

# The Dent-Liner™



Peter T. Pontsa, RDT has over 40 years of experience in the dental profession. In 1991 he established Dent-Line of Canada Inc. and is currently president of this dental supply company. He is a leader in superior professional techniques in fixed and removable restorations and he shares this knowledge through articles and seminars which he regularly provides. Peter is a past president of the College of Dental Technologists of Ontario. He is also pleased to be involved as co-publisher of Spectrum Denturism.

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*A Bulletin Dealing With Issues For Dental Health Professionals*

## Vario Soft III Extra-Coronal Attachment System

The Vario Soft 3 extra-coronal precision attachments are primarily selected when the retaining abutments are relatively small and intra-coronal attachments would create over contouring. The VS3 also requires less tooth reduction and is designed to be a passive insertion rather than snap into place. It is ideal for patients who have limited manual dexterity, or the prosthesis has a difficult path of insertion and removal. Traditionally extra-coronal attachments are easier for patients to insert and remove whereas intra-coronal attachments have drawbacks such as when female attachments on the retaining crowns accumulate food debris thus making seating of the removable denture difficult. The Vario Soft 3 extra coronal precision attachments are resilient due to the duroplast (thermoplastic material) retention sleeves. This allows free movement of the prosthesis, to distribute potentially destructive forces or loads away from the abutments on to the tissue and bone. The fewer abutments remaining and the weaker the abutments are, the greater the need for resiliency or free movement to direct the forces away from the abutments, to the supportive bone and gingiva through the base of the removable denture. The Vario Soft 3 is very cost effective and has been proven for 15 years in thousands of cases. It guarantees success with every restoration for both

mandible and maxillary bilateral removable partial denture cases. In the case of uni-lateral free end removable partial dentures, they should be cross arch stabilised. Dental health professionals and patients benefit from the Vario Soft 3 as a low cost attachment that is resilient with a passive fit, with three retention choices. The duroplast female retention sleeve absorbs negative movements to protect weak abutments and provide patient comfort. The VS3 needs only a full coverage abutment preparation and provides the patient with easy insertion and removal. The only service requirement is the quick and easy retention sleeve replacement at chairside. The dental lab benefits with the Vario Soft 3 since it features time saving and simple routine techniques, and requires no additional tools or instruments. The plastic male component burns out cleanly and it may be cast in any alloy to eliminate soldering and dissimilar alloys. The extra coronal design provides for a properly contoured abutment that will enhance aesthetics of the restoration. The laboratory and clinical procedures can include either single or double abutments. After preparing the master model and dies, determine the path of insertion, then wax full coverage crown patterns. Place the males in a surveyor or paralleling instrument and position them on the model adjacent to the wax

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## Questions and Answers Forum!

During my years as President and Technical Advisor for Dent-Line of Canada I have been faced with many interesting technical cases and have provided advice on attachment planning. As a result we have decided to revive a column which appeared in a previous Dent-Liner several years ago called **Questions and Answers**. If you have a special question concerning Bredent attachment planning, just write to us at info@dent-line.com and your case may just appear in our new Questions and Answers Forum - you can remain anonymous if you choose... Below is Question # 1!

*I have used Bredent attachments in my laboratory for the past year or two. Recently I have been experiencing problems. Let me describe two. Maybe you can have a tech person advise me or call me with a suggestion.*

**Question 1:** *A female patient had teeth 6-11 crowned and splinted. Round bredent attachments were placed on the distals of 6 and 11. Conventional female grooves were placed between the canines and lateral incisors with the corresponding male counterpart on the partial denture. After approximately one year*

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Vario Soft III Extra-Coronal Attachment System cont'd...



The Vario Soft 3 assortment contains males on mandrels, females, duplicating matrices and wax parts.



Another type of male available has no mandrel; the one on the left needs a milled ledge. The other has the shear distributor already integrated into the male.

patterns. Males must be vertically parallel and should be positioned over the crest of the gingival ridge. The adjoining area of the attachment is concave, thus allowing the male to be placed in close proximity to the wax pattern, thus reducing the amount of leverage exerted on the attachment. A milled in lingual rest will act as a stress breaker. The male pattern has no sharp edges and can be adapted to the ridge, respectively it can be shortened up to 40% in cases with limited inter occlusal space. The interlock is drilled with a 1 mm wax miller and its position is predetermined at 170 degrees off center of the male attachment. Proceed with a 1.5 mm wax miller and starting from left to right at a speed of 5000 to 7000 RPM, cut the lingual facing approximately 1.5 mm deep. The male attachment is then placed on the distal of the waxed crowns. It is essential that the male attachment is parallel vertically, sagittally and centered on the ridge. Or else binding will occur and early attachment wear will be the result. Sprue and cast the restoration and prepare a milling model so subsequent milling of the stress distributor can take place. A profile milling bur is utilized to refine the milled ledge at 15,000 to 20,000 RPM rotational speed. Next a 1.0 mm groove bur re-mills the interlock. The male attachment is also gently milled with a 1.5 mm round end profile bur to remove any bubbles or imperfections and also

to maintain the parallelism. At this time the occlusal shoulder is also refined. The abutment crowns and connectors are highly polished and the porcelain veneer is applied. It is important to obtain a smooth surface without reducing the size and shape of the male. Caution must be exercised to prevent alterations to the dimensions of the male during finishing. Seat the finished casting on the master model and place the white duplicating female sleeve over the male adjusting it to conform to the dimensions of the male and ridge. The white female sleeve must be used when duplicating as this ensures that the interior dimensions of the housing sleeve are correct. Prepare the model for the casting. A wax housing sleeve is included in the VS3 assortment. Place it on the refractory model over the sleeve. The wax pattern guarantees that the housing is of uniform thickness, when cast in chrome. This prefabricated wax component is quickly fitted to the investment model. Fill the area contracting the ridge with the wax so as to reproduce it fully in chrome cobalt. Next design and wax up the chrome cobalt casting according to the standards of practice. Place Bredent retention crystals over the attachment in order to provide the necessary mechanical retention for the acrylic. Trim and polish the chrome cobalt casting. Do not electro-polish the inner surface *continued on page 3*

Featured Product: Renfert's New Dynex Separating Discs

Renfert's Dynex separating discs make cutting, grinding sprues and separating bridges effortless. The new double reinforced separating discs are not only considerably more effective, but also more economical to use since they do not break during use even when jammed. These separating discs are available in three sizes and are superior to the standard discs in both cutting performance and wear. There is a highly flexible one suitable for crown and bridge techniques with up to 50,000

RPM rotational speed. The other two discs are more suited to non-precious and chrome cobalt. These three separating discs cut so quickly, that far less heat is generated on the surface than usually the case. In addition the discs are made with a special organic binder which considerably reduces the unpleasant odor. **For more information on Dynex discs and samples call 1-800-250-5111.**



Dynex separating discs are double cross linked with high-tech fibreglass reinforcement.

Featured Product: GO-2011 Dissolves Alginate and Plaster

Renfert's GO-2011 dissolves alginate; it is best known as a plaster solvent, however it is excellent in dissolving alginate, in particular a combination of plaster and alginate residue. Extensive in-house tests, which were carried out, confirm this. GO-2011 is the best combination solvent in its category. It is the most effective all in one cleaner for alginate and gypsum residue. It cleans mixing bowls, acrylic dentures, impression trays, castings and investments and removes dental stones,

gypsum based investment material and alginates even in hard to reach areas. GO-2011 is ready to use, quick acting and most effective when used in an ultrasonic cleaner at 40 to 50 degrees Celsius. The best cleaning time is 5-15 minutes in ultrasonic and 15-90 minutes without it. GO-2011 has been relabeled, has a pleasant subtle lemony scent and it does not etch acrylics, metals or glass. **Contact us today for more details at 1-800-250-5111.**



GO-2011 is a very effective all in one cleaner for alginate and gypsum residue.

Vario Soft III Extra-Coronal Attachment System cont'd...



The male attachment comes with or without a parallel mandrel for convenience.



Retention sleeves have a spine for anti-rotation and a flexible outer opening for easy insertion.



Crowns are waxed and milled to accommodate the path of insertion.



The male attachment should be adapted to the ridge and then luted to the waxed crown.



To avoid binding on insertion, the male should be parallel vertically, sagittally and centred on the ridge.



The crowns are cast and the lingual areas and male attachment are refined with milling burs.



The white duplicating matrix is adapted and a duplication is made for the removable partial.



The green retentive sleeve is placed on the preformed housing in the removable cast partial.

of the cast housing, as this could adversely affect its fit over the female. Process the partial denture to the standards of practice, taking care to keep acrylic from getting into the housing prepared for the female retentive sleeve. Insert the desired female using the insertion pin; green indicates reduced friction, yellow normal, and red, high friction. It is of crucial importance to begin with the lightest friction first and move up as the partial becomes looser over time. For easy insertion by the patient, the occlusal of the male should be slightly bevelled or rounded. To service and rebase the VS3, the female retention sleeve can be easily removed using a pointed instrument to slide it from the housing. The replacement retention sleeve, whether high or reduced friction can be inserted effortlessly with the special insertion

pin provided in the kit. The relining is done using standards of practice and should be done routinely since failure to reline will place excessive loads upon the attachment and abutments causing potential fracture and failure so a periodical recall program is important to ensure patient satisfaction. The technique to fabricate bilateral cases is a practical approach utilized with straight forward procedures that employ prosthetic and technical methods. The technique is compatible with any crown and bridge combination cases and recommended when potential destructive forces can result in changes to the periodontal ligament and the supportive bone. For case planning or technical advice, do not hesitate to contact Peter T. Pontsa, RDT at 1-800-250-5111!

Source; Peter T. Pontsa, RDT

Trade Show News: National Symposium for Denturists

The National Symposium on Denturism was held from September 17th to the 21st in Boucherville at Hotel Montagne. The conference was a success as many denturists came from across Canada; there were even two attendees from as far away as New Zealand. The speakers spoke in French with English translation and vice versa, so every

one could participate in understanding the seminars. The International speakers provided seminars on denture construction, implants, CAD CAM milled implant bars, haptic computer design and a new implant metal. We would like to thank Daniel Leveille DD and the dedicated organizers of the National Symposium for all their efforts.



The RPD should fit the model and crowns without binding before processing the acrylic resin.



The finished RPD is ready for initial insertion after sterilization first using the lightest retention sleeve.

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### About Our Organization...

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## Questions and Answers Forum! cont'd...

*the retention loosened. When the lab replaced the yellow attachments with red ones the partial no longer seated without a handpiece adjustment to the bredent attachment on the buccal aspect (distal tooth # 11). What happened here? What went wrong? Shouldn't the partial have reseated in its original position once the new attachments were snapped into place by my laboratory?*

**Problem 2:** *Same situation. Splinted crowns from 6-11 with female grooves between the canines and laterals. Round Bredent attachments distal to the canines. In this case the metal male attachments that would slide in between the canines and laterals broke off bilaterally. My question to you is not how this happened (although I would be interested in your thoughts). My question is if the partial needs to be redone and cannot be repaired... how do I do this without redoing the accompanying crown and bridgework from 6-11? Is it possible to take an impression and register an accurate transfer of the round male attachments distal to the canines? If so, how could I eliminate any alignment problems? I would appreciate any help you would have to offer. Thank you, Dr. Jay A. Millar, 4249 Route 9 North Freehold N.J. USA.*

### Answer to problem 1:

Bredent recommends when a yellow female loses its retention it should be replaced with a new yellow female. Red, the highest retention is used when the replacement yellow cannot provide it. As for the poor reseating there are a few possibilities. The red females were not properly seated in the housing because the original yellow was previously adjusted to fit. Also after a year in the mouth, it is normal for a partial to need a relin at the time of the retention replacement. Finally the male ball may not have worn down for the tighter red female to seat all the way.

### Answer to Problem 2:

The reciprocal or lingual arm may have broken from metal fatigue. It would be difficult to determine the cause without an in depth analysis. The dental lab should be able to make a new arm and weld it on to the existing partial or a new partial could be fabricated. Whether you opt to repair or fabricate a new partial, Bredent has metal transfer analogues that will eliminate any alignment problems. In any event, you should not have to redo the existing crown and bridge work.

**Source: Peter T. Pontsa RDT**

## Trade Show News: Donation to George Brown College

DENT-LINE OF CANADA INC. in co-operation with Renfert USA made a donation to the Dental Technology Program at George Brown College on Monday October 27th. The equipment donated was a Renfert Top Spin, which is a laser guided pin drill machine; this will help the students in model preparation. Peter T. Pontsa RDT and Angela van Breemen from Dent-Line were on site to present the gift to Bernie Mullen RDT who is the program co-ordinator. Contributions like these makes it possible to ensure that the school is using the most up to date equipment to educate their students. We have been a strong supporter of the Dental Technology Programs for many years and our ongoing commitment makes

it possible to ensure that the programs benefit all members of our community.



**Bernie Mullen RDT shows the new Top Spin, Peter T. Pontsa, RDT pictured to the left; A. van Breemen on the right, plus enthusiastic students.**

## Dentists Back Sealants, Despite Concerns

Lately we have heard a lot about the chemical bisphenol-A, or BPA, which is commonly utilized in the production of the hard, clear plastic called polycarbonate. This material is also used to line food containers and soft-drink cans which means that most of the exposure to humans from this chemical comes from our food supply. Recently we learned from an article in the New York times that traces of this chemical have also been found in dental sealants. Nonetheless, the American Dental Association remains strongly in favour of sealants. Numerous studies show that any exposure is negligible and temporary, lasting no more than three hours after the initial application. In addition, other studies have found

no detectable levels of BPA in most American - made sealants. In the meantime, sealants have been shown to offer years of protection against cavities. "This is such an enormously valuable tool to prevent tooth decay," said Dr. Leslie Seldin, a New York City dentist and consumer adviser for the American Dental Association. Parents worried about BPA exposure should find out from their dentists which type of sealants they use and whether it has been tested for BPA. Furthermore researchers from the Centers for Disease Control and Prevention provided this final comment: "Sealants should remain a useful part of routine preventive dental practice."

**Source; The New York Times**