

# Types of Restorative Techniques used in Tooth Fillings

Bronwyn George\*

Department of Dentistry, University of Sydney, Camperdown, Australia

## Perspective

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**\*For Correspondence:**

Bronwyn George, Department of Dentistry, University of Sydney, Camperdown, Australia

**E-mail:**

[Georgebron.westernsydney@edu.au](mailto:Georgebron.westernsydney@edu.au)

### DESCRIPTION

Dental restoration, also known as dental fillings or simply fillings, are treatments that are used to restore the function, integrity, and morphology of missing tooth structure caused by caries or external trauma, as well as to replace such structure supported by dental implants. They are classified by location and size and are of two broad types: direct and indirect. A root canal filling, for example, a restorative technique is used to fill the space normally occupied by the dental pulp.

### Tooth preparation

Restoring tooth to a good form and function requires two steps:

1. Preparing the tooth for placement of restorative material or materials.
2. Placement of these materials.

Preparation typically entails cutting the tooth with a rotary dental handpiece and dental burrs, a dental laser, or air abrasion to make room for the planned restorative materials and to remove any dental decay or structurally unsound portions of the tooth. Temporary restoration may be used if permanent restoration cannot be completed immediately after tooth preparation. A tooth preparation is a prepared tooth that is ready for the placement of restorative materials. Among the materials used are gold, amalgam, dental composites, glass ionomer cement, and porcelain. Intracoronal or extracoronal preparations are possible. Intracoronal preparations are those that are used to keep restorative material within the confines of the structure of a tooth's crown. Crowns and onlays, as well as veneers, are examples. A number of factors will determine the type and extent of preparation when preparing a tooth for a restoration. The most important consideration is decay. Most of the decay's extent will define the extent

of the preparation, and thus the subsequent method and appropriate materials for restoration. Unsupported tooth structure is another factor to consider. Unsupported enamel is removed when preparing the tooth for a restoration to allow for a more predictable restoration. While enamel is the hardest substance in the human body, it is also the most brittle, and unsupported enamel easily fractures.

### **Direct restorations**

This technique entails inserting a soft or malleable filling into the prepared tooth and rebuilding it. After that, the material is hardened and the tooth is restored. When a tooth wall is missing and needs to be rebuilt, a matrix should be used before placing the material to recreate the shape of the tooth and keep the teeth from sticking together. When placing composite restorations, sectional matrices are generally preferred over circumferential matrices because they promote the formation of a contact point. This is critical in order to reduce patient complaints about food impaction between the teeth. Sectional matrices, on the other hand, can be more technique sensitive to use, so care and skill are required to avoid problems in the final restoration. Direct restorations have the advantage of setting quickly and being placed in a single procedure. The dentist offers a number of different filling options. Typically, a decision is made based on the location and severity of the associated cavity. Because the material must set while in contact with the tooth, only a small amount of energy (heat) is transferred to the tooth during the setting process.

### **Indirect restorations**

The restoration is created outside of the mouth using dental impressions of the prepared tooth in this technique. Inlays and onlays, crowns, bridges, and veneers are examples of common indirect restorations. Typically, an indirect restoration is created by a dental technician using records provided by the dentist. The finished restoration is usually permanently bonded with dental cement. It is frequently performed in two separate visits to the dentist. Gold or ceramics are commonly used in indirect restorations. A provisory/temporary restoration is sometimes used to cover the prepared tooth while the indirect restoration is being prepared to help maintain the surrounding dental tissues.

Because they are designed to replace missing teeth, removable dental prostheses (primarily dentures) are sometimes considered a type of indirect dental restoration. There are numerous types of precision attachments (also known as combined restorations) to aid removable prosthetic attachment to teeth, including magnets, clips, hooks, and implants, which may be considered a type of dental restoration in their own right.