

# DENTAL ADVISOR™

Product insights you can trust.

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Vol. 41, No. 05

## ADVANCEMENTS IN PREVENTIVE



WHO SHOULD RECEIVE  
SILVER DIAMINE FLUORIDE  
APPLICATIONS?

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SUPPLEMENTAL/TOPICAL  
FLUORIDE THERAPIES

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HANDLING HYPERSENSITIVITY

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FLUORIDE-FREE ALTERNATIVES





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Preventative dental therapy and caries risk assessment are essential components of modern dental care which focus on the proactive management of oral health to prevent the onset of dental diseases. By integrating comprehensive risk assessments, dentists can identify those individuals at higher risk for caries before they develop. This approach enables and allows implementation of tailored preventative measures, such as enhanced oral hygiene practices, dietary recommendations, and fluoride treatments. Emphasizing prevention not only helps in maintaining optimal oral health but also reduces the need for more invasive and costly treatments in the future. Through a combination of advanced diagnostic tools and personalized care strategies, preventative dental therapy seeks to safeguard patients' smiles and overall well-being while treating potential concerns before they become an issue. As always, thank you for reading, and feel free to reach out to our team at connect@dentaladvisor.com or to me personally at drbunek@dentaladvisor.com with any comments or questions.

— Sabiha S. Bunek

**CLINICAL AMBASSADOR PROFILE**



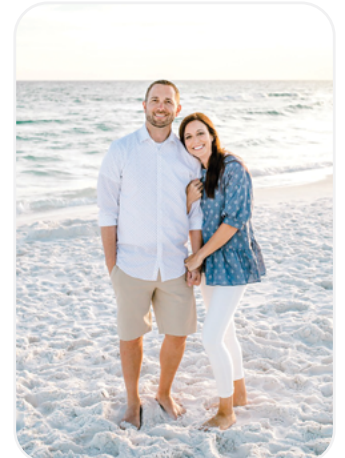
**Dr. Ashton A. Prince** is a general and cosmetic dentist specializing in advanced restorative procedures and rehabilitation. His home office is based in St. George, UT where he has practiced for 15 years. He is also a national lecturer in the fields of dental product development, practice management, cosmetic/restorative treatments, and patient/team communication skills.

Dr. Prince's training began after graduating from the UNLV School of Dental Medicine where he was offered an Associate Professorship within the University to supervise and teach in the field of Restorative and Cosmetic Practices.

Dr. Prince is a founding member of the Seattle Study Club of Southern Utah and also works very closely with the Utah Tech University Hygiene

and pre-dental programs as the President of the Advisory Board and Adjunct Faculty in the Pain Management program. He is a key Clinical Ambassador with The Dental Advisor, has served as the founding and Acting Editor-In-Chief of the ACT Dental – Best Practices Magazine, serves on the Board of Directors for the dental malpractice company Professional Insurance Exchange, and is a KOL for GC America.

Dr. Prince is a member of the AACD, has been nominated as one of Incisal Edge Magazine's "Top 40 Under 40" dentists in the country, and has trained with the National Speakers Association and the Exceptional Speakers Network. Dr. Prince has also been invited and is progressing toward membership in the American Academy of Esthetic Dentistry and is very excited to be a part of progressive dental techniques in an ever-changing field.

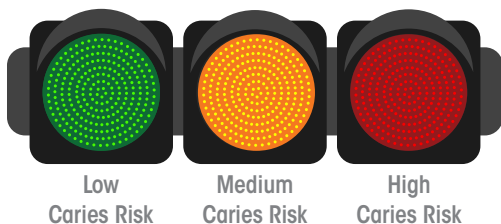




# Advancements in Preventive

## Caries Risk Assessment

The first step in prevention of dental caries is to assess the patient's caries risk. The standard risk categorization is defined as follows:



Generally, the caries risk increases with a high level of sugar consumption, special health care needs, medications that reduce salivary flow, history of dental restorations, and unfluoridated water.

Downloadable forms for use in practice are available from the ADA for members on their website.

Once a level of caries risk is assigned,

treatment can be customized for the patient in a variety of ways. Items worth consideration may include frequency of care and radiographs, minimally invasive options such as the use of special mouthrinses and toothpastes as well as customized oral care devices and to include more clinical procedures such as the use of fluoride varnishes, trays, and Silver Diamine Fluoride application.

## Who should receive Silver Diamine Fluoride applications? When and why?

Silver Diamine Fluoride (SDF) treatment is applied topically and works by stopping the progression of carious lesions and providing antimicrobial action. However, it is important to note that while SDF can arrest carious lesions, it does not replace the need for regular dental evaluations and more definitive restorative treatments as necessary.

SDF treatment is a valuable tool in dentistry, particularly for specific patient populations and clinical scenarios. **SDF is indicated for:**

### Patients with High Caries Risk:

Individuals at high risk of caries, including those with poor oral hygiene, significant plaque accumulation, or limited access to dental care, can benefit from SDF. It helps to arrest active carious lesions and prevent further decay, making it an effective option for those who are prone to frequent cavities.

### Children and Adolescents:

SDF is often used in pediatric dentistry to manage carious lesions in children who may have difficulty undergoing traditional restorative procedures. It is particularly useful for children with early childhood caries or those who are unable to cooperate for more invasive treatments.

### Geriatric Patients:

Older adults, especially those with root caries or limited dexterity, can benefit from SDF. It can be an effective intervention for managing carious lesions in elderly patients who may face barriers to more conventional dental treatments.

### Special Needs Patients:

Individuals with special needs or cognitive impairments who have difficulty undergoing routine dental procedures can also benefit from SDF treatment. It provides a non-invasive way to manage caries and reduce the risk of further dental issues.

### Patients with Limited Access to Dental Care:

SDF is useful in underserved or remote populations where access to regular dental care is limited. It offers a practical solution for managing caries and preventing progression in such communities.

*SDF treatment is applied topically and works by stopping the progression of carious lesions and providing antimicrobial action. However, it is important to note that while SDF can arrest carious lesions, it does not replace the need for regular dental evaluations and more definitive restorative treatments as necessary.*

Many SDF products can cause staining of both tooth structure and soft tissues (temporarily) due to its silver content, which may result in a dark, blackish discoloration. This staining is generally cosmetic and does not affect the health of the teeth or tissues. Newer SDFs are much less likely to stain tooth structure, unless light is applied to the surface. SDI's **Riva Star Aqua** is a great alternative, especially when used with a self-cure GIC on top.

### Examples of staining caused by SDF treatment



Photos courtesy of Dr. Matthew Miller

SDF can be used by itself to treat sensitivity and to arrest decay. SDF can remineralize carious tooth structure and can be useful when performing selective caries removal. It is applied to the tooth surface after gross removal of decay, prior to placement of the restoration. Glass Ionomer, Resin Modified Glass Ionomer, and Composite Resin are good restorative material choices.

Some studies show that the silver layer over the dentin may reduce the bond strength, however other research indicates this impact does not appear to be significant. Rinsing SDF treatments prior to bonding will improve the bond strength.



# DA Featured Products:

## Riva Star Aqua

SDI (North America) Inc.

Riva Star Aqua is a silver fluoride system:

- Water-based SF + KI system
- Reduces staining
- Two-year and beyond desensitizing effect
- Non-invasive and ideal for minimally invasive dentistry



### Consultants' Comments

"I really liked that it did not discolor the tooth, and that a tissue barrier is not required. That is a huge advantage."

"No staining and no refrigeration."

"Very effective as a desensitizer."

"Easy to use two-step procedure."

## SilverSense SDF

Centrix, Inc.

SilverSense SDF is a 38% silver diamine fluoride that contains, approximately, 25% silver (weight/volume), that acts as an antimicrobial, and ~5.0% fluoride to help prevent further demineralization and begin the remineralization process. It has been approved by the FDA for use as a desensitizing agent.

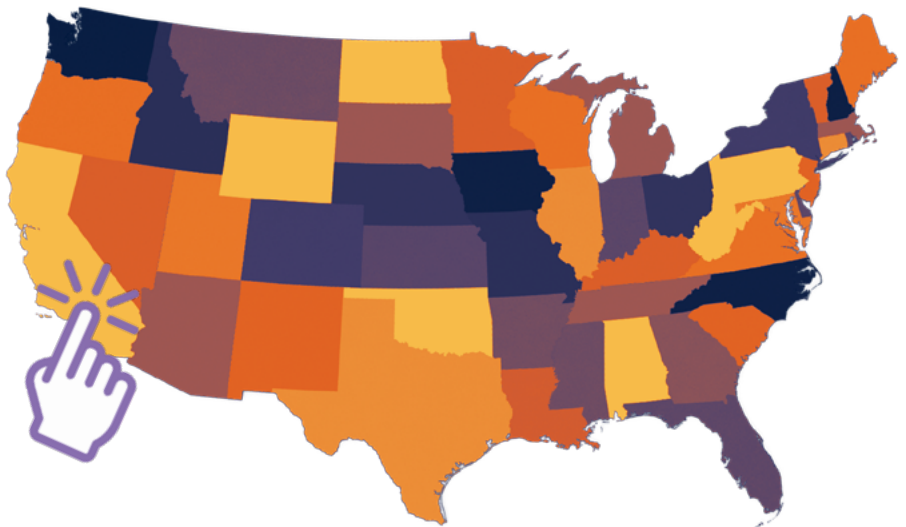


### Listen to the Podcast:



## Who Can Apply SDF?

Which members of a dental team are permitted to apply SDF varies from state-to-state. Click the map to reference this resource produced by the ADHA in partnership with Elevate Oral Care to know the relevant laws and allowances in your specific state.



# Advancements in Preventive

## Use of Traditional Fluoride

Fluoride application is tailored to an individual's caries risk level, providing a targeted approach to caries prevention. By customizing fluoride application based on caries risk, dental professionals can more effectively prevent the progression of tooth decay and promote long-term oral health.



### High Caries Risk

Intensive fluoride therapies- frequent professional fluoride applications of varnish or gel, at-home, prescription-strength fluoride toothpaste; fluoride-releasing dental sealants.

### Medium Caries Risk

More frequent fluoride applications (biannual), use of fluoride-releasing materials such as gels or foams.

### Low Caries Risk

Fluoridated toothpaste and occasional professional fluoride varnish applications.

## Who Should Receive Supplemental/Topical Fluoride Therapy & When?

Fluoride is a versatile and effective preventive measure in dentistry, indicated for a wide range of patients to help reduce the risk of caries and strengthen tooth enamel. The application of fluoride varnish, rinses, and remineralization toothpaste is guided by an individual's caries risk level, age, and specific clinical needs. Here's a breakdown of who should receive fluoride therapy, general recommendations for amounts, and when it should be applied:

Type of Patient	Frequency, Dosage & Modality
Children & Adolescents	Children over 6 years old: 5% Fluoride varnish is commonly applied to children and adolescents as a part of routine dental care.  Moderate to high risk of caries—such as children with a history of cavities, poor oral hygiene, or those with orthodontic appliances—fluoride varnish is typically applied every 3 to 6 months.
High Caries Risk Patients	Individuals of any age: more frequent applications of fluoride varnish, high fluoride toothpaste, and rinses. This includes patients with frequent cavities, those with special needs, or those who have limited access to dental care. For these patients, fluoride varnish might be applied every 3 to 4 months or other forms of fluoride to provide ongoing protection and to arrest or prevent carious lesions. At home use of fluoride rinses and remineralizing toothpastes is also highly recommended.
Patients with Xerostomia	Individuals experiencing dry mouth (xerostomia), whether it is due to medications, medical conditions, or other factors, are at an increased risk of caries. Regular fluoride applications can help mitigate this risk by providing additional efforts to remineralize and strengthen enamel to combat breakdown and decay.
Pregnant Women	Fluoride varnish can be beneficial for pregnant women, particularly if they have high caries risk. Maintaining oral health during pregnancy is crucial, and fluoride therapy can help protect both the mother's teeth and set a positive example for maintaining good oral hygiene for the child.
Patients with Root Exposure	Older adults or individuals with receded gums who are susceptible to root caries may benefit from fluoride varnish and topical fluoride applications. Root surfaces are more vulnerable to decay, and fluoride varnish helps to strengthen these areas and prevent further damage.

*Fluoride varnish is generally applied every 6 to 12 months as part of regular dental check-ups for most patients, with more frequent applications as needed based on individual risk factors. The application is quick, minimally invasive, and effective, making it an ideal preventive measure in various patient populations.*

*Higher levels of fluoride can be utilized by making home care trays, and high fluoride toothpaste and rinses can be prescribed for those at higher risk for caries.*



# DA Featured Products:

## MI Paste® ONE Kids

GC America Inc.

**MI Paste ONE Kids** is a two-in-one application (toothpaste and **MI Paste Plus**®) containing **RECALDENT**® (CPP-ACP) and fluoride, in three delicious flavors: Bubblegum, Cotton Candy, and Blue Raspberry. **MI Paste ONE Kids** is the only kids' toothpaste containing naturally derived milk protein and fluoride for safe and effective treatment of white spot lesions and non-cavitated tooth demineralization.

**MI Paste ONE Kids** is a wonderful way for your patients to help protect and repair teeth.

**MI Paste ONE Kids** helps children become more resistant to decay and rebuilds enamel.



## Profluorid Varnish

VOCO

**Profluorid Varnish** is a 5% sodium fluoride varnish with a mess-free, single-dose applicator. Its transparent, tooth-colored formula comes in five flavors—Melon, Cherry, Mint, Caramel, Bubblegum, and Lime Cola—and contains Xylitol. It is free from common allergens such as nuts, corn, shellfish, eggs, milk, soy, gluten, artificial colors, and sweeteners like saccharin and aspartame.



### Consultants' Comments

- "Easy application, even in less-than-ideal situations."
- "I received good feedback from patients that their sensitivity was reduced."
- "Great flavor selection and patients liked the taste."
- "I like that the color of the material does not stand out on a patients' teeth."
- "Teeth can be moist while applying this varnish."

## 3M™ Clinpro™ Clear Fluoride Treatment

Solventum

**3M Clinpro Clear Fluoride Treatment** offers an effective fluoride application with a lower dosage. This 2.1% sodium fluoride solution, which is free of rosin and water-based, delivers fluoride ions that quickly bond to teeth, providing comparable or superior fluoride uptake to traditional 5% varnish treatments. The treatment features a convenient L-Pop delivery system, simplifying application and enhancing the professional experience. With its smooth texture, pleasant flavors, and a minimum contact time of just 15 minutes, it ensures a more comfortable fluoride experience for patients.



++++ (97%)

## FluoroDose®

Centrix, Inc

**FluoroDose** fluoride varnish, with 5% sodium fluoride (22,600 ppm) and Xylitol, includes a single dose and a **Benda® Brush** applicator. It dries instantly upon contact with saliva and remains on the tooth for 4 to 6 hours. Available in five flavors: Caramel, Bubble Gum, Mint, Cherry, and Melon.

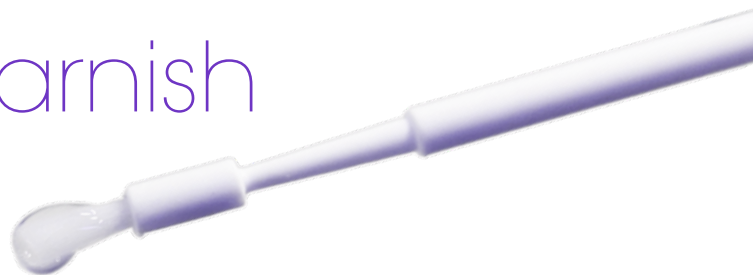


### Consultants' Comments

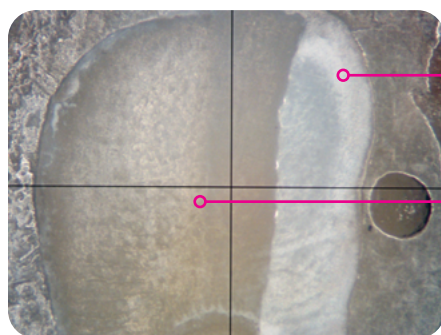
- "Easy and smooth application; wonderful consistency without bubbles or clumping."
- "Thin viscosity with great coverage. Much better than other varnishes I have used."
- "The delivery system was excellent."
- "This varnish doesn't have a yellow tint like some other brands."

++++ 1/2 (95%)

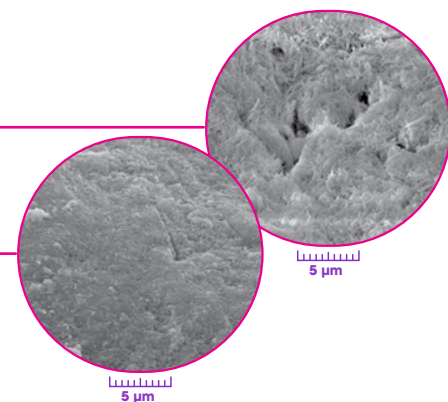
## From the Lab: Topical Fluoride Varnish Remineralization



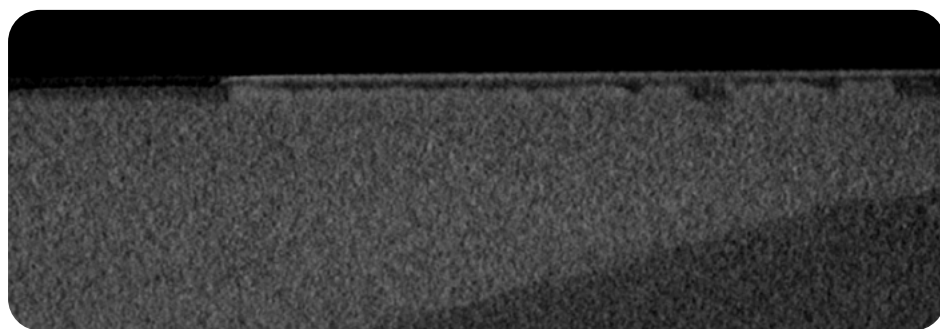
One way to examine the efficacy of caries treatment in vitro is to produce artificial caries. The best way to produce clinically significant caries involves pH cycling the teeth between an acidic pH (4.4-4.6) and a lightly remineralizing solution at a neutral pH to replicate the process that occurs orally. Then after the intervention is applied, we can examine the surface and depth of the caries in various ways. Recently, we examined several fluoride varnishes, with different compositions and release profiles. All fluoride-based varnishes tested were able to significantly remineralize the surface, but varied in depth of remineralization and appearance.



Enamel specimen in which the entire surface was demineralizing giving the appearance of the right side. The left side was treated with a fluoride varnish.



Enamel surfaces of the same specimen which has been demineralized (right) producing a porous structure and exposing enamel prisms and after application of a fluoride varnish containing TCP (left).



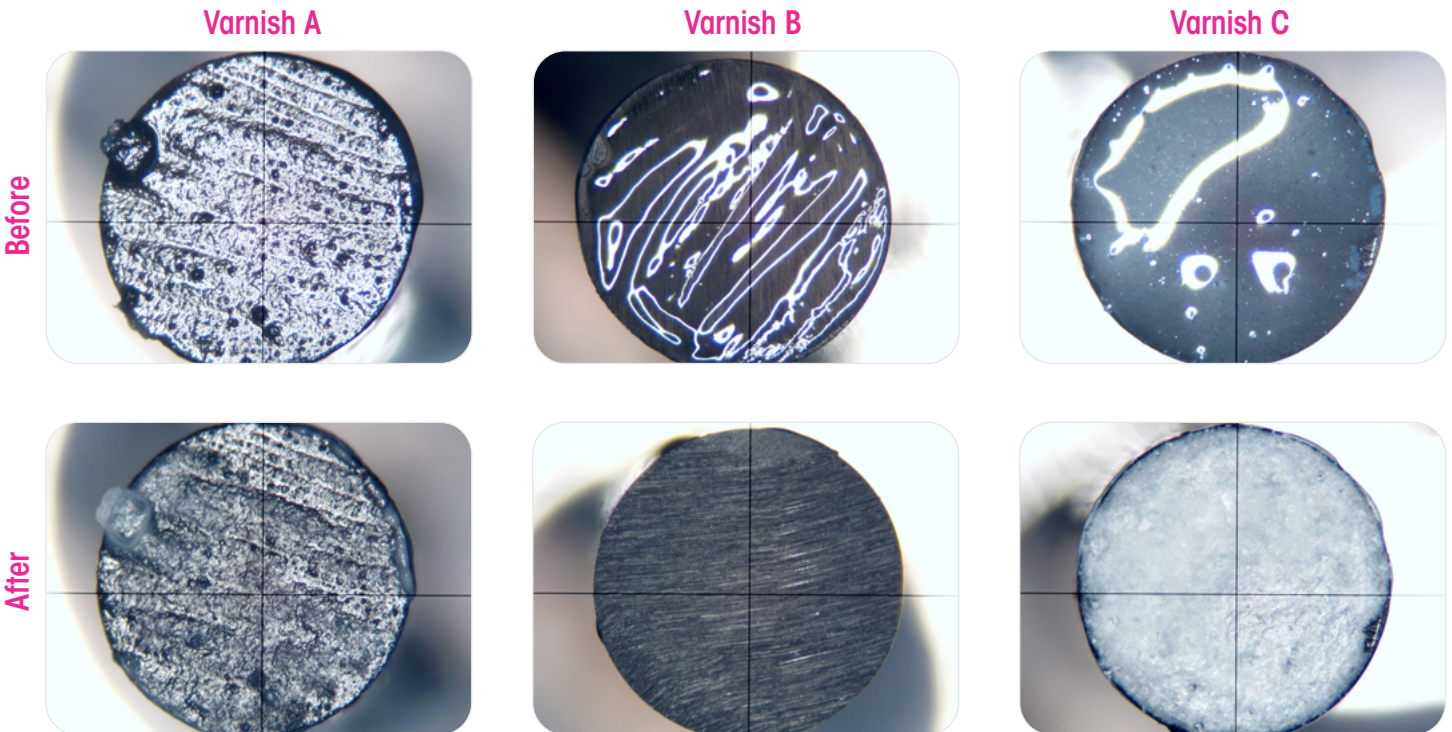
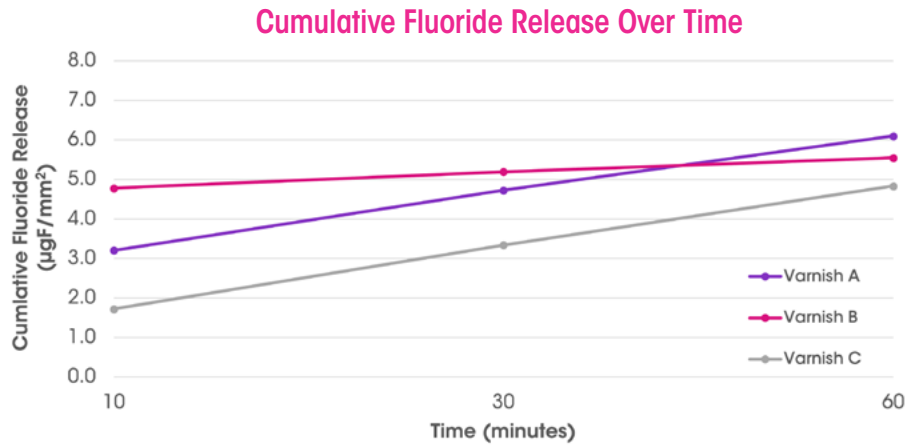
This combination view of a MicroCT cross-section image of remineralized enamel (right) with an SEM image of the same specimen after it was sectioned. After one varnish treatment, the enamel was nearly fully remineralized to a depth of about 20 microns, which can help prevent future decay by filling in porosities and make it more resistant to acid attack. Fluoride varnish as an adjunct with other remineralization products can provide an initial burst of protection.





## Fluoride Release

We compared the fluoride release profile of three varnishes using a modified ISO 17730 method. Varnishes were painted on 6 mm rods with the total mass controlled and immersed in circulating water. Fluoride was measured after 10, 30 and 60 minutes to get an idea of how the fluoride is released over time. Varnish B is a liquid-based varnish while the other two are traditional rosin-based. The liquid-based varnish released nearly all of the fluoride after 10 minutes, and was virtually gone from the surface after 60 minutes. All varnishes released over 100X the minimum requirements from the ISO standard and overall had similar total fluoride release.



Images of the varnishes before and after immersion in water for 60 minutes. Varnish B is a liquid-based varnish and eventually dissolved from the surface after 60 minutes. Varnish C was the most viscous and tended to turn white over time, but this won't discolor the tooth surface. Varnish C was very effective in the remineralization testing, though the change in color may cause the patient to want to remove the varnish sooner rather than later.

# Advancements in Preventive

## DA Featured Products:



### Curodont™ Repair Fluoride Plus vVARDIS

**Curodont Repair Fluoride Plus** is a unique, biomimetic system for the treatment of early carious lesions through Guided Enamel Remineralization. According to vVARDIS, its proprietary formulation diffuses throughout the lesion to remineralize the watch area, enabling the preservation of the natural tooth. It's a quick and easy application that's minimally invasive, non-staining, and can be used for all surfaces and suitable for patients of all ages.

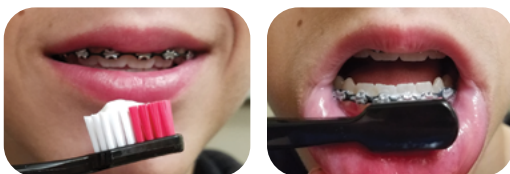


### Curodont™ Protect vVARDIS

**Curodont Protect** is a remineralizing dental gel for in-office and at-home use that helps prevent dental cavities and builds increasing protection against tooth sensitivity. According to vVARDIS, its proprietary formulation with stabilized Stannous Fluoride remineralizes and strengthens the enamel while offering relief from sensitivity. Curodont Protect complements the application of Curodont Repair Fluoride Plus by protecting against demineralization while fostering patients' compliance. It is ideal for patients with high risk of caries, including patients undergoing orthodontic treatments as a preventive measure against the formation of white spots.

### MI Paste® ONE Perio GC America, Inc.

**MI Paste ONE Perio** is a 2-in-1 dentifrice that can help treat and prevent both decalcification/caries and gingivitis. This "one and done" approach simplifies oral hygiene and promotes compliance by removing the need for several products. **MI Paste ONE Perio** has a mild minty taste and is gentle with a low RDA (Relative Dentin Abrasivity) value.



Photos courtesy of Lesley Correll



++++ (89%)

### Consultants' Comments

"It had the consistency and flavor of any other regular toothpaste."

"Made my teeth feel clean and smooth after using even though it did not feel abrasive at all."

"I'm a big fan of **MI Paste**, so this is a great addition."

"Post op sensitivity was reduced drastically while using **MI Paste ONE Perio**."

\*Allergy alert: This product contains milk protein





# Fluoride-Free Alternatives

Due to allergies and patient preferences, many clinicians seek alternatives to fluoride in preventive care. Below we highlight some products that are alternatives to fluoride.

## NOBS Toothpaste Tablets

Biöm

**NOBS Toothpaste Tablets** provide an advanced oral care solution free from fluoride and harsh abrasives. Infused with 5% nano-hydroxyapatite, they effectively protect enamel and promote long-term dental health. Unlike traditional paste, these tablets are compact, mess-free, and travel-friendly, bypassing the 3.4oz liquid limit. They come in a durable glass jar, eliminating plastic waste and minimizing environmental impact. **NOBS Toothpaste Tablets'** natural mint flavor ensures fresh breath without relying on overpowering sweeteners. Safe for children and pregnant women, **NOBS Toothpaste Tablets** combine effective cleaning with a commitment to sustainability and convenience, making them a practical choice for both everyday and travel use.



## StellaLife® VEGA® Oral Care Recovery Kit

StellaLife®, Inc.

**StellaLife VEGA Oral Care Recovery Kit** consists of a homeopathic antibacterial rinse, gel and a spray that provide pain relief, reduce inflammation and edema, accelerate healing and post-operative recovery. Rinse can be used as part of routine daily oral hygiene. It kills bacteria that cause cavities and periodontal disease, hydrates oral cavity, freshen breath.



++++ ½ (91%)

### Consultants' Comments

"I like that it is homeopathic. The packaging of all three products together is good."

"This product is very useful. I gave it out to my implant patients and they recovered well."

"Wound healing was fast, especially around provisional bridgework."

"Patient-friendly – we like the pre- and post-op use."



## CrystLCare™ Biorestorative

GreenMark Biomedical Inc.

**CrystLCare Biorestorative** is a fluoride-free dental varnish that uses bioactive calcium and phosphate to remineralize and strengthen tooth enamel. It helps to restore and protect teeth from early carious lesions and decay by forming a protective layer. This varnish is particularly suited for patients seeking non-fluoride alternatives for enhancing oral health.

## Tooth & Gums Tonic®

Dental Herb Company

**Tooth & Gums Tonic** is a professional strength, all-natural alternative to traditional periodontal treatments such as chlorhexidine. The Tonic is alcohol-free and non-staining, providing dental practitioners with a versatile antimicrobial rinse that is ideal for both initial treatment and long-term periodontal maintenance.

### Consultants' Comments

"A good alternative to chlorhexidine."

"Reduces inflammation during pregnancy and it is safe to use."

"Great for orthodontic patients since it does not stain."

"Patients had less bleeding during prophylaxis if they had been using **Tooth & Gums Tonic.**"



++++ (96%)



## Handling Hypersensitivity

### Causes of Hypersensitivity

Hypersensitivity is a common complaint. It can be caused by various factors which can include:

#### Gingival Recession

Exposed dentin caused by gingival recession. Some common causes of gingival recession are mechanical trauma, orthodontics, tooth anatomy or position.

#### Loss of Enamel

Attrition, erosion and abrasion can lead to loss of enamel, resulting in dentin exposure.

#### Periodontal Disease and its Treatment

Both periodontal disease and its treatment have been associated with loss of gingival tissues. As recession occurs, the cementum is easily removed via chemical or physical means and the underlying dentin becomes exposed.

#### Fracturing of Teeth or Fillings

Trauma or excessive forces on the teeth can create fractures of the tooth or failure of previous fillings. This may allow bacteria to extend deep into the tooth, causing irritation to the nerve.

#### Abfraction from Poor Occlusal Forces

In areas of excessive occlusal force, flexion of the tooth may occur which can create areas of abfraction. This causes destruction of the tooth and provides a means for exposure of the sensitive and unprotected dentinal surfaces.

#### Deep Restorations/Carious Lesions

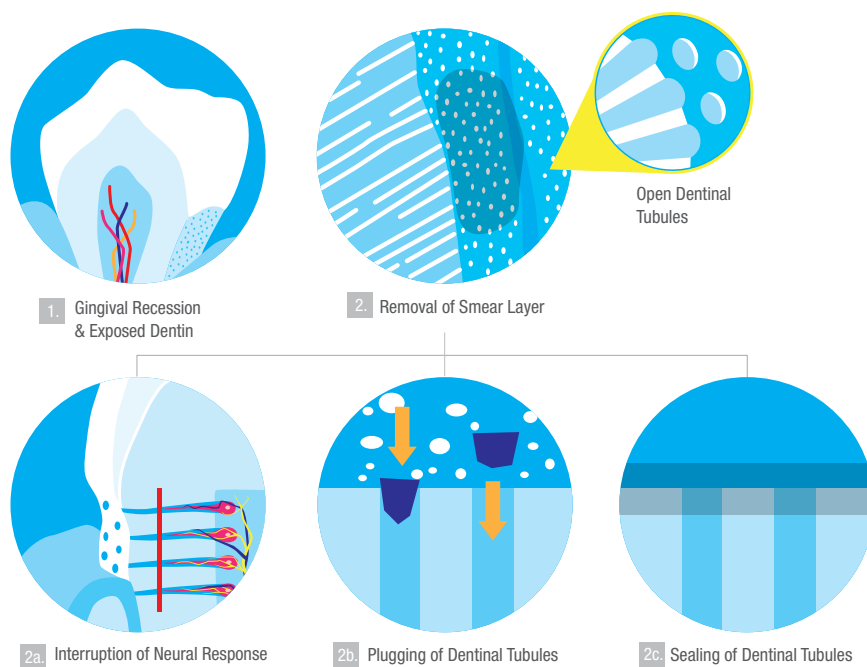
Restorations close to the pulp chamber can cause sensitivity over time as the dental materials interact with the biology of the tooth itself. As materials such as bonding agents, liners, bases, and other restorative options are placed close to a pulpal area, a negative response from the nerve may arise and cause a sensation of sensitivity.

### Treating Hypersensitivity

Dental hypersensitivity can be treated using several methods. The choice of treatment depends on the cause and severity of the hypersensitivity, as well as clinician and patient preference. Methods include:

- 1. Desensitizers:** These contain agents like potassium nitrate or calcium phosphates that help block nerve endings and reduce sensitivity.
- 2. Fluoride Varnish:** Topical fluoride varnish strengthens enamel and reduces sensitivity by forming a protective layer by converting the tooth surface from a Hydroxyapatite to a more resistant Fluorapatite.
- 3. Bonding Agents:** Seal dentinal tubules and provide a barrier against stimuli and effectively reduce sensitivity. Some bonding agents also contain fluoride and/or provide an antimicrobial effect.
- 4. Silver Diamine Fluoride (SDF):** Reduces sensitivity not only by occluding dentinal tubules but it also has antimicrobial properties that help in caries management.
- 5. Toothpaste/Remineralization Paste:** Deposits minerals like fluoride, potassium nitrate, calcium and phosphate to strengthen and protect the tooth enamel, thereby reducing the exposure of dentinal tubules and alleviating

### How Desensitizers Work





**37** CLINICAL EVALUATORS  
**328** TOTAL USES  
**97%** CLINICAL RATING

**Key features:** 2.1% Sodium Fluoride + Added calcium and phosphate + Water-based formula

## Description

**3M Clinpro Clear Fluoride Treatment** is a 2.1% sodium fluoride, water-based fluoride applied topically to enamel and dentin for the treatment of hypersensitive teeth. It contains 9,500 ppm fluoride as well as added calcium and phosphate. The product is packaged in a 0.5 ml unit-dose L-Pop.

## Indication

Treatment of hypersensitive teeth.

## Unique Attributes

- Contains 2.1% sodium fluoride.
- 9,500 ppm ready-release fluoride as well as added calcium and phosphate.
- Press and go L-Pop delivery system.
- Water-based formula will not stick to unwanted surfaces or clog suction lines.
- Free of common allergens.

## Clinical Tips

- Short wait time after treatment allows for higher patient acceptance.
- Works well in root sensitivity cases.
- Really worked well on a patient with high gag reflex as the consistency was very watery and not sticky at all.
- Be sure to read the instructions on how to open the varnish carefully to avoid spillage.



**"ONE OF THE BEST FLUORIDE VARNISHES I'VE USED TO DATE!"**

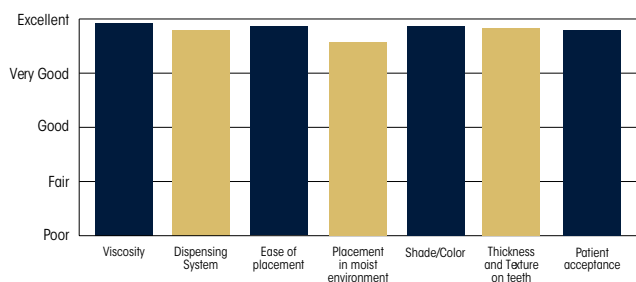
## Evaluators' Comments

- "The consistency is great, and it does not clump as other fluorides do."
- "Patients noted they liked it as it retains the 'fresh from the dentist' feel, as opposed to having the sticky feeling they once had."
- "Clear and smooth application, and it retains the clear hue once applied."
- "The wait time post application of 15 minutes is a great advantage."
- "We got great feedback from all the patients that received this varnish about texture and flavor."
- "The hygienist could easily place this product before I come to do the exam."

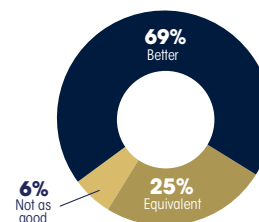
### Consultants who would:

- 92%** Recommend to a colleague
- 56%** Yes, instead of current product
- 33%** Yes, in addition to current product
- 8%** I might want to order this product for certain cases

### Evaluation Summary:



### Compared to Competitive Products:





**25** CLINICAL EVALUATORS

**166** TOTAL USES

**96%** CLINICAL RATING

**Key features:** Light cured + Efficient syringe design for direct application + Spherical particle filler for ideal handling and aesthetics

## Description

**PANAVIA Veneer LC** is a light-cured, esthetic resin cement used for the cementation of veneers, inlays and onlays less than 2mm in thickness. It is available in 5 shades, clear, universal, brown, white, and soft white with corresponding try-in pastes.

## Indication

To be used for Indirect Restoration bonding and cementation, including inlays/onlays and veneers less than 2 mm in thickness.

## Unique Attributes

- Spherical fillers provide good viscosity and flow
- Nanocluster fillers provide good handling without "stringy" consistency
- Filler particles lends itself to better wear and less staining over time
- Tack-cure feature for 1 sec followed by light cure



Photos courtesy of Dr. Matthew Miller



## Clinical Tips

- The cement cleans up well, but if there is any residual cement after fully curing it can be difficult to remove. This also speaks to how strong the cement is.
- Use a microbrush or rubber tip to clean up excess cement before curing.
- Apply glycerin gel to the margins after placing the veneer with the cement to eliminate the oxygen inhibition layer and ensure a complete cure before light curing through the gel.
- The wet cleanup is preferred as the tack cure was very firm.
- Watch out for the phase separated portion when dispensing and make sure it is discarded.

**"THE TRY-IN PASTE MATCHES THE CEMENT EXACTLY."**

## Evaluators' Comments

"Simple to use."

"I really like the syringe designs for the try-in paste and the cement paste."

"The white shade of the cement was opaque enough for efficient masking of discolored tooth structure."

"Great esthetics, very easy to use, complete system."

### Consultants who would:

**96%** Recommend to a colleague

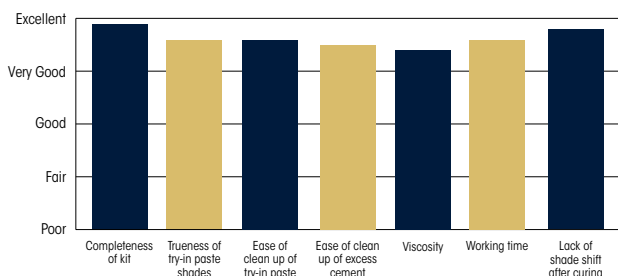
### Consultants who would want to stock in office:

**29%** Yes, instead of current product

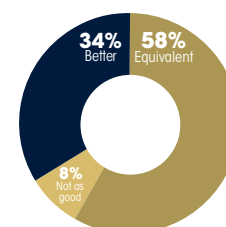
**67%** Yes, in addition to current product

**4%** I might want to order this product for certain cases

### Evaluation Summary:



### Compared to Competitive Products:





**16** CLINICAL EVALUATORS

**195** TOTAL USES

**86%** CLINICAL RATING

**Key features:** Stays sharper 3X longer • Patent-pending TWIST handle ensures grip without causing discomfort or numbness • Made from cryogenically-treated, aerospace-grade stainless steel

## Description

**rezSHARP Instruments** are high-precision dental hygiene instruments designed for effective plaque and calculus removal. They feature durable, sharp tips and ergonomic handles to enhance both performance and comfort during dental procedures.

The following instruments were evaluated from the **rezSHARP** line:

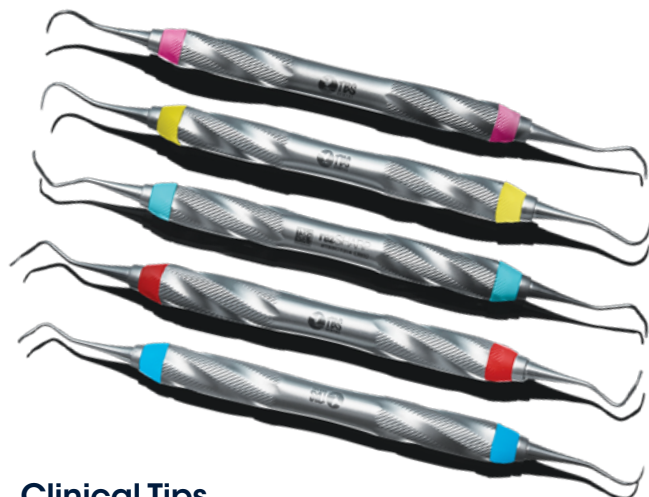
- **Lady Liberty Universal Sickle Scaler**
- **rezSHARP Barnhardt 5/6**
- **rezSHARP Sickle H 6/7**
- **rezSHARP204S**

## Indications

Hand scaling and cleaning of teeth.

## Unique Attributes

**rezSHARP Instruments** are engineered to clean and scale teeth more efficiently because of their ultra sharp and long-lasting cutting edge and lightweight ergonomic design. The metal is aerospace grade stainless steel that is sourced from Italy and cryogenically treated in the USA for increased durability. These lightweight instruments have a twisted handle with a knurled surface that allows for improved grip and less hand fatigue.



## Clinical Tips

- Use them all for scaling, they are amazing!
- The universal curette was amazing for posterior subgingival calculus removal.
- Be sure to use a fulcrum when using these instruments.
- Hold on tight. They rotated in my hands because of the spirals.

"SUPER SHARP."

## Evaluators' Comments

"Balance and ergonomics were good."

"They were very sharp and stayed sharp without having to be sharpened during the time I used them."

"The instruments are lightweight and the grip was comfortable."

"I liked the texture of the handle."

"The handle felt bulky and the tip of the instrument was too thick."

"They don't come in enough shapes and sizes."

### Consultants who would:

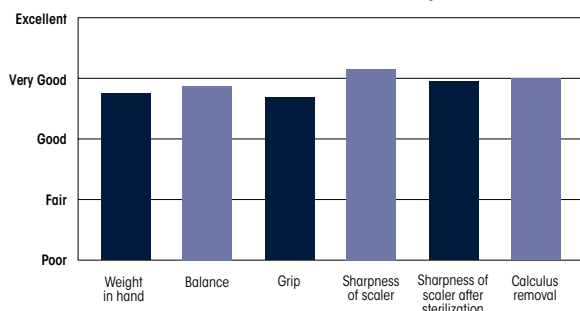
**50%** Recommend to a colleague

### Consultants who would want to stock in office:

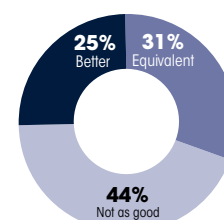
**25%** Yes, in addition to current product

**31%** I might want to order this product for certain cases

### Evaluation Summary:



### Compared to Competitive Products:





**42** CLINICAL EVALUATORS

**542** TOTAL USES

**92%** CLINICAL RATING

**Key features:** Long working time and quick setting time • Enhanced Impression accuracy of less than 2 microns • High tear resistance and dimensional stability

## Description

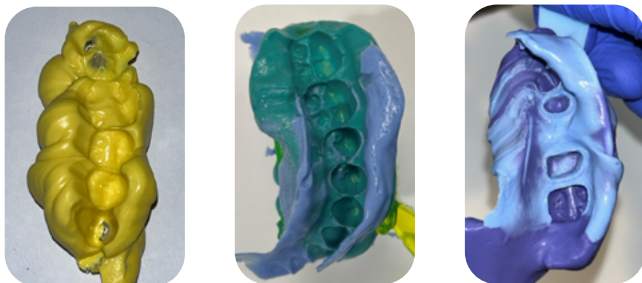
**Accur8** is a vinyl polysiloxane material available in 3 viscosities, Heavy Body, Rigid Tray, and Light Body, as well as a Bite Registration material. The impression material is available in both fast set (2:45 min) and regular set (5:30 min). The Bite Registration material is available with one set time (1:15 min).

## Indications

To be used for the purposes of creating, via impression, a reproduction of tooth and gum structure.

## Unique Attributes

- Heat-activated, quick setting time begins upon intraoral seating.
- Better material flow to reduce light-body displacement and improve accuracy under 2 microns.
- High tear strength and easy removal for distortion free impressions.



Photos courtesy of Dr. Matthew Miller



## Clinical Tips

- Rigid Tray material is excellent for provisionals.
- With the Heavy Body material, you should use less than what you would typically put in the tray because the material spreads nicely, especially if using a triple tray.
- When using the rigid tray to make provisionals, make sure to use a somewhat flexible impression tray, otherwise it can be too rigid.
- Move quickly with bite registration.

**"GOOD WORKING TIME, ACCURATE IMPRESSIONS."**

## Evaluators' Comments

*"The consistency and accuracy were very good."*

*"The Rigid Tray material was very accurate and set fast."*

*"Great handling of material, hydrophilic properties, and fast set time."*

*"The Bite registration material was very quick to set, and rigid/stable after setting."*

*"Great impression and Bite Registration material. My assistants loved it."*

### Consultants who would:

**91%** Recommend to a colleague

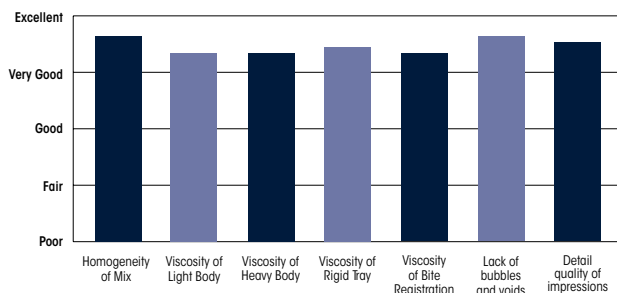
### Consultants who would want to stock in office:

**36%** Yes, instead of current product

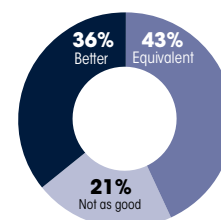
**36%** Yes, in addition to current product

**28%** I might want to order this product for certain cases

### Evaluation Summary:



### Compared to Competitive Products:







**30** CLINICAL EVALUATORS

**315** TOTAL USES

**91%** CLINICAL RATING

**Key features:** BPA-free • ionglass™ Technology • Self-curing

## Description

**Riva Cem Automix** is a self-curing, radiopaque, fluoride-releasing, paste/paste, resin-modified glass-ionomer luting cement which features **ionglass™** technology. This unique blend of different sized reactive glass particles harnesses ion release to cross-link polycarboxylic acid chains. This focused ion release gives **Riva Cem Automix** a clinically higher strength, superior bond and more stable esthetic properties.

## Indications

Indirect Restoration cementation including:

- PFM Crowns and Bridges
- Metal/Cast posts
- Metal orthodontic appliances
- Highly Retentive High strength ceramic Crown & Bridge
- Inlays/onlays

## Unique Attributes

- Sustained fluoride release
- BPA Free
- Light yellow shade
- Significantly increased bond strength when conditioner is used on tooth
- Shorter mixing tip, to significantly reduce waste



## Clinical Tips

- Use the tack-cure feature – it makes cleanup really easy.
- Make sure you clean it during the doughy stage; it sets really hard.
- Use the conditioner to improve the bond strength.
- Slightly longer tack cure than 5 seconds will help.

**"EASY TO USE AND EASY TO CLEAN UP!"**

## Evaluators' Comments

"Short Automix tip is less wasteful and dispenses a consistent mix."

"I like that it is fluoride releasing."

"Good radiopacity."

"5-second tack cure feature is a bit too long."

"Hard to clean up if you miss some in the doughy stage."

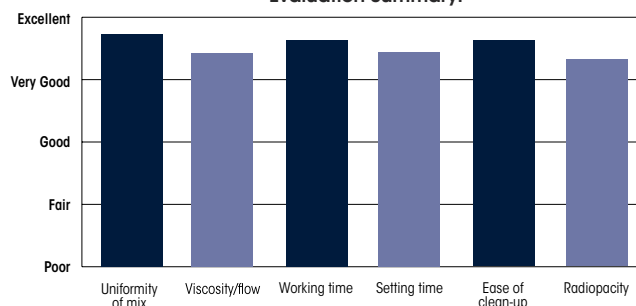
**86%** Consultants who would: Recommend to a colleague

**35%** Consultants who would want to stock in office: Yes, instead of current product

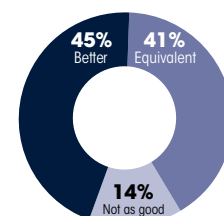
**45%** Yes, in addition to current product

**20%** No interest in purchasing

### Evaluation Summary:



### Compared to Competitive Products:





**39** CLINICAL EVALUATORS

**712** TOTAL USES

**87%** CLINICAL RATING

**Key features:** 4 shades blend with 16 VITA Classical shades • Monochromatic layering to enhance simplicity • Faster shade selection, saving clinical procedure time without sacrificing esthetics

## Description

**Venus Pearl PURE** is a universal nano-hybrid composite for use in all classes of anterior and posterior cases. It is available in four shades; light, medium, dark and bleach.

## Indications

**Venus Pearl PURE** is indicated for Class I-V direct composite restorations as well as direct composite veneers, shape corrections of the teeth, composite splinting, core build-ups, and porcelain repair procedures.

## Unique Attributes

With a balance of Hue, Chroma, and Value, this material can adapt and blend in any situation and does so with a creamy and low-stick consistency. The Kulzer-unique TCD matrix provides very low shrinkage stress and thus a reduction in marginal gap formation and secondary decay. Due to this matrix system, the material is also free of any BPA structure.



**Tooth #8 DIFL, Medium shade**  
Photos courtesy of Dr. Frank Berman



## Clinical Tips

- Material works best with thin restorations where an enamel shade would normally be used.
- I taped the shade recommendations on each box to help pick between light to medium or medium to dark.
- I figured out the shade matching after a few uses—but initially it was helpful to cure a small amount of the material on the facial surface before treatment to confirm the correct shade.
- I am a fan of warming composite, but with this material I felt it was just the right consistency without it. You don't need to do anything special to get a nice consistency and result.

**"SHADE MATCHING IS EXCELLENT."**

## Evaluators' Comments

- "The handling was much less sticky than other brands and I still get great margins."
- "The material could be placed easily, the colors matched, and it polished nicely."
- "The opacity allows it to mask underlying color if needed."
- "The simple shading system and ability to adapt to the tooth shade were excellent."

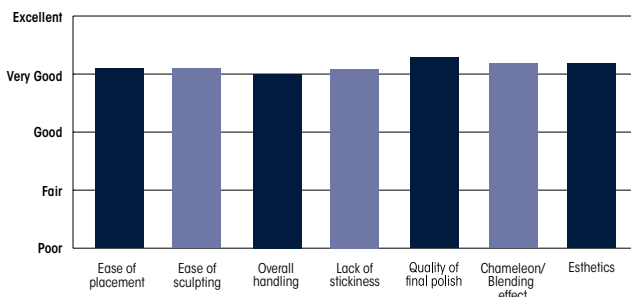
**74%** Consultants who would: Recommend to a colleague

**10%** Consultants who would want to stock in office: Yes, instead of current product

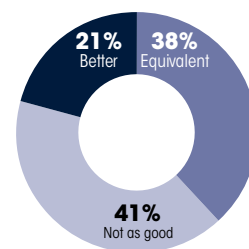
**54%** Yes, in addition to current product

**10%** I might want to order this product for certain cases

## Evaluation Summary:



## Compared to Competitive Products:





**21** CLINICAL EVALUATORS

**195** TOTAL USES

**87%** CLINICAL RATING

**Key features:** Allergen Free • Textured • Non-Latex

## Description

**nic tone Synthetic Rubber Dam** is a textured, non-latex rubber dam, available in medium thickness and a 6x6 size. It is capable of stretching up to 800% of its original size without tearing

## Indications

Isolation and retraction of teeth and surrounding tissues for endodontic and restorative procedures.

## Unique Attributes

Slightly more firm than traditional non-latex rubber dams, this version from MDC Dental does not tear as easily yet is very adaptable to the teeth. Placement and application were simple and smooth.

## Clinical Tips

- Potentially go up a size on the hole you cut for the dam.
- Lubricate the rubber dam punch before punching the holes. Be sure to create a seal on the frame by pulling with some force over the nubs.
- Use a dam+clamp placement technique (rather than placing the clamp on the tooth and then placing the dam)
- Pre-stretch prior to placement.
- I'd use the slit technique to release some of the tension placed with isolating individual teeth within a quadrant



"STRETCHES WITHOUT TEARING."

## Evaluators' Comments

"It had an interesting texture that I liked and helped visibility."

"I loved the thickness. It isolated well and was tear resistant."

"Had a great ability to adapt to the teeth once it was placed over the clamp."

"I liked the durability and tear resistance the best, and the fact that the material is non-latex is great for peace of mind."

"I like that it is latex-free, and I like the color."

"Increased tear resistance compared to my current rubber dam."

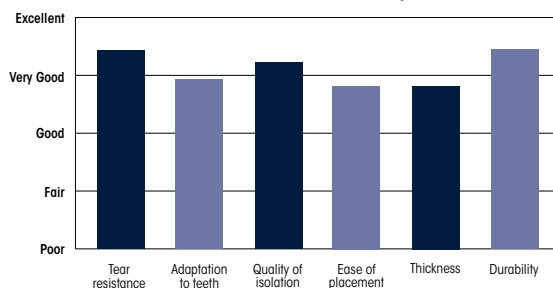
**71%** Consultants who would: Recommend to a colleague

**29%** Consultants who would want to stock in office: Yes, instead of current product

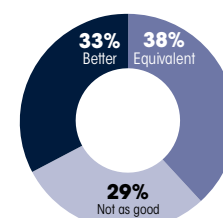
**38%** Yes, in addition to current product

**24%** I might want to order this product for certain cases

## Evaluation Summary:



## Compared to Competitive Products:



## Improving Periodontal Conditions with Probiotic Treatment

(StellaLife)

### Introduction

Patients often present with inflamed gums, poor oral hygiene, and complicated medical histories. These cases pose a particularly difficult challenge to most clinicians. Periodontal conditions do not always respond well to traditional treatments such as scaling and root planing. The reasoning for this is not always clear. Adjunctive therapies that address systemic and oral health can be used alongside conventional methods. Probiotics can be utilized as lozenges and capsules to improve oral and gut health. Healthy oral and gut bacteria are instrumental to oral and overall health.



### Description

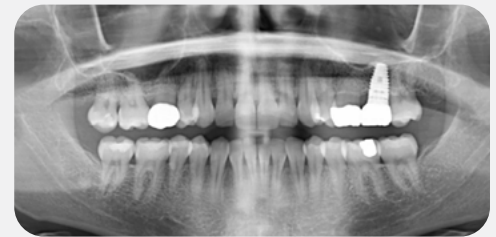
The **StellaLife® Pre+Post+Probiotic Kit** combines oral and gut probiotics to give you a natural solution to improve your entire microbiome solution. Each Probiotics Kit contains a of Oral Lozenges & Gut Vegetarian Capsules. Using the **StellaLife Pre+Post+Probiotic Kit** can help reduce halitosis, improve digestive, oral, and overall health, boost the immune system, and break down toxins and pathogens. The regimen begins with taking one capsule daily with water and then dissolving one oral lozenge completely in the mouth. For optimal results, avoid eating or drinking for at least 30 minutes afterward.

### Case Presentation

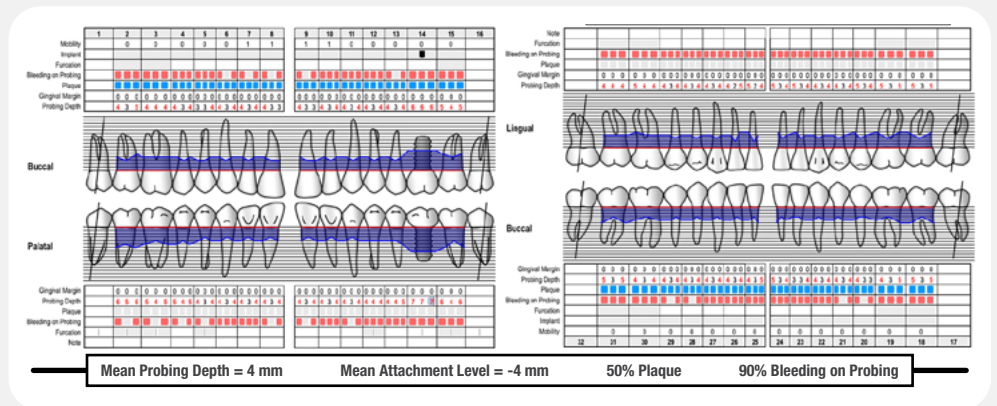
A 29-year-old female presented after 6 months of clear aligner braces for a periodontal exam. The patient had no history of periodontal treatment and had a dental implant placed #14 two years ago. She was on an increased frequency three-month prophylaxis protocol before referral. She asked for clearance to continue and finish her clear aligner treatment. Clinical photos, full periodontal charting, panoramic image and a full mouth series of x-rays were completed. The diagnosis is that the patient is not periodontally stable and has severe gingival inflammation. Additionally, #14 dental implant has exudate and 7mm probing depths. The treatment plan for the patient is to stop aligner treatment, remove clear retainer buttons, scaling and root planing, and use of **StellaLife Pre+Post+Probiotic Kit** for 4 months. The patient will be seen at 6 weeks for a re-evaluation for periodontal stability and removal of #14 implant, then followed up at 2, 3, and 4 months to monitor.



Photo before treatment



Panoramic image before treatment



Periodontal chart before treatment

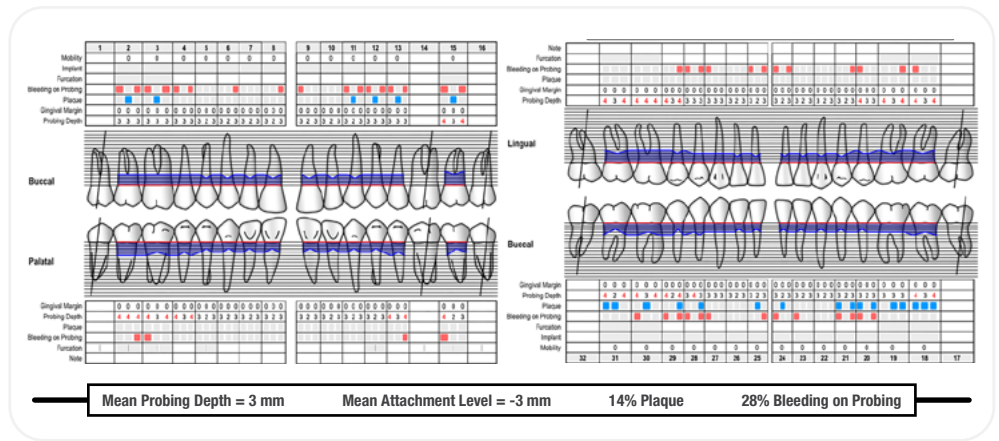


## 6 Week Recare Appointment

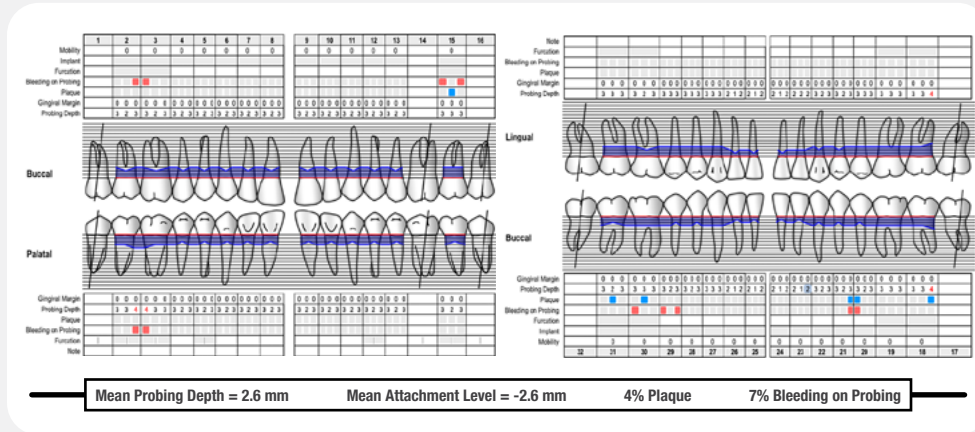
Patient presented with a significant reduction in inflammation, probing depth, and indicated they felt healthier. Patient was cleared to resume orthodontic treatment and #14 implant was scheduled for removal and bone grafting.



Photo 6 weeks after initial treatment



Periodontal chart 6 weeks after initial treatment



Periodontal chart 4 months after initial treatment

## 4 Month Recare Appointment

Patient continued to have improvement in inflammation, probing depths, minimal bleeding, significantly less plaque, and overall periodontal health. This was even more impressive, considering the addition of traditional braces.



Photo 4 months after initial treatment

## Summary

Probiotics were utilized as lozenges and capsules to improve oral, gut and overall health. *StellaLife Pre+Post+Probiotic Kit* was well accepted and embraced by the patient. After 6 weeks of *StellaLife Pre+Post+Probiotic Kit*, patient presented with a noteworthy reduction in inflammation, bleeding, and probing depths, and indicated they felt healthier. After 4 months of *StellaLife Pre+Post+Probiotic Kit*, patient continued to have improvement in inflammation, 35% reduction of probing depths, plaque reduction from 50% to 4% and bleeding on probing reduction from 90% to 7%.

This was even more impressive, considering the addition of traditional braces. The combined treatment protocol of conventional scaling and root planing with a *StellaLife Pre+Post+Probiotic Kit* proved to be an excellent treatment. Based on my observations, the *StellaLife Pre+Post+Probiotic Kit* was instrumental in the success of this case.

## Laboratory Evaluation of BeautiLink SA Cement

M. Cowen, B.S., M. Gilmartin, B.S., J.M. Powers, Ph.D.

### Introduction:

**BeautiLink SA** (SHOFU) is a new self-adhesive cement indicated for cementation for all ceramic, composite, metal and post restorations; with or without a separate universal adhesive (**BeautiBond Xtreme**, SHOFU) for increased adhesion. **BeautiLink SA** is among the few self-adhesive cements on the market which includes a silane in the cement for enhanced adhesion to glass ceramics. This study tested the bond strength of four cements in the self-cure mode to zirconia and glass ceramic, while the glass ceramic IPS e.max Press was tested with an additional ceramic primer as well as in the self-adhesive mode without an additional primer.

### Conclusion:

**BeautiLink SA** has exemplary performance in bonding to zirconia without a primer, and to glass ceramics in combination with **BeautiBond Xtreme**.

### Materials:

- **BeautiLink SA, BeautiBond Xtreme** (SHOFU)
- **3M™ RelyX™ Universal, 3M Scotchbond™ Universal Plus** (3M Oral Care)
- **Maxcem Elite™, Optibond™ Universal** (Kerr)
- **SpeedCEM® Plus, Monobond® Plus** (Ivoclar)

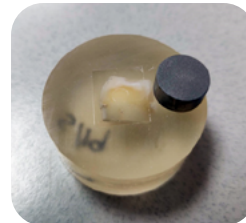
**Test Groups:** **SHOFU Disk ZR Lucent Supra** zirconia in Self-adhesive Mode, **IPS e.max Press** in Adhesive and Self-adhesive Mode

**Storage Conditions:** 24 hours, 5,000 thermocycles

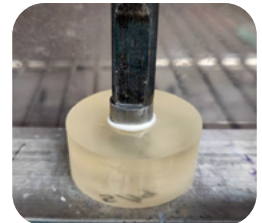
**Curing Mode:** Self-cure

### Methods:

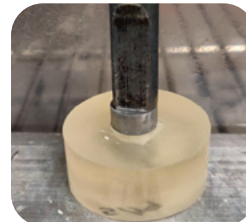
**Indirect Shear Bond Strength:** Zirconia plates were cut to be ~12 mm x 12 mm x 2-3 mm thick, processed according to manufacturer instructions, embedded in acrylic resin discs, finished through 600 grit diamond paper, and surfaces treated. The surface treatment was 5% hydrofluoric acid for at least 20 seconds to **IPS e.max Press** and sandblasting with 3 bar (0.3 MPa) pressure and 50 µm particles to Zirconia. Test groups for **IPS e.max Press** additionally had their surfaces treated for adhesive bonding mode. Specimens were prepared in which single-sided adhesive PTFE tape, ~0.10 mm thick, with an approximately 3 mm diameter hole was placed over the bonding site and burnished into place. A 10 mm diameter metal cylinder was ground with 60 grit SiC Paper, sandblasted and primed to simulate an indirect restoration which should have a higher bond strength than the substrate being tested. A dab of the cement was placed in the center of the hole of the tape and the cylinder gently applied concentric with the hole with finger pressure before being placed in a loading jig where a 1 kg weight was applied at room temperature. The excess cement was removed by microbrush without light and the load was removed then moved to a 37°C, 100% R.H. oven carefully and dwelled for 10 minutes. They were then transferred to a container with 37 °C water for 24 hours prior to shear testing. Additional test groups were tested after 5,000 thermocycles. Thermocycling consisted of 20s immersion in 5 and 55°C deionized water for 5,000 cycles which represents about 6 months of aging. The shear bond strength test was performed on a universal testing machine (Instron model 5866) at a crosshead speed of 1 mm/min. Means and standard deviations were calculated, data was analyzed by ANOVA and Tukey multiple comparison test for pair-wise comparison at a p-value of 0.05. Graphs are depicted with means and standard deviations.



After surface treatment, tape with 3 mm hole is applied, and cement is applied to disc and placed over the hole.



Disc is loaded with 1 kg load.

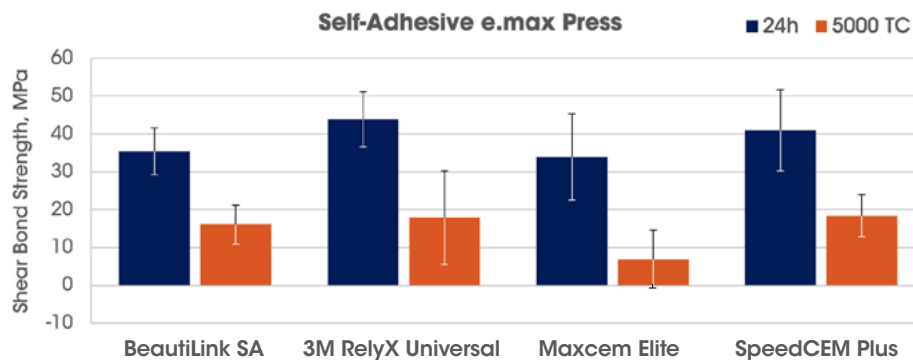
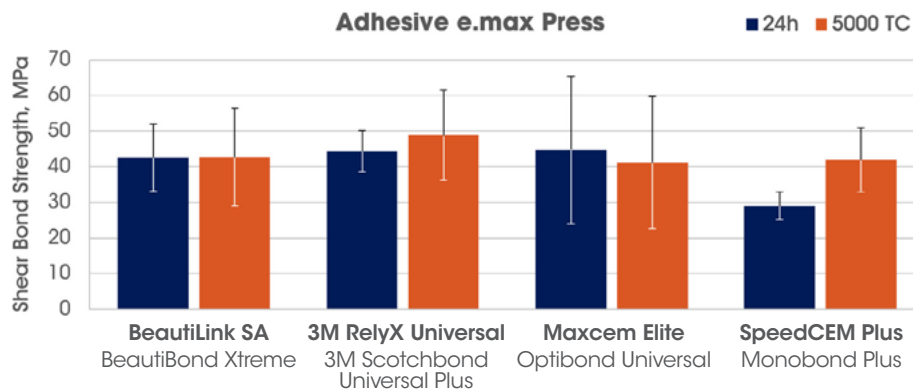
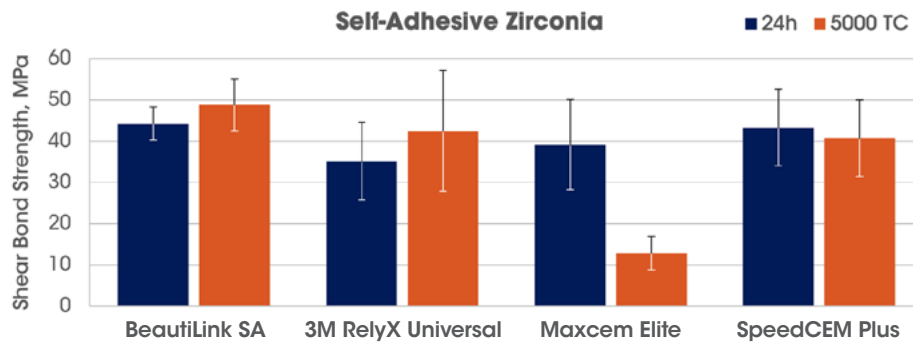


Cement is removed under load before continuing to cure in ~99% R.H. chamber for 10 minutes before testing or placed in water.



Shear bond test is conducted with 1 mm/min crosshead speed using an Instron model 5866.

## Results Summary:



### Self-Adhesive Zirconia:

**BeutiLink SA** had the most consistent bond strength to zirconia at 24 hours and after thermocycling among the cements tested. The failure mode for **BeutiLink SA** was primarily mixed or cohesive meaning that the cement fractured before debonding indicating that the adhesive strength at the interface may be even higher than the values tested.

### Adhesive *IPS e.max Press*:

All cement and primer combinations provided excellent bond strength to the glass ceramic **IPS e.max Press**.

### Self-Adhesive *IPS e.max Press*:

There were no significant differences after 24 hours in bond strength between the self-adhesive groups as the micromechanical retention contributes significantly to hydrofluoric etched glass ceramic. After thermocycling accelerated aging, all groups showed reduced bond strength, however, **BeutiLink SA** had no spontaneous debonds during aging.

Research supported by SHOFU Dental Corporation.

Learn more from our latest

# digital media

dentaladvisor.com



eBook



eBook



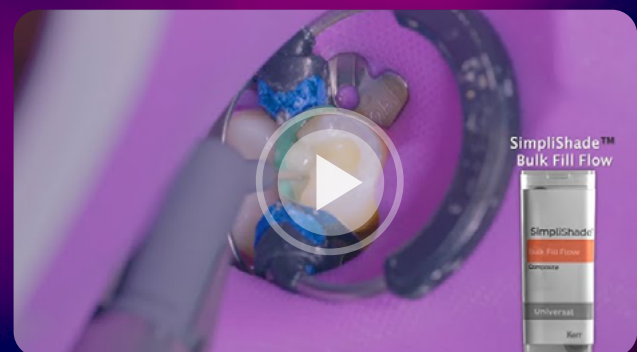
Podcast



Motion Graphic Video



Motion Graphic Video



Clinical Video



VISIT US ON SOCIAL MEDIA

