

Full Arch Zirconia Implant Prosthesis Protocol



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NOTICE:

The following manual is designed to follow the procedure set forth by the **Implant Direct Multi-Unit Abutment Technique**. The procedure may vary based on the implant and abutment provider. Additional cost may also be included based on cost of desired provider's implant components.

In addition to Implant Direct, Utica Dental Lab is capable of accommodating the following dental implant systems:

Additional Implant System Providers			
BIOMET 3i™	CAMLOG®	DENTSPLY Implants	HIOSEN®
Certain	Screw-Line	Ankylos® C/X Astra Tech Implant System®	HG System
Nobel Biocare	Straumann®	Neoss®	Zimmer Dental
Branemark System RP NobelActive® NobelReplace®	Bone Level Tissue Level	Neoss®	Screw-Vent®

*Utica Dental Lab is willing to explore all additional implant systems per request

The Full Arch Zirconia Implant Prosthesis Protocol calls for a total of 5 patient visits. After each visit, you will be instructed to return each prosthetic item with any instructions for adjustments. Expected turnaround time is as follows:

Zirconia Implant Full Arch Turn Around Time	
Item Received From Lab	In Lab Days
Verification Jig/Wax Rim	7 Days
Denture Wax Try-In	3 Days
Provisional PMMA CAD/CAM Implant Prosthesis	7 Days
Final Zirconia Implant Prosthesis	7 Days

Special Thanks
Dr. Brian Jackson DDS

All in-patient photos courtesy of Dr. Brian Jackson DDS



“All on Four” Full Arch Zirconia Implant Prosthesis Protocol

(Implant Direct Multi-Unit Abutment Technique)

The Full Arch Zirconia Implant Prosthesis offers edentulous patients a unique, highly aesthetic, fixed implant solution made from 100% zirconia. The exceptional flexural strength of zirconia (up to 1465mpa) offers high resistance to chips and fractures while providing the patient with the stability needed to improve chewing and phonetic functions. Using a mix of traditional denture techniques and the most advanced CAD/CAM technology, we can provide a passive, natural looking, and precise fitting restoration. A screw-retained wax try-in with denture teeth is first provided to ensure the correctness of selected tooth shade and shape, as well as tooth setup and occlusion. After the try-in is confirmed by the patient, a temporary PMMA appliance is fabricated via CAD technology from the wax try in. The PMMA provisional appliance will provide a more definitive evaluation of the final prosthesis.

Prerequisite Checklist:

(Check all before proceeding)

- 10 mm's of vertical space in the posterior
- Multi-Unit Abutments
- Open(1000-62) or closed(1000-63) tray overdenture abutment transfer
(The following protocol is explained with an open tray technique)

First Visit Preliminary / Final Impression

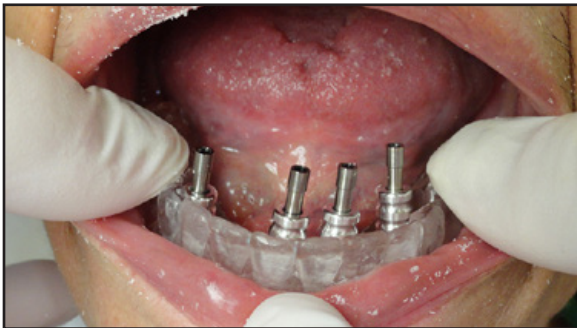


Fig.A: Seat Abutment Transfers



Fig.B: Transfer Abutments Seated In Impression

- If necessary, remove appliance to expose multi-unit abutments.
- Seat abutment transfers from above on to implants and tightly screw in to place (Figure A). Grind holes in tray for access to screws. Check the fit of the tray. *It is crucial to obtain an accurate final impression to ensure a passive fit.

Quick tip: If custom tray is needed, one will be provided at second visit.

- Take a VPS impression of the edentulous arch. Allow material to set completely. Loosen all screws and remove tray. Replace original prosthesis.
- Carefully check to see that all transfer copings are fully seated back in the impression (Figure B).

- Package all case related materials: Master impression, counter model, transfer screws and fill out included Work Order Form and send to Utica Dental.

Second Visit Verification Jig / Wax Rim

7 In Lab Days

Items Received From Utica Dental This Visit:



Fig.C Verification Jig



Fig.D Wax Rim with Housings and Screws



Fig.E Custom Tray



Fig.F Gingival Shade Guide



Fig.G: Seated verification jig

- If necessary, remove appliance to expose multi-unit abutments.
- Seat verification jig on implants. Use the Sheffield Test to ensure the passivity of the jig. Tighten one screw on either end of the jig. Check to make sure the jig is seated passively on the remaining implants (Figure G).

Quick tip: If jig is not passive, section the jig where necessary. Make sure each temporary cylinder is tightly screwed on to each implant. Lute jig back together using light cure or resin material. Once material has completely cured, use provided custom tray to take final impression.



Fig.H: Seated bite block

- After passivity is confirmed, next seat the bite block and hand tighten screws. Use conventional denture techniques to capture jaw relation records (Figure H).
- Choose a Vita Shade for tooth color, and a gingiva shade with the provided guide.
- Replace original prosthesis.

- Package all case related materials: Master model or impression, counter model, bite block and screws and fill out included Work Order Form and return case to Utica Dental.

Third Visit Denture Wax Try-In

3 In Lab Days

Items Received From Utica Dental This Visit:



Fig.I Screw-Retained Denture Wax Try-In



Fig.J (4) Fixation Screws

- If necessary, remove appliance to expose multi-unit abutments.
- Seat wax try-in and hand tighten screws
- Evaluate tooth color, tooth arrangement, CR, VDO, mid-line, aesthetics, and phonetics. Make any adjustments as you would with your standard denture try-in technique (Figure K).

Quick tip: If CR is incorrect, a new bite registration should be taken. If a reset is necessary, mark all necessary adjustments on included checklist.

- **NOTE:** It is extremely important that the patient approves of the color, shape, and arrangement of teeth. The approved wax try-in will be scanned and used in the CAD process when fabricating the provisional PMMA appliance as well as the final prosthesis.



Fig.K: Evaluate Wax Set-up

- Package all case related materials: Master model, counter model, wax try-in, bite reg. if necessary, and all screws. Fill out included Work Order Form and return case to Utica Dental.

Reset Appointment If Needed

- Re-evaluate all necessary information needed to obtain patient approval from third visit. Once again it is crucial that the patient loves tooth color, shape, and arrangement.

Fourth Visit Provisional CAD/CAM PMMA Implant Prosthesis 7 In Lab Days

Items Received From Utica Dental This Visit:



Fig.L Provisional CAD/CAM PMMA Implant Prosthesis

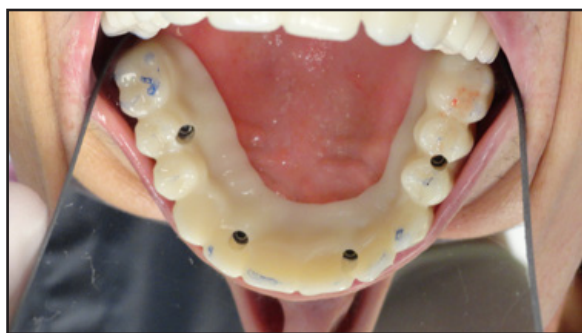


Fig.M: Occlusal View of PMMA appliance



Fig.N: Evaluate PMMA

- If necessary, remove appliance to expose multi-unit abutments.
- Seat CAD/CAM PMMA provisional implant prosthesis (Figure M).
- Hand tighten screws alternating from one side to the other.
- Tighten screws to the suggested torque per manufacture instructions.
- Evaluate occlusion. (Figure N) If any adjustments need to be made, mark adjustments on included work order form.
- Place cotton in holes and fill with light cure resin or acrylic.

- Allow patient to wear the PMMA appliance for at least 2 weeks.
- When patient is ready to get the final prosthesis, send back the articulated models. If any adjustments need to be made, return modified PMMA along with a description of adjustments . Return case to Utica Dental.

Fifth Visit Delivery of Final All Zirconia Implant Prosthesis

Items Received From Utica Dental This Visit:

7 In Lab Days



Fig.O Final CAD/CAM Implant Prosthesis



Fig.P: Seat final implant prosthesis

- Remove PMMA appliance to expose multi-unit abutments.
- Seat the final implant prosthesis (Figure P).
- Hand tighten screws alternating from one side to the other.
- Tighten screws to the suggested torque per manufacture instructions.
- Evaluate occlusion. Make any necessary adjustments (Figure Q).
- Place cotton in holes and fill with light cure composite or acrylic to prevent the buildup of bacteria.



Fig.Q: Evaluate occlusion



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