Redwood Pediatric Dentistry
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Silver Diamine Fluoride (SDF)

A quick, needle-free, drill-free way to stop a cavity from growing. We paint a small drop of medicine on the tooth, and it does the work.

1 What SDF Is and How It Works

- **SDF is a liquid medicine**, not a filling. We brush a tiny drop onto the cavity with a micro-applicator. The whole thing takes about a minute per tooth.
- **The silver stops the bacteria** that cause decay, and the fluoride hardens and re-mineralizes the softened tooth structure underneath.
- **No shot, no drill, no numbing.** Nothing is removed from the tooth. Most children feel nothing at all.
- **It also calms sensitivity**, which is what the FDA originally cleared it for. Using it on cavities is a well-established, evidence-supported off-label use.

2 What the Research Shows

- **Roughly 7 to 8 out of 10 treated cavities stop growing** when SDF is applied twice a year. Once-a-year application works too, but noticeably less well.
- **Two applications are better than one.** We plan on a second visit about 2 to 4 weeks after the first, then a re-check every 6 months.
- **It helps the teeth we did not treat, too,** by lowering the amount of decay-causing bacteria in the whole mouth.
- **It is safe.** There is less fluoride in one SDF treatment than in a standard fluoride varnish application, and no serious side effects have been reported when it is used as directed.

3 The Black Stain: What to Expect

- **Only the decayed part turns black.** Healthy enamel does not stain. The dark color is actually the sign that the cavity has hardened and stopped.
- **The stain on the tooth is permanent,** but not necessarily forever visible. We can cover it later with a tooth-colored filling or crown, and baby teeth eventually fall out.
- **Stain on skin, lips, or gums is temporary** and fades in about 1 to 3 weeks. We coat the lips and gums with petroleum jelly beforehand to keep this to a minimum.
- **For front teeth,** talk with us first. Some families prefer a tooth-colored option in the smile zone, and that is a completely reasonable choice.

SDF-treated incisors and molars: before and after


BEFORE


AFTER


BEFORE


AFTER

4 SDF + Floss: Cavities Between the Teeth

- **Most cavities in school-age kids start between the back teeth,** where a brush cannot reach and where a plain application of SDF cannot make good contact.
- **We use spongy floss to carry the medicine into the contact point**, so the SDF actually reaches the lesion surface.
- **The evidence here is promising but younger** than the evidence for open cavities. In one records-based study, about 84% of early lesions between primary teeth showed no growth on X-rays after 12 months.
- **These lesions need daily flossing to stay stopped.** This is the one spot where home care truly makes or breaks the result.

Application with spongy floss (left), and arrested interproximal lesions (right)


APPLICATION


APPLICATION


ARRESTED


ARRESTED


ARRESTED

5 Right After the Appointment

- **Wait about 30 minutes** before eating or drinking, to give the medicine time to soak in.
- **A brief metallic taste is normal** and passes quickly. Water is fine once the 30 minutes is up.
- **Brush and floss as usual that night.** There is nothing to protect and nothing to avoid.
- **You may notice a small dark spot on the lip or gum.** Leave it alone. Do not scrub it. It will fade on its own.

6 Your Follow-Up Plan

- **Second application in 2 to 4 weeks** for a meaningfully higher success rate.
- **Re-check every 6 months**, with a repeat application at that visit if the lesion is still active.
- **If a treated cavity softens or grows,** we will talk about a filling or crown. SDF buys time and often avoids treatment altogether, but it is not a guarantee.

7 When SDF Is Not the Right Choice

- **Deep cavities near the nerve,** or any tooth with pain, swelling, or an abscess. Those need definitive treatment.
- **Cavities that trap food.** Even a stopped cavity that is packing food usually needs to be filled for comfort and gum health.
- **A known silver allergy,** or active mouth sores and ulcerated gums.
- **SDF stops decay. It does not rebuild the tooth.** The hole stays a hole. Sometimes we place a filling over the SDF at a later visit for shape and function.

What Makes SDF Work Long-Term

SDF is a powerful head start, not a cure. What happens at home decides whether the cavity stays stopped:

- Brush twice daily with fluoride toothpaste, with an adult helping through about age 8.
- Floss every day, especially between the back teeth.
- Cut back on grazing and sipping. Frequency of sugar matters more than amount.

A treated cavity in a mouth with daily flossing behaves very differently than the same cavity without it.

Please Call Us If...

- Your child has tooth pain, a swollen gum or face, or a fever.
- A treated tooth becomes sensitive to cold or sweets again.
- Food is packing into a treated area.
- Staining on the gums or lips has not faded after 3 weeks.

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