A Clinician’s Guide to Restoring Conus

CONUS CONCEPT PROVIDED BY DENTSPLY IMPLANTS

www.AbsoluteDentalLab.com
Dear Doctor,

Absolute Dental has specialized in fixed prosthetics with an emphasis on Implant dentistry for more than two decades. With all the advances in restoring the edentulous arch available to us, I believe the Conus concept to be one of the most innovative and practical systems on the market.

After successfully completing multiple cases with the Conus concept, I feel confident our Absolute Conus case flow procedure is the most efficient and predictable way to restore these cases.

My team and I are excited to assist you with your Conus case and are looking forward to working with you soon!

Conrad J Rensburg

absolutelydentallab.com
Conus Implant Supported Hybrid Removable Denture

What is the ATLANTIS™ Conus concept?

Conus is a palate-less removable implant supported denture with the feel and function of a fixed implant retained prosthesis. Conus is a cost effective, friction retained denture, supported by patient-specific abutments. The Atlantis fabricated Conus CAD abutments can facilitate up to 30° of angle correction.

The system is processed directly into the implant and is available for most major implant systems. A minimum of four implants per arch is needed and the AP spread can be shallow without compromising retention or function. This makes Conus an ideal solution for patients with minimal bone.

The final denture can be processed with or without a facial vestibule. For patient comfort, the palatal area is designed with an open palate horseshoe design.

The Conus concept can also be used in partial application where fixed options could potentially cause hygienic issues due to bone deficiencies.
First Appointment

Once implants are integrated and ready to restore, a fixture level impression using open tray impression copings are registered. This impression must be taken with PVS material and splinted together using a rigid intraoral material i.e. Triad Dual-Cure, Duralay etc. In some cases, Divergent implants will cause undercuts with the impression copings, making it difficult to remove when splinted. In these cases splint only the parallel implants. It is important to take this impression using a custom tray, paying special attention to accurate indexing of the vestibule and palatal areas. Overfilling the impression tray will help with a stable engagement of the impression copings. Verify an accurate impression by testing each impression coping for movement by lightly pushing on them using a pointed instrument. Any movement of the impression copings inside the PVS material will warrant a new impression.

Please do not hesitate to call us or your local Dentsply implant representative with any questions regarding this technique.

Lab Process:
Pour a soft-tissue model; fabricate a wax bite rim and model verification jig. This will be returned to the clinician for bite registration and model verification.

Schedule your patient to return after: 5 DAYS IN LAB
Second Appointment

Register a bite using the same protocols as for traditional removable dentures. Register the bite, mid-line, occlusal plane and labial contour on the wax-rim.

Determine a tooth shade and mold approved by the patient.

Lab Process:
Set up teeth in wax and return for traditional tooth try-in. If the final denture will be processed without a vestibule or a more stable try-in is required the wax denture try-in can be processed on an acrylic base engaging one or more implant sites. This is done using a temporary component.

Schedule your patient to return after: **5 DAYS IN LAB**

**Conus Dimensions and Height Requirements**

- **Minimal clearance between SynCone cap and opposing occlusal** - 5.0mm
- **SynCone cap height** - 6.0mm
- **Height requirements**
  - Minimum vertical clearance - 11mm
  - Ideal vertical clearance - 15mm

* Measure clearance from tissue to opposing dentition only in areas where implants are placed. Less vertical is needed around tissue supported areas of prosthesis.
Third Appointment

Remove the healing abutments from the implants, exposing the implant platform.
Perform a tooth try-in using the same protocols as for a traditional, removable denture.

If any changes are needed, please return case to the lab for a tooth reset and schedule
for another tooth try-in before proceeding to abutment design. Patient satisfaction and
approval is crucial at this appointment.

If patient approves tooth set up, return for next step.

Lab Process:
Scan and digitize the implant level model and denture relationship or simply send
the case to Atlantis for scanning and design of the Conus abutments. Atlantis allows
the lab design input through the Atlantis WebOrder software. Atlantis will mill and
return the approved abutments in 1-3 days after approval. Place the abutments on
the model, press the SynCone caps onto the Conus abutments and fabricate a CoCr
sub-structure to allow the clinician to cement the caps into the CoCr frame. This
frame should fit loosely around the caps to allow for a passive clinical pick up. Any
required adjustments are made to the denture to allow for a final tooth try in. Do
not jump the teeth onto the CoCr frame at this stage. Fabricate a new custom tray
to allow for a pick up impression of the frame after cementation of the caps.

Return the following components
- Conus abutments on the model with positioning transfer jigs in place
- Gold SynCone caps
- Teeth in wax set-up for a tissue supported tooth try-in – If needed
- CoCr support sub-structure
- Polymerisation protection caps
- Newly fabricated custom tray

Schedule your patient to return after: 15 DAYS IN LAB

Components Delivered for 4th Appointment

Conus abutments in position on original implant level model
Markings over jig and abutment to show correct rotational position
Positioning jig
SynCone caps
Tooth set-up in wax
CoCr cementable sub structure
New custom tray for PVS pick-up impression of cemented CoCr frame
Polymerisation caps

www.AbsoluteDentalLab.com
The Conus Concept

- SynCone gold retention cap
- Conus CAD abutment
- 30° angle adjustment
- Prosthesis
- CrCo cementing support structure
- SynCone gold retention cap
- Conus CAD abutment
- Polymerisation cementing sleeve
Fourth Appointment

Remove the healing abutments from the implants, exposing the implant platform. Transfer the Conus abutments directly from the model to the mouth using the positioning indicators. A precise transfer of the abutments is crucial in determining the retention of a Conus case.

Unscrew the abutments from the model through the positioning indicators and transfer to the mouth without removing the abutments from the positioning indicators. Only remove the positioning indicators after the abutments are torqued in place. If an abutment is out of rotation by any amount it will cause the case to bind in the mouth. Call the lab for instructions if a Conus abutment does not transfer accurately from the model to the mouth.

Place the supplied SynCone gold caps over the Conus abutments and press down to achieve the desired amount of retention – more pressure will equate to a stronger retention. Passively position the CoCr support structure over the caps making sure the frame is not under tension. If needed, make internal adjustments to allow the frame to fit loosely over the abutments. Slide the supplied polymerisation caps over the gold SynCone caps to protect the abutments from cement overflow.

**CLINICAL STEPS**
- Transfer the Conus abutments to the mouth using the positioning indicators
- Press the SynCone caps onto the Conus abutments using finger pressure
- Slide the supplied polymerisation caps over the SynCone caps to protect the abutments from cement overflow
- Position the CoCr support structure over the SynCone caps
- Cement the frame onto the caps using an Acrylic Resin cement
- Pick the frame up using the new custom tray
- Do not remove the abutments from the mouth
- Soft reline the existing denture over the Conus abutments

Unscrew abutments through the positioning indicator and transfer to the mouth
Transfer the Conus abutments to the mouth using the positioning indicator as a carrier
Torque abutments in the mouth without removing them from the positioning indicator

Push SynCone caps onto torqued Conus abutments
Pull polymerisation cementation sleeves over caps
Passively position CoCr frame over SynCone caps
Cementing the CoCr substructure

Flow a small amount of acrylic resin cement into the receiving part of the CoCr frame and lute the CoCr support frame onto the SynCone gold caps. Once the cement is cured remove the frame and polymerisation sleeves – Do NOT remove the Conus abutments from the mouth. Replace the frame over the Conus abutments and press down to achieve the desired amount of retention. Take a pick up impression of the CoCr support bar using the newly fabricated custom tray. Flow light body PVS material under the frame to index a passive tissue position. Add medium or heavy body material into the tray to facilitate a pick-up impression over the bar.

Lute the frame to the abutments using an oral acrylic resin or extraoral composite cement

Flow resin cement into the CoCr receiving areas

Cement the SynCone caps into the CoCr support structure

Pick-up the luted SynCone caps and support structure inside a new custom tray impression

A “clean” pick up is essential for positive retention. Retake if any PVS bleeds into the caps.

Return the impression with the frame in place to allow your lab to pour a final processing model.

Adjusting the existing denture to fit over the Conus caps
Flow a small amount of bite or PVS material into the intaglio service of the existing denture to index the Conus abutment positions. Drill corresponding holes into the existing denture to accommodate the Conus abutments. Protect the screw heads with a small amount of Teflon tape and reline the denture using a soft-reline material.

Lab Process:
Order a second set of Conus abutments and keep them in the lab to use as lab processing analogs. Place these abutments into lab analogs and press them into the pick-up impression – make sure they are fully engaged. Pour a processing model from the pick-up impression. Pull the CoCr structure with the Conus caps out of the PVS pick up impression. Remount the case by fitting the original wax denture set-up back onto the new processing model. Fit the CoCr bar with SynCone caps back onto the Conus “replicas” on the new processing model. Jump the teeth back onto the frame and return for a definitive try-in.

Schedule your patient to return after: **5 DAYS IN LAB**
Definitive Try-In

The lab will return the case in wax for a definitive try-in. At this appointment it is important to evaluate the case for retention, esthetics and bite. Make chairside adjustments if needed.

Lab Process:
Process case for final delivery.

Absolute Lab add-on services
Absolute Lab will digitize the case. We keep a digital record of the model with Conus abutments, opposing model and bite relationship. A high-water sleep denture is designed and archived from this data. The sleep denture is milled from PMMA material and can be re-milled, if needed, without any additional chair time required from the clinician. Absolute also fabricates a custom Conus removal tool to assist the patient in the removal of the prosthesis.

Final Delivery

Components delivered
• Denture processed with CoCr sub-structure and cemented SynCone caps
• PMMA milled high-water sleep denture
• Absolute removal tool
**Absolute Dental Lab**

Established in 1994, Absolute Dental started as a fixed prosthetics lab serving clinicians in the Triangle area of North Carolina. Two decades later, Absolute’s restorative focus is much broader but their attention to product detail and exceptional customer service has not changed.

Today, the Absolute team is renowned for their expertise in creating world-class dental esthetics. Their use of cutting edge technology in CAD and milling departments, as well as their extraordinary dental implant and high end removables sections, enables them to deliver lifelike and functional dental prosthetics.

Staying abreast of new technologies, yet only implementing relevant protocols and procedures, has earned Absolute a reputation for being a trusted partner to discerning clinicians throughout the United States.

Serving their customers with Absolute Excellence has always been the primary focus of the owners, branch partners and team members...this remains true today.

---

**Conrad J. Rensburg**  
*ND & NHD in Tech.*

Conrad J. Rensburg graduated under full scholarship from Pretoria Tech in 1992, with a four-year Baccalaureate Degree in Technology. Since that time, he has specialized in fixed prosthetics with a heavy emphasis on dental implant restorations.

While employed by ADW Dental as Senior Ceramist, Mr. Rensburg received managerial certification from the SADTC in 1995. After, he owned and operated RensTech Fixed Prosthetics in Pretoria, South Africa. In 1999 he relocated to the U.S. and was hired as the General Manager of Absolute Dental Services. During that time, he created the nationally renowned Absolute Implant Department.

Mr. Rensburg and his business partner, Drew Van Aarde, purchased Absolute Dental in 2004. With Drew as Senior Ceramist and Conrad as head of Absolute Dental Implant and Pre-Ceramics sections, they created a world class dental lab in the Triangle area of North Carolina.

Mr. Rensburg is a board-certified technician in good standing with the SADTC and NCDLA. He has been a CE accredited speaker for several dental implant manufacturers since 2002, and has been the keynote speaker at special events across the U.S. His seminars are focused on educating restorative dentists on the latest techniques and materials, as well as keeping them up-to-date with the ever-evolving dental implant market.