Temporary Fillings: are those fillings which are inserted into the prepared cavity, only for a certain period of time till replaced by a permanent filling. They can be also called intermediate or provisional fillings.

According to the time period of their placement, they can be divided into three categories:

1. Short term temporary fillings (placed for 1-2 weeks)
2. Medium term temporary fillings (placed for several weeks)
3. Long term temporary fillings (placed for 6 months)

For shorter-term fillings, an unmodified, zinc oxide– eugenol cement is mixed to a putty-like consistency. Several cotton fibers may be added to the mix. Setting of this mix is accelerated when the surface of the filling is patted with a cotton pellet saturated with hot water. For longer-term fillings, modified zinc oxide–eugenol, resin-modified glass ionomer, or zinc polycarboxylate cements can be used. Resin-based provisional inlay and onlay materials are also available.

Objectives of Temporary Fillings:

1. Protection of the dentin-pulp organ:
   Temporary fillings will seal the cavity against food debris, saliva and bacteria. If the cavity is left without a provisional filling, pain will occur. Pain will be a response and not reflecting an inflammatory condition. However, long term dentin exposure may lead to inflammatory response.
2. Sedation of the dentin-pulp organ:
   If the cavity is left opened without a dressing, pain will occur. External stimuli, such as hot or cold food, will stimulate pain. Pain of this type is characterized by being very brief and sharp.
3. Restoration of occlusion:
   Temporary filling will restore the occlusion and will prevent the tooth from tilting, drifting or over-eruption.
4. Protection of the periodontium:
   This is especially true with class II cavities. Leaving the proximal surface without temporary filling will cause food impaction to occur with its complications on the periodontium.
5. Putting the tooth into function: it is important that occlusal stresses to be distributed on both sides.
6. Protecting the tooth from fracture.

Requirements of an Ideal Temporary Fillings:

1. Ease of use.
2. Ease of placement, shaping and removal.
3. Ease of repair.
4. Fast setting.
5. Sedative, anticariogenic potential, bactericidal effect.
6. Good fracture and wear resistance (high strength)

7. Good biocompatibility (no sensitivity or toxicity reaction)
8. Good esthetics (good color matching and stain resistance)
9. No or little solubility and disintegration.
10. Radio-opaque.
11. No interference with the setting reaction of permanent restoration.

Types and Indications of Temporary Fillings:

1) Conventional zinc oxide eugenol: is usually used in posterior teeth prepared for amalgam restorations.
2) Modified zinc oxide eugenol: it consists of conventional zinc oxide powder reinforced with several additives such silica and alumina fillers or ethoxybenzoic acid to increase the strength and decrease the setting time. It is indicated in either extensive cavities or for long term temporization.
3) Non-eugenol temporary fillings: they are presented as single paste system in collapsible tubes or well-sealed jars to avoid premature setting and to extend their shelf life. Moisture contamination will lead to premature setting of ready-made temporary fillings.
   The popularity of ready-made temporary fillings comes from the simplicity of application, and because no eugenol residues are left which may interfere with setting reactions of resin restorations and bonding of direct esthetic restorations. Thus, they are highly recommended in in preparation in anterior teeth.
4) Temporary fillings for indirect fillings as (inlay, onlay and overlay) preparation:

   Direct temporary resin restorations: either chemically cured or photo cured commercial preparations are used. They are characterized by enough strength and hardness. They are used for temporary restorations of indirect restoration preparations and temporary crowns. They are cemented using temporary cement.

Factors affecting the selection of a temporary restoration:

1. Type of the final restoration:
   - For metallic restorations: conventional zinc oxide eugenol and modified zinc oxide eogenol.
   - For non-metallic restorations: non eugenol filling.

2. Vitality of the tooth:

   Root canal treated teeth need an intensive protective dressing, to prevent their fracture under masticatory load. This might be attributed to dehydration of the tooth structure and its weakening due to the endodontic cavity preparation in addition to the previous destruction or caries. It is recommended to use temporary full coverage in between visits, if the treatment planning is considering full coverage.

3. Size of the cavity:
   The smaller the size of the cavity, the less will be the need for more than zinc oxide and eugenol filling. In larger sized cavities we use reinforced ZOE and temporary resin restorations.

4. Length of time before temporary restorations:
   If less than two weeks, ZOE or soft type of ready-made temporary fillings could be used. If more than two weeks, reinforced ZOE, medium and hard type of ready-made temporary filling and temporary restoration are used.