Relining and Rebasing and Repairing of complete denture

Shaima’a Ahmed Radwan
Relining

It is the procedures used to resurface the tissue-side of a denture with new material layer, thus producing an accurate adaptation to the denture foundation area. It is usually carried out when the fitness of the denture has been deteriorated and it is not necessary to construct a new one.
Relining is indicated when denture is no longer adapted to the tissues while all other factors as:

- Occlusion
- Vertical dimension
- Esthetics
- Denture base material are satisfactory.
Relining can be achieved in one of two ways

1. Direct (chair side)

2. Indirect (Laboratory)
Cold cured acrylic, tissue conditioner or soft liner material is used, but are not very durable. Direct relining is less time consuming.

1. The fitting surface of the denture is cleaned, roughened, and slightly reduced. The flanges are trimmed (to reduce danger of overextension) and the undercuts removed.
2. Lubricant added over polished surface to prevent the new resin material from adhering on it.
3. A new relining material (Cold cured acrylic, tissue conditioner or soft liner) is then mixed and applied to the fitting surface.
4. The denture is inserted and the patient asked to **bite** gently on the denture to ensure that the **occlusion is not altered** by the procedure. Border molding can then be carried out. The denture is kept in situ for about 5 minutes after which it is removed and carefully examined.
Disadvantage of relining with self-cure acrylic resin

1. The material has often produced a chemical burn on the mucosa, and from exothermic reaction.

2. Color stability is very low and bad odor due to porosity of the material, since no flaking procedure is used.

3. Liability for errors and wrong positioning of the denture is great.

4. Improvement in the denture requirement is very little and low.

5. It is a short term solution.
2. Indirect (Laboratory)

1. The fitting surface is cleaned, the undercuts are removed and the flanges are shortened.
2. Minor defects and extensions can be corrected.
3. *Border molding* can then be carried out.
4. A wash impression by zinc oxide eugenol is making with the old denture, with the patient in lightly closed in centric occlusion.
5. Beading and boxing of the impression, then pouring the boxed impression with stone material.

6. The denture and the cast are not separated, but any excess impression on the teeth or facial surfaces of the base is removed, then the denture flanked in the usual manner.
7. (Zinc oxide eugenol) elimination in hot water for 5 minutes; then separated and all the impression material is cleaned from the cast

8. Painting the cast with a separating medium.

9. Paint the surface of the denture with cotton pellet moistened with monomer.

10. Mix the acrylic resin and place it in the flask (the new relining material should be compatible with the old denture base material chemically and esthetically).
11. Curing the heat cured resin.

12. The denture deflasked and the cast removed from the denture then polish the denture; the relined denture is ready to be inserted in the patient mouth.
Rebasing

It is the laboratory process of replacing the entire denture base material on an existing prosthesis, without changing the dental arch, and the occlusal relationship.
Indication of Rebasing

- Imperfection in the denture base
  - Defects in the impression surface of the denture due to
    - Improper handling of the tissues during impression making.
  - Processing defects
    - Porosities, shrinkage/contraction, gaseous, granular.
    - Warpage/crazing of the material
- Defects in the polished surface
Rebasing procedure

- Rebasing procedure is the same as those for relining with some differences: impression is made and a cast is poured in the denture as in relining procedure.
The denture with the cast is mounted on an instrument as **Hooper duplicator** or **Hanau articulator with mounting jig** that maintains the relationship of teeth to the cast.
• The old denture base is cut and removed.
The original teeth are re-waxed in their previous positions on the cast. The denture is then processed in the laboratory as for relining. The denture deflasked and the cast removed from the denture then finished and polish the denture; the relined denture is ready to be inserted in the patient mouth.
Remake

1. When there is **increased vertical dimension** (insufficient Interarch space).
2. Poor esthetic and **incorrect position of teeth**.
3. **Unsatisfactory jaw relationship** in the denture.
4. **Excessive resorption** of residual ridge. Severe osseous undercuts.
5. Dentures causing **major speech problems**.
Repairing Complete Denture
Midline Fracture:

- **Causes**

1. No or insufficient relief in the midline.
2. Accidental drop
3. Ridge resorption with loss of relief effect.
• Procedure
Broken parts are assembled and fixed together with sticky wax on the polished surface.
Assembled parts may be strengthened with burs or plastic sticks.
– Any **undercut** on the fitting surface is blocked out with wax or clay.
– Stone plaster is poured into the fitting surface. After stone setting the denture is removed from the cast and cleaned from any traces of sticky wax.
• fractured edges are reduced, **widened (8-10mm)** along the fracture line and beveled towards the polished surface to increase bonding surface area.

– **Dove tail** cuts may be made to strengthen the repair joint.
• The cast is painted with separating medium and the denture is secured to the cast with rubber bands.
  – Self-cure is applied to the modified fracture area until the area is overfilled.
Repair of fractured missing part

Fracture of the flange of an upper denture.

Flange replaced in the clinic using impression compound.
After pouring the cast auto polymerizing acrylic resin is used to replace the missing part.
Repair of a fractured or lost tooth
The fractured tooth.

Tooth has been removed.
A replacement tooth is selected and placed in proper alignment and secured in position using sticky wax.
An index in silicone rubber has been prepared after waxing tooth into position.

Self cure acrylic resin is added from the lingual side until repair area is overbuilt. It is then covered with tin foil.

- After curing; the index is removed and the denture is finished and polished.
Thank you!