All-On-4 Final Restoration
Step-By-Step

ROE Supports
All-On-4 techniques available by all implant companies

All-On-4
Revitalize
Diem II
Unit-for-Fixed
Straumann
Thommen

ROE Dental Laboratory
www.roedentallab.com
www.dentalimplantplanning.com
9565 Midwest Ave
Garfield Hts, OH 44125
Support Team 800 228 6663
Joe Ambrose CDT 303
BJ Kowalski President 301
Alan Banks 306
Objective: The purpose of this document is to give an overview of the process involved in restoring an All-On-4 patient with the final prosthesis. This document assumes that you will be finalizing the case with a Fixed-Removable (Hybrid) prosthesis.

Step 1: Evaluating the Current Situation

When evaluating an All-On-4 patient for the final prosthesis, the first thing to do is to evaluate the current esthetics and function with the provisional in place. This is the time to document any noticeable issues that may arise surgically or restoratively. Examples of issues that may need to be corrected before moving the final prosthesis are:

- An abutment position that causes a screw access hole to be too far palatal
- An abutment that causes the screw access hole to be too far facial
- Vertical space that is less than 12mm, as measured from the top of proposed implant to the occlusal plane of the opposing dentition, or on double arch restorations 24mm from maxillary implant interface to mandibular implant interface.

Advanced: This is also when you can determine if this case is eligible for the single stage final process which reduces chair time and length of restoration. Call ROE for information on One-Stage Final Prosthesis.

Step 2: The Master Impression

The All-On-4 Protocol uses Straight, 17° Angle, or 30° Angle Multi-Unit Abutment on each implant. This allows for correcting any implant angle for the prosthesis and simplifies the final impression.

All impressions should be made with OPEN TRAY impression copings.

After the impression copings are placed and firmly seated, you have the option to lute the transfers together using light cure material or pattern resin. It is suggested that you wrap dental floss around the transfers to create a matrix upon which the pattern resin can be applied. We highly recommend this technique, doing it at this phase avoids the need for a fit verification jig (pictured to the right) subsequent appointments.

Once the impression copings are placed (and luted together if you so choose) you may use medium or heavy-body impression. It is not necessary to use light-body impression material around the copings. Send the final impression with the impression copings and the screws to the lab for the master model. On the laboratory work authorization please indicate something like the following,

"please fabricate implant-retained occlusal rim for bite registration for future hybrid denture and fit verification jig."

We will return a screw-retained bite rim which will provide a very stable platform from which to take your bite registration. In addition, if the impression transfers were not luted together with pattern resin then we will make a Fit Verification Jig (figure 1) to verify the accuracy of the implant model. Following are the instructions for trying in the jig:

- Step 1 Remove healing collars
- Step 2 Screw in the duralay jig on one end - hand-tighten.
- Step 3 Verify the remaining posts are engaged and not encumbered by tissue, visually or with an explorer.
- Step 4 If there is a question about engagement, capture an x-ray.
- Step 5 If a post(s) is not engaged, section the jig, engage and reduralay.
- Step 6 If you sectioned, pick up the jig in a new impressions (no blockout under the bar) using long screws if possible.
- Step 7 The new pick-up impression will be poured and used as the new, verified master cast.

You can now replace the provisional prosthesis, and, in most case, fill the screw access hole with light-body impression material for easier retrieval during this process.

Step 3: Bite Registration & Model Verification

Within a few days, ROE will return an implant occlusal rim similar to the one to the right. There should be at least two copings embedded in the rim in order to stabilize and affix the rim in the correct position. From this point forward, other than dealing with screwing and unscrewing the prosthesis, everything is essentially basic denture work. Midlines need to be marked, shades taken, and moulds requested. In most cases the palate of the occlusal rim will be removed (maxillary) so that this more closely resembles the final product. Once the occlusal rim is affixed you can take a bite registration using whatever bite material you prefer.
Step 3 cont’d: If everything fits accurately and the bite registration has been successful, you may reinsert the provisional and place light-body impression material in the screw access holes once again. If you have not already done so, now is the time to take the impression of the opposing arch. You may now return the model, occlusal rim, tooth shade, bite registration, fit verification jig and opposing model (or impression) to the lab. The prescription should read something like:

"Model verified and bite registration taken. Fabricate wax try-in for future hybrid restoration".

Step 4: Framework & Tooth Try-In

ROE uses state of the art technology to design all of the iRIS CAD/CAM titanium substructures for optimum performance and aesthetics. We can design the substructure to your specifications however we have several standard designs the “full wrap” design is our default and most popular design due to its adaptability. We will mill the titanium substructure and return it to you with teeth set in wax for a final try-in.

Seat the try-in to ensure fit, we suggest taking an x-ray to confirm the bar is seated to each implant interface when screwed into place. Like a typical denture check phonetics, esthetics, and lip support. One noticeable difference here is that all of the lip support is provided by the gingival third of the tooth. There is minimal denture flange on these prosthesis. If more support is required than what is provided by the wax try-in, then the necks of the teeth can be moved labially.

Once the try-in is complete, return to case to the lab for the final stage. On the prescription you may indicate something like the following:

“Try-In Approved, finish final Hybrid Restoration for final insertion”

If you desire changes or additional try-ins, this is the time to notify the lab of what changes. The final appliance will take at least 8 working days to produce.

Step 5: Placement of Final Appliance

When the appliance is placed, it should seat firmly against the soft tissue. The design of the tissue interface of the hybrid should be such that it causes the tissue to roll over the prosthesis on the buccal and lingual aspects (figure 2).

ROE’s final hybrid is culmination of years of experience with fixed implant supported restorations. We use nano hybrid teeth from Heraeus Kulzer, CAD/CAM titanium bars designed with special individual tooth posts for maximum retention (figure 3), pressure injected acrylic with Ivocap, and a separate analog model for processing. The final bar is designed virtually inside the approved denture set-up ensuring ideal design for acrylic and tooth life.

Summary

Our comprehensive service includes the provisional denture, the definitive hybrid prosthesis, custom trays, models, special soft-tissue model, articulation, standard and processed bite rim, fit verification jig, set-ups, resets, acrylic finish, one full set of premium teeth, one set of economy teeth, protective night guard, iRis titanium CAD/CAM components, final screws for the bar, analogs. Price excludes in-office technician labor, impression transfers, abutments, shipping and tax. These fees represent maximum costs for the specified design. Actual fees may be less depending upon processes which may not be required or might be performed clinically. Individual fees will be itemized and billed at the time service is rendered. Prices are subject to change without notice.

Ask about our chairside denture conversion $100/hr. Our experienced technicians arrive at your office with all the materials and tools necessary to convert the provisional prosthesis. We also provide a fully guided CT-based implant placement service.

www.roedentallab.com  
www.dentalimplantplanning.com