Impressions may be made directly to the implant, (UCLA technique), or indirectly to the tissue extension (abutment). See previous pages for Direct vs Indirect mode of fixation.

The Direct Impression Technique for hexed implants, technique #1, may be made with a two piece hexed impression coping to transfer the hex orientation or a one piece, flat sided impression coping that will transfer the thread timing.

For single tooth replacement and screw retained telescopic abutments, the hexed impression copings must be used.

I. Impression Direct to Hexed Implants

1. After the healing period, remove healing cap and attach impression coping onto the implant (A & B). The internal hex of the impression coping must interface with the external hex on the implant to relate the hex orientation.

2. It may be necessary to incorporate an access hole into the tray so that the coping can be disengaged before the tray is removed. Inject impression material around coping and fill the impression tray; take impression (C). After material has set, disengage the guide pin. When using a closed impression tray, seal the hex hole of the guide pin with wax before taking the impression. Remove tray and attach an implant analog to the coping. Fabricate soft tissue model and attach hexed UCLA abutment. (D)

II. Impression Direct to Non-Hexed Implants

1. A healing period of two to three weeks should follow the secondary surgery before impressions are made.

2. Attach non-hex impression coping(s). Try in impression tray to verify that adequate space is provided for the impression coping(s). Inject impression material around copings, fill tray heavily, and insert. Remove tray and unscrew impression copings. Attach implant analogs to impression copings and reinsert them into their original position in the impression. If a direct abutment is to be used as an impression post, it must have a flat side to transfer the thread orientation. Fabricate soft tissue model.

III. Impression to Abutment (Tissue Extension)

1. A healing period of two to three weeks should follow the secondary surgery before impressions are made.

2. Check the Tissue Extensions to make sure they are tight and attach tapered or square impression coping(s). Try in impression tray to verify that adequate space is provided for the impression coping(s). If square impression coping(s) are used, the impression tray must have a window (also referred to as open tray) for access to the copings’ internal guide pin. Inject impression material around copings, fill tray heavily, and insert. Guide pins of square copings must be disengaged before tray is removed. Attach abutment analogs to impression copings and pour model in die stone.
Review and follow preliminary protocol steps a. through d.
   a. Preliminary Work-up
   b. Diagnostic Wax-up, Temporary Set-up
   c. Radiographic Correction Tray
   d. Stents

**Single Tooth Replacement**

1. In many cases, it is possible to simply screw a premade hexed, two-piece hexed titanium abutment onto the implant and proceed with technique similar to conventional crown and bridge procedure. It is usually necessary to contour the abutment out of the mouth before the impression is made. The crown may be cemented to the titanium abutment with or without an access hole occlusally, or a set screw may be used. (E)

2. An esthetically pleasing restoration with subgingival margins can be made by interfacing directly with the implant. Use the direct to implant impression technique described previously.

3. Soft tissue models are recommended when the fitting surface is subgingival. A resilient material such as Gi-Mask from Coltene, Dura-Soft from Premier, Coe-Soft from Coe etc., must be placed around the gingival portion of the impression coping before the model is poured.

4. A plastic waxing cylinder, such as the UCLA or the UMA abutment, is connected to the implant or UMA analog in the model and is modified to form a coping or crown. The UCLA or the UMA abutment recommended for single tooth replacement has an internal hex to interface with the external hex on the implant. This feature prevents rotation and makes attachment to adjacent teeth unnecessary. The abutment is reduced to be slightly out of occlusion, built up with wax to appropriate contour and is cast in a noble allow. (F)

5. The crown or coping is finished using an implant analog to protect the abutment/implant interface. Use a reamer to refine the access hole and screw seat. Porcelain or composite material is added to the coping. (G)

6. Lapping is the final step after glazing/finishing of the restoration. Insert the lapping tool into the handpiece and place some diamond paste on the shoulder. Place the lapping guide pin into the occlusal aspect of the restoration and align the lapping tool with lapping guide pin. At slow speed, rotate the lapping tool with the diamond paste on it for a few seconds. A smooth micro finish will then be achieved.

7. The restoration is delivered to the dentist and is attached to the implant with either a hexed or slotted screw. The occlusion is then refined and any working or balancing interferences are removed.

8. A plastic occlusal plug is used to fill the access hole and is ground flush with the occlusal. The plug can be easily removed if necessary by driving a small round bur into it, the hand piece is stopped, and the plug is simply pulled out. (H)

**Note:** As noted previously, the UCLA Abutment interfaces directly with the implant. If a tissue extension such as the UMA Abutment is placed in the implant, the restorative components will conform to the tissue extension.