
Fuji VII
Pink or
White?

Why a glass ionomer for protection and stabilisation?

As our understanding of the caries process grows, new techniques and strategies for the prevention and control of caries are being more widely practiced. A purpose designed glass ionomer is needed for these new applications:

Protection of erupting molars

Increasing rates of childhood decay has lead to a greater demand for preventive intervention solutions for the prolonged eruption phase when the occlusal surfaces of permanent molars are at most risk of decay.

Protection of exposed root surfaces

A growing elderly population with more retained teeth and greater risk of dental disease leads to an increase in exposed root surfaces that would benefit from additional protection.

Caries stabilisation and indirect pulp capping of active lesions

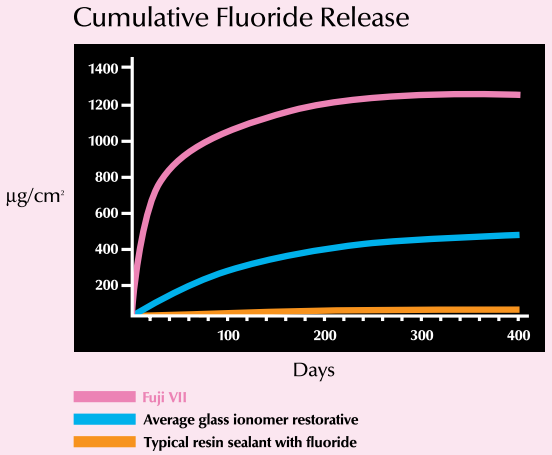
An effective seal via a high fluoride releasing glass ionomer is essential to the success of this minimally invasive technique.

Restoration of micro-cavities

A flowable glass ionomer is needed for ultra small cavities.

Fuji VII – purpose designed

Fuji VII is designed as a high fluoride releasing glass ionomer with a free-flowing consistency to ensure effective wetting and intimate adhesion to tooth surfaces. The fine fluoroaluminosilicate glass filler allows a smooth surface finish and the incorporation of strontium in the glass provides radiopacity, enhanced remineralization capabilities and a sharp snap set. The setting characteristics can be further accelerated by use of a halogen light curing device for 20-40 seconds (pink shade only).

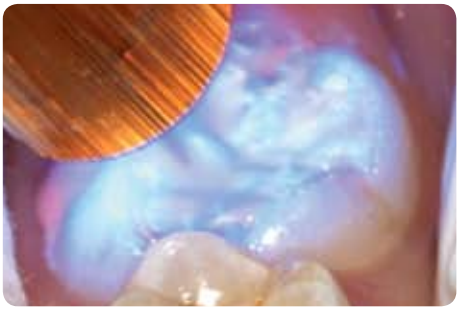


Fuji VII. Your choice of pink or white

Special pink shade

For many different applications clinicians have sought a contrasting shade in restorative material either for clear identification of margins, for communication of clinical status or as a visual reminder of its temporary nature.

Therefore Fuji VII has a pink chroma offering easy identification to both clinician and patient while keeping the shade low in value helping it blend into the oral environment.



Dr. H Ngo

Unique command set

Fuji VII sets in around four minutes. The setting reaction of the pink shade of Fuji VII can be accelerated by light curing for 20-40 seconds using a halogen curing light (the pink colour absorbs light energy which accelerates the setting reaction).

New white shade

Fuji VII White is indicated where a tooth coloured material is desirable and the need for clear visual recognition is out-weighed by the aesthetic demands of the patient or parent.

Fissure protection on clearly visible molar surfaces, minimal fissure filling in erupted molars and caries stabilization in lower anteriors are all examples of where Fuji VII White can be used.

Dr. G Milicich

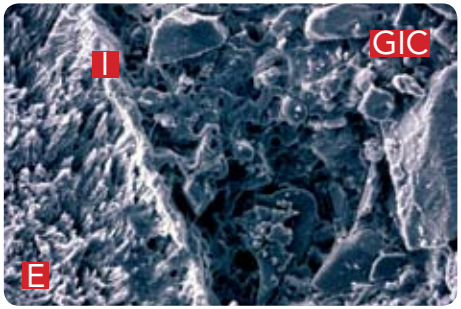
Surface protection

What is surface protection?

Surface protection describes the application of a thin film of glass ionomer (GIC) to tooth surfaces that are at increased risk of caries or erosion. The objective of surface protection is to create a hardened outer surface using the glass ionomer reaction to form a more acid-resistant ion exchange zone (I– shown opposite) which provides additional protection for the tooth.

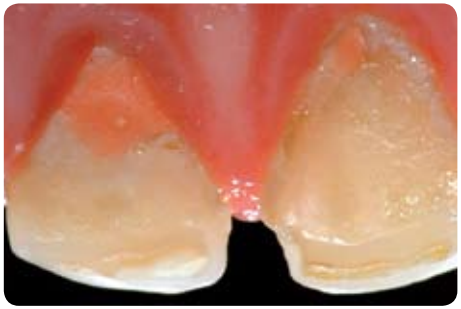
A flowable, high fluoride releasing glass ionomer is ideal for this application. Glass ionomer is moisture tolerant during application and is therefore well suited to use as a protection material where saliva control might be compromised – e.g. erupting molars.

Once set, the thin layer of glass ionomer also acts as a protective coating, preventing acid contact with the tooth and providing a surface which is difficult for plaque to adhere to.



Dr. H Ngo

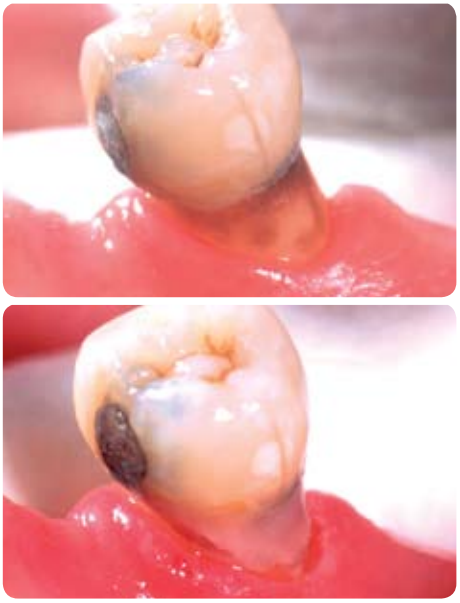

Dr. J Lucas


Dr. M Gryst

Root surface protection

With an ageing population, root surface caries and cervical erosion have become a daily challenge. Once exposed to the oral environment, root surfaces are at greater risk of demineralisation, especially when patients have reduced saliva flow and diminished buffering capabilities.

Root surface protection describes the application of a thin film of glass ionomer to exposed root surfaces for those patients with an increased risk of caries or erosion. The free-flowing consistency of Fuji VII is well suited to brush application and the unique pink shade is a useful visual check for you and your patients, confirming that the coated root surfaces remain protected. Root surfaces protected by Fuji VII should be monitored on a regular basis to help establish and maintain a balanced oral environment.



Dr. H Ngo*

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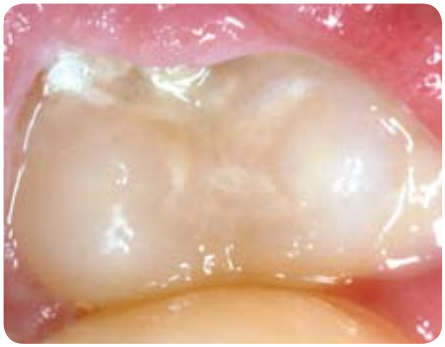
Dr. G Knight

Fuji VII can also be used for treating dentine hypersensitivity by providing a chemically fused seal to stop fluid flow in the tubules and provide instant and long lasting relief.

Fuji VII is ideal for fissure protection

Fissure protection is a non invasive treatment procedure for children at higher risk of developing caries. It is undertaken as early as possible during the eruption phase of the first and second permanent molars. Posterior teeth are at increased risk of developing caries during eruption due to the increased levels of plaque retention, immaturely formed enamel and the length of time taken to achieve full eruption.

Fuji VII is ideal for fissure protection due to its moisture tolerance during placement and the nature of the ion exchange adhesion between glass ionomer and enamel. Fuji VII creates a strong, acid resistant, chemically-fused layer which will continue to give protection to the occlusal surface even when it appears visually 'lost' (eg as a result of attrition from the opposing dentition).



Dr. H Ngo*

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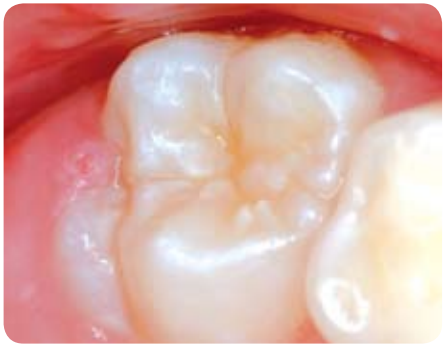
The pink shade is especially useful when moisture control is difficult as the setting reaction can be accelerated using a halogen curing light. The pink shade is also an excellent visual reminder that protection is in place. Patient brochures are available which explain fissure protection, the benefit of using a pink shade as a visual marker and what changes are seen as the protected molar comes into occlusion.

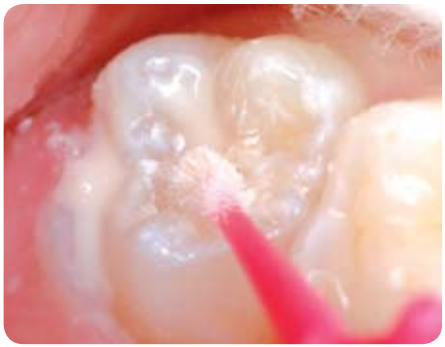
Fuji VII White for fissure protection



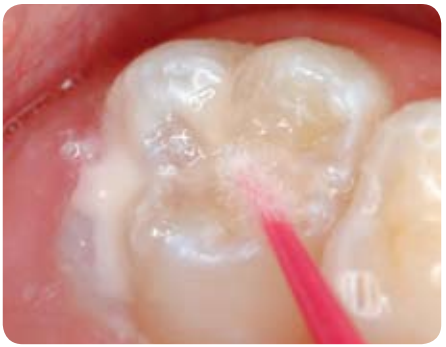
An erupting molar. A brush cone is used to remove plaque

Clean and condition using CAVITY CONDITIONER. After rinising avoid overdrying

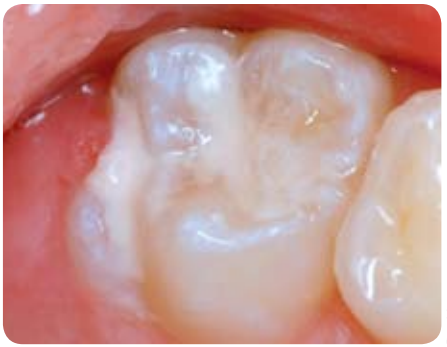
Mix and disperse onto a pad



Apply Fuji VII over the occlusal surface using a microbrush



Apply Cocoa Butter immediately following placement



Completed fisure protection

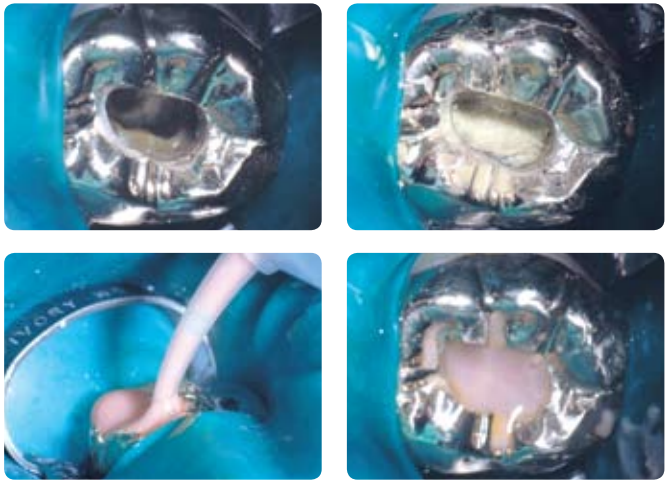
Dr. J Lucas

Fuji VII Applications

Temporary endodontic sealing material

Fuji VII is ideal as a temporary seal between endodontic treatments. The ion exchange adhesion will ensure an effective coronal seal which is proof against microleakage and possible further contamination of the operative area.

The contrasting pink shade aids fast removal without compromising aesthetics, and following completion of the root canal therapy it will make an ideal base for lamination with restorative options such as amalgam or composite resin.

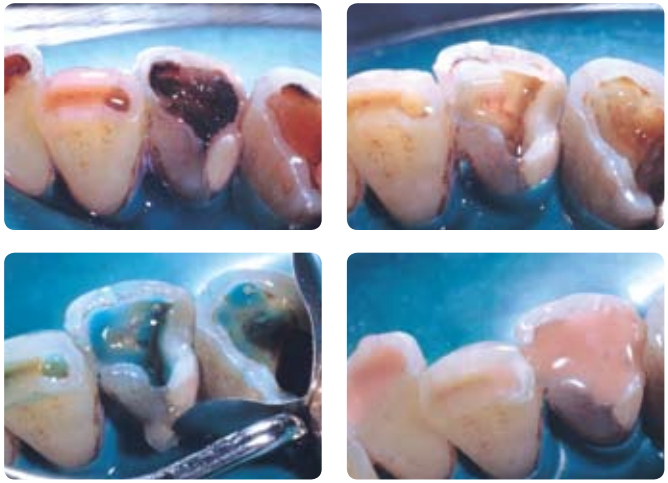


Dr. H Ngo

Caries stabilisation

The pink shade of Fuji VII clearly identifies restorations as transitional and its free flowing consistency seals demineralised dentin in both the primary and permanent dentition. Minimally invasive preparation techniques using an ultra-slow handpiece or hand instruments enable removal of only the softest dentin; however to optimise the seal, a prepared cavity still requires 2mm of clean margins around its periphery.

Stabilisation techniques are helpful for treatment of elderly, dental phobic, medically compromised and very young.



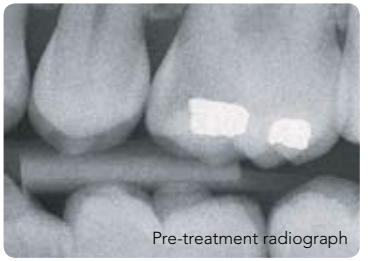
Fuji VII Applications

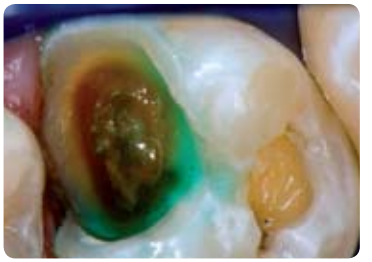
Indirect pulp capping

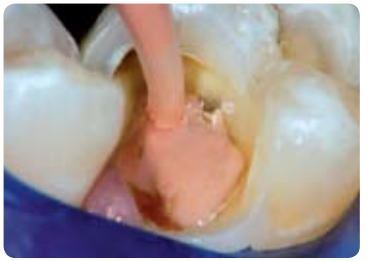
Indirect pulp capping describes the process of leaving a thickness of softened demineralised dentine, intact on the pulpal floor. This technique is used to remove the risk of mechanical exposure of the pulp during cavity preparation and to provide a seeding site and the potential for internal remineralization.

Fuji VII is placed with the primary objective to create an effective seal and to allow time for the pulp to heal.

Providing the patient does not present with symptoms of irreversible pulpitis, this technique is indicated for very deep cavities where further excavation would increase the risk of pulpal exposure potentially leading to endodontic treatment or even extraction.


Pre-treatment radiograph






Radiograph at 18 months

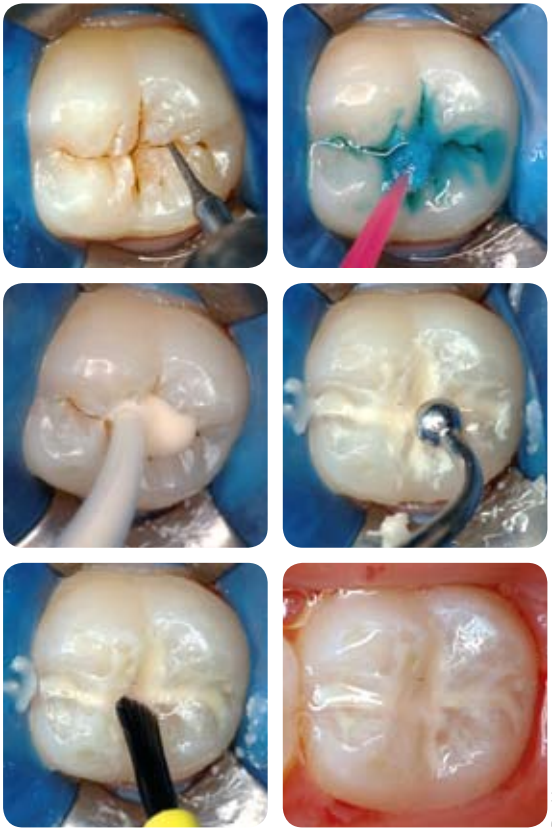
Dr. H Ngo

Minimal restorations

The increasing use of minimal preparation techniques to remove the first areas of softened tooth structure, or to explore stained fissures, has created a need for a more flowable glass ionomer that will adapt well to micro prepared cavities. For erupted teeth Fuji VII White is the preferred glass ionomer solution due to its ease of access, fast set and smooth surface finish.

Technique tips

- This technique is suitable for restoring fissures that have been prepared using ultra-fine diamonds or air abrasion.
- To maximize adhesion always condition the prepared fissures with a cavity conditioner for 10 seconds.
- Rinse the conditioner and remove excess moisture with a sponge or cotton pellet to avoid over-drying the tooth.
- To ensure good adaptation into the prepared fissures and surrounding surfaces place the tip of the Fuji VII nozzle directly onto the prepared surfaces and inject into the fissures.
- A ball burnisher is used to contour the unset glass ionomer. The burnisher can be lubricated with Cocoa Butter to aid manipulation.
- Apply a varnish or light cured protective coating material immediately following placement.



Dr. J Lucas

Lining under composite or amalgam

Fuji VII capsules feature a long fine-tipped nozzle that is ideal for direct placement of lining materials onto the floor of the cavity ensuring fast application and excellent cavity adaptation without risking air entrapment.

Dr. G Knight

Intermediate restorations

Fuji VII is clearly identifiable to the patient as a temporary solution, just one part of a complete treatment strategy. Quick and simple to apply, Fuji VII is a great choice for temporary and intermediate restorations.

Dr. G Knight

Cementing stainless steel crowns

GC Fuji VII's free flowing consistency, high fluoride release and sharp set make it especially suitable for cementation of stainless steel crowns using either the pink or white shade.

Dr. J Lucas

Fuji VII physical properties

Powder/Liquid Ratio (g/g)		0.30/0.15
Net Volume (ml)		0.15
Working Time		1'40''
Setting Time	Without Light Irradiation	2'30''
	With Light Irradiation*	20"-40"
Water Sensitivity	Without Light Irradiation	3'00''
	With Light Irradiation*	2'00''
Compressive Strength (MPa)	After 1 Hour	100
	After 1 Day	159
	After 7 Days	171
Adhesive Strength (MPa After 1 Day)	Bovine Enamel	7.0
	Bovine Dentin	6.0
Surface Hardness (Hv)	After 1 Hour	26
	After 1 Day	39
	After 7 Days	48
Radiopacity (mm Al)		2.4
Fluoride Release (µgm/cm²)	After 1 Day	197

* Halogen light curing device

Fuji VII

Box 50 Capsules

Shades: Pink or White

SOME OF THE AVAILABLE REFERENCES FOR Fuji VII

1. I. Adyatmaka, A. Adyatmaka, H.C. Ngo. *Efficacy of Fuji 7 in preventing pits & fissures caries in Indonesian children.* Abstract I0-48 – 20th IADR (South-East Asian Division) Meeting, September 1-4, 2005, Melaka.
2. T. Noguchi, S. Kato, S. Akahane. *Comparison of the acid-resistance level of the dentine surface immersed with fluoride-releasing materials in artificial saliva.* Abstract 1986 – 81st General Session of the IADR, 2003, Göteborg, Sweden.
3. M.C. Peters, M. Jimenez, G.E. Poort, J.C. Fenno. *Antibacterial effect of various glass ionomers.* Abstract 0415 – 80th General Session of the IADR, 2002, San Diego, USA.
4. D.A. Covey, W.W. Johnson and L.R. Hopper. *Penetration of various pit and fissure sealants into occlusal grooves.* Abstract 3471 – 82nd General Session of the IADR, 2004, Honolulu, Hawaii.
5. J. Wanuck, S. Antonson, D.E. Antonson and B. De Santis. *Retention of surface protectant sealants on contaminated enamel surface.* Abstract 1729 – IADR, March 2005, Baltimore, Maryland, USA.
6. H.C. Ngo, J. McIntyre and G. Mount. *Ion-Transfer patterns across a thin film of set glass-ionomer: Fuji 7.* Abstract 3058 – IADR, March 2005, Baltimore, Maryland, USA.

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