

## Immediate dentures (summary)

**Definition:** An interim acrylic resin denture that is placed at the same appointment of extraction to restore aesthetic and function **immediately after the extraction of natural teeth.**

**-Esthetics comes first then function**

**-similar steps of fabricating a complete denture:** Primary impression, secondary impression, jaw relation, posterior teeth try in (CID)

- Posterior teeth should be extracted and the areas of extraction allowed to heal before the immediate denture begun, unless they help in maintaining the OVD. Usually only the anterior teeth will have been retained.

| • Indications  | • Contraindications   |
|--|---|
| <ul style="list-style-type: none"><li>a. Patient is socially active</li><li>b. Wishes to retain their natural appearance - esp. with minimal bone loss</li><li>c. Good health</li><li>d. Available time and can afford multiple visits</li></ul> | <ul style="list-style-type: none"><li>a. Patient is unavailable for appointment</li><li>b. Patient is debilitated</li><li>c. Systemic conditions preclude multiple extractions</li><li>d. Emotionally disturbed or diminished mental capacity</li><li>e. Indifferent patients</li></ul> |

| • Advantages   | • Disadvantages   |
|--|---|
| <ul style="list-style-type: none"><li>1. Promotes better healing- protect surgical sites and serve as templates for healing</li><li>2. Promotes better ridge form-</li><li>3. Prevents collapse of facial musculature</li><li>4. fastens patient adaptation to dentures</li><li>5.Prevents patient embarrassment</li><li>6.Provides a guide for optimal individualized patient aesthetics</li><li>7.Provides a guide for OVD</li></ul> | <ul style="list-style-type: none"><li>1. Patients in poor health and uncooperative patients are subject to infection or edema following extraction of teeth</li><li>2. The additional expense of relining immediate dentures three to six months after insertion creates problems for some patients.</li><li>3. Additional treatment time is required for the dentist and patient because of the number of necessary post-insertion adjustments</li><li>4. The immediate denture cannot be assessed fully until it is placed into the mouth</li></ul> |

## I. Types of immediate dentures according to treatment plan:

| Conventional (or classic) immediate denture (CID). Better for complete immediate denture and when we have loose teeth.  | Interim (or transitional) immediate denture. (IID)   |
|---|--|
| <ol style="list-style-type: none"> <li>1. Definitive or long term prosthesis.</li> <li>2. After healing is complete, it is relined.</li> <li>3. At the patient's initial presentation, only ant. Teeth (plus possibly premolars) are remaining.<br/>It means when we will start fabricating denture process the posteriors are already extracted</li> <li>4. Has good retention and stability *at placement, which is possible to maintain during healing<br/>* posterior area already registered in a good way (border molded )</li> <li>5. Cost is less than IID.</li> <li>6. Treatment process takes longer than the IID because there is delay 3-4 weeks for post. Teeth extraction areas to heal partially before making final imp.</li> <li>7. Indicated when patient can function without post. Teeth for approximately 3 months.</li> <li>8. At placement, only ant. Teeth are extracted (possibly one premolar on each side that had been retained to preserve the vertical dimension of occlusion.</li> <li>9. Esthetic cannot be changed.</li> <li>10. At the end of the treatment ,the patient has one denture</li> </ol> | <ol style="list-style-type: none"> <li>1. Transitional or short-term prosthesis.</li> <li>2. After healing, a second denture is made.</li> <li>3. At initial patient's presentation, usually both ant. And post. Teeth are remaining.</li> <li>4. Has only fair retention and stability at insertion, which must be improved by provisional relines (tissue conditioner) during healing.</li> <li>5. Cost is greater.</li> <li>6. Treatment process takes less time than CID as denture fabrication procedure can begin right away.</li> <li>7. Indicated when the patient cannot go without post. Teeth or an existing partial denture because of esthetic or functional concerns.</li> <li>8. At placement, both ant. And post. Teeth are extracted</li> <li>9. The second denture after the IID allows an alteration of esthetic and any other factors if indicated.</li> <li>10. At the end of the treatment, the patient has a spare denture to use.</li> </ol> |

## Clinical and Laboratory Procedures:

1. To extract posterior teeth; (keep teeth which maintain vertical dimension, if necessary). Allow tissues to heal prior to preliminary impressions.(CID)
2. Make primary impressions in alginate and stock trays
3. Working cast duplicated to provide a reference during subsequent procedures.
4. make special trays and secondary impressions
5. Take jaw relationship (bite registration for edentate and occlusal rims for edentulous) before mounting.
6. Master casts should be mounted and posterior teeth setup in centric occlusion.
7. Wax try in (for CID posterior teeth only )
8. Pencil lines drawn on master cast to provide guidelines  
Cast trimming guidelines: Preserve the incisal edge position and tooth angulation information prior to removal of stone teeth.
  - i. Use a sharp pencil to mark the gingival outline buccally and palatally (black line) of the teeth to be extracted
  - ii. Mark another line 1 mm below the first line buccally and lingually as well (red line)
  - iii. To preserve incisal edge position: Use a divider /gauge to mark a horizontal line which is 15 mm apical to the incisal edge of each tooth
  - iv. Then mark the long axis of each tooth
  - v. Remove teeth with saw/ bur/sharp knife)- (normal periodontal condition rule of thirds –refer to the lecture )
  - vi. Follow Alternating Tooth Setup Technique .
  - vii. Trimmed areas convex and sanded smooth – no socketing
  - viii. Avoid removing incisive papilla

(If aesthetics of natural dentition is desired to be duplicated onto the immediate denture):

1. Preserve the incisal edge position and tooth angulation information prior to removal of stone teeth.
2. Develop gentle convex shape of stone extraction site
3. Control of the setup: Remove one stone tooth and set one denture tooth at a time.
4. Wax tooth set-up

### **Diagnosis:**

Explanation to the patient concerning immediate denture:

1. They do not fit as well as complete denture.
2. They will cause discomfort. The pain of extraction, in addition to the sore spot caused by immediate denture.
3. The esthetics may be unpredictable. **Since there is no anterior try in**
4. Immediate denture must be worn for the first 24 hours without being removed by the patient. **In case of complete, If we removed it we might not be able to insert it again because ridge will expand because of the trauma. second day the patient can remove it and we can do needed adjustment .for partial we can remove it at night .**
5. Because supporting tissue changes are unpredictable , immediate dentures may be loosen up during the first 1 to 2 years. **This is not the final either we do reline or rebase.**

# Clinical Procedures: Impressions

- Modification of a stock tray is needed by using an impression compound and placing it at the edentulous area (depend on the case) because we have deep ridge that is not stable and the alginate won't be enough to flow to the sulcus to get better impression.
- Primary denture is the key step to successful denture.
- If we don't have adhesive scratch using heated wax knife to get a rough surface.

## Two Methods of making the Immediate CD impression

### • **Single Tray Method** (For IID)

Wax spacer (One thickness of wax is placed over the teeth). A second layer of wax is placed over both the teeth and the edentulous ridge. Cuts for tissue stops can be made over the teeth to provide an even thickness of the impression material. Adapt a single piece of tray material over the wax shim. When anterior teeth remain, as in this example, a tray handle is usually unnecessary. Heat and place individual segments of compound over the borders of the tray and adapt this to fit the surrounding tissues by pulling the lips over the tray and massaging the cheeks. After the border-molding is completed, the wax shim is removed. The border-molded flanges and palatal seal area should maintain the thickness needed for the impression material. Impression will be taken with medium body. There is no perforations in the try so it has an effective seal. (2 layers anteriorly and 1 layer posteriorly)

### • **Two Tray Method** (Best when doing the CID or when very loose teeth are present).

#### • Edentulous ridges (1<sup>st</sup> tray for the edentulous area (posterior))

#### • Remaining teeth are loose

#### • Trays are indexed to fit together precisely.

#### • First tray is border-molded in peripheral area and palatal seal area. Take impression with ZnOE-because it is not flexible to extent to the teeth/ remains in the tray area.

To make the second tray:

#### • Adjust the second tray 2mm short of the vestibule.

#### • Cut out the ends of the mounds of the second tray.

#### • Check the fit of the two trays on the cast.

2<sup>nd</sup> impression of the anterior area (teeth) taken by alginate, while the 1<sup>st</sup> tray w/impression material inside the mouth .the 2<sup>nd</sup> tray has surface that fits the elevated areas of the first.

The 1<sup>st</sup> tray is up to the depth of the sulcus (after border molding), the 2<sup>nd</sup> tray is 2mm shorter than the 1<sup>st</sup>, only anterior extended to the sulcus and take alginate impression.

Sometimes we can use stock tray for the ant.part with special tray for the posteriors, in such case there is no elevations/handle on the 1<sup>st</sup> tray .so once we are done impression has anterior alginate and posterior ZnOE.

-Avoid medium body for posterior cause it can extend as it has increases flexibility and if you try to cut it will tear

-If anterior teeth are very mobile use only alginate as a final impression material.

-If we don't have loose teeth medium body can be used.

### Post Extraction Instructions

- Do not remove denture for the first day
- Keep head elevated
- Small amounts of blood in saliva is normal
- Diet: soft and warm, not hot
- Avoid: ° Strenuous activity ° Alcohol, smoking
- Recall next day
- Remove denture
- Apply topical anesthetic to traumatized mucosa, if necessary
- Locate over extensions and pressure areas and adjust
- Recall 1 week

-Healing, shrinkage, resorption

-Relines

◦Interim – within first 12 months

◦Definitive – 12 months +

◦ Short term – tissue conditioners lasts up to 2 weeks, after that loses its properties

◦ Mid-term – intermediate direct liners approximately month/more

☞E.g. Koo liner™ (direct reline in the mouth)

◦ Long-term – standard reline protocol (lab) when we want to reline and flanges aren't fitting well.

