

FILLING OF CAVITIES

1&5

CLASS BY BLACK



PHANTOM COURSE 4 SEMESTR

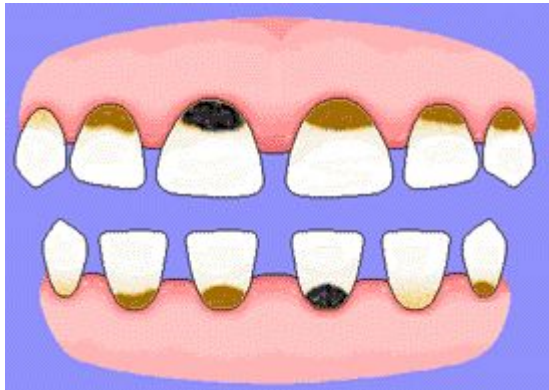
Classification by Black

- Class I cavity preparations (pits and fissures) are one-surface preparations which involve the occlusal surfaces or the occlusal two-thirds of the facial or lingual surfaces of a posterior tooth or the lingual pits of maxillary anteriors.
- Class II cavity preparations are those that involve the proximal surfaces of posterior teeth.
- Class III cavity preparations are one-surface preparations that involve the proximal surfaces of anterior teeth.
- Class IV cavity preparations are those that involve the proximal surfaces and the incisal angle of anterior teeth.
- Class V cavity preparations are one-surface preparations that involve the gingival third of the labial, buccal, or lingual surfaces of any teeth.
- Class VI cavity preparations are those that involve areas not normally affected by dental caries such as the incisal edges of anterior teeth and the cuspal tips of posterior teeth. This class is in addition to Dr. G. V. Black's original five classes.

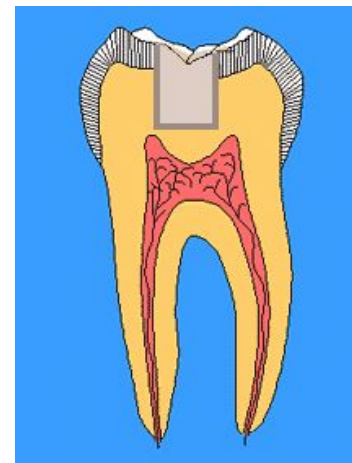
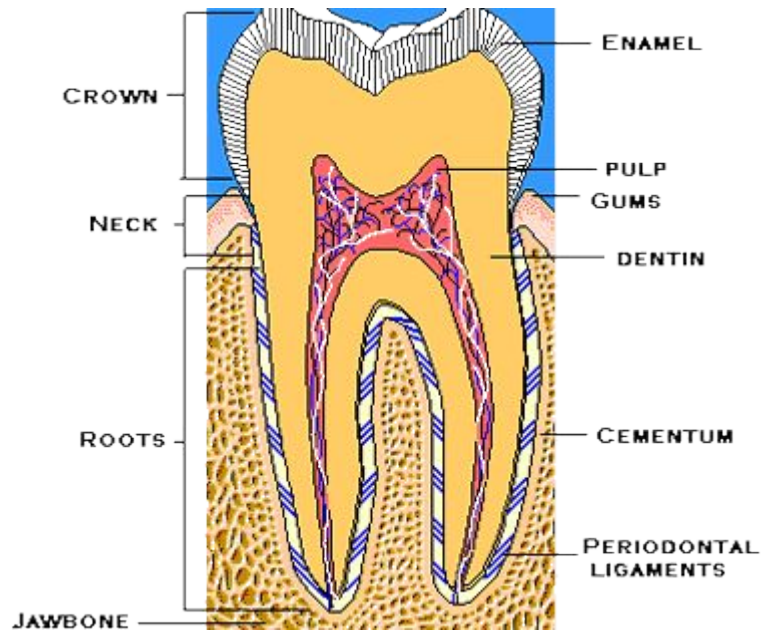
First class preparation



Fifth class preparation



Preparation



Restoration

- A **dental restoration** or **dental filling** is a dental restorative material is a dental restorative material used to restore the function, integrity and morphology is a dental restorative material used to restore the function, integrity and morphology of missing tooth structure. The structural loss typically results from caries is a dental restorative material used to restore the function, integrity and morphology of missing tooth structure. The structural loss typically results from caries or external trauma. It is also lost intentionally during tooth preparation is a dental restorative material used to restore the function, integrity and morphology of missing tooth structure. The structural loss typically results from caries or external trauma. It is also lost intentionally during tooth preparation to improve the aesthetics or the physical integrity of the intended restorative material. Dental restoration also refers to the replacement of missing tooth structure which is supported by dental implants.

□

Dental restorative materials

- **AMALGAM**
- **COMPOSITES Direct and Indirect**
- **GLASS IONOMERS RESIN-
IONOMERS**

FACTORS AMALGAM

General Description

A mixture of mercury and silver alloy powder that forms a hard solid metal filling. Self-hardening at mouth temperature.

Principal Uses

Dental fillings and heavily loaded back tooth restorations.

Leakage and Recurrent Decay

Leakage is moderate, but recurrent decay is no more prevalent than other materials.

Overall Durability

Good to excellent in large load-bearing restorations.

Cavity Preparation Considerations

Requires removal of tooth structure for adequate retention and thickness of the filling. **Clinical Considerations**

Tolerant to a wide range of clinical placement conditions, moderately tolerant to the presence of moisture during placement.

Resistance to Wear Highly resistant to wear.

Resistance to Fracture

Brittle, subject to chipping on filling edges, but good bulk strength in larger high- load restorations.

Metals and metallic alloys



- Amalgam is widely used for direct fillings, and done in single appointment.

Dental composites

▣ **General Description**

A mixture of submicron glass filler and acrylic that forms a solid tooth-colored restoration. Self- or light-hardening at mouth temperature.

Principal Uses

Esthetic dental fillings and veneers.

Leakage and Recurrent Decay

Leakage low when properly bonded to underlying tooth; recurrent decay depends on maintenance of the tooth-material bond

Overall Durability

Good in small-to-moderate size restorations.

Cavity Preparation Considerations

Adhesive bonding permits removing less tooth structure.

Clinical Considerations

Must be placed in a well-controlled field of operation; very little tolerance to presence of moisture during placement.

Resistance to Wear

Moderately resistant, but less so than amalgam.

Resistance to Fracture

Moderate resistance to fracture in high-load restorations.

Post-Placement Sensitivity

Occurrence of sensitivity highly dependent on ability to adequately bond the restoration to the underlying tooth.

Esthetics

Mimics natural tooth color and translucency, but can be subject to staining and discoloration over time.

Composite restoration



Glass ionomer cement

General Description

Self-hardening mixture of fluoride containing glass powder and organic acid that forms a solid tooth colored restoration able to release fluoride.

Principal Uses

Small non-load bearing fillings, cavity liners and cements for crowns and bridges.

Leakage and Recurrent Decay

Leakage is generally low; recurrent decay is comparable to other direct materials, fluoride release may be beneficial for patients at high risk for decay.

Cavity Preparation Considerations

Adhesive bonding permits removing less tooth structure.

Clinical Considerations

Must be placed in a well-controlled field of operation; very little tolerance to presence of moisture during placement.

Resistance to Wear High wear when placed on chewing surfaces.

Resistance to Fracture Low resistance to fracture.

Post-Placement Sensitivity Low.

Esthetics Mimics natural tooth color, but lacks natural translucency of enamel.