Immediate Placement Dentures
(Surgical Placement Dentures)

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Understand the treatment sequence and rationale for Surgical Placement Dentures

Describe the advantages and disadvantages of Surgical Placement Dentures, especially complete and posterior serial extraction methodology

Demonstrate the knowledge associated with impression and jaw relation techniques unique to Surgical Placement Dentures

Be able to provide guidance to the surgeon during insertion and to the patient for their post insertion experience
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Advantages

- Patient does not go without teeth
- Less bleeding and swelling

Immediate denture service designed to preserve oral structures.
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Advantages

- Initial esthetics and tooth position based on patient’s own teeth
- Incisal plane, occlusal plane, and vertical dimension of occlusion more easily determined

Immediate denture service.
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Advantages

◆ Patient adapts to new denture faster
◆ Good speech and appearance maintained, less chance of muscle changes
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Advantages

- Normal tongue size maintained
- Patient cooperation and moral high
- Better post surgery nutrition
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Disadvantages

- General poor health/poor surgical risk
- Additional expense and office visits
- New denture or reline/rebase needed in 9-12 months
- Surgical placement dentures cannot be assessed fully until insertion
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Opposing Arch Options

- Nothing - no denture, no teeth
- Interim Resin RPD
- Metal Based RPD
- Conventional/Surgical Placement Mandibular Denture
- Natural Teeth
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- Surgical Placement/Interim RPD
  - Posterior tooth removal and pre-pros surgery as needed
  - Impressions, JRR, Posterior Try-in
  - Surgery/Insertion

Clinical Tip: Insert the opposing arch prior to the surgery appointment so the patient does not need an extended appointment post surgery experience.
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- Surgical Placement/ Metal Based RPD
  - Posterior tooth removal and pre-pros surgery as needed
  - Max Impression, Mouth Preparations (survey crowns, Diagnostic setup?), Mand Impression
  - Framework Fabrication, Try-in, JRR
  - Posterior Try-in
  - Surgery/Insertion

Clinical Tip: Insert the opposing arch prior to the surgery appointment so the patient does not need an extended appointment post surgery experience.
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Extraction Options

Complete extractions

- More difficult denture adjustment
- More post-insertion problems
- May need reline at insertion
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**Extraction Options**

**Posterior serial extractions**

- Less likely to be problem insertion
- More stable at insertion
- Anterior teeth will maintain patient’s OVD
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Impressions

Final impressions must produce casts with fundamentals of denture support

- Maximum basal seat area
- Proper borders
- No distortion
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Impression Technique

- Vestibular Extension
- Type of Material
- Tray selection
- Technique
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Accuracy of Hydrocolloids

Tray Selection

- Stock Trays
  - Rim Lock
  - Perforated
  - Plastic Disposable
- Custom Trays
Tray Selection

- Stock Trays
  - Rim Lock
  - Perforated
  - Plastic Disposable
- Custom Trays
Tray Modifications

Modeling Plastic/Waxes
Quality Casts
Two Stage Pour

- Use for **ALL** Casts
- Water and air rise during setting
- Tray suspended right side up
- Base added after initial set
Quality Casts
Two Stage Pour

Impression lightly dried

Suspended and retention nodules added

Initial Set of stone

Nodules flattened after initial set
Impression inverted and base added with same type of stone
A Periodontal probe is used to determine the correct vestibular depth from the ridge crest for the denture flange.

Alginate impression will most likely be over-extended in the vestibular areas no matter how careful the tray is prepared.
Measurements are made by observing the vestibular depth during the same type movements made during border molding procedures.
These recordings are recorded or transferred to the impression.
Mark the vestibular depth from the readings taken intra-orally. The marks will be used later to determine the actual length of the waxed denture borders.
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**CUSTOM TRAYS**

- Standard trays with blockout around teeth
- Posterior Trays
- Tray material


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Impressions-Posterior Tray
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Impressions- Posterior Tray
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Impressions-Posterior Tray
Impression putty placed to record anterior borders producing a two piece impression
Clinical determinations will allow you to make plans for the denture teeth based on corrections visualized for optimal esthetics and function.

Make notes to communicate those changes on the position of the existing teeth captured in the final impression.
Send other information to the laboratory based on your clinical observation
Evaluate occluding vertical dimension
- Centric relation
- Centric occlusion
- Maximum intercuspation
Vertical Jaw Relationships

1. Rest vertical dimension
2. Occluding vertical dimension
Vertical Relationships

Rest vertical dimension
(-) Occluding vertical dimension

Interocclusal distance

Niswonger, JADA 21:1572-1582, 1934
Horizontal Jaw Relationships

- Centric Relation
- Centric Occlusion
- Maximum Intercuspsation
Centric Relation
Maximum Intercuspation
Typical Jaw Relation Records for Complete Dentures
Interocclusal Records

Ideal Characteristics

- Accurate
- Easy to handle
- Rigid when set
- No resistance to closure during registration
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Jaw Relationship Records

- Occlusion Rim Technique
  - Extra appointment
  - Unstable record base
- Plaster or PVS Jaw Relation Record
  - Accurate
  - Same day as impression
  - Technique sensitive
Surgical Placement
Complete Dentures
Jaw Relationship Records

- Occlusion Rim Technique
  - Extra appointment
  - Unstable record base

- Plaster or PVS

Jaw Relation Record
  - Accurate
  - Same day as impression
  - Technique sensitive
Initial over extended putty records

Captures distal surface of the most distal tooth, all other available occlusal/incisal surfaces and soft tissue contact over areas of attached mucosa.

Records are trimmed for a reline with light bodied registration material.
Relined putty records
Captures distal surface of the most distal tooth, all other available occlusal/incisal surfaces and soft tissue contact over areas of attached mucosa.

Final Trimmed Records
Records are trimmed so only occlusal/incisal cusp tips make contact, all undercuts are removed, gingival margin is removed, soft tissue contact trimmed to attached mucosa.
Relined putty records

The records must fit passively on the casts (casts may need to be perfected prior to evaluating the records)

Areas of contact must be precise

No rocking should be observed

Tooth-to-tooth contacts must be accurate
What is the opposing arch?

- Natural teeth
- Natural teeth and interim RPD
- Natural teeth and final RPD
- Natural teeth and fixed restorations
- Immediate denture

Posterior Try-in?
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Cast Preparation

*Trimming the cast in the construction of immediate dentures.*

Trimming the cast **DOES NOT** mean trimming the bone
One to three anterior teeth are removed. The sockets are reduced 1mm to make room to set teeth.
Teeth are set to replace those that are being removed. Noted changes in position, length, angle etc. are accomplished while teeth are still present for comparison.
Setting teeth continues by removing the remaining teeth from the cast and completing the set-up. Posterior teeth may be set from a previous posterior try-in of those teeth.
The denture is waxed to the final form.
The final trimming of the cast is accomplished at the boil-out stage. The surgical template is made from a duplicate cast fabricated after the final trimming is finished.
Processed Denture
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Insertion

- **Obvious undercuts and other abnormalities on the denture should be corrected before surgery**

- Surgical template should have corrections

- Opposing prosthesis should be inserted and adjusted prior to surgery

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Surgery

- Surgical templates may be useful to determine additional surgical requirements beyond interseptal bone recontouring.

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Insertion

- Same technique as any complete denture
- May need to consider soft reline for:
  - Retention
  - Stability
- Twenty-four hour check
- Follow at 1, 3, 6, and 9 months
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**Insertion**

- Adjust intaglio surface and flange length/thickness
- Stability and retention important
- Consider soft liner
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Insertion

- Establish solid CR position with no premature interferences
- Clinical remount in one or two weeks
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Insertion
First twenty-four hours

- Do not remove denture
- Take all prescribed medications
- Ice packs for first six hours
- Increase fluid intake
- Soft diet
- Return next day for exam and further instructions
- Follow-up will vary by patient and extent of surgery
Questions?