

Technical Tips: Impressioning an Implant

Today, more and more dentists are prescribing dental implants as a solution to replacing permanent teeth, especially now in an aging population. The primary reason being the immediate function and dramatic improvements in a person's smile. Many general dentists are now incorporating this restorative option in to their practice as it has been said to be among the most successful procedures performed. Accuracy is very crucial when it comes to the fabrication of an implant case and it all begins with an accurate impression. The impression must replicate the exact position and orientation of the implant relative to the tissue and other teeth in the mouth. When the impression is sent to the lab a precise stone model is poured and is used as a basis throughout the entire fabrication process. We will refer to a closed tray impression technique throughout the article and also look at the differences when using an open tray.

Closed Tray

The very first step before taking an impression is to remove the healing abutment that is placed over the implant. If removed too soon, the gingiva can reform over the head of the implant causing soreness for the patient. The tissue shouldn't be inflamed and the platform should be clear of any bone debris. The impression coping can then be seated and secured using a retaining screw and a radiograph should be taken to ensure the impression coping is completely seated on to the implant. The impression tray can now be tried in the mouth allowing enough space and clearance for the entire arch.

The tray should be loaded with a heavier-bodied material while making sure that the mix tip is submerged in order to prevent bubbles or voids. At the same time the tray is being loaded the impression coping should be syringed with a continuous flow of wash material, again keeping the tip submerged to avoid trapping air bubbles while also using enough material. The tray can now be loaded straight in the mouth aligning it evenly and holding it firmly without the patient biting down on the tray. A timer should be used to allow for the proper setting time and the tray should be stabilized as the material sets to avoid any distortion.

With a closed tray technique the tray is removed from the mouth and the impression coping is unscrewed and can be assembled with the implant analog. The transfer should be evaluated for common errors before being aligned within the impression.

Snappy Abutment

In some closed tray techniques a snappy abutment will be used and is screwed on to the implant with a torque wrench. It should be screwed on so that it stays in place permanently at a correct tightness of 35 Newton centimeters. Now the impression coping can be seated over the abutment by pushing it in to place with your fingers until it snaps on. When using a snappy abutment the impression coping will snap off and stay in the impression as it is removed. This process can be fairly simple because the analogs can be snapped on and a healing cap can be placed over the abutment. In most instances it is used for implant restorations in the posterior teeth.

Open Tray

If restoring a multiple unit case it is best to use an open tray technique, one reason being the post is not being transferred from the mouth to the impression. With an open tray technique markings are made where the copings are located and then small openings are cut out so that the impression coping screws can easily fit through the tray. When trying the tray in it is important to be sure that the impression coping is not interfering with the tray.

After the impression material has set, the screw holding the impression coping in place must be removed first, followed by the tray which has the post incorporated in to the impression. The implant analog can be secured after the impression is rinsed and inspected. It is recommended that a new impression coping and analog is used for each restoration. Over time the pieces may get worn and chipped and would only result in more remakes. In any case the impression should be dried and disinfected before it is shipped out to the lab. In order for each implant case to be a success it is important to include an impression of the opposing arch and also a bite registration so the proper occlusion can be checked. Pre-op models or models of the temporaries also serve as a helpful tool.