

# Silver Diamine Fluoride 38% - Background

## Primary Prevention

Silver diamine fluoride 38% is being used for protection on high risk sites. Silver penetrates into and remains on the surface of healthy dentin and/or enamel, providing antimicrobial biofilm resistance. This is particularly valuable in furcations, food traps, root surfaces and newly erupted occlusal surfaces difficult to dry and isolate for sealants.

## Interproximal Lesion Application



Photos courtesy of Dr. Jeanette MacLean

## Micro-CT Scan of Dentinal Penetration of Silver

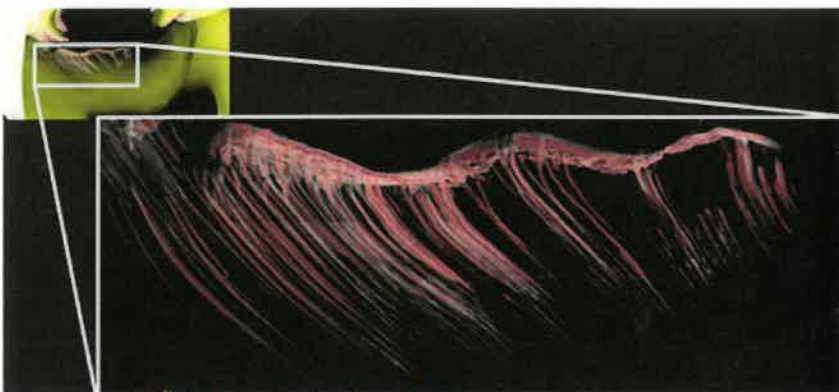


Photo courtesy of Drs. Jeremy Horst and Jong Seto

## Arrest Decay at Restoration Margin



Photo courtesy of Dr. Steve Duffin

## Nonsurgical Arrest of Incipient Caries



Photo courtesy of Dr. Steve Duffin

## Early Childhood Caries



Photo courtesy of Dr. Jason Hirsch

# Silver Diamine Fluoride 38% - Clinical Uses

## Silver Diamine Fluoride is appropriate for...

- Patients with high risk sites:
  - Exposed root surfaces
  - Furcations
  - Deep pits and fissures
  - Food traps
  - Sites sensitive to hot/cold
  - "Watch" spots
- Cavity-active patients:
  - Primary, permanent or class V decay
  - Incipient decay
  - Interproximal decay
  - Elderly patients with secondary decay (multiple medications)
  - Special needs patients
  - Decay close to the pulp

## Silver Modified Atraumatic Restorative Treatment (SMART) For Enhanced Esthetics

The before/after sets of images show teeth treated with silver diamine fluoride and then covered with glass ionomer restorative material. Glass ionomer materials can be placed in minutes without the need for drills, adhesives or instruments. These SMART restorations may provide a sufficient cover-up for many cases.

In situations where esthetics are paramount, dentists apply SDF and then cover the discoloration by polishing and applying composite materials. Another option, especially for permanent dentition, is to polish away discoloration along the margins, then cover the remaining discoloration with a "sandwich" of opaque glass ionomer followed by a composite material.



Intra- and post-operative SMART #7, 8 & 10, showing clean perimeters and final GIC restorations. Note: tooth #10 had complete stain removal on internal margin.



Photos courtesy of Dr. Douglas A. Young

The dark spot on the small arrested lesion on the second molar of this young child may not need any type of restoration.



Photo courtesy of Dr. Jason Hirsch

## SMART with nitrous oxide, but no local anesthesia



Photos courtesy of Dr. Jeanette MacLean

