

HEALTH: TAP WATER: INFANT TEETH

Health Canada downplays fluoride fears

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For the past year, the American Dental Association has warned parents that if their tap water is fluoridated, they shouldn't use it to make infant formula. The worry: It could cause children to develop mottled teeth.

Canadian health authorities haven't made a similar call, even though the amounts of fluoride that prompted the U.S. recommendation are also found in many Canadian municipal water supplies.

Now, some health experts contend that Health Canada and the Canadian Dental Association have made a mistake in failing to tell parents their children are at greater risk of the mottling - a condition known as dental fluorosis - if they used fluoridated water for reconstituting baby formula. But both the federal agency and the CDA reject these assertions.

"The American Dental Association now recognizes that problem and has sent out their warning. I, for the life of me, don't understand why the Canadians don't follow that lead," said Hardy Limeback, the head of preventive dentistry at the University of Toronto's faculty of dentistry.

"The days of wholesale deliberate fluoridation ... are numbered," said Warren Bell, a former head of the Canadian Association of Physicians for the Environment, who also is concerned that Canadian health authorities haven't issued the same advice as U.S. dentists.

The ADA recommendation applies to infants under one year of age who consume a lot of formula, typically a litre or more a day. These children "are at risk for developing some level of dental fluorosis," says Howard Pollick, professor at the school of dentistry of the University of California, San Francisco, and an ADA spokesman.

Fluorosis, in mild forms, causes faint white streaking in teeth and is considered a cosmetic problem, but in severe cases causes disfiguring staining of teeth.

Dr. Pollick said the risks occur at the level of fluoride recommended for U.S. water systems of 0.7 parts per million in warmer areas (where people tend to drink more water) to 1.2 ppm of fluoride in cooler areas. Health Canada recommends fluoridation at 0.8 ppm to 1 ppm, and about 43 per cent of Canadians drink from municipal systems that use the chemical. Fluoride is added in trace amounts to water because it makes teeth more resistant to decay.

At typical U.S. water fluoridation levels, about 10 per cent of infants who drink a high volume of reconstituted formula would exceed the maximum exposure limit for the chemical, according to Dr. Pollick.

For children at risk, the ADA recommends parents make formula with either distilled water or water treated by reverse osmosis. The procedures remove fluoride.

In a statement made in response to e-mailed questions by The Globe and Mail about why Canada isn't matching the ADA, Health Canada played down the U.S. action.

It said the biggest risk factor for fluorosis is the cumulative amount of fluoride ingested over a child's first three years of life, so any overexposure while on formula may be offset later, although the government agency doesn't do much to publicize to parents that they can use this approach to minimize the risk of infants getting too much of the chemical.

"In other words, possible higher exposure in the first year would be mitigated by lower exposures in the subsequent two years of life when not on infant formula," Health Canada said.

Both Health Canada and the Canadian Dental Association say an additional safety factor is that the amount of fluoride considered dangerous by the U.S. Environmental Protection Agency is 4 ppm, far above the similar safety figure of 1.5 ppm in Canada.

"We don't expect to see fluorosis as a problem by using our tap water to make baby formula," said Darryl Smith, president of the Canadian Dental Association.

However, Dr. Pollick said the EPA safety level didn't figure into its recommendation, which was based on the far lower levels of fluoride found at municipal water systems. "We're not talking about the EPA's upper limit here," he said.

The ADA recommends that rather than using formula, mothers breastfeed infants. Human breast milk contains about 1/100th of the fluoride that is in treated municipal water.

The recommendation to avoid fluoridated water applies only to infants. For the rest of the population, the ADA continues to recommend fluoridated water to prevent tooth decay.