



Milk Fluoridation

Full Summary

Description:

Milk fluoridation was first reported in Switzerland by pediatrician Ziegler in the early 1950s¹. Since then, milk in fluoride has been investigated in community caries prevention programs. The World Health Organization (WHO) has supported milk fluoridation as an alternative to water fluoridation, in the United Kingdom (UK), China, Peru and Thailand^{2, 3}. Fluoride in milk directly targets children. However, the amount of milk consumption varies. There are also concerns about lower absorption of fluoride from milk. Compared to water fluoridation, regulation of fluoride in milk and monitoring the levels of fluoride in milk are challenging. Studies conducted in Hungary, Chile and Scotland have reported that milk fluoridation is effective when starting intake in early childhood and when maintaining consumption for at least 180 days in a year. Two clinical studies in Budapest and Glasgow were conducted to evaluate milk fluoridation². These studies found milk fluoridation to be effective in decreasing the mean DMFS by 85% in the Budapest study and 43% in the Glasgow study. In a Cochrane review on milk fluoridation 2 randomized clinical trials with 353 children were included for analysis¹. The authors reported that there was a significant difference in the DMFT for permanent and primary teeth after 3 years in one study but not the other. The review reported that the data suggest that milk fluoridation appears to be beneficial to the permanent dentition; however, more data is needed to provide the highest level of evidence for practice. A community trial in Bulgaria included 204 6-year old children randomly selected and were examined at baseline and at 3.5 years⁴. The caries reduction in the primary teeth was 40% and in the permanent teeth it was 90%. In this study the authors reported that milk fluoridation is more efficient when the intervention starts earlier in life. Another study in Bulgaria that included children aged 4.5 years at the starts of the study reported similar reduction in dental caries; however, the effect was strongest in the first 2-3 years of the program⁵. Currently milk fluoridation programs exist in several countries including Bulgaria, Chile, China, Peru, the Russian Federation, Thailand and the UK^{1, 3}. In a review on safety milk fluoridation was reported to be safe and fluorosis, if any, was mild⁶. No other adverse effects have been reported.



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