PROVISIONAL RESTORATIONS

REQUIREMENTS:

- PULPAL PROTECTION
- POSITIONAL STABILITY
- OCCLUSAL FUNCTION
- EASILY CLEANED
- NONIMPINGING MARGINS
- STRENGTH AND RETENTION
- ESTHETICS
PULPAL PROTECTION

The restoration should be fabricated in a material that prevents the conduction of temperature extremes.

Margins should be well adapted to prevent leakage of saliva.
POSITIONAL STABILITY

The abutment teeth should not be allowed to extrude or drift in any direction.

Such movement will require adjustment or remake of the final restoration at the time of cementation.
OCCLUSAL FUNCTION

Being able to function on the provisional restoration will:

- Aid in case diagnosis
- Prevent tooth migration
- Satisfy the patient
EASILY CLEANED

The material and the contours of the provisional restoration must help the patient to keep it clean
NONIMPINGING MARGINS

The margins of the provisional restoration must not impinge the gingival tissue.

Horizontal and Vertical overhangs should be avoided.
STRENGTH AND RETENTION

The restoration must withstand occlusal forces without breaking or coming off the tooth.

The restoration should remain intact during removal and recementation.
ESTHETICS

The provisional restoration must provide good cosmetic result in the appearance zone.
TYPES OF PROVISIONAL RESTORATION MATERIALS

The materials used for provisional restoration range from zinc oxide-eugenol cement for small intracoronal inlay to different resin material for fixed partial denture.
RESINS FOR PROVISIONAL RESTORATION

- Polymethyl methacrylate
- Polyethyl methacrylate
- Polyvinyl methacrylate
- Bis-acryl composite resin
- Visible light–cured (VLC) urethane dimethacrylate
The characteristics of an ideal provisional material are:

1. Convenient handling and easy moldability
2. Adequate working time
3. Rapid setting time
4. Biocompatibility - Nonallergenic, Nontoxic, Nonexothermic
5. Dimensional stability during solidification
6. Ease of contouring and polishing
7. Adequate strength and abrasion resistance
8. Good appearance - Color controllable, Color stable
9. Good patient acceptance - nonirritating, odorless
10. Ease of repairing
11. Chemical compatibility with provisional luting agents
METHODS OF FABRICATION

I. Prefabricated:
Used for single tooth restoration e.g. anatomic metal crown forms, clear celluloid shells and tooth colored polycarbonate crowns

II. Custom made:
Used for single and multiunit fixed partial denture
CUSTOM MADE PROVISIONAL RESTORATIONS

- Variety of techniques for fabricating the mould used to form the outer surface of the custom provisional restoration which provides the axial contours, the occlusal form and the proximal contact with the adjacent teeth

- The inner surface will be shaped by the preparation
CUSTOM MADE PROVISIONAL RESTORATIONS

The mould may be formed by using different materials:

1. Alginate
2. Elastomeric impression material
3. Clear thermoplastic resin matrix (vacuum forming machine)
Provisional restorations can be classified by the technique of fabrication used:

A. Direct technique: is done on the actual prepared teeth in the mouth
B. Indirect technique is done on the cast outside the patient mouth
C. Combination Technique (indirect-direct)
<table>
<thead>
<tr>
<th>Direct Technique</th>
<th>Indirect Technique</th>
<th>Combination Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential tissue trauma</td>
<td>No tissue trauma</td>
<td>Reduced tissue trauma</td>
</tr>
<tr>
<td>Poor marginal fit</td>
<td>Good marginal fit</td>
<td>Reasonable marginal fit</td>
</tr>
<tr>
<td>Prolonged chairside time</td>
<td>Minimum chairside time</td>
<td>Reduced chairside time</td>
</tr>
</tbody>
</table>
Armamentarium
DIRECT TECHNIQUE
INDIRECT TECHNIQUE

1. Cast is trimmed and finish line is marked with pencil.

2. Petrolatum jelly or other separating medium is applied on the cast.
3. Place the mixed resin in the mould in the area of the preparation and the edentulous area and align it accurately on the cast.

4. Once the material sets, remove the mould and separate the provisional FPD from the cast and start gross trimming with acrylic bur or coarse Moores disc.
INDIRECT TECHNIQUE

5. Use Moores sand paper disc to open the interproximal embrasures.

6. The pontic is trimmed with disc and bur and shaped to be conical in shape.
7. Assess the margins on the cast or on the dentoform. Additional acrylic can be added with the brush.
8. If complete reline is required, it is important to grind the fitting surface to accommodate the extra material.
9. Check occlusion with articulating paper and adjust high spots with acrylic bur.
10. Polish all surfaces with polishing compound
COMBINATION TECHNIQUE (INDIRECT-DIRECT)

This technique involves both indirect technique (minimal tooth preparation on the cast and fabrication of provisional FPD on the prepared cast) and direct technique (relining the provisional FPD in the mouth after tooth preparation).
CEMENTATION