

Are Fluoride Mouthrinses Effective in Caries Prevention in Adults?

Ziad Al Asmar, Martin Mangoni, Vivian Song, Han Wen Yu

Clinical Problem

Caries are one of the most common and widespread oral diseases today. They cause damage and weakening of the tooth structure, which can lead to infection, pain, and poor nutritional intake. Although caries disease is extremely prevalent, it can be well controlled with proper oral hygiene, dietary habits and the use of fluorides.

Clinical Question

How effective are Fluoride mouthrinses for caries prevention in adults, compared to non-use or other caries prevention products (e.g., F toothpaste)?

Evidence Search

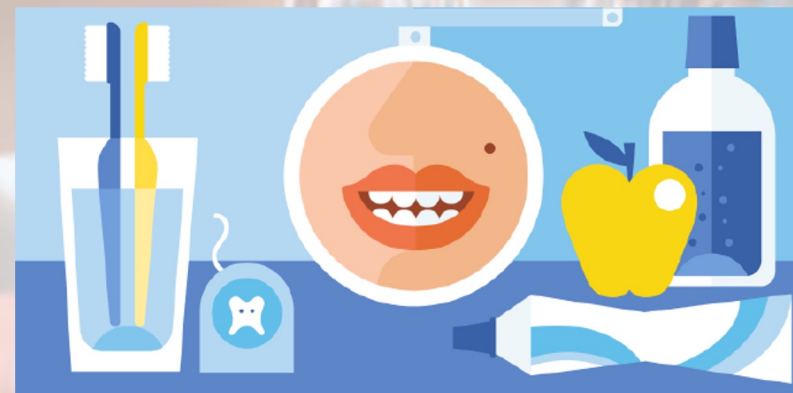
Search date: November 20th, 2021
PubMed results: 138 evidence sources
Additional search: ADA EBD web site
(<https://ebd.ada.org/en/evidence/evidence-by-topic>) : under publications

References

Eyant RJ, Tracy SL, Anselmo T, Beltrán-Aguilar ED, Donly KJ, Frese WA, et al. Topical fluoride for caries prevention. J Am Dent Assoc. 2013;144(11):1279–91. Available from: <https://doi.org/10.14219/jada.archive.2013.0057>
Zhang, J., Sardana, D., Li, K. Y., Leung, K., & Lo, E. (2020). Topical Fluoride to Prevent Root Caries: Systematic Review with Network Meta-analysis. Journal of dental research, 99(5), 506–513. <https://doi.org/10.1177/0022034520906384>

Clinical Bottom Line

There is low to moderate quality evidence suggesting that home-use of 0.05% and 0.2% sodium fluoride mouthwashes in adults as an additional preventive measure may be effective in the prevention of caries in adults compared to non-use and other preventive products. The use of 0.05% F mouth rinse + 1100-1500 ppm F toothpaste or 0.2 % NaF mouth rinse also maybe effective in root caries control.



Results

Evidence quality

- Moderate certainty evidence recommending the use of 0.2% sodium fluoride mouthwash for coronal caries in adults.
- Clinical significance in using 1100-1500 ppm F toothpaste + 0.05% F mouth rinse and 0.2 % NaF mouth rinse for root caries prevention (Zhang et al. 2020).

Strengths

- Specific intervention of interest. Multiple databases searched. Multiple studies included. studies observed the severity of root caries similar to the national average according to CHMS. Low bias due to: deviations from the intended intervention, missing outcome data, measurement of the outcome, selection of the reported result. Network Meta-Analysis.

Limitations

- Limitations of studies include a somewhat concerning bias related to randomisation, small number of relevant included studies, different fluoride levels in water, focus only on older age of sample population, differences in location and settings. Studies includes no mention of conflicts of interest nor does it mention sample sizes of the studies used to generate their clinical guidelines

Applicability

- Articles' population were either elderly (65 years and older) or children data extrapolated to adult data
- Sufficient follow-up period to measure the effects on caries prevention (2-4 years)
- Fluoride mouthrinses cheaply available in Canada, an affordable method of prevention
- Studies from 8 countries, representing Canada's diversity, but also differences in setting and water fluoridation levels compared to Montreal
- Fluoride mouthrinses should be used as an adjunct to therapy due to benefits significantly outweighing the harms

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