

Clinical Recommendations for Use of Professionally-Applied or Prescription-Strength, Home-Use Topical Fluoride Agents for Caries Prevention in Patients at Elevated Risk of Developing Caries¹

Strength of recommendations: Each recommendation is based on the best available evidence. The level of evidence available to support each recommendation may differ.



Strong

Evidence strongly supports providing this intervention



In favor

Evidence favors providing this intervention



Weak

Evidence suggests implementing this intervention only after alternatives have been considered



Expert Opinion For

Evidence is lacking; the level of certainty is low. Expert opinion guides this recommendation



Expert Opinion Against

Evidence is lacking; the level of certainty is low. Expert opinion suggests not implementing this intervention



Against

Evidence suggests not implementing this intervention or discontinuing ineffective procedures

Age Group or Dentition Affected	Professionally-Applied Topical Fluoride Agent	Prescription-Strength, Home-Use Topical Fluoride Agent
Younger than 6 years	2.26% fluoride varnish at least every 3 to 6 months ● In Favor	
6-18 years	2.26% fluoride varnish at least every 3 to 6 months ● In Favor OR 1.23% fluoride (APF*) gel for 4 minutes at least every 3 to 6 months ● In Favor	0.09% fluoride mouthrinse at least weekly ● In Favor OR 0.5% fluoride gel or paste twice daily ● Expert Opinion For
Older than 18 Years	2.26% fluoride varnish at least every 3 to 6 months ● Expert Opinion For OR 1.23% fluoride (APF*) gel for 4 minutes at least every 3 to 6 months ● Expert Opinion For	0.09% fluoride mouthrinse at least weekly ● Expert Opinion For OR 0.5% fluoride gel or paste twice daily ● Expert Opinion For
Adult Root Caries	2.26% fluoride varnish at least every 3 to 6 months ● Expert Opinion For OR 1.23% fluoride (APF*) gel for 4 minutes at least every 3 to 6 months ● Expert Opinion For	0.09% fluoride mouthrinse daily ● Expert Opinion For OR 0.5% fluoride gel or paste twice daily ● Expert Opinion For

Additional Information:

- 0.1% fluoride varnish, 1.23% fluoride (APF*) foam, or prophylaxis pastes are not recommended for preventing coronal caries in all age groups (● Expert Opinion Against or ● Against). See JADA publication for recommendation strength by age group.¹ The full report, which includes more details, is available at ebd.ada.org.
- No prescription-strength or professionally-applied topical fluoride agents except 2.26% fluoride varnish are recommended for children younger than 6 years (● Expert Opinion Against or ● Against), but practitioners may consider the use of these other agents on the basis of their assessment of individual patient factors that alter the benefit-to-harm relationship.
- Prophylaxis before 1.23% fluoride (APF*) gel application is not necessary for coronal caries prevention in all age groups (● Expert Opinion Against or ● Against). See JADA publication for recommendation strength by age group.¹ No recommendation can be made for prophylaxis prior to application of other topical fluoride agents. The full report, which includes more details, is available at ebd.ada.org.

*APF: Acidulated phosphate fluoride

Patients at low risk of developing caries may not need additional topical fluorides other than over-the-counter fluoridated toothpaste and fluoridated water.

Using Topical Fluoride Agents for Caries Management and Prevention

Determination of Caries Risk: There are many systems to determine caries risk [see ADA*, AAPD**].

Individual risk factors increasing risk for developing caries may include, but are not limited to:

- Active caries in previous 12 months
- High titers of cariogenic bacteria
- Poor oral hygiene
- Drug/alcohol abuse
- Poor family dental health
- Cariogenic diet
- Genetic abnormality of teeth
- Many multi-surface restorations
- Chemo or H/N radiation therapy
- Eating disorders
- Active orthodontic treatment
- Irregular dental care
- Suboptimal fluoride exposure
- Developmental or acquired enamel defects
- Prolonged nursing (bottle or breast)
- Presence of exposed root surfaces
- Restoration overhangs and open margins
- Physical or mental disability with inability or unavailability of performing proper oral health care
- Xerostomia (medication, radiation, or disease-induced)

* ADA.org/5157.aspx?currentTab=2

** www.aapd.org/media/Policies_Guidelines/G_CariesRiskAssessment.pdf

Recommended Topical Fluoride Agents	Fluoride Concentration		
	PPM Fluoride	Percent Fluoride	Percent Sodium Fluoride
Professionally-applied Agents:			
2.26% fluoride varnish	22,600	2.26	5.0
Acidulated phosphate fluoride (APF) gel (with 0.1 M phosphoric acid)	12,300	1.23	2.7
Prescription-strength, Home-Use Agents:			
Gel or paste with or without acidulation (0.1M phosphoric acid)	5,000	0.50	1.1
Mouthrinse	900	0.09	0.2

The following were not reviewed, but are presented as a reference:

Over-the-counter Strength:

- Toothpaste with 1150 ppm (0.12%) fluoride or less [i.e., 0.25% sodium fluoride]
- Mouthrinse with 100 ppm (0.01%) or 225 ppm (0.02%) fluoride [i.e., 0.02/0.05% sodium fluoride]

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