

Restorative Dentistry

What is the best technique for fabricating provisional veneer restorations?

Amanda Seay, DDS, AAACD

It is important to understand the variables involved in fabricating esthetic provisional restorations and some of the most important factors to consider are the amount of tooth preparation involved and the degree of mechanical retention and resistance form present. The more minimal preparation often results in very little, if any, retention form and a provisional restoration that is very thin and fragile. Adding to the complexity are the esthetic implications in choosing different provisional materials.

For clinicians who don't like to freehand composite provisionals there are two general techniques: one that sets extraorally and one that sets intraorally. Both techniques require injection of some material into a silicone matrix that is made from a diagnostic mock-up or wax-up and both require a luting material that provides a sufficient seal between the tooth and the provisional restoration.

In choosing to do the extraoral technique, a flexible material such as a self-curing bisacryl, is injected into the matrix, placed over the prepared teeth, and allowed to reach a gel phase that is usually half of the total set time. The matrix is then removed and the provisional should come out inside the matrix and allowed to reach a full set outside the mouth. The provisional can easily be removed from the matrix and gross trimming can all be done bench top, which is an advantage of the extraoral approach versus the intraoral.

In the event that the provisional does not come out in one whole piece at the initial set time or tears in segments, there may be a path of draw issue and undercuts present. On occasion, the provisional can be sectioned into separate segments to alleviate this issue but doing so also weakens the cross arch

stabilization and retention. The decision as to how retentive the provisional needs to be is based on the preparation design, the thickness of material, and the number of units that can be fused together. If more retention is needed, it would be advantageous to spot etch each tooth to gain adhesion. A flowable composite or an unfilled resin is then placed over the entire preparation and the provisional placed and cured. The color of the luting material can greatly affect the esthetic outcome depending on the thickness of the provisional.

When there is a combination of crown and veneer preparations and/

or path of draw issues present, the intraoral technique is ideal. Like the extraoral technique, the self-curing bisacryl material is injected into a matrix but this time allowed to fully cure directly on the teeth. While this method is efficient it requires trimming in the mouth without damaging prepared margins. Applying this technique still requires a luting material but retention is improved because the units are all fused, thus enhancing the cross arch stabilization. Spot etching and luting material depends on individual choice.

An added advantage of the intraoral technique is the ability to utilize composite, which is stronger and stiffer than a bisacryl material. This is particularly advantageous when more esthetic shade options are required.

There are many variables to consider in selecting a technique to fabricate provisional veneer restorations, for which understanding of esthetics and functional requirements will aid the decision-making process.

ABOUT THE AUTHOR

Amanda Seay, DDS, AAACD, maintains a private practice in Mount Pleasant, South Carolina.



AMANDA SEAY, DDS, AAACD

**There are two
general techniques:
one that sets
extraorally and one
that sets intraorally.**