



Public Health Branch
Community and Health Services Department

Memorandum

To: Members of Committee of the Whole

From: Dr. Karim Kurji
Medical Officer of Health

Date: June 15, 2017

Re: **Alternative Approaches to the Current Community Water Fluoridation in the Region of Peel**

On May 11, 2017, York Region's Committee of the Whole received a letter from the Region of Peel regarding the decision to use alternative approaches to community water fluoridation. Further information pertaining to the decision outlined in the letter was requested of the Medical Officer of Health at that time.

Background

On February 11, 2016, the Region of Peel established the Community Water Fluoridation Committee (Committee) in response to repeated concerns and objections from regional residents and a small minority of the scientific community. The Committee was established to examine the practice of fluoridation and to make a recommendation to Peel Regional Council on community water fluoridation. Over the course of a year, the evidence from scientific studies, and the recommendations from regional staff were reviewed by the Committee. They also re-examined the benefits and potential risks associated with adding fluoride to the municipal drinking water system. To support the Committee in making an informed recommendation, Regional staff provided the Committee with the following information:

- History of fluoridation, including data from the World Health Organization;
- Legislative framework;
- Water fluoridation process (e.g., current additives and alternative approaches);
- Sources of fluoride (e.g., toothpaste and fluoride varnish);
- Evidence on the effectiveness, dental fluorosis and safety of fluoride; and
- Responses to Committee questions on related topics (e.g., questions regarding specific research/studies).

Objections and concerns were focused on the residual components that are released in the drinking water as a result of the fluoride additive used by the Region of Peel. As an example, lead residuals are occasionally found in the Hydrofluorosilicic acid (HFSA) produced from phosphate rock that is used to treat the Region's drinking water supply. While the levels found consistently measure at concentrations below the legislated maximum acceptable concentration in drinking water, the Committee wanted staff to provide more information and recommendations on how to address the public concerns and objections to the use of said specific fluoride additive.

In October, 2016, Liberal MPP Bob Delaney brought forward a motion in the Ontario Legislature requesting that the province replace the *Fluoridation Act* with an amendment to the *Health Protection and Promotion Act* making water fluoridation mandatory and the portions of the *Municipal Act, 2001* be removed that gives municipalities the ability to cease fluoridation for drinking water treatments or fail to start them. On October 6, 2016, a non-binding motion was passed in the Ontario legislature to ban cities from removing fluoride from their water supplies. The motion is more symbolic than prescriptive in that it does not bind the Ontario government to adopt a specific policy or course of action.

On February 9, 2017, Peel Regional Council approved the recommendation from the Committee to advocate the provincial government in regards to the provincial role in community water fluoridation. Peel Regional Council agreed to ask the province to conduct its own toxicity tests on the additives used to fluoridate drinking water across Ontario based on the evidence and information reviewed by the Committee.

While awaiting a decision from the province, Peel Regional Council reviewed additional recommendations made by the Committee related to community water fluoridation. The benefits, risks and costs associated with each of four options were presented:

- Option 1: Maintain current practice of community water fluoridation
- Option 2: Change fluoridation additive used in Peel
- Option 3: Discontinue community water fluoridation
- Option 4: Implement a fluoride varnish program

On February 23, 2017, Peel Regional Council voted in support of changing the fluoridation additive used in the Region's drinking water as the best course of action. The fluoridation product used in its South Peel Drinking Water System (HFSA from phosphate rock) would be changed to calcium fluoride from the supplier Control Chem Canada. Before the new additive could be introduced into the Region's water supply, Peel Region would fully deplete the existing fluoride supply. As of May 11, 2017, the new fluoridation product had been fully introduced into the two water treatment plants drawing from Lake Ontario.

Council also approved the resolution to reduce the concentration of fluoride in Peel's lake-based municipal water supply by adjusting it to the lowest concentration level in accordance with provincial standards for the prevention of tooth decay, the American

Water Works Association (AWWA), the NSF/ANSI Standard 60, and Health Canada with regards to the standards for all additives used in water treatment processes. These were interim measures, taken until such time that the provincial government came back to the Region of Peel with a decision regarding treatment additives or continuation of fluoridation in the province.

What is the Impact to York Region?

There is no impact to fluoride levels in York Region at this time. Fluoride levels are monitored closely to ensure optimum levels are maintained, as outlined in the *Ontario Public Health Standards*. Depending upon the source of drinking water, fluoride levels vary. Continuous water sampling shows that all sources are safe and consistently well below the maximum recommended level of fluoride or within the optimal range of 0.6 to 0.8 mg/L. At all York Region, City of Toronto and Region of Peel drinking water treatment plants where fluoride is added to drinking water, fluoride levels are continuously monitored to ensure the water meets the requirements of the province.

The Cities of Markham and Vaughan, the Town of Richmond Hill, and the Township of King are supplied with fluoridated water through connection to the Region of Peel's and City of Toronto's water systems. The City of Toronto also adds HFSA derived from calcium fluoride to its drinking water. York Region staff will continue to monitor the fluoride levels in the water that is received through both water systems. In Georgina, only Keswick, Sutton and the lake communities in between currently receive drinking water fluoridated with HFSA (phosphate rock). Mixed surface and groundwater supplies serve the Towns of Aurora, Newmarket, Whitchurch-Stouffville, and parts of East Gwillimbury. Mixing the sources of water results in drinking water that is slightly below the optimal levels (see Attachment 1).

What's next for York Region?

Environmental Services and Public Health will continue to monitor and act on any changes in the fluoride levels as a result of the change in fluoridation additives and level of fluoridation in the drinking water received by York Region residents from the Region of Peel.

Dr. Karim Kurji
Medical Officer of Health

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Fluoride Information

- Over 90 national and international professional health organizations, including the Canadian Dental Association, support using fluoride to help prevent dental cavities.
- Fluoride is a mineral found naturally in our environment and has been proven to prevent tooth decay.
- Fluoride can be found in food, drinking water, toothpaste and in fluoride treatments.
- Fluoride strengthens tooth surfaces, prevents dental decay and reduces tooth sensitivity.
- Incorrect use of fluoride may result in mild fluorosis, which looks like chalky white or light brown spots on adult teeth. Talk to your health care provider to discuss specific fluoride recommendations for your child.
- Fluoride supplements like chewable tablets, lozenges or drops are not generally recommended for Canadians. However, your health care provider might recommend fluoride supplements if your child is at high risk for developing dental cavities.
- Use of a fluoride mouth rinse is not recommended for children under six years of age as they may swallow significant amounts of the rinse. For children over six years of age consult the manufacturer's directions prior to using rinses or mouth wash. Please consult your health care provider before using fluoride rinses.
- If you use infant formula, prepare it with fluoridated water to help your baby's permanent teeth that are developing. Well water might have a higher level of natural fluoride and Health Canada recommends well water be tested* before mixing with infant formula. Talk to your health care provider about fluoride concentration levels if you are preparing infant formula with well water.

* This service is offered by private labs for a fee.



Fluoride Toothpaste Recommendations

- Children under three years of age should use only water or a rice grain-sized amount of **non-fluoridated** toothpaste.
- Children three years of age and older should use a green pea-sized amount of **fluoridated** toothpaste if they are able to spit.
- Children up to six years of age are not able to brush their teeth properly, so you will have to do it for them. Let them have a turn brushing when you are done.
- Brush twice a day, especially at bedtime.
- Teach your child to spit out the toothpaste and to rinse well after brushing.



Community Water Fluoridation in York Region

Fluoride levels throughout the Region vary depending on the drinking water source. Water sampling shows that all sources are safe and consistently well below the maximum recommended level of fluoride. Optimal levels of fluoride are 0.6 to 0.8 ppm.

- In Georgina, only Keswick, Sutton and the lake communities in between currently receive fluoridated drinking water.
- The Cities of Markham and Vaughan, the Town of Richmond Hill and the Township of King are supplied with fluoridated water through connection to the Region of Peel's and City of Toronto's water systems. The City of Toronto has been fluoridating their water since 1963.
- Mixed surface and groundwater supplies serve the Towns of Aurora, Newmarket, Whitchurch-Stouffville and parts of East Gwillimbury. Mixing the sources of water results in drinking water that is slightly below the optimal 0.6 to 0.8 ppm fluoride concentration.
- At all York Region, City of Toronto and Region of Peel drinking water treatment plants where fluoride is added to drinking water, fluoride levels are continuously monitored to ensure the water meets the requirements of the Province of Ontario.



For more information about fluoridated water in York Region visit york.ca/water

To speak with a registered dental hygienist, call York Region Public Health Dental Program at 1-800-735-6625 or visit york.ca/dental for more information.



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York Region Health Connection

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