

Technical Support

How to Take an Impression of a Crown Under an Existing Partial



Figure 1



Figure 2



Figure 3



Figure 4

It's ideal, but not always practical, to have a patient's partial when fabricating a crown to fit under a clasp restoration (especially when the partial replaces anterior teeth). When you encounter a patient who needs a crown fabricated for use under an existing partial, a good alternative is to take an impression while the partial is still in place. To get the optimal result, the laboratory and dentist should follow the steps listed below.

Remove the partial appliance from the patient's mouth and prepare the tooth for a porcelain-to-metal or full cast crown restoration.

1. After preparation is complete but before the tissue is retracted for the impressions, the partial should be fully resealed in the patient's mouth (Figure 1). In many instances, the arms of the clasp may have spread and loosened from years of wear. If this is the case, you should adjust the clasp back to its original fit, one that permits adequate clearance of the prepared tooth and allows the construction of a crown with a more normal structure. Failing to perform this step may result in a crown that is unnecessarily large in order to retain the existing clasp.
2. Once the partial is fully seated in the patient's mouth, inject a small amount of syringe impression material preferably Regisil or a similar vinyl polysiloxane material – around the prepared tooth under the clasp arm and supporting connectors (Figure 2). It is not necessary to be concerned with the marginal detail of this impression; in fact, the marginal area will be cut away later to ensure positive seating in the working case.
3. After the clasp impression has set, simultaneously remove the partial and clasp impression from the patient's mouth (Figure 3). Then carefully detach the clasp impression piece from the partial. If the impression material has covered the clasp arms – and most likely it has – carefully split the impression material along the center of the outer surface of the clasp arms so it can be removed without tearing (Figure 4). Set aside the impression for shipment to the lab.
4. On cases where a cuspid has been supporting a partial that replaces the upper and lower anteriors, we suggest that you again seat the partial in the patient's mouth and take an alginate impression with the partial in place. This impression will serve as a guide to the proper contour of the new cuspid crown. Note: The partial is removed from the impression and the impression poured in a lab stone. It is only for reference during the final contouring of the crown.
5. Retract the tissue and use your normal impression procedure to obtain the detailed impression of the prepared tooth and the adjacent teeth. You will also need to take the usual counter impression and a bite registration with the partial in place. We do not recommend the triple tray impression technique for this procedure.
6. Along with the laboratory work order, send the following: the clasp impression taken earlier and removed from the partial, the impression of the prepared tooth, the bite registration, and counter model or counter impression. Also include the impression of the partial in place (but with the partial removed from the impression).

The obvious advantage of this procedure is that the patient does not have to be without the partial denture while the crown is being fabricated. For patients without a spare partial, this is the most convenient option.