

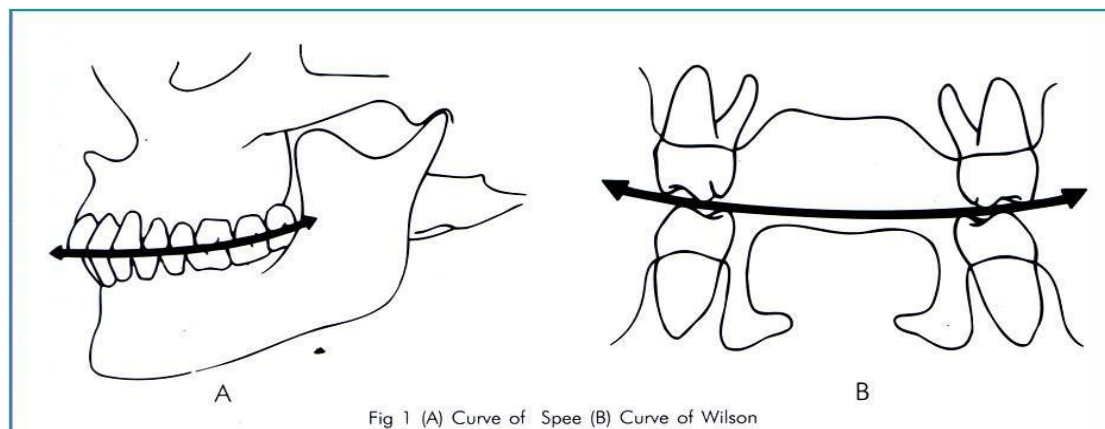
## Arrangement Of Posterior Teeth

Correct placement of posterior teeth is important for the retention and stability of both dentures that it essential during function (mastication).

\* Prior to arrangement of the posterior teeth, we must understand some of the definitions which are related to posterior teeth arrangement.

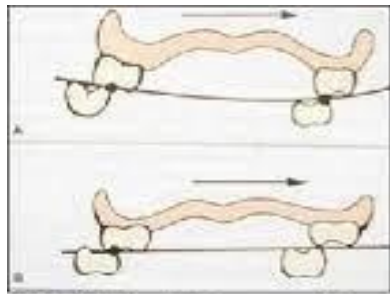
**Curve of Spee:** It is an anatomical curvature of the occlusal alignment of teeth, beginning at the tip of mandibular canine and following the buccal cusps of the natural premolars and molars, continuing to the anterior border of the ramus of mandible.

**Curve of Wilson:** It is a curve extends mediolaterally from one side of the arch to the other side.

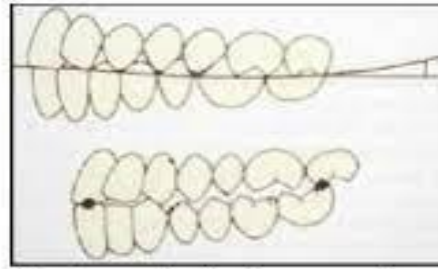


**Christensen's phenomenon:** This is the posterior opening of the dental arches or occlusion rims during forward movement of the mandible. To compensate for the posterior opening during protrusive movement need to incorporate compensating curve.

**Compensating curve:** It is the anteroposterior, and lateral curvature in the alignment of the occluding surfaces and incisal edges of artificial teeth, which is used to develop balanced occlusion. (It compensates the opening that occurs during forward and lateral movement of the mandible)



Mediolateral Compensating Curve



Anteroposterior Compensating Curve

### Arrangement of The Mandibular Posterior Teeth

The mandibular posterior teeth will be before the maxillary posterior, because there are more anatomical landmarks to locate the guidelines which are:

- A.** The line of the crest of the mandibular residual ridge, which extends between the middle of retromolar pad and tip of mandibular canine, the central grooves of the mandibular posterior teeth should coincide with this line.
- B.** The line extending between the tip of mandibular canine and upper half of retromolar pad will determine the height of mandibular posterior teeth.



### 1. Mandibular 1st Premolar:

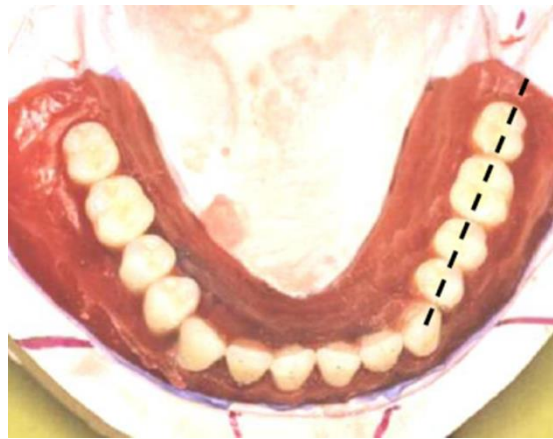
- **In buccal view**

The tooth should be set perpendicular to the occlusal plane. The tip of its buccal cusp should be 1 mm below the line is planed from the tip of canine and the half of the vertical height of retromolar pad.



- **In horizontal view**

The central groove should be over the crest of residual ridge.



### 2. Mandibular 2nd premolar:

It should be arranged in the someway as mandibular first premolar.

### 3. Mandibular 1st molar:

- **In buccal view**

The mesiobuccal cusp should be 1 mm below the line, and the distobuccal cusp should be ½ mm below the line.

- **In horizontal view**

The central groove should coincide with the crest of the residual ridge.



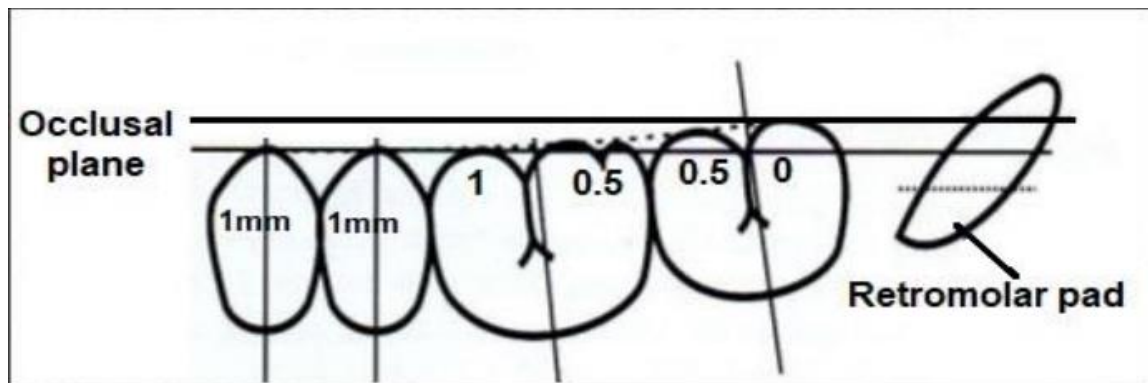
#### 4. Mandibular 2nd molar:

- **In buccal view**

The mesiobuccal cusp is  $\frac{1}{2}$  mm below the line, and the distobuccal cusp should touch the line.

- **In horizontal view**

The central groove should coincide with the crest of the residual ridge.





## Arrangement of Maxillary Posterior Teeth

### 1. Maxillary 1st Molar:

In order to get normal molar relation, the mesiobuccal cusp of maxillary first molar should rest in the buccal groove of the mandibular first molar, and the mesiopalatal cusp should seat into the central fossa of mandibular first molar.



### 2. Maxillary 2nd Premolar:

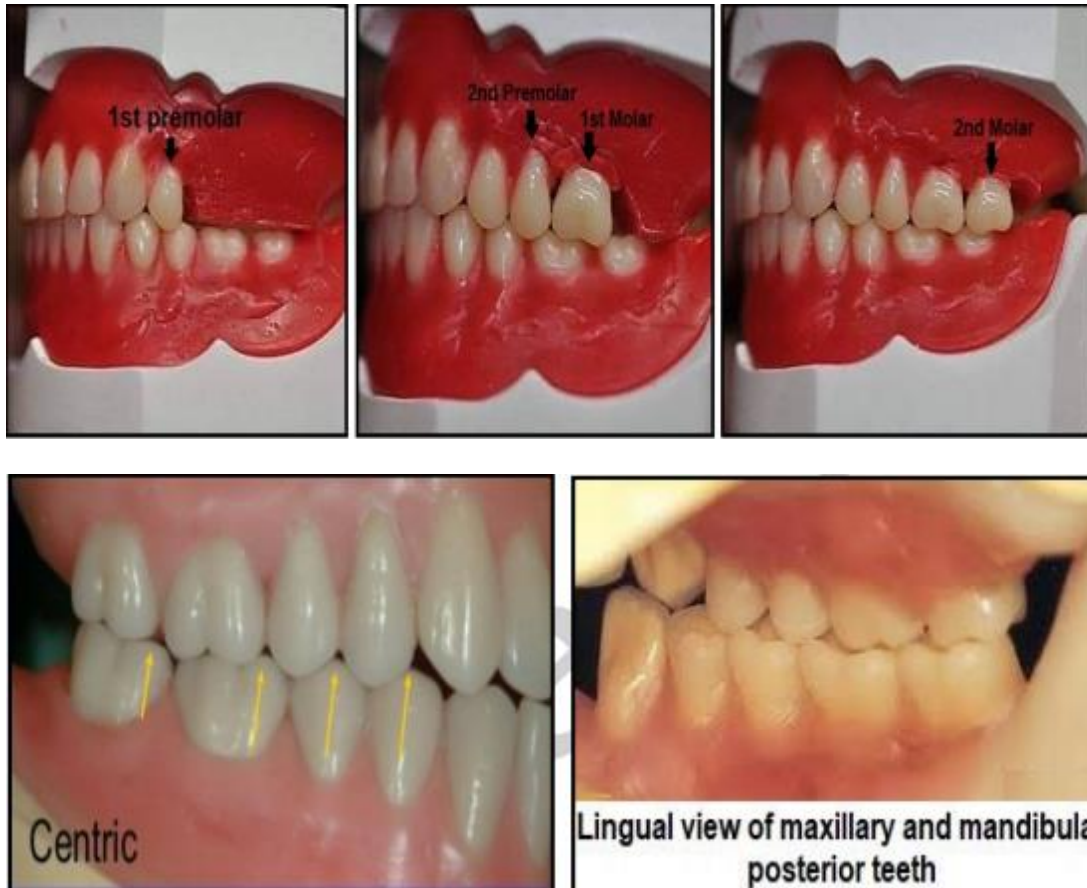
The palatal cusp should seat into the embrasure formed between the mandibular second premolar and first molar.

### 3. Maxillary 1st Premolar:

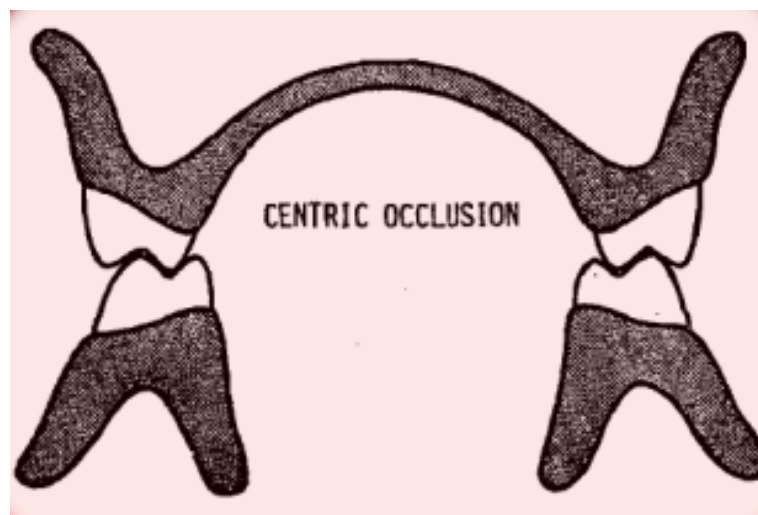
The palatal cusp should seat into the embrasure between the mandibular first and second premolars.

### 4. Maxillary 2nd Molar:

The mesiobuccal cusp should rest in the buccal groove of mandibular second molar, and the mesiopalatal cusp should seat into the central fossa of the mandibular second molar.



Maxillary teeth overlap the mandibular teeth horizontally; the overlap must be present posteriorly to prevent cheek biting. The long axis of each maxillary tooth is distal to that of corresponding mandibular tooth. Each tooth in both arches is opposed by two teeth, except the mandibular central incisor and the maxillary second molar. This arrangement of posterior teeth will provide maximum contact between the occlusal surfaces of mandibular and maxillary teeth in centric occlusion.



**Common errors in arrangement of teeth:**

1. Setting mandibular anterior teeth too forward in order to meet maxillary teeth.
2. Failure to make the canine the turning point of the arch.
3. Setting the mandibular first premolars to the buccal side of the canines.
4. Failure to establish the occlusal plane at the proper level and inclination.
5. Establishing the occlusal plane by an arbitrary line on the face. When it is too low or too high, it is not look natural and cause difficulty in the mastication.
6. The posterior teeth should not appear longer than anterior teeth when the patient smile, the patient will have (reverse smile).
7. Lack of lingual rotation of anterior teeth to give a narrow effect. Tooth arranged too wide posteriorly, appearance like many teeth in the mouth.
8. Setting the mandibular posterior teeth too far to the lingual side in the second molar region which cause tongue interference and mandibular denture displacement.
9. Teeth arranged too far toward the tongue or palate, there will be dark space between the cheek and teeth when patient talk or smile (dark buccal corridors).



