

Dental terminology

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Lecture 3

Tooth Restorations

The restoration of teeth is the most common treatment associated with the dental office. The purpose of a dental restoration is to do the following:

- Remove the carious lesion (decay area).
- Restore the tooth to its normal function and esthetic (pertaining to beauty) appearance.

Each caries-affected tooth requires special attention. The method, procedure, and choice of restorative materials for this affected tooth must be custom planned and adapted.

Restorative Materials

A variety of materials and procedures are used in restoring the affected tooth to normal function, use, and beauty.

Amalgam (*soft alloy mass containing mercury*) is a blend of various powdered alloy metals and liquid mercury mixed into a plastic (movable) form that soon hardens.



Composite resin material used in dental restorations; supplied in macrofilled (large particles), microfilled (small particles), and hybrid (mixed particles) and may be purchased in paste, syringe, or single dose capsules.



Among several popular material choices for protecting or preparing materials are:

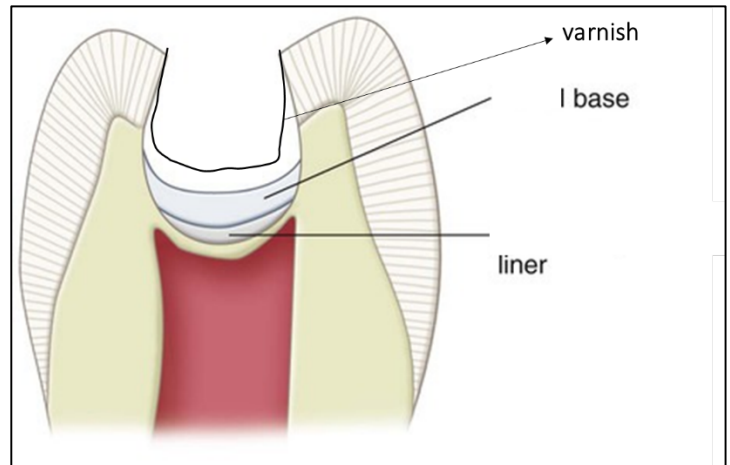
Liner: thin coating that provides a barrier against chemical irritation.

Base: barrier against chemical irritation. Bases will also provide thermal isolation, resist condensation forces, and are able to be contoured and shaped.

Varnish: used to cover the cut edges of tooth surfaces and seal against leakage under all restorations except composites.

Acid etchant: phosphoric acid solution used to prepare the cavity margins to provide retention for the bonding and restorative materials.

Bonding agent: material used to unite some restorative agents to the tooth surface and underlying materials.

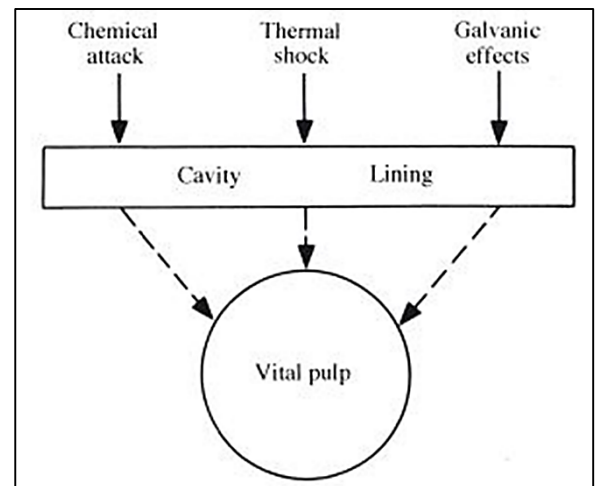


Purposes of Submaterials

Some materials are placed into cavity preparations prior to the restorative material. These liners, bases, and cements are chosen for a specific purpose, such as the following:

Insulation: prevents transfer of heat, stress force.

Protective; preparation seal or temporary restoration between treatment visits.



Restoration Placement Terminology

Manipulation: preparation and handling during use; each material requires a different method.

Homogeneous: describes a uniform mixture.

Polymerization: transforming material from a plastic (movable) shape to a hard substance through a curing process.

Bonding: used to prepare a tooth surface for attaching to another material.

Finishing Methods

Increment (*increase or addition*): small amounts or doses of the materials that are placed into the preparation until filled.

Condensation the changed preparation as a result of the condenser or plugger instruments packing down the material into the preparation.

Carving: instrument shaping and cutting of condensed material to resemble original anatomical tooth surface.

Burnish (*to smooth or rub*): to smooth the restoration surfaces toward the margins. Matrix strips may be burnished or rubbed into the proper shape. Burnishing also provides a shiny surface to gold.

Cosmetic Dentistry terms

People seek dental care to improve their looks and turn to their dentist for cosmetic restorations and esthetic correction of diseased tissues.

Although most cosmetic dentistry procedures can be completed by the dentist, some require a team consisting of the dentist and other dental personnel such as a prosthodontist, oral surgeon, periodontist, and dental laboratory technician.

Smile Makeover

The first thing that comes to mind in cosmetic dentistry is a beautiful smile.

Commercial smile enhancer: sometimes called “Hollywood Smile” has been developed for total cosmetic use.



Snap-on Smile is a full arch covering that can be placed on and off the teeth by the patient to offer immediate good looks.



Tooth Whitening

The most common cosmetic procedure is the whitening or lightening of tooth surfaces. Whitening or bleaching of teeth surfaces can be completed in the dental office, at home, or a combination.

Bleaching of teeth, as defined by the FDA, is the whitening of teeth beyond their natural color, such as lessening of brown bands, while tooth whitening is the restoration of natural tooth color.

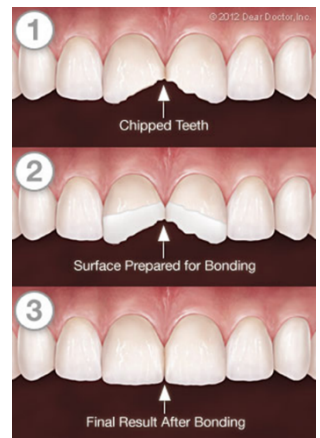


Tooth Bonding and Veneer Application

Tooth bonding and veneer application are alternatives to tooth whitening, particularly if the tooth surfaces are excessively stained or have other irregularities such as open spaces, broken edges, pitted surfaces, and misshaped teeth.

Tooth bonding

involves applying a composite material. The composite material is applied in layers, and the material is activated by a curing light. When shaped and finished, the composite is smoothed and polished.



Veneer

In a veneer application, a thin fabricated resin or porcelain cover is applied to the prepared tooth surface, the shape or color of the tooth may be altered. Depending on the severity and preparation needs of the teeth, veneers, also called laminates.



Indirect veneer application (requires two visits):

At the first visit, the teeth are prepared by removing a small amount (0.5 mm to 1.0 mm) of enamel tissue. At the second visit, the teeth receive the new laminates that are cemented on the tooth surface and light cured to set up. The porcelain veneers are cleaned and polished. Porcelain veneers usually are longer lasting and more expensive.

Cosmetic Tooth Restorations

Tooth restorations are completed using materials that resemble enamel tissue. Older amalgam fillings can be replaced using composite material to give the whole mouth a natural look. Restorative procedures include;

Inlay: a solid-casted restoration, involving some occlusal and proximal surfaces, that is cemented into a tooth preparation.

Onlay: a solid-casted restoration that covers some occlusal tooth cusp and side wall area and is cemented onto the prepared site.

Tooth crowns: covering the crown surfaces of the tooth with artificial coverings. The type of crown applied depends on the extent of the tooth repair and is named by the area involved.



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