

IMPLANT BAR OVERDENTURE STEP-BY-STEP RESTORATIVE PROTOCOL

FIRST APPOINTMENT

Preliminary Impression

Before moving forward with the Implant Bar Overdenture option, consider anterior-posterior spread and keep in mind that 12mm or more of vertical space is required. Also keep in mind that a minimum of 5 mm is required between implants for successful results with our bar design. Although a closed-tray impression technique is described here, open-tray impressions are acceptable.

- Take an implant-level impression, including the vestibules. Ensure the palate is included for maxillary impressions.
 - Remove the healing abutments or appliance from the implants. If the patient has multi-unit abutments in place, take an abutment-level impression.
 - Seat the impression copings and tighten the screws (**figure 1**). Take a periapical radiograph to verify complete seating. Check the impression tray for proper fit.
 - Take a VPS impression of the edentulous arch (**figure 2**). Allow the material to completely set, carefully remove the impression tray, loosen the screws, and remove the impression copings.
 - Replace the healing abutments or appliance.
 - Carefully place the impression copings back into the impression (**figure 3**)
 - Fill out lab Rx including implant system and diameter of implants. Send MagDent the Rx and impression.

SECOND APPOINTMENT

Jaw Relation Records and Shade Selection

You will receive from MagDent a bite block with two screw-retained temporary cylinders (**figure 4**) and a wax-rim checklist.

- Remove the healing abutments or appliance from the implants.
- Seat the bite block and gently tighten the screws by hand (**figure 5**).
- With the patient sitting up, use conventional denture technique to achieve accurate jaw relation records.
- Unscrew the cylinder screws and remove the bite block(s). Replace the healing abutments or appliance.
- Take an impression of the opposing dentition and an impression of current denture for study model.

Figure 1: Seat the impression copings.



Figure 2: Take preliminary VPS impression.



Figure 3: Carefully reinsert impression copings into impression.



Figure 4: Bite block with temporary cylinders.



- Select the shade and mold of the denture teeth. The study model of the patients existing denture can be used as a reference regarding the size and shape of the new teeth.
 - *Note: We will match to Kenson denture teeth unless otherwise directed.*
- Select the gingival shade
- Return the case to MagDent with the master model, bite block, bite registration, opposing impression and study model.
 - *Note: The final restorative option is determined following the second appointment, after your bite block has been received. At this point, MagDent may determine that multi-unit abutments are required to correct implant angulation or connect the prosthesis to implants that are more than 2mm subgingival. In these cases, MagDent will contact the doctor to provide information concerning treatment options and pricing.*

THIRD APPOINTMENT

Setup Try-in, Verification Jig and Final Impression

You will receive from MagDent a wax setup, a custom tray and an implant verification jig. If multi-unit abutments are required, they will also be provided.

Setup Try-in

A wax setup is provided with temporary cylinders and a checklist.

- Remove the healing abutments or appliance. If multi-unit abutments were supplied by MagDent, deliver the multi-unit abutments in the same sequence and positions represented on the model.
- Seat the trial denture setup (denture base with teeth in wax). Tighten the temporary cylinder screw(s) by hand (**figure 6**).
- Evaluate the VDO, CR, esthetics, shade, tooth arrangement, occlusion, phonetics and midline (**figure 7**). If CR is incorrect, a new bite registration should be taken.
- Send clinical photos per the checklist included with the case.
- Unscrew the temporary cylinder screws and remove the setup.
- If a reset is necessary, a new bite registration should also be taken (**figure 8**).

Verification Jig

To ensure a passive fit of your restoration, it is vital to obtain an accurate final impression. A custom tray is provided along with

Figure 5: Seat the bite block.



Figure 6: Seat the trial denture and gently tighten temporary cylinder screws.



Figure 7: Evaluate trial denture setup.



Figure 8: Take a new bite registration (if necessary).



an implant verification jig that has been sectioned and numbered on a working model. Each acrylic section contains a titanium cylinder. This procedure should be followed to ensure an accurate final impression.

- Seat each section of the jig onto the appropriate implant or multi-unit abutment and tighten the guide pin (**figure 9**).
 - The sections should not be in contact. If necessary, remove one section, minimally trim it with a disc, and reseat it. Each section should have a gap about the thickness of a credit card. Visually verify gaps before luting.
- Lute the sections together with a suitable material (e.g., Triad[®], Dualine[®] - DENTSPLY; Pattern Resin[™] - GC America; Zapit[®], - Dental Ventures of America or ADDS-IT – American Diversified Dental Systems) (**figure 10**).
 - Allow the material to flow through and completely around the gaps (**figure 11**).
 - Ensure the material is completely cured.
- *Optional* – If desired, the clinician can test the passivity of the jig with a one-screw test. Tighten a single guide pin into one of the distal cylinders. No lifting of the jig should occur. Check for passive fit by visibly inspecting completely around each cylinder for complete seating. This process can be repeated for each implant.
 - If any section has a cylinder-implant interface that is subgingival, a periapical radiograph should be taken to verify complete seating.
 - If any cylinder is not completely seated, the jig must be sectioned in that area, reluted and rechecked until a passive fit is obtained.

Final impression

- Check the custom impression tray for proper fit (no contact with the jig or cylinders).
- Using a medium body VPS material, take the final impression with an open-tray technique.
 - Inject VPS impression material under and around the jig to capture the ridge and all anatomical landmarks as for a full denture including full vestibular extensions (**figure 12**). Capture the complete palate for maxillary cases.
 - Completely fill the impression tray. Seat the filled impression tray, ensuring the heads of the guide pins are exposed through the tray (**figure 13**).
 - Once the material has set, remove the guide pins and then remove the impression.

Note: the verification jig is picked up in the impression. Inspect the impression for the required detail.
- Replace the healing abutments or appliance. If multi-unit abutments were supplied by MagDent, leave them in place if possible.

Figure 9: Implant verification jig seated. Allow approximate space of credit card between sections.



Figure 10: Lute sections of the verification jig together.



Figure 11: Implant verification jig luted together.



Figure 12: Inject impression material under the implant verification jig.



Figure 13: Seat tray, ensuring guide pins are exposed.



- Send in entire case, including the trial denture setup, opposing model, the final impression containing the implant verification jig and guide pins, and lab Rx with reset instructions (if necessary).

RESET APPOINTMENT

Reset Denture Try-in (if necessary)

You will receive from MagDent a reset denture with temporary cylinders.

- Try-in reset denture according to Third Appointment instructions.
- Approve setup or submit lab Rx with reset instructions.

FOURTH APPOINTMENT

Implant Bar/Final Setup Try-in

You will receive from MagDent the final magnetic denture setup and a titanium magnetic bar (MagBar®).

- Remove the healing abutment or appliance.
- Seat the titanium bar on the implants or multi-unit abutments (**figure 14**).
- Verify the fit of the bar. Tighten one screw and verify a passive fit on all of the implants or multi-unit abutments (no lifting of the bar). Remove the screw and repeat the process for each implant or multi-unit abutment. Once a passive fit is verified, tighten the remainder of the screws.
- Seat the final denture setup onto the bar. Have the patient practice inserting and removing the magnetic denture onto and off the MagBar®.
- Verify VDO, CR, occlusion, esthetics, shade, tooth arrangement, phonetics, midline and retention of the denture.
- Remove the final magnetic denture setup and MagBar®.
- Replace the healing abutments or appliance.
- Return the case to MagDent for processing.

FIFTH APPOINTMENT

Delivery of Final Magnetic Titanium Bar (MagBar®) and Magnetic overdenture

You will receive from MagDent the final magnetic overdenture and the final magnetic titanium bar (MagBar®).

- Remove the healing abutments or appliance.
- Seat the bar on the implants or multi-unit abutments (**figure 16**).
- Hand tighten the prosthetic screws, alternating from one side to the other.

Figure 14: Seat the Magnetic Titanium bar intraorally.

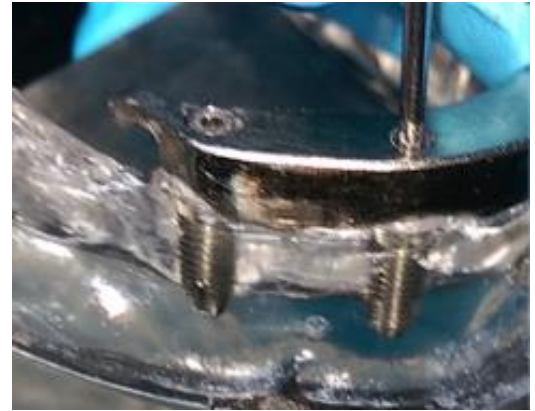


Figure 15: Verify the final denture setup.



- Tighten the screws to the appropriate torque per manufacturer instructions. Wait approximately 5 minutes and retorque the screws.
- Seat the magnetic denture onto the MagBar® (**figure 17**).
- Confirm the fit, retention and occlusion (**figure 18**). Make adjustments as necessary.

ONE WEEK

Follow-up Check

- Check retention by pulling straight vertically bilaterally on the posterior teeth while patient is sitting upright (resist rotating your hand while pulling downward).
Note: Straight vertical pull should not dislodge the denture.
- Re-tighten prosthetic screws on the MagBar® to the appropriate torque per manufacturers instructions of the implant system.
- Check occlusion.
- Review oral hygiene instructions.
- Set recall schedule.

MAINTENANCE APPOINTMENTS

How to maintain final magnetic prosthesis

- Six-month hygiene appointment
 - Perform prophylaxis under the prosthesis.
- Twelve-month (annual) hygiene appointment
 - Remove magnetic overdenture and unscrew MagBar®. Place MagBar® and magnetic denture in ultrasonic bath for 15-20 minutes. Scrub the intaglio surface of MagBar® with toothbrush and toothpaste and examine for signs of corrosion.
Note: If signs of corrosion are observed on either MagBar® or the Magnetic overdenture, document with photographs and contact MagDent.
 - If prosthesis screws are damaged or show signs of stripping, screws should be replaced.

Predictable implant overdenture lab fees with no hidden costs

- Price (per arch) includes: CAD/CAM precision-milled titanium magnetic bar (MagBar®); Premium denture teeth from Kenson; all labor and die work; analogs, setups, bite blocks, try-ins and verifications jigs.

CAD/CAM Milled Bar Overdenture

- Prices may vary based on the cost of ancillary components of chosen implant system, or material of final magnetic denture (zirconia, PMMA or acrylic). Multi-unit abutments are available for purchase in cases where they are required.

Figure 16: Deliver the magnetic titanium bar intraorally.



Figure 17: Occlusal view of the denture seated over the magnetic titanium bar.



Figure 18: Confirm occlusion.



	Doctor	MagDent
First appointment	Preliminary impression	Pour models, fabricate bite block (7 days)
Second appointment	Jaw relation records, select tooth shade/mold, impression of opposing dentition and current denture for study casts	Articulate casts, set denture teeth in wax, fabricate implant verification jig and custom tray (5 days)
Third appointment	Trial denture setup try-in, photos, lute verification jig, take final impression	Fabricate master cast, fabricate MagBar [®] , final setup (15-21 days) OR reset (if necessary - 5 days)
Reset Appointment	Try-in and approve reset denture, photos	
Fourth appointment	Implant bar/final setup try-in	Process final denture (14 days)
Fifth appointment	Final prosthesis delivery	
One week Post-Delivery Check	Check occlusion	