



Milk Fluoridation

Case Study

Case Study: Milk Fluoridation to Prevent Caries in China

The purpose of this community-based demonstration study of young Chinese children was to examine the effect of milk fluoridation on caries development. Children from the intervention schools (n=524) consumed 200 ml of fluoridated milk (concentration 2.5 mgF per litre) per day on school days and were provided two packs of fluoridated milk (250 ml) to consume at home on weekends. A concentrated sodium fluoride solution was prepared at Peking University and delivered to the local dairy that then prepared the fluoridated milk and delivered it to the intervention kindergartens. Children from schools within the same district that declined to participate served as the control group (n=305). Children in the control group occasionally had milk on their cereal. The fluoride level in the community water was less than 0.3 mg/l and in the locally available cow's milk, below 0.02 mg/l. Children were examined at baseline by four dentists and again after 21 months by a blinded dental epidemiologist and three of the four original dentists who were not all blinded. Exams were conducted using portable lights, mouth mirrors and sickle-shaped probes.

After 21 months, 417 (78%) children in the intervention group and 247 (81%) children in the control groups were available for the examinations. There was a statistically significant difference in the mean dmft in the intervention versus control groups, 0.4 and 1.3 respectively, $P < 0.001$. There was also a higher rate of arrested lesions in the intervention group; 0.3 vs. 0.1; $P < 0.001$. The authors concluded that consumption of



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fluoridated milk by the kindergarten children in Beijing was an effective measure in preventing caries in the primary teeth and in arresting incipient caries.

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