

Teeth selection for edentulous and partially edentulous patients

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- Artificial teeth selection for complete denture

Anterior teeth selection

Posterior teeth selection

- Artificial teeth selection for removable partial denture

Anterior teeth

Posterior teeth

Artificial teeth selection for complete denture

One of the objectives of complete denture prosthetics is to produce a harmonious appearance of the denture when in the patient's mouth

A denture is usually perceived esthetic when the teeth and bases are in harmony with the facial musculature as well as the size and shape of the head

Selection of the anterior teeth

Selection of the anterior teeth

- Study casts:

They are the most reliable guides in selecting the size, shape and position of the natural

Selection of the anterior teeth

- Photographs:

Helps in determining the placement of teeth, arch form, lip support than the actual size or shape of teeth

Use close up photo

Use the most recent

Selection of the anterior teeth

- Intra-oral radiographs:

Can supply information about width, length and shape of teeth

May be distorted??

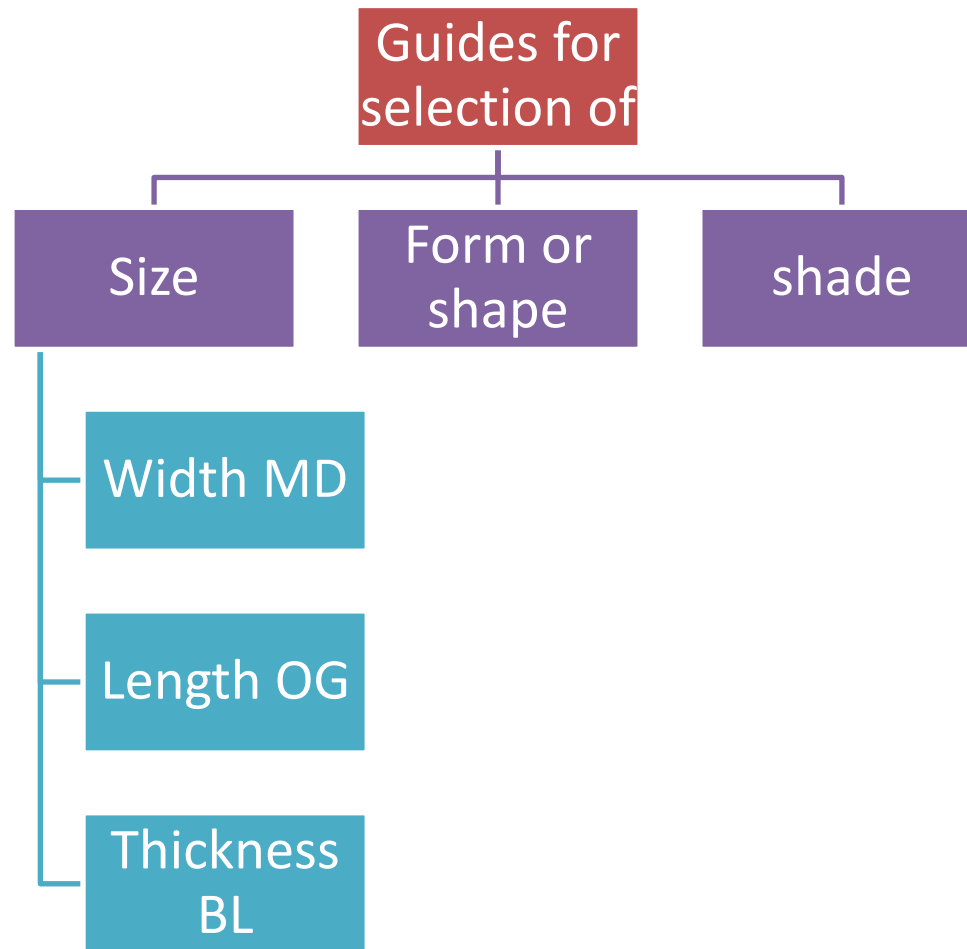
Selection of the anterior teeth

- Extracted teeth:

Can supply information about size and mold of
teeth

colour??

Selection of anterior teeth



Guides to select anterior teeth size

Selection of anterior teeth

Guides for
selection of teeth
width

Bizygomatic
width

BL centers
of
hamular
notch

Corners of
mouth

Lateral
surfaces
of nose

Cranial
circumference

Ridge size
and
contour

Incisive
papilla

WIDTH



- Post extraction guides to determine width:

Bi zygomatic width

Combined width of six maxillary anterior may be estimated by dividing the maximum bizygomatic width of skull by 3.3

The width of maxillary central incisor may be estimated by dividing the maximum bizygomatic width by 16

WIDTH

- Post extraction guides to determine width:

Buccolingual centers of hamular notches

Combined width of six maxillary anterior equals the distance between the buccolingual centers of hamular notches plus 5 mm

WIDTH

- Post extraction guides to determine width:

Corners of the mouth

The distal surface of many natural upper canines is positioned at the corner of the relaxed mouth



WIDTH



- Post extraction guides to determine width:

Canine eminence

If it is well defined, the distance between lines drawn on the master cast of the upper jaw at the distal aspect of the eminence may be taken as the mesiodistal width of the six anterior teeth

WIDTH



- Post extraction guides to determine width:

Width of nose

Distance between lateral extremities of the ala of nose can be measured with dividers and then transferred to the occlusion rims

Approximately 6 mm should be added to give the width of the six anterior teeth

Clinical way.... Pic?

WIDTH

- Post extraction guides to determine width:

Size and contour of residual ridge

The growth of alveolar bone requires presence and eruption of teeth. Therefore the size of residual ridges on casts have a relationship to size of anterior teeth

Bone resorption after extraction will result in loss of contour and incorrect choice

- Post extraction guides to determine width:
Size and contour of residual ridge
Pattern of alveolar bone loss after extraction
Maxilla: ant. Vertical and palatal direction
Post. Vertical and medial direction
Mandible: ant. Vertical and lingual direction
Post. Vertical and slight lingual direction

- Post extraction guides to determine width:

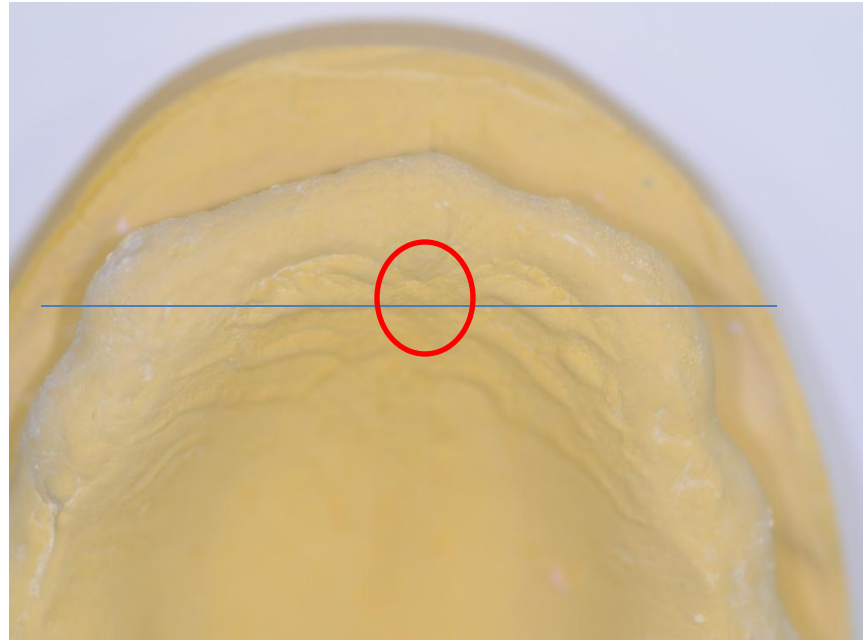
Lateral surface of the nose

Imaginary line through the lateral surface of nose and the center of brow line will indicate the distal aspect of the canine tooth at the point where the projected line passes through the occlusal plane

- Post extraction guides to determine width:

The Incisive papilla

Imaginary transverse line bisecting the incisive papilla will pass through the middle of the upper canines



- Post extraction guides to determine width:

Maxillomandibular relation

Any disproportion in size between the maxillary and mandibular arches influences length, width and position of teeth

- Post extraction guides to determine

Cranial circumference



The horizontal circumference of the cranium at a plane passing through the glabella and maximum occipital point is said to be 10 times the width of the maxillary anterior teeth

LENGTH

- Post extraction guides to determine length:

Vertical distance between the ridges

Length of teeth is determined by the available space between the alveolar ridges

- Post extraction guides to determine length:

The lips:

Length of anterior teeth can be determined from relaxing lips

Amount of central incisor visible below the lip when lip is relaxed and teeth apart is about 2-3 in young people and less in older individuals

When teeth are in occlusion lower lip is supported by incisal third of upper central incisor

- Post extraction guides to determine length:

The lips:

On smiling amount of tooth show is related to:

1. Length of upper lip
2. Mobility of upper lip
3. Vertical dimension of occlusion
4. Vertical overlap of teeth

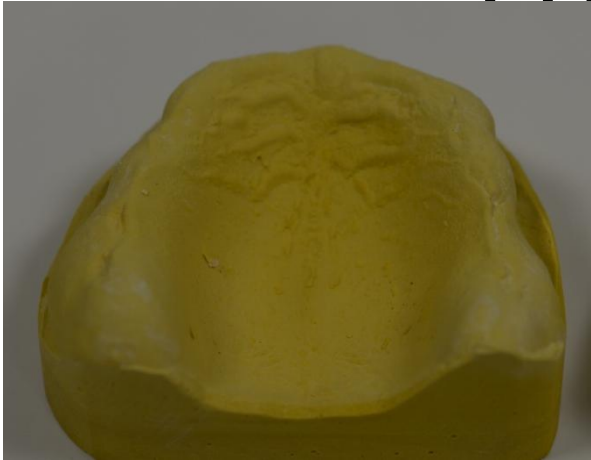
THICKNESS

- Post extraction guides to determine thickness:

Thickness of teeth has a considerable effect on **phonetics as well as esthetics**

Guides to select anterior teeth form

SHAPE/ FORM



- Post extraction guides to determine shape of anterior teeth:

1. Shape of the arch

There is a relation between the shape of the upper arch and incisor teeth.

It may be square, tapering and ovoid

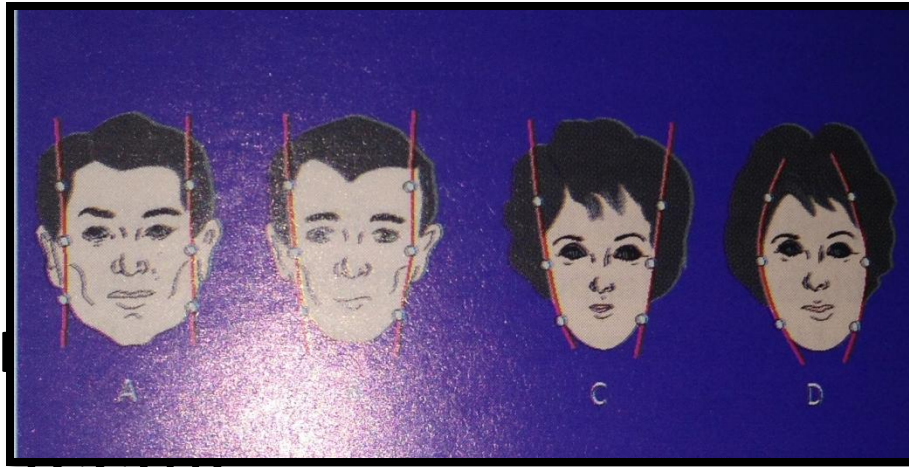
- Post extraction guides to determine shape of anterior teeth:

2. Shape of the face

Leon Williams classification

The shape of the upper central incisor usually coincide with the inverted form of the face

It may be square, tapering or ovoid



- Post external and anterior teeth

2. Shape of the face

Leon Williams classification

The shape of the upper central incisor usually coincide with the inverted form of the face

Basic facial forms: square, tapering square, tapering and ovoid

- Post extraction guides to determine shape of anterior teeth:

2. Shape of the face

The outline form or shape of the anterior teeth should harmonize with the shape of the patient's face

- Post extraction guides to determine shape of anterior teeth:

2. Shape of the face

Trubyte indicator is used of determination of the facial outline

The form of the face is observed by noting the outline form as it appears in comparison with the vertical lines of the tooth indicator

- Post extraction guides to determine shape of anterior teeth:

2. Shape of the face

It is helpful in observing the relative straightness or curvature of the profile

The forehead, the base of the nose and the point of the chin should be checked

If the three points are in line the profile is straight

If the three points are recessive, the profile is curved

- Post extraction guides to determine shape of anterior teeth:

3. **Sex**

Curved facial features are associated with femininity and square features are associated with masculinity

Ovoid tooth is more feminine and square tooth is more masculine

Curved labial surface is more feminine and a flat labial surface is more masculine

- Post extraction guides to determine shape of anterior teeth:

4. **Age**

With age incisal edges and interproximal surfaces wear

Labial surfaces seem flatter and the outline form appears more square

Guides to select anterior teeth shade

SHADE

- Post extraction guides to determine shade:

Patient's age

Dark teeth are more suitable for old patients while lighter teeth are more suitable for younger

- Post extraction guides to determine shade:

Must be in harmony with the surrounding environment

Patient's skin colour

Light teeth for fair skin, blue eyes

dark teeth usually for dark skin and eyes

Maxillary central incisor are the lightest teeth in the mouth, maxillary laterals and lower incisors are slightly darker, canines are darker

Mandibular anterior teeth

Each set of upper anterior teeth has a corresponding set of lower anterior teeth which matches it in

- Size
- Form
- color

Mandibular anterior teeth

Exceptions:

When selecting teeth for class II anterior teeth relationship, use mandibular teeth **smaller and lighter in shade** than that recommended by the mould guide

because of retruded and narrow mandibular arch the space is less.... Narrower

Lighter shade creates illusion that teeth are more anterior than they really are

Mandibular anterior teeth

Exceptions:

When selecting teeth for class III anterior teeth relationship, use mandibular teeth **larger** and **less brilliant** than that recommended by the mould guide

because of protruded and wider mandibular arch providing more space.... Larger teeth

Less brilliant teeth so they do not look as brighter

Dentogenic concept

Introduced by Frush and Fisher in mid-1950s

Based on patient's age, sex and personality

Old, male, smokers with bold vigorous
personality tend to have darker teeth

Female with delicate personality....lighter shade

Dentogenic concept

It advices dentists to select, arrange and alter teeth, carve the gingiva according to the patient's age, sex and personality

Posterior teeth selection

Factors for consideration when selecting posterior teeth:

Ridge morphology

Interarch distance

Arch relationship

Patient's age and neuromuscular control

Esthetics

Comminution of food

Previous denture wearing experience

Posterior teeth selection

It is more empirical than anterior teeth selection

- The **shade** should harmonize with that of anterior especially premolars
- **SIZE:**

Posteriors should have smaller mesiodistal width to minimize stresses on supporting structures, increases the tongue space and improves the shape of the polished surface

Posterior teeth selection

It is more empirical than anterior teeth selection

- The mesiodistal width is determined by the length and slope of mandibular ridge
 - Different ridge relation
 - Measurement of the mesiodistal space from the distal of the canine to the mesial end of the retromolar pad

Posterior teeth selection

It is more empirical than anterior teeth selection

- The length is determined by the interarch distance
- **The thickness (BL width)** less than natural teeth

Decrease stresses and provide a space for tongue and polished surfaces of denture

Should provide enough support to the cheek

Posterior teeth selection

Selection of teeth form:

Anatomic teeth- 33 degrees teeth

Simulate natural teeth

Suitable for young healthy patients with good ridges

Used with balanced occlusion

Posterior teeth selection

Selection of teeth form:

Non Anatomic teeth- 0 degrees teeth

Have flat occlusal surface

Not efficient unless provided with cutting ridges,
spillways

Transmit less destructive forces to the tissues

Suitable for old patients having poor ridges, and
poor neuromuscular control, abnormal jaw
relation or corssbites

Posterior teeth selection

Selection of teeth form:

Semi Anatomic teeth

Posterior teeth selection

Selection of teeth materials:

Esthetics

Color stability

Wear

Adjustment

Transmission of forces

Polishing

Bonding

Fracture

Repair

Noise during use

**TEETH
SELECTION FOR
RPD**

Anterior teeth selection for RPD

Important for esthetic and incising food

Best arranged when patient is present

Anterior teeth selection for RPD

When selecting denture teeth, the practitioner should use the shade guide provided by the tooth manufacture

Anterior teeth selection for RPD

Artificial teeth should be matched as closely as possible to the adjacent natural teeth or fixed restorations

The matching process should be accomplished using natural light and should be completed as quickly as possible

Anterior teeth selection for RPD

Mold selection is based upon two important factors:

- The space that has been created by tooth loss
- Overall form or shape of the teeth

Anterior teeth selection for RPD

Mold selection is based upon two important factors:

- The space that has been created by tooth loss
- Overall form or shape of the teeth

By determining the shape of the patient's face you choose the appropriate form for the anterior teeth

Anterior teeth selection for RPD

Denture teeth on a denture base generally permit the most esthetic results. In such a situation, the denture base may be built to provide the appropriate support and contour for the lips

Anterior teeth selection for RPD

If maxillary central incisors are missing. It is essential that these teeth be set first. This allows the practitioner to reestablish the maxillary midline in the center of the face

Anterior teeth selection for RPD

If an anterior denture tooth is to be positioned against a natural tooth, the proximal surface of the prosthetic tooth must be contoured to permit close adaptation

Selective recontoring of axial and incisal surfaces permits improved adaptation and appearance

Anterior teeth selection for RPD

The denture base flanges should be contoured and smoothed to provide a pleasing appearances

During the try-in appointment the practitioner should seek feedback regarding tooth arrangement

Posterior teeth selection for RPD

materials:

Improved acrylic resin teeth with gold occlusal surfaces are preferably used in opposition to natural teeth restored with gold occlusal surfaces

Posterior teeth selection for RPD

materials:

Porcelain teeth are generally used in opposition to other porcelain teeth

Posterior teeth selection for RPD

Posterior teeth must fit into available edentulous spaces and in harmony with opposing occlusal surfaces

Posterior teeth selection for RPD

Tooth size is determined by the length of the edentulous space

In distal extension, tooth size is determined by the sizes of the opposing teeth as well as the length of the edentulous space

Posterior teeth selection for RPD

Tooth size is determined by the length of the edentulous space

When removable partial denture is opposed by a complete denture, the practitioner measures from the distal surface of a natural canine to the incline of the ramus in the mandibular arch

Posterior teeth selection for RPD

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When removable partial denture is opposed by a complete denture, the practitioner measures from the distal surface of a natural canine to the incline of the ramus in the mandibular arch

Posterior teeth selection for RPD

The occlusogingival height of each replaced tooth must be considered

Most posterior teeth are available in short, medium and long

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