

Canadian Health Measures Survey: Tap Water and Urine Fluoride Concentration Levels, 2014 to 2015

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The national average concentration of fluoride in tap water in Canada was 0.12 milligrams per litre (mg/L), based on new results from the fourth cycle (2014 and 2015) of the Canadian Health Measures Survey (CHMS). This is about 10 times lower than Health Canada's maximum acceptable concentration of 1.5 mg/L for fluoride in drinking water.

Health Canada states that water containing fluoride at or below this level of concentration does not pose a risk to human health.

Fluoride is a compound recognized as being effective in preventing tooth decay. The ingestion of excessive amounts of fluoride during enamel formation, which occurs during childhood, can lead to dental fluorosis, a cosmetic condition of the teeth that may cause stains, surface irregularities and pitting. Water, food and beverages, as well as dental products are the major sources of fluoride exposure.

The CHMS also measured the concentration of fluoride in urine. The national average concentration of creatinine adjusted fluoride in urine for Canadians aged 3 to 79 measured during the CHMS (2014 and 2015) was 2.4 micromoles per millimole ($\mu\text{mol}/\text{mmol}$). There were no significant differences in urine fluoride levels between sex and age groups. There are currently no established reference ranges for fluoride in urine that would allow for a determination of acceptable concentration levels.

Creatinine adjustment is commonly used to control for possible differences in the concentration (or dilution) of the urine itself.

The information collected through the CHMS could help researchers determine how the sources of fluoride exposure mentioned above affect urine fluoride levels as well as be used for further investigations into acceptable concentration levels in urine.

Note to readers

Cycle 4 of the Canadian Health Measures Survey was conducted from January 2014 to December 2015.

This release consists of four data files containing information on household and person level results for fluoride measures as well as volatile organic compound measures.

Available in CANSIM: tables [117-0023](#) to [117-0026](#).

Definitions, data sources and methods: survey number [5071](#).

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; STATCAN.infostats-infostats.STATCAN@canada.ca) or Media Relations (613-951-4636; STATCAN.mediahotline-ligneinfomedias.STATCAN@canada.ca).

