

# Periodontal disease: Prevention, diagnosis, and treatment strategies.

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## Introduction

Restorative dentistry is a branch of dentistry focused on the diagnosis, prevention, and treatment of oral diseases, and the restoration of the function and aesthetics of the teeth. It encompasses a wide range of procedures aimed at repairing damaged teeth and restoring their normal function and appearance. Advances in techniques and materials have significantly improved the outcomes of restorative treatments, providing patients with durable and aesthetically pleasing solutions [1-2].

**Techniques in Restorative Dentistry; Fillings:** One of the most common restorative procedures, dental fillings are used to repair teeth with cavities. The decayed portion of the tooth is removed, and the cavity is filled with materials such as composite resin, amalgam, or glass ionomer. Composite resins are particularly popular due to their tooth-colored appearance and strong bonding capabilities [3].

**Crowns:** Crowns, or caps, are used to restore severely damaged or decayed teeth. They cover the entire tooth surface, providing strength and protection while restoring shape and function. Crowns can be made from various materials, including porcelain, ceramic, metal, and zirconia. Porcelain and ceramic crowns are highly valued for their natural appearance and durability [4].

**Bridges:** Dental bridges are used to replace one or more missing teeth. A bridge consists of one or more artificial teeth anchored by crowns on adjacent natural teeth. This technique restores the function and aesthetics of the smile while preventing the shifting of surrounding teeth [5].

**Implants:** Dental implants are a modern and highly effective solution for replacing missing teeth. An implant involves surgically placing a titanium post into the jawbone, which acts as an artificial root. Once the implant integrates with the bone, a crown is attached to the post, providing a strong and natural-looking replacement tooth. Implants offer superior durability and stability compared to other options [6].

**Inlays and Onlays:** These restorations are used when a tooth is too damaged for a filling but not damaged enough for a crown. Inlays fit within the cusps of the tooth, while onlays cover one or more cusps.

They are typically made from porcelain, composite resin, or gold, offering a conservative and durable solution [7].

**Materials in Restorative Dentistry;** The choice of materials in restorative dentistry is crucial for ensuring the longevity, functionality, and aesthetics of the restoration. **Composite Resin:** Widely used for fillings, composite resin is favored for its ability to match the natural color of teeth. It bonds well to the tooth structure and is suitable for both anterior and posterior restorations. **Amalgam:** Although less popular due to its metallic appearance, dental amalgam is still used for its strength and durability, particularly in molars where chewing forces are greatest [8].

**Porcelain and Ceramic:** These materials are commonly used for crowns, veneers, inlays, and onlays. They provide a natural appearance and are resistant to staining. Advances in ceramics have improved their strength and durability. **Glass Ionomer:** Often used in fillings and as cement for crowns and bridges, glass ionomer releases fluoride, which helps protect the tooth from further decay. It is particularly beneficial for pediatric and geriatric patients. **Zirconia:** Known for its exceptional strength and aesthetic qualities, zirconia is used for crowns and bridges. It is biocompatible and can withstand the significant forces of chewing [9-10].

## Conclusion

Restorative dentistry combines advanced techniques and materials to repair and restore damaged teeth effectively. From fillings and crowns to implants and bridges, the goal is to provide solutions that not only restore function but also improve the aesthetics of the patient's smile. Continuous advancements in materials, such as composite resins, ceramics, and zirconia, have enhanced the durability and appearance of dental restorations, making restorative dentistry a vital component of modern dental care.

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