



Milk Fluoridation

Case Study

Case Study: Chile

The feasibility and effectiveness of using fluoride in powdered milk in a community prevention program was tested in 1994 by the Institute of Nutrition and Food technology (INTA) in Chile.¹ The National Feeding Program in Chile (PNAC) is a government program where every child is entitled to receive 2 kilograms (kgs) of powdered milk per month at no extra cost from birth to two years of age. Thereafter the child is entitled to 1kg of milk derivative per month. The INTA decided to assess the feasibility of using PNAC products as a fluoride vehicle since PNAC products reach 90% of the national population in Chile.¹ The dose from fluoridated powdered milk ranged from 0.25 mg to 0.75 mg depending on the age of the children. Cross-sectional samples of children aged 3 to 6 years from 1994-1999 were compared to a control community. The control community received the PNAC milk products without the addition of the fluoride supplement. The results showed a reduction of 72% in the primary dentition. The proportion of caries-free children increased from 22% to 48%. Another study evaluated the effectiveness of using fluoridated milk products on the permanent dentition among school-children.² The fluoridated milk products were delivered to 35,000 school children through schools' standard feeding program. Cross-sectional samples of children aged 6, 9 and 12 years were compared to control communities with ongoing APF-gel programs. The caries reductions ranged from 24-27% at 36 months. When compared to the control communities there was no significant difference. However given the cost and technical difficulties of the APF-gel programs the fluoridated milk was reported as an effective alternative caries prevention program. The cost effectiveness evaluation of using fluoridated powdered milk and milk products in community programs reports \$5 savings per diseased tooth after 4 years when compared to the control group.³



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References:

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