

Substantial consumption of fluoride increases chance of mild fluorosis

October 25 2010

Young children who consume substantial amounts of fluoride through infant formula and other beverages mixed with fluoridated water or by swallowing fluoride toothpaste have an increased chance of developing mild enamel fluorosis, according to research published in the October issue of *The Journal of the American Dental Association* and supported by the National Institute of Dental and Craniofacial Research. Children can continue using fluoridated water and fluoride toothpaste because fluoride has been proven to prevent tooth decay, and mild fluorosis does not negatively affect dental health or quality of life.

"Nearly all of the fluorosis in our study participants was mild. A recent review of the effects of mild dental fluorosis on oral health–related quality of life concluded that the effect of mild fluorosis was not adverse and could even be favorable," according to the study. "This suggests that concerns about mild dental fluorosis may be exaggerated. Therefore, no general recommendations to avoid use of fluoridated water in reconstituting infant formula are warranted. "

According to the American Dental Association, mild enamel fluorosis appears as barely noticeable faint white lines or streaks on tooth enamel that may occur when children ingest excess [fluoride](#) while their teeth are developing.

Researchers concluded that substantial fluoride consumption from beverages with fluoridated water, including infant formula, by children between the ages of 3 to 9 months, elevates a child's prospect of

developing mild enamel fluorosis. Substantial fluoride consumption from beverages with fluoridated water and from fluoride toothpaste by children between the ages of 16 to 36 months also elevates a child's probability of developing mild enamel fluorosis.

The American Academy of Pediatrics recommends breastfeeding for infants. If parents are concerned about reducing the chances of their infants developing mild fluorosis through consuming substantial amounts of infant formula mixed with fluoridated water, the researchers suggest that they consult with their family dentist or physician. The researchers also encourage parents to follow recommendations to use small (smear or pea-sized) amounts of fluoridated toothpaste and ensure proper supervision of the child's tooth brushing.

Researchers recruited mothers of newborn infants from eight Iowa hospital postpartum wards between 1992 and 1995 for their children's participation in what would become known as the Iowa Fluoride Study, an investigation of dietary and non-dietary fluoride exposures, dental fluorosis and dental cavities. Researchers sent questionnaires to the parents at regular intervals and 630 children underwent visual dental examinations using standardized techniques and portable equipment. The leader of the research team was Steven M. Levy, D.D.S., M.P.H., the Wright-Bush-Shreves Endowed Professor of Research in the Department of Preventive and Community Dentistry at the University of Iowa's College of Dentistry and Professor of Epidemiology at the College of Public Health.

Provided by American Dental Association

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