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**DIPLOMATES OF THE AMERICAN BOARD OF ORAL & MAXILLOFACIAL SURGERY**

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## Silver Diamine Fluoride to prevent, Arrest Root Caries In Older Adults

In a systematic review, researchers examined the effect of silver diamine fluoride (SDF) in preventing and arresting caries in exposed root surfaces of adults. The study was published in the August issue of The Journal of the American Dental Association.

Root caries among adults peaks at about 70 years of age. Untreated caries can lead to pain, social dysfunction, and possibly handicap. The development of root caries begins with repeated bouts of demineralization and remineralization on exposed root surfaces, but it is the degradation of the organic components of dentin and cementum that plays a crucial role in its progression. It is reasonable to postulate that topical application of products that inhibit proteolysis might be used to manage root caries.

SDF has primarily been used to treat coronal caries in pediatric patients. SDF inhibits the proliferation of cariogenic microbes and stimu-

lates remineralization of enamel and dentin while also preventing dentinal collagen breakdown. In 2016, the U.S. Food and Drug Administration approved SDF as a medication to desensitize hypersensitive teeth, and dentists have also been using it off-label to manage caries. SDF is easy to apply, painless, noninvasive, and cost-effective. It is thought that SDF might prove to be a valuable tool for inhibiting and arresting caries in older adults with mobility and oral self-care challenges.

The purpose of this systematic review was to conduct a methodologically sound qualitative and quantitative synthesis of the existing evidence on the use of SDF to prevent and arrest root caries in adults. Inclusion criteria were adult patients with exposed root surfaces; topical SDF applied by a health care professional; comparison of no intervention, placebo, cariostatic agent, or dental restorative material; and development of

new root caries or root caries arrest at least 12 months after product application. Studies were retrieved from multiple databases, clinical trial registries, and the Brazilian database of theses and dissertations. The risk of bias was evaluated by using the Cochrane Risk of Bias Tool. For caries prevention, the difference in mean caries increment as weighted mean differences of decayed or filled root surfaces (DFRS), prevented fractions, and confidence intervals were calculated. For caries arrest, the difference in mean number of arrested lesions between SDF

and control groups was determined.

A total of 2,356 studies were found using the search strategy described in the article. The final study population included 3 clinical trials in which data were analyzed for 544, 712, and 460 participants at 12, 24, and 30 or more months of follow-up. Participants in all 3 studies had similar mean ages (72.1-78.8 years), low caries experience (DFRS, 1.1-2.1), and drank fluoridated water. Treatment and control groups received oral hygiene instruction. In terms of caries prevention, meta-analysis of 3

### DENTAL FUN FACT

#### DID YOU KNOW...

IF YOU'VE BEEN USING FLOSS DAILY, BY THE END OF THE YEAR THE TOTAL LENGTH WILL BE THE PERIMETER OF A BASEBALL DIAMOND! IS YOUR FLOSS GOING TO MAKE IT TO HOME PLATE?

(<https://thedentistsofficefallon.com/dental-fun-facts-ii/>)

### NEWS YOU CAN USE

#### Antimicrobial Photodynamic Therapy for the Treatment of Periodontitis and Peri-implantitis

Antimicrobial photodynamic therapy (aPDT) as an adjunct to scaling and root planing (SRP) results in similar improvements in probing depth (PD) and clinical attachment level (CAL) as conventional periodontal therapy alone for patients with periodontitis and peri-implantitis. The findings are based on a systematic, best evidence consensus by the American Academy of Periodontology published in the July issue of Journal of Periodontology. aPDT involves the use of a light-sensitive dye called a photosensitizer (PS) combined with visible light, stimulating the PS to form free radicals of oxygen which can have bactericidal properties.

studies with 24 months of follow-up showed that SDF use significantly reduced the number of new root caries (weighted mean differences DFRS, -0.56; 95% confidence interval, -0.77 to 0.36). Depending on the duration of the follow-up, the pre-

vented fractions ranged from 50.30 through 68.35%. In 1 study, there was a significantly greater mean number of arrested lesions in the SDF group than in the placebo group after 24 months.

1. Mei, M.L., Chin-Man Lo, E., Chu, C.H. **Clinical use of silver diamine fluoride in dental treatment.** *Compend Contin Educ Dent.* 2016;37:93-98

8Crystal, Y., Niederman, R. **Silver diamine fluoride treatment considerations in caries management.** *Pediatr Dent.* 2016;38:466-471.

**Dr. Brian Simpson**  
announces the thirty sixth meeting of the  
**NANUET IMPLANT STUDY GROUP**

**Speaker: Carly De Candia**  
**Regenerative Specialist**  
**Zimmer Biomet, Warsaw IN**

**“Grafting Materials, the Clinical Implications and Their Impact on Patients”**

**Thursday, November 8, 2018**  
**Dinner: 6:30 Presentation: 7:00 — 9:00 pm**

**Hudson House 134 Main Street Nyack, NY**

**2 CE credits awarded by the Ninth District Dental Association**  
**Cost: \$50.00**

**To register, please call: 845-623-3497 or email [office@drbriansimpson.com](mailto:office@drbriansimpson.com)**

*“Be yourself; Everyone else is already taken”  
-Oscar Wilde*