

Supplemental Table 1.

Fluoridation status by site in Cycles 2 and 3 of the CHMS

Fluoride added to public water	Site	Region	Rationale for Classification
<b>CYCLE 2</b>			
No	Laval	Quebec	No evidence of fluoridation found in grey literature or online; classified as non-fluoridated by McLaren (2016).
	Coquitlam	British Columbia	Coquitlam's drinking water is provided by the Metro Vancouver watersheds, which are not fluoridated; Classified as non-fluoridated by McLaren (2016).
	North shore Montreal	Quebec	The water treatment plant that services north shore Montreal (Atwater et Des Bailleurs) does not add fluoride; classified as non-fluoridated by McLaren (2016).
	St. John's	Newfoundland	Classified as non-fluoridated by McLaren (2016); confirmed by St. John's Water Services website ( <a href="http://www.stjohns.ca/living-st-johns/city-services/water-services/">http://www.stjohns.ca/living-st-johns/city-services/water-services/</a> ).
	Richmond	British Columbia	Richmond is served by the Metro Vancouver watersheds, which are not fluoridated ( <a href="http://richmond.ca/shared/assets/2015_Water_Quality_Report44511.pdf">http://richmond.ca/shared/assets/2015_Water_Quality_Report44511.pdf</a> ); classified as non-fluoridated by McLaren (2016).
	Kingston	Ontario	The municipality of Kingston does not add fluoride to drinking water, ( <a href="https://www.utilitieskingston.com/pdf_downloads/KingSt-WTP_Annual_Report_2010.pdf">https://www.utilitieskingston.com/pdf_downloads/KingSt-WTP_Annual_Report_2010.pdf</a> ); classified as non-fluoridated by McLaren (2016)
	Gaspésie	Quebec	A representative from the Quebec government confirmed by email that there is no fluoride added to any municipalities in Gaspésie; classified as non-fluoridated by McLaren (2016).
<b>CYCLE 3</b>			
No	East Montreal	Quebec	Online sources including a map of water treatment plants in Montreal confirms that the water treatment plant that services East Montreal (Atwater et Des Bailleurs) does not add fluoride.
	South Central Laurentians	Quebec	This site is comprised of a number of regional municipalities likely including Les Laurentides, Argenteuil, Deux-Montagnes, La Rivière-du-Nord, Les Pays-d'en-Haut, Mirabel, Thérèse-De Blainville. Municipal government employees from Deux-Montagnes, Les Pays-d'en-Haut and Mirabel. Municipalities in Thérèse-De Blainville stopped fluoridation in 2002 according to <a href="http://blogues.radio-canada.ca/rive-sud/2013/07/03/buvez-vous-de-leau-fluoree/">http://blogues.radio-canada.ca/rive-sud/2013/07/03/buvez-vous-de-leau-fluoree/</a>

Orillia	Ontario	A presentation by the regional health authority confirms that Orillia has never added fluoride ( <a href="http://www.simcoemuskokahealth.org/docs/default-source/topic-oralhealth/cwffactsheetpublic">http://www.simcoemuskokahealth.org/docs/default-source/topic-oralhealth/cwffactsheetpublic</a> )
Victoria-Saanich	British Columbia	The Greater Victoria Drinking Water Quality Annual Reports confirm that fluoride is not added to the drinking water in Greater Victoria.
Vancouver	British Columbia	The Metro Vancouver website (drinking water treatment processes page) confirms that fluoride is not added to the water supply ( <a href="http://www.metrovancouver.org/services/water/quality-facilities/facilities-processes/treatment-process/Pages/default.aspx">http://www.metrovancouver.org/services/water/quality-facilities/facilities-processes/treatment-process/Pages/default.aspx</a> )

## CYCLE 2

Yes	Central and East Ottawa	Ontario	The website of the City of Ottawa's Water and Environment department confirms that fluoride is added to the drinking water. See: <a href="http://ottawa.ca/en/residents/water-and-environment/drinking-water-and-wells/fluoride">http://ottawa.ca/en/residents/water-and-environment/drinking-water-and-wells/fluoride</a>
	Oakville	Ontario	Oakville is part of the region of Halton, which states that they According to the Halton region website, "the Region adds fluoride to the water supplies in Burlington, Halton Hills, Oakville, and the new developments in Milton to bring it up to the recommended levels," i.e., 0.5–0.8 parts per million ( <a href="http://www.halton.ca/cms/one.aspx?pageId=15215">http://www.halton.ca/cms/one.aspx?pageId=15215</a> ).
	South of Brantford	Ontario	Annual drinking water reports confirm that Brantford continues to add fluoride to their water. Available from: <a href="http://www.brantford.ca/residents/health/water_quality/waterquality/Pages/MOEAnnualReport.aspx">http://www.brantford.ca/residents/health/water_quality/waterquality/Pages/MOEAnnualReport.aspx</a>
	Southwest Toronto	Ontario	All areas of Toronto add fluoride to their drinking water, as stated by: <a href="https://www.toronto.ca/311/knowledgebase/kb/docs/articles/toronto-water/water-treatment-and-supply/operations-efficiency/fluoridation-of-city-drinking-water-fluoride-levels.html">https://www.toronto.ca/311/knowledgebase/kb/docs/articles/toronto-water/water-treatment-and-supply/operations-efficiency/fluoridation-of-city-drinking-water-fluoride-levels.html</a>
	East Toronto	Ontario	All areas of Toronto add fluoride to their drinking water, as stated by: <a href="https://www.toronto.ca/311/knowledgebase/kb/docs/articles/toronto-water/water-treatment-and-supply/operations-efficiency/fluoridation-of-city-drinking-water-fluoride-levels.html">https://www.toronto.ca/311/knowledgebase/kb/docs/articles/toronto-water/water-treatment-and-supply/operations-efficiency/fluoridation-of-city-drinking-water-fluoride-levels.html</a>
	Winnipeg	Manitoba	Winnipeg adds fluoride to their drinking water according to their city website: <a href="http://www.winnipeg.ca/waterandwaste/water/fluorideFAQ.stm">http://www.winnipeg.ca/waterandwaste/water/fluorideFAQ.stm</a>
	Edmonton	Alberta	Edmonton adds fluoride to their drinking water at a level of 0.7ppm: <a href="https://www.epcor.com/products-services/water/water-quality/Pages/facts-about-fluoride.aspx">https://www.epcor.com/products-services/water/water-quality/Pages/facts-about-fluoride.aspx</a>

	Calgary	Alberta	Calgary began adding fluoride to the drinking water supply in 1991, and stopped fluoridation in May 2011. Therefore, during Cycle 2 data collection, Calgary was fluoridated. For more information see: <a href="http://www.calgary.ca/UEP/Water/Pages/Drinking-water/Fluoride.aspx">http://www.calgary.ca/UEP/Water/Pages/Drinking-water/Fluoride.aspx</a>
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**CYCLE 3**

<b>Yes</b>	Oshawa-Whitby	Ontario	Annual water treatment reports confirm the addition of fluoride to the municipal drinking water: <a href="https://www.durham.ca/en/living-here/resources/Documents/WaterandSewer/OWAWaterQualityReport2016.pdf">https://www.durham.ca/en/living-here/resources/Documents/WaterandSewer/OWAWaterQualityReport2016.pdf</a>
	North Toronto	Ontario	All areas of Toronto add fluoride to their drinking water, as stated by: <a href="https://www.toronto.ca/311/knowledgebase/kb/docs/articles/toronto-water/water-treatment-and-supply/operations-efficiency/fluoridation-of-city-drinking-water-fluoride-levels.html">https://www.toronto.ca/311/knowledgebase/kb/docs/articles/toronto-water/water-treatment-and-supply/operations-efficiency/fluoridation-of-city-drinking-water-fluoride-levels.html</a>
	Brampton	Ontario	The city of Brampton is part of the region of Peel, which adds fluoride across the region. See: <a href="http://www.peelregion.ca/health/fluoride/">http://www.peelregion.ca/health/fluoride/</a>
	Lethbridge	Alberta	Lethbridge has added fluoride to the drinking water since 1974. More information is available from: <a href="https://www.lethbridge.ca/living-here/water-wastewater/Documents/Consumer%20Confidence%20Report%202016.pdf">https://www.lethbridge.ca/living-here/water-wastewater/Documents/Consumer%20Confidence%20Report%202016.pdf</a>
	Halifax	Nova Scotia	All water treatment plants in Halifax add fluoride to their drinking water supply, as confirmed by: <a href="https://www.halifax.ca/home-property/halifax-water/water-services">https://www.halifax.ca/home-property/halifax-water/water-services</a>

**EXCLUDED**

<b>MIXED SITES</b>	South Monteregic	Quebec	The municipalities contained within this site were unclear and likely contained a mix of both fluoridated and non-fluoridated municipalities. Since postal code data were not available, sites could not be divided into separate areas and the whole site was therefore excluded.
	Southwest Monteregic	Quebec	The municipalities contained within this site were unclear and likely contained a mix of both fluoridated and non-fluoridated municipalities. Since postal code data were not available, sites could not be divided into separate areas and the whole site was therefore excluded.
	West Montreal	Quebec	Part of the region is supplied by a water treatment plant that adds fluoride, and another part of the region is supplied by a water treatment plant that does not add fluoride. Since postal code data were not available, sites could not be divided into separate areas and the whole site was therefore excluded.
	Windsor (stopped Jan 29, 2013)	Ontario	Windsor stopped fluoridation on January 29 2013, which was during the data collection for Cycle 3. About 78% of tap water samples from this site were collected after fluoridation was discontinued.

Central and East Kootenay	British Columbia	This site contained some municipalities that added fluoride and some that did not. Since postal code data were not available, sites could not be divided into separate areas and the whole site was therefore excluded.
Colchester and Pictou Counties	Nova Scotia	This site contained some municipalities that added fluoride and some that did not. Since postal code data were not available, sites could not be divided into separate areas and the whole site was therefore excluded.
Southwest Calgary (stopped in 2011)	Alberta	Calgary began adding fluoride to the drinking water supply in 1991, and stopped fluoridation in May 2011. For more information see: <a href="http://www.calgary.ca/UEP/Water/Pages/Drinking-water/Fluoride.aspx">http://www.calgary.ca/UEP/Water/Pages/Drinking-water/Fluoride.aspx</a> . Since fluoridation stopped just before Cycle 3 data collection for this site, the tap water fluoride average for this site was almost 3 times higher than for other non-fluoridated sites. Therefore, this site was excluded from analyses using city fluoridation status as a variable.
Brantford-Brant County	Ontario	The average tap water level for each site in Cycle 3 was calculated, and any site with an average tap water level greater than 0.3 mg/L was excluded from classification as a non-fluoridated site. Further, the average level of fluoride in tap water was 3 times lower in Brant County than for the average of all non-fluoridated sites. This is likely due to the fact that Brant County is a rural area with high naturally occurring fluoride in well water.
Kent County	New Brunswick	The average tap water level for each site in Cycle 3 was calculated, and any site with an average tap water level greater than 0.3 mg/L was excluded from classification as a non-fluoridated site. Further, the average level of fluoride in tap water was 3 times lower in Kent County than for the average of all non-fluoridated sites. This is likely due to the fact that Kent County is a rural area with high naturally occurring fluoride in well water.

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Supplemental Table 2.

Adjusted<sup>a</sup> Odds Ratio (aOR) for association between fluoride exposure and ADHD for Cycle 2 and Cycle 3.

	ADHD diagnosis Cycle 2 only	ADHD diagnosis Cycle 3 only
	aOR (95% CI)	aOR (95% CI)
Urinary fluoride concentration	0.75 (0.30, 1.85)	1.07 (0.61, 1.90)
CWF	1.40 (0.64, 3.09)	0.30 (0.03, 0.56)

*Abbreviations:* ADHD = Attention Deficit/Hyperactivity Disorder; CWF = community water fluoridation; aOR = adjusted odds ratio

<sup>a</sup>Adjusted for child's sex, age at interview, ethnicity (white or other), Body Mass Index, highest level of parental education, total household income, exposure to cigarette smoke inside the home (yes/no), concurrent blood lead level (log<sub>10</sub>-transformed).