

# ZOOM IN: AMED INSIGHTS

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## Advancements in Adhesive Dentistry: Deep Subgingival Restoration and the Dental Microscope

### Subgingival Decay and Treatment Options

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Subgingival Decay refers to caries that occur below or at the level of the cemento-enamel junction (CEJ). This type of decay can be caused by several factors, including poor oral hygiene, recurrent decay from ill-fitting restorations, and systemic diseases.

#### Treatment Approaches for Subgingival Decay

Several treatment options exist for addressing subgingival decay, and the choice of technique depends on the severity and location of the decay. Treatment options include:

- Crown Lengthening
- Mini Flap Designs
- Deep Margin Elevation using lasers or electrosurgery
- Less invasive techniques like orthodontic intervention or alternate methods to access the decay like Teflon tape, retraction cords, wedges, and rubber dams to compress and retract the gingival tissue.

Subgingival decay in the interproximal areas (mesial and distal surfaces) is especially challenging. Clinicians often struggle with fully removing the decay, controlling fluids in the subgingival area, and achieving proper band and wedge fit. These challenges are often related to limited access and poor visibility.

### **The Role of the Dental Microscope**

The use of the dental microscope can greatly aid in overcoming these challenges. With enhanced magnification and illumination, the clinician can clearly visualize the structures in the subgingival space, including:

- The distance between the interproximal gingiva and the subgingival wall
- The extent of the decay (both vertically and horizontally)
- The shape of the subgingival floor (Figure #2)
- Fluid control
- Matrix adaptation

This increased visibility allows for more precise and effective treatment.