

# Silver Diamine Fluoride

- A Caries “Silver Fluoride Bullet”

# 38% Silver Diamine Fluoride

- **Topically applied treatment that controls active dental caries and aids in preventing further progression of the disease**
- **Dual mechanism of action**
- **Silver component acts as an anti-microbial agent killing bacteria and preventing the formation of new biofilm**
- **Fluoride acts to prevent further demineralization of tooth structure**

# 38% Silver Diamine Fluoride



# Articles

- **J Calif Dental Assoc, January 2016, pp. 17-28**
- **UCSF Protocol for Caries Arrest Using Silver Diamine Fluoride: Rationale, Indications and Consent**
- **“No other intervention approaches the ease of application and efficacy”**
- **“American dentistry has been desperately lacking an efficient instrument to be used at the diagnostic visit to provide a step toward controlling the disease”**

# Articles

- **J Dent Res 2009 88: 116**
- **Silver Diamine Fluoride: A Caries “Silver-Fluoride Bullet”**
- **<http://jdr.sagepub.com/content/88/2/116>**
- **Australian Dental Journal March 2015, pp.80-87**
- **“Silver diamine fluoride outperforms other anti-caries medicaments in killing cariogenic bacteria in dentinal tubules”**

# 38% Silver Diamine Fluoride

- **First used in Japan 80 years ago**
- **Nothing new**
- **Has been used as an effective measure of arresting active caries in Japan, China and other Asian countries, Australia and South America since the 1960's**

# 5 Attributes of 38% SDF

- **Arrests caries**
- **Ease and simplicity of use (paint on)**
- **Affordability of material ( approximately \$0.70 per application)**
- **Minimal requirement for personnel time and training (one minute application twice a year)**
- **Non-invasive**

# 38% SDF

- **FDA approved the first silver diamine fluoride for market in August 2014 and as of April 2015 that product is available.**
- **Elevate Oral Care**
- **Advantage Arrest Silver Diamine Fluoride 38%**
- **FQCHC costs – 8 ml bottle = \$175.00 ( 250 drops)**
- **3 bottle kit ( 3 ml bottles) = \$215.00 (281 drops)**
- **Institutional Savings Plan Effective April 1, 2023**



# 38% SDF Indicated For:

- **Patients with extreme caries risk (xerostomia, ECC)**
- **Those who cannot tolerate conventional care**
- **Patients who must be stabilized so they can be restored over time**
- **Patients who are medically compromised or too frail to be treated conventionally**
- **Those in disparity populations with little access to care**

# 38% SDF Protocol

- 1 drop SDF in plastic dappen dish
- Remove bulk saliva with saliva ejector
- Isolate tongue and cheek from affected teeth with 2x2 gauze or cotton rolls
- If near the gingiva, apply petroleum jelly with Q-tip (SDF will stain gingiva)
- Wipe caries with gauze or dry brush caries to remove plaque

# 38% SDF Protocol

- **Dry affected tooth surface with air syringe or, if not feasible, dry with cotton**
- **Bend microbrush, immerse in SDF, remove excess on side of dappen dish**
- **Apply SDF directly onto affected tooth surface, rub in**
- **Allow SDF to absorb for 1 minute if reasonable, then remove excess with gauze or cotton roll**
- **Rinse with water**

# 38% SDF

- **If successful, caries will turn black**
- **Caregivers need to be told this is a good thing as it means the treatment was successful**
- **Apply every 6 months for maximum results**

# CDT Code for SDF

- **New code in 2016**
- **D1354 –interim caries arresting medicament application**

# Dr. Jeanette MacLean

- **Pediatric dentist in Glendale, AZ**
- **Has many clinical videos on use of SDF and SMART restorations**
- **How to treat interproximal caries with SDF**
- **Cover black stain with glass ionomer**

# 38% SDF



- Caries should be black









# New Product – Reduces staining, 2 steps



# Riva Star = SDF + Potassium Iodide

- 2 steps – 1 drop from bottle 1 and 2 drops from bottle 2
- Apply SDF for 1 minute
- Apply Potassium iodide for 90 seconds
- PI reacts with the SDF to form a white creamy precipitate which then turns clear
- Rinse off

# Riva Star = SDF + Potassium Iodide

- FQCHC cost, Henry Schein = \$94.00
- Approximate cost per application = \$2.04

# The National Coalition of Dentists for Health Equity

- [www.dentistsfortheequity.org](http://www.dentistsfortheequity.org)



# American Dental Therapy Association

- Community Catalyst

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