

Silver Fluoride Treatment

Past dentists working in the Pitjantjatjara Lands have experienced particular success using Silver Fluoride in children. Its aim is to combat decay while causing the least amount of distress or discomfort for young patients.

Directions For Use - Please read very carefully.

In common with other silver salts, e.g. silver nitrate, this preparation will stain skin and clothing. Often the stain will not be apparent until exposed to sunlight. A meticulous technique must be adopted when using this preparation. Garmer clamps (junior size) are mandatory for the isolation of lower quadrants.

Technique – Deciduous Teeth

Open Lesions with no history of pain:

1. Do not use any agent containing SnF₂ before applying silver fluoride, as this will severely interfere with the reaction.
2. Isolate area to be treated. Use Garmer clamps for the isolation of lower quadrants.
3. Remove superficial caries.
4. Place one drop of silver fluoride on the back of a paper cup or a waxed paper pad.
5. Soak a small pellet of cotton wool in silver fluoride then place pellet in cavity **gently moving the pellet** in the cavity with the tip of a probe for **no less than one minute**.

Care must be taken not to have an excess amount of silver fluoride as the solution should not spread onto the gingiva.

6. Remove pellet and place a **very small** amount of Floran spot application paste (10% SnF₂) or Floran Stable Stannous Fluoride 20% solution in cavity.
7. Place a small piece of Stomahesive (or Varihesive) wafer over the lesion and seal wafer on sound enamel adjacent to lesion. The appropriate size piece of wafer is cut from the large piece, and the adhesive backing removed before applying to the tooth.

Be careful not to apply pressure to the lesion as this may evoke an outward pulpal response.

On a distal surface lesion, such as a DO on a primary deciduous first molar, the wafer must extend from the crown of the first molar to the crown of the second molar, to ensure the lesion is completely covered.

8. Remove isolation and ensure that wafer is correctly sealed around its entire periphery.
9. Instruct patient to rinse out.
10. Patient is asked not to eat for 1 hour and to allow wafer to dissolve in oral fluids.
11. Recall patient within two weeks to ensure that the treated lesion has turned a pitch-black color. If the lesion has not turned the requisite colour repeat the treatment.
12. At the two week recall if required, restore lesion with a glass ionomer cement (e.g. Fuji IX or Ketac) restoration.
13. If a lesion is left uncovered it is advisable at least initially to check the lesion every six months. If there is any sign of loss of pigmentation the treatment should be repeated.

Note: In a very young patient the level of co- operation may be such that it is difficult to carry out all the stages outlined above. In these circumstances and especially if the lesion is “self cleansing”, apply silver fluoride to the lesion and then cover immediately with a small piece of Stomahesive wafer.

If mechanical retention is feasible (and conventional ART is not possible to achieve, especially if the DEJ cannot be cleared, or the child is unable to cope), it is possible to apply the AgF only as described (without the SnF₂), dry the cavity (with air or cotton pellets) , and then place a GIC restoration.

Generally previous dentists would take that approach as a priority.



Photo taken by Dr Simon Wooley.

This photo shows a Stomahesive wafer in place, after applying silver fluoride to a distal lesion on the lower left primary first deciduous molar.

Silver Fluoride Product Safety Data

1. During application for silver fluoride the patient's and the operator's eyes should be covered by protective glasses.
2. If poisoning occurs contact a doctor or Poisons Information Center.
3. If swallowed induce vomiting using Ipecac Syrup (APF) if available.
4. If in eyes, hold eyes open flood with water for at least 15 minutes and see doctor.
5. If silver fluoride stains skin this stain can be removed by a saturated solution of potassium iodine (AGF Stain Remover).
6. If silver fluoride stains clothing apply AGF brand stain remover and soak garments in gentle bleach (e.g. Napisan).
7. If silver fluoride stains a cleanable bench top apply ordinary household bleach undiluted until stain disappears then wash area thoroughly.