

A NON-AEROSOL RESTORATIVE PROTOCOL: SMART (Silver Modified ART)

THE FOLLOWING INFORMATION IS A PROTOCOL DEVELOPED BY DR GEOFF KNIGHT

This is a protocol for treating asymptomatic carious teeth without using a high-speed handpiece. Aerosols from high-speed handpieces have the potential of contaminating every surface of a dental operatory.

Silver Diamine Fluoride (SDF) will reduce 80% of tooth decay if applied twice yearly. However, the permanent black stain it causes has limited the clinical use of SDF to deciduous teeth and root caries in the elderly.

Riva Star involves an extra step of applying potassium iodide (KI) after SDF application. However, when combined with a glass ionomer cement (GIC) overlay on caries, there are significant benefits over just applying SDF.

- Tooth decay is arrested 100%, turning existing caries into a decay resistant base beneath a future restoration.*
- There is no staining, making Riva Star an ideal medicament for both permanent and deciduous teeth.
- The time required to triage teeth with Riva Star and GIC is a fraction of the time required to conventionally restore a tooth, especially as the tooth is not required to be anaesthetised.
- Systematic reviews in the dental literature confirm that a single surface cavity restored with an ART GIC may be considered to have a similar life expectancy as an amalgam or composite resin restoration. Application of Riva Star prior to placing a GIC enhances the clinical outcomes of ART.
- Multiple-surface cavities restored with a GIC have a limited prognosis. A GIC/composite resin sandwich restoration provides a long-term outcome either at initial placement or in the near future.
- This technique dramatically reduces the possible complications of exposing the pulp, necessitating an extraction or root canal.

* Frencken J E. The art and science of Minimal Intervention Dentistry and Atraumatic Restorative Treatment. 2018 Handcocks Publishing.

WARNING

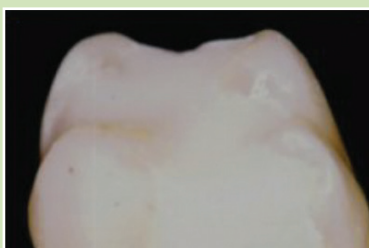
Due to potential staining if the instructions are not closely followed, it is strongly advised not to treat teeth in the aesthetic zone until practitioners are comfortable with the clinical use of Riva Star.

- Riva star cap kits must be stored in the fridge.
- Riva star bottle may be kept in the cupboard.

For FAQ refer to Riva Star website: www.rivastar.com



Cavity pre-treated with Silver Diamine Fluoride and restored with conventional glass-ionomer cement (after 4 yrs) storage in water.



Cavity pre-treated with Silver Diamine Fluoride / Potassium Iodide and restored with conventional glass-ionomer cement (after 4 yrs) storage in water.

PROTOCOL

- Prepare the cavity by scraping away any badly broken down tooth structure and biofilm with a blunt dental explorer
- Etch the decay for 15 seconds with 37% phosphoric acid, wash and dry
- Apply Riva Star SDF (limiting application to the lesion)
- Immediately apply Riva Star KI until the white reactant becomes clear
- Flush the preparation with water and dry
- Isolate the preparation from moisture with cotton rolls as for a restoration
- Place the auto cure GIC to slightly overfill the preparation
- Place a small amount of petroleum jelly on a gloved index finger and smear over the surface of the unset GIC so as to free the surface from the any occlusal interference
- Trim any small overhangs of the setting GIC with a suitable plastic instrument
- Dismiss the patient
- This technique can be done in quadrants on multiple cavities further speeding up the procedure and reducing any potential discomfort a patient may have sitting in a dental chair.



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SDI'S RECOMMENDATION

If petroleum jelly is not required Riva Coat is designed for the prevention of saliva and water contamination to exposed surfaces of glass ionomer cements during the first 24 hours immediately after placement.

DR GEOFF KNIGHT

BDSc MSc MBA PhD

Dr Geoff Knight is a general dentist and internationally noted dental speaker with special interests in Minimal Intervention Aesthetic Dentistry.

He has pioneered a number of innovative clinical procedures in aesthetic dentistry and the pharmacological management of caries and is named on several patents.

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Australia (Head Office)

SDI Limited
3-15 Brunson Street
Bayswater
Victoria 3153
Telephone +61 3 8727 7111
Fax +61 3 8727 7222
Toll Free 1 800 337 003
Email: Info@sdicom.au

Germany

SDI Germany GmbH
Hansestrasse 85
51149, Cologne Germany
Tel +49 (0) 2203 9255 0
Fax +49 (0) 2203 9255 200
Free phone 0800 1005759
Email: Germany@sdicom.au

Austria

Free Phone: 00800 0225 5734
Email: Austria@sdicom.au

France

Free Phone: 00800 0225 5734
Email: France@sdicom.au

Italy

Free Phone: 00800 0225 5734
Email: Italy@sdicom.au

Brazil

SDI BRASIL INDUSTRIA E
COMERCIO LTDA.
Rua Dr. Virgílio de Carvalho
Pinto, 612 CEP 05415-020
São Paulo, SP Brazil
Tel +55 11 3092 7100
Fax +55 11 3092 7101
DDG 0800 7701 735
Email: Brasil@sdicom.au

USA and Canada

SDI (North America) Inc.
1279 Hamilton Parkway
Itasca, IL 60143

USA

Tel +1 630 361 9200
Fax +1 630 361 9222
Toll Free 1 800 228 5166