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1 Policy on Use of Fluoride

2

3 Review Council

4 Council on Clinical Affairs

5 Revised

6 ~~2014*~~, 2018

7 ~~*Revisions limited to ADA 2014 guidelines regarding use of fluoride toothpaste in young children.~~

8

9 Purpose

10 ~~The American Academy of Pediatric Dentistry (AAPD), affirms ing that the appropriate use of~~
11 ~~fluoride as an adjunct in the prevention of caries is a safe and effective. adjunct in an individualized-~~
12 ~~prevention plan. The AAPD in reducing the risk of caries and reversing enamel demineralization,~~
13 ~~encourages dentists and other health care providers, public health officials, health care providers, and~~
14 ~~parents/caregivers to optimize fluoride exposure based on a caries risk assessment. The American~~
15 ~~Academy of Pediatric Dentistry (AAPD), affirms that the use of fluoride as an adjunct in the~~
16 ~~prevention of caries is safe and effective. The AAPD encourages dentists and other health care~~
17 ~~providers, public health officials, and parents/caregivers to optimize fluoride exposures to reduce the~~
18 ~~risk for caries and to enhance the remineralization of affected tooth structures.~~

19

20 Methods

21 This document was originally developed by the Liaison with Other Groups Committee and adopted in
22 1967. This is an update from the last revision in 2013~~4~~. An electronic database search using the terms
23 fluoride, fluoridation, acidulated phosphate fluoride, fluoride varnish, fluoride therapy, and topical
24 fluoride was previously conducted to develop and update this policy. The current update relied upon
25 systematic reviews, expert opinions and best current practices ~~also were relied upon for this policy.~~
26 The use of silver diamine fluoride is addressed in a separate AAPD policy.(Policy on the Use of
27 Silver Diamine Fluoride for Pediatric Dental Patients, 2017)

28

29 Background

30 The adjustment of the fluoride level in community water supplies to optimal concentration is the most
31 beneficial and inexpensive method of reducing the occurrence of caries.¹ ~~Epidemiologic data from the~~
32 ~~last half century indicate reductions in caries of 55 to 60 percent, and recent data show caries-~~

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33 reduction of approximately 25 percent, without significant enamel fluorosis, when domestic water
34 supplies are fluoridated at an optimal level.² Evidence accumulated from long Long-term use of
35 fluorides has demonstrated that reduced the cost of oral health care for children can be reduced by as
36 much as 50 percent.³ ~~These savings in health dollars accrue to private individuals, group purchasers,~~
37 ~~and government care programs.~~ When public water is fluoridated to an optimal level, there is a 35%
38 percent reduction in decayed, missing, filled primary teeth and 26% percent less decayed, missing,
39 and filled permanent teeth. (Iheozor-Ejiofor Z, 2015) The occurrence of fluorosis, causing esthetic
40 concerns, has been reported to be 12% percent when public water contains 0.7 ppm F. (Iheozor-
41 Ejiofor Z, 2015)

42
43 An even higher caries reduction can be obtained if the proper use of fluorides is combined with other
44 dietary, oral hygiene, and preventive measures⁴ as applied or prescribed by a dentist or physician
45 familiar with the child's oral health and family history caries risk assessment. When combined with
46 other dietary, oral hygiene and preventive measures⁴, the use of fluorides can reduce the incidence of
47 caries.

48
49 Professional fluoride products should only be applied by or under the direction of a dentist or
50 physician who is familiar with the child's oral health and has completed a caries risk assessment.
51 A large body of literature supports the incorporation of optimal fluoride levels in drinking water
52 supplies. When fluoridation of drinking water is impossible, effective fluoride supplementation can
53 be achieved through the intake of daily fluoride supplements, according to established guidelines^{1,12-14}
54 ¹³⁻¹⁵ . Before supplements are prescribed, it is essential to review dietary sources of fluoride (eg, all
55 drinking water sources, consumed beverages, prepared food, toothpaste) to determine the patient's
56 true exposure to fluoride^{1,5,6} , and to take into consideration the caries risk of the child. The mean
57 Ffluoride concentration of ready-to-use feed infant formulas in the U.S. and Canada ranges from is
58 0.15ppm for milk-based formulas to and 0.3 0.21ppm for soy-based formulas.mg/L⁷, which provides
59 only a modest source of fluoride. The more important issue, however, is the fluoride content of
60 concentrated or powdered formula when reconstituted with fluoridated water. The range of fluoride in
61 ppm for reconstituted powdered or liquid concentrate, when reconstituted with water containing 1ppm
62 fluoride, is 0.64 – 1.07.⁷ Considering the potential for mild fluorosis, caution is advised for infants
63 consuming formula that is reconstituted with optimally fluoridated water.⁸As the Environmental
64 Protection Agency/Department of Health and Human Services' recommendation^{9,16} for optimizing
65 community water supplies to 0.7 ppm F is instituted, fluorosis due to reconstituting infant formula

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66 with fluoridated water ~~will be less~~ is less of an issue.

67

68 Significant cariostatic benefits can be achieved by the use of over-the-counter fluoride-containing
69 preparations such as toothpastes, gels, and rinses, especially in areas without water fluoridation.¹ The
70 brushing of teeth with appropriate amounts of fluoride toothpaste twice daily for all children is
71 encouraged.¹¹ Monitoring children's use of topical fluoride- containing products, including toothpaste,
72 may prevent ingestion of excessive amounts of fluoride.^{10,11} Numerous clinical trials have confirmed
73 the anti-caries effect of professional topical fluoride treatments, including 1.23 percent acidulated
74 phosphate fluoride [APF; 1.23% F], ~~and five percent neutral sodium~~ 5 percent sodium fluoride
75 varnish [NaFV; 2.26% F], 0.09 percent fluoride mouthrinse, and 0.5 percent fluoride gel/paste.^{11,12}
76 For children under the age of 6 years, 5 percent sodium fluoride varnish [NaFV; 2.26% F], is the
77 professionally applied topical fluoride of choice.¹²

78

79 A significant number of parents and caregivers are concerned about their child receiving fluoride and
80 may refuse fluoride treatment even though fluoride is safe and effective. (Chi 2014) This is similar to
81 opposition to community water fluoridation (Melbye and Armfield 2013). Topical fluoride refusal
82 and resistance may be a growing problem and mirror trends seen with vaccination refusal in
83 medicine.

84

85 Policy statement

86 The AAPD:

- 87 • Endorses and encourages the adjustment of fluoride content of ~~domestic community public~~
88 drinking water supplies to optimal levels where feasible.
- 89 • Endorses the supplementation of a child's diet with fluoride according to established
90 guidelines^{11,12,14,13-15}-when fluoride levels in ~~community water supplies~~ public drinking water
91 are suboptimal and after consideration of ~~sources~~ sources of dietary sources of fluoride and the caries
92 risk of the child.
- 93 • Encourages the brushing of teeth with appropriate amounts of fluoride toothpaste twice daily
94 for all children¹¹.
- 95 • Encourages the application of professional fluoride treatments for ~~all children~~ all individuals
96 at risk for dental caries.
- 97 • Encourages dental professionals to inform medical peers of the potential of enamel fluorosis

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98 when excess fluoride is ingested prior to enamel maturation.

99 • Encourages the continued research on safe and effective fluoride products.

100 • Supports the delegation of fluoride application to auxiliary dental personnel or other trained
101 allied health professionals by prescription or order of a dentist after a comprehensive oral
102 examination, or by a physician after a dental screening and caries risk assessment ~~has~~ have
103 been performed.

104 • Encourages all beverage and infant formula manufacturers to include fluoride concentration
105 with the nutritional content on food labels.

106 ~~• encourages dentists and other health care providers to educate parents that infant formula, if~~
107 ~~constituted with optimally fluoridated water, contains fluoride. Dentists and other health care~~
108 ~~providers, therefore, should assist parents in determining the infant's fluoride exposure.~~

109 • Recognizes that drinking fluoridated water and brushing with fluoridated toothpaste ~~at least~~
110 twice daily are ~~perhaps~~ the most effective method in reducing dental caries prevalence in
111 children.

112 • Encourages dental providers to talk to parents and caregivers about the benefits of fluoride
113 and to proactively address fluoride hesitance through chairside and community education.

114

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