

Prosthodontics

Ø Provisional coverage:

1. Types of provisional coverage:

- a. Custom prosthesis: acrylic resin is adapted in the primary impression & placed in the patient mouth.
- b. Pre-formed polymer: a shell like crown with composite layer inside to give the appropriate color.
- c. Aluminum: used only in posterior teeth.
- d. Pre-formed polycarbonate: the most esthetic crown thus used for anterior teeth.
- e. Laboratory fabricated: used in long span restorations, they are done on a cast of the teeth before preparation.

2. Criteria of provisional coverage:

Esthetics – contours – smooth cervical margin – alignment – stable – readily removed.

Ø Dental restorations:

1. Types of dental restorations:

- a. Direct:
 - Amalgam filling: the most commonly used restoration in the dental office, it is compromised esthetically but has a very good strength.
 - Composite filling: it is a mixture of acrylic resin & finely ground glasslike particles, it has an excellent esthetic characters.
- b. Indirect:
 - Inlays & onlays: it is a cast restoration that fits snugly into a prepared tooth, it covers part of the occlusal & or proximal surfaces.

- Veneers: it is a thin shell of tooth colored material used to improve appearance on the facial surface.
- Crowns:
 - Three quarter: it covers all surfaces except the facial.
 - Porcelain fused to metal: full metal crown with its outer surface covered with porcelain layer.
 - Porcelain jacket crown: a very thin metal shell covered by layers of porcelain.
- Fixed bridges:
 - Composed of unit, pontic, abutment & solder joint.
 - Resin-bonded bridge: consists of pontic with wing like extensions bonded to the lingual surface of adjacent tooth.

Ø Fixed prosthesis restorations:

1. Shade selection:

It must be done before preparation of teeth, & the color sample must be moistened.

2. Preparation:

It is the reduction of the teeth contour to accommodate the restoration bulk, with the formation of a marginal finishing line.

3. Retention aids for crowns:

- a. Core buildup: to built a core for vital teeth to support the cast crown.
- b. Pin retention: used to add strength to the core build up.
- c. Post & core: used in non vital teeth treated endodontically, they are of two types, prefabricated or casted posts.

4. Gingival retraction & tissue management:

- a. Chemical retraction: retraction cord has chemical & mechanical actions due to impregnation in epinephrine or aluminum chloride.

- b. Surgical retraction: electrosurgery is the most commonly used method.
- c. Mechanical retraction: by placing an over extended provisional crown for several days.

5. Laboratory prescription:

- Dentist name, license number, address, signature.
- ID of the patient.
- Type of prosthesis.
- Type of alloy.
- Exact shade.
- Anatomic characters.
- Date the case is expected back.

6. Crown & bridge appointment:

- a. Preparation appointment.
- b. Try-in appointment.
- c. Cementation appointment.

Ø Factors in selecting a removable prosthesis:

1. Extraoral factors:

- a. Physical health.
- b. Mental health.
- c. Motivation.
- d. Age.
- e. Dietary habits.
- f. Social & economic factors.
- g. Occupation.

2. Intraoral factors:

- a. Musculature.
- b. Salivary flow.
- c. Residual alveolar ridge.

- d. Oral mucosa.
- e. Oral habits.
- f. Tori.

Ø Removable partial denture:

1. Components of a partial denture:

- a. Framework: the metal skeleton.
- b. Connectors:
 - Major connector joins components of one side with the other.
 - Minor connector links the major connector to the other parts of the partial denture.
- c. Retainer: a clasp that directly supports & gives stability to the denture.
- d. Rest: it controls the seating of the denture & provides support.
- e. Artificial teeth: constructed from either acrylic or porcelain.

2. Appointment sequencing for a partial denture:

- a. Appointment 1: records.
- b. Appointment 2: preparation.
- c. Appointment 3: try-in.
- d. Appointment 4: delivery.
- e. Appointment 5: post delivery check.

Ø Complete dentures:

1. Components of a full denture:

- a. Base: it fits the residual ridge & surrounds gingiva.
- b. Flange: it extends over the attached mucosa.
- c. Post dam: it is a posterior palatal seal in maxillary dentures.
- d. Artificial teeth: formed from acrylic or porcelain.

2. Appointment sequencing for full dentures:

- a. Appointment 1: records.
- b. Appointment 2: final impression.
- c. Appointment 3: try-in of baseplate & occlusal rim, artificial teeth, occlusal registration, functionally generated path technique.
- d. Appointment 4: try-in.
- e. Appointment 5: delivery.
- f. Appointment 6: post delivery.

Ø Other types of dentures:

1. Immediate dentures:

It is placed immediately after extraction of the anterior teeth, it has to be replaced or relined in 3-6 months.

2. Overdentures & implants:

a. Overdenture:

Is a full denture supported by the bony ridge & two or more remaining natural teeth, it provides more stability & retention.

b. Implant:

It is a natural looking replacement of teeth that uses a bone anchored implant which produces osseointegration with bone.

Ø Laboratory procedures:

1. Denture relining:

It is done to accommodate the changes that happened in the supporting tissues for the appliance to fit properly again by placing a new layer of the denture material on the fitting surface.

2. Denture rebasing:

It replaces the entire denture base material.

3. Denture repairs.

4. Denture duplication:

It is a spare denture for emergencies.