

## **Guidelines for use of fluorides in Australia**

### **Water fluoridation-**

- (1) Water fluoridation should be continued as an effective, efficient, socially equitable and safe population approach to the prevention of caries in Australia.
- (2) Water fluoridation should be extended to as many non-fluoridated areas of Australia as possible, supported by all levels of Government.
- (3) The level of fluoride in the water supply should be within the range 0.6–1.1 mg/L.
- (4) For people who choose to consume bottled or filtered water containing fluoride, manufacturers should be encouraged to market bottled water containing approximately 1.0 mg/L fluoride and water filters that do not remove fluoride. All bottled water and water filters should be clearly labeled to indicate the concentration of fluoride in water consumed or resulting from the use of such products.
- (5) People in non-fluoridated areas should obtain the benefits of fluoride in drinking water using bottled water with fluoride at approximately 1 mg/L.

### **Fluoridated toothpaste-**

(1) From the time that teeth first erupt (about six months of age) to the age of 17 months, children's teeth should be cleaned by a responsible adult, but not with toothpaste.

(2) For children aged from 18 months to five years (inclusive), the teeth should be cleaned twice a day with toothpaste containing 0.5–0.55 mg/g fluoride (500–550 ppm). Toothpaste should always be used under the supervision of a responsible adult. A small pea-sized amount should be applied to a child-sized soft toothbrush and children should spit out, not swallow, and not rinse. Young children should not be permitted to lick or eat toothpaste. Standard toothpaste is not recommended for children under 6 years of age unless on the advice of a dental professional or a trained health professional.

(3) For people aged 6 years or more, the teeth should be cleaned twice a day or more frequently with standard fluoride toothpaste containing 1–1.5 mg/g fluoride (1000–1500 ppm). People aged 6 years or more should spit out, not swallow, and not rinse.

(4) For people who do not consume fluoridated water or who are at elevated risk of developing caries for any other reason, guidelines about toothpaste usage should be varied, as needed, based on dental professional or trained health professional advice. Variations could include more frequent use of fluoridated toothpaste, commencement of toothpaste use at a younger age, or earlier commencement of the use of standard toothpaste. This guideline might be applied particularly to preschool children at elevated risk of caries.

(5) For teenagers, adults and older adults who are at elevated risk of developing caries, dental professional or trained health professional advice should be sought to determine if they should use toothpaste containing a higher concentration (5 mg/g or 5000 ppm) of fluoride.

### **Fluoride mouth rinses-**

A minority of mouth rinse products purchased by Australian consumers contain fluoride ion at the recommended concentration of 200–900 mg/L for daily and weekly use respectively.

(1) Children below the age of 6 years should not use fluoride mouth rinse.

(2) Fluoride mouth rinse might be used by people aged 6 years or more who have an elevated risk of developing caries. Fluoride mouth rinse should be used at a time of day when toothpaste is not used, and it should not be a substitute for brushing with fluoridated toothpaste. After rinsing, mouth rinse should be spat out, not swallowed.

### **Fluoride varnishes-**

Fluoride varnish contains 22.6 mg/mL fluoride ion suspended in an alcohol and resin base. The most common product available in Australia is Duraphat. It is applied by dental and other health professionals directly to dried teeth where it forms a waxy film that adheres to the teeth until it is worn off by chewing or brushing.

(1) Fluoride varnish should be used for people who have an elevated risk of developing caries, including children under the age of 10 years.

### **Fluoride gel and foam-**

-Fluoride gels contain a high concentration of fluoride, typically up to 12.3 mg/g fluoride. They are applied by dental professionals using trays that retain the material on the teeth for several minutes. After removal of trays, patients must spit out the residual gel. There is evidence of their effectiveness in children, however, they are contra-indicated for use in children under the age of 10 because large amounts of fluoride can be ingested.

-Furthermore, fluoride gels appear more efficacious in the permanent dentition. The reviews found no evidence that the effect was dependent on frequency of applications. Like all forms of professionally provided fluoride, gels offer an alternative vehicle for caries prevention for individuals deemed to be at an elevated risk and in whom other fluoride modalities are not available or suitable.

-There is no evidence to support the use of foam.

(1) High concentration fluoride gels (those containing more than 1.5 mg/g fluoride ion) might be used for people aged 10 years or more who are at an elevated risk of developing caries.



### Silver diamine fluoride-

-The findings to date suggest that the application of 38% SDF twice yearly is effective in arresting active carious lesions in primary teeth and root caries in permanent teeth among the elderly, and its major side effect is the black staining of the carious lesion.

-SF has been found comparable to atraumatic restorations with GIC in very remote Indigenous children.

-Its use might be indicated in situations where traditional treatment approaches to caries management might not be possible due to behavioural or medical management challenges, or where access to care is difficult or not available.





(1) Silver diamine fluoride or silver fluoride might be used for people with caries in situations where traditional treatment approaches to caries management might not be possible.

### Important-

-There are a number of topical applications claiming to lead to remineralisation of a decalcified tooth surface. However, most international guidelines acknowledge that further research is required before recommending widespread use of other remineralising agents in dental caries management plans—[fluoride remains first-line therapy for the primary prevention and treatment of dental caries.](#)

-Emerging evidence suggests casein phosphopeptide—amorphous calcium phosphate (CPP-ACP) in combination with fluoride can reverse dental caries in the early stages of the disease (noncavitated lesions). CPP-ACP products should not replace fluoride interventions, but may be discussed as an additional treatment in motivated patients. Use clinical judgment to determine if CPP-ACP is an appropriate option in patients at elevated risk of dental caries.

## Home Care – Toothpastes

Age	Toothbrushing Instructions	Recommended Toothpaste Use	Special Considerations	
		<b>Low Caries Risk*</b>	<b>Mod-High Caries Risk<sup>#</sup></b>	
0-17 months	Once or Twice Daily Begin to teach: Spit out Don't swallow Don't rinse	No Toothpaste 	Begin using low fluoride toothpaste (500ppm) when first tooth erupts.	Use a smear of low fluoride toothpaste (500ppm). 
18 months – 6 years	Twice Daily Spit out Don't swallow Don't rinse	Low fluoride toothpaste (500ppm)	Standard fluoride toothpaste (1000-1500ppm).	Use a pea-sized amount of low fluoride toothpaste (500ppm) or a smear of standard toothpaste (1000-1500ppm)  
6 – 12 years	At least Twice Daily Spit out Don't swallow Don't rinse	Standard fluoride toothpaste (1000-1500ppm)	Standard fluoride toothpaste (1000-1500ppm).	Brush more frequently than twice daily.
13 years and over	At least Twice Daily Spit out Don't swallow Don't rinse	Standard fluoride toothpaste (1000-1500ppm)	Standard fluoride toothpaste (1000-1500ppm).  <b>Or</b> on professional advice: Use high concentration fluoride toothpaste (5000ppm) twice daily.	Brush more frequently than twice daily.

## Home Care – Other Fluoride Products

Product	Toothbrushing Instructions	Recommended Use	Special Considerations	
		<b>Low Caries Risk*</b>	<b>Mod-High Caries Risk<sup>#</sup></b>	
Mouthrinses (200-900ppm F)	Spit out. Don't swallow.	Not Recommended	Not for young children. For children over 6 years to adults.	Should not replace twice daily toothbrushing. Use at a different time of day than twice daily toothbrushing.

## Professionally-Applied Fluoride Products

Product	Instructions	Recommended Use	Special Considerations	
		<b>Low Caries Risk*</b>	<b>Mod-High Caries Risk<sup>#</sup></b>	
Fluoride Varnish (22,600ppm F)	Apply up to 4 times per year.	Not Recommended	All people at risk of caries.	Do not exceed max dosage: 0.25ml for primary dentition 0.4ml for mixed dentition 0.75ml for permanent dentition
Fluoride Gel (1500-12,300ppm F)	Use where other forms of fluoride are not available or suitable.	Not Recommended	Not for children under 10 years. For children over 10 years to adults.	
Silver Diamine Fluoride (38%)	Apply twice a year.	Not Recommended	May be indicated where traditional approaches to caries management might not be possible.	
Fluoride Foam	DO NOT USE <sup>^</sup>	DO NOT USE <sup>^</sup>	DO NOT USE <sup>^</sup>	DO NOT USE <sup>^</sup>

