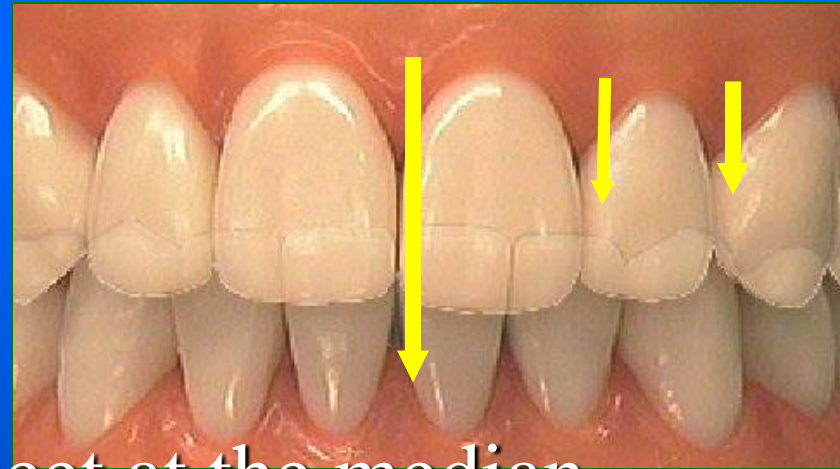


● Facial Relations of Incisors:

Maxillary Incisors:

1 & 2 overlap $\bar{1}$, $\bar{2}$, $\bar{3}$

- Mesial outlines of 1 & $\bar{1}$ meet at the median line.
- Distal outline of 1 passes with the middle of labial surface of $\bar{2}$.
- Distal outline of 2 passes above the tip of the cusp of $\bar{3}$.
- Their incisal ridges are *free of contact*.



THANK YOU

Any Question ?

