

Selection of artificial teeth

Prosthetic teeth: -

Artificial teeth are used on a denture to substitute for natural teeth. It provides esthetic. It transfers occlusal forces to the denture base and subsequently to the teeth edentulous ridges in tooth–tissue supported RPD and thus provides the function of support.



Denture teeth are artificial substitutes for the coronal portions of the missing teeth.

Objectives:

1. Esthetic
2. Masticatory function
3. Correction of speech defect
4. Preservation of the remaining tissue and muscle tone

-The selection of the teeth is very important to construct a successful removable partial denture as near as possible to the natural look.

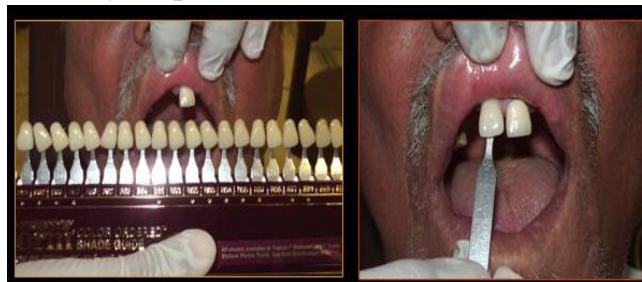
- The main factor in selecting the artificial teeth in partial denture is **the presence of remaining natural teeth.**

Selection of artificial teeth

- A- Selection of anterior teeth.
- B- Selection of posterior teeth.

Selection of anterior teeth

- In routine cases a shade of teeth is taken by watching the natural teeth to a shade guide (it is very important in anterior teeth)

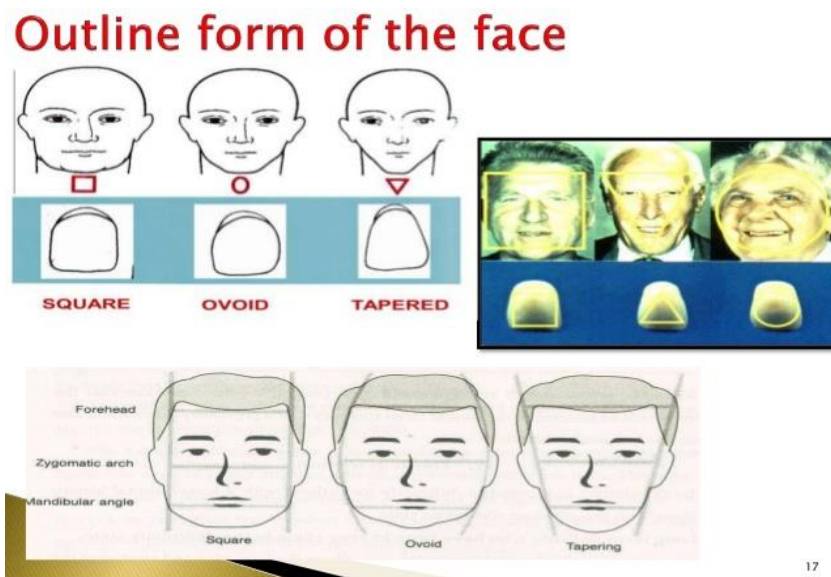


- The mold (shape \ anatomy) can be selected by the laboratory technician from standing teeth on cast



Guides for the anterior teeth selection

1. Pre-extraction records or guides
 - a. Study cast
 - b. Photograph
 - c. Radiograph
 - d. Extracted teeth
2. Old denture
 - **If the six anterior teeth have been lost, the selection of anterior teeth will depend on the following factors**
 1. The width of teeth depends on the saddle area.
 2. The length of teeth is determined by lip length and facial movements
 3. The shape of teeth is determined by the shape of the face (square, taper, oval) according to it.
 4. The texture (kind of the patient's skin determines the texture of the tooth)



Materials of anterior teeth:

There are two main types:

1. Porcelain.

2. Acrylic

I-Porcelain teeth: we have vacuum-fired and air-fired. The vacuum is better because they are harder and have luster. Generally, porcelain teeth are preferred particularly for **young people** because they look more **vital, smooth, and difficult to abrade**.



2. Acrylic teeth: They are made from acrylic resin, indicated when there is insufficient inter-occlusal distance, and grinding becomes necessary, also in situations where there are opposing natural teeth, partial denture, and gold bridge. They are inferior when they are compared with porcelain **because they cannot maintain luster for a long time and abraded easily**.



Selection of posterior teeth

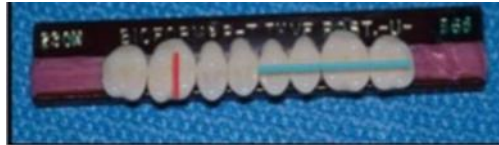
Posterior teeth are selected for color, buccolingual width, mesio-distal length, vertical height (occluso-gingival length), and occlusal form.

1- Shade (color): -

The shade of posterior teeth should be harmonized to the shade of anterior teeth, maxillary first premolars are sometimes used for esthetic more than function, so it's advisable to select premolar teeth with lighter color than the other posterior teeth, but not lighter than anterior teeth. Generally, the shades of posterior teeth are slightly darker than anterior teeth.

2- Bucco lingual width; -

The buccolingual width of posterior teeth should be slightly narrower than natural teeth to decrease occlusal surfaces which direct less stress during function to supporting tissue and enhance the development of the correct form of polished denture surfaces.



3- Mesiodistal: -

The mesiodistal length of posterior teeth should be equal to the distance between the canine line and the anterior border of maxillary tuberosity for upper teeth. For lower teeth should be equal to the distance between the canine line and the anterior border of the retromolar pad area.

If the residual ridge anterior to the retromolar pad area slopes upward, smaller teeth or even fewer in number must be used. Placing a tooth on an inclined plane should be avoided, otherwise, dislodgment of the denture occurs.

4- Occlusogingival height: -

The occluso gingival height or length is controlled by the available inter-arch distance. The length of the maxillary first premolar should be comparable to that of the maxillary canine to have the proper esthetic effect. The height of posterior teeth is usually divided into long, short, and medium. Long posterior teeth are generally more esthetic in appearance than shorter teeth.



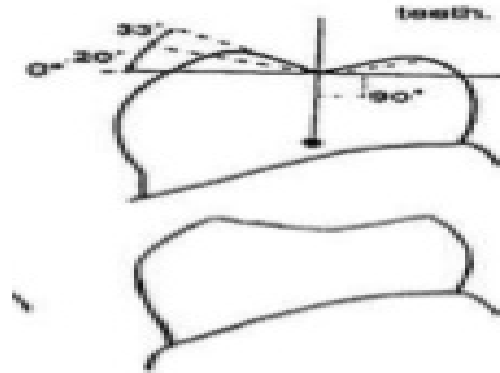
5- Occlusal form: -

There are two forms: -

- a) **Cusp form (anatomical teeth):** Anatomical teeth have cusp angles of 33, 20, and 5 degrees.
- b) **Non-cusp (cusp less) form teeth:** also called **monoplane or zero-degree teeth.**

Advantages of cusp form teeth: -

- 1- More efficient
- 2- Can be arranged in a balanced occlusion eccentric position.
- 3- The cusp fossa relationship between upper and lower posterior teeth forms a definite point for a return to centric occlusion.
- 4- More acceptable esthetically.
- 5- More compatible with the surrounding oral environment.



Advantages of non-cusp form teeth: -

- 1- Offer less resistance in non-masticatory movement like bruxism, therefore less damaging to supporting tissue.
- 2- More comfortable.
- 3- Offer less resistance to lateral forces therefore, they are indicated in excessively resorbed ridges.
- 4- Allow greater range for movement which is necessary in patients with mal-related jaw.
- 5- Can be used with less damaging effect than cusp form teeth in patients with uncoordinated neuromuscular control which jaw relation records are not repeatable.



THANK YOU