



Fluoride exposure and attention deficit hyperactivity disorder (ADHD) in Canadian youth

Riddell, Julia and Till, Christine "Fluoride exposure and attention deficit hyperactivity disorder (ADHD) in Canadian youth"
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What the researchers did

Fluoride was measured in urine and tap water. Youth (ages 6 to 17) or their parents completed a questionnaire asking about hyperactive and inattention symptoms and if the child has been diagnosed with ADHD. The researchers used statistical models to examine the relationship between fluoride exposure and ADHD diagnosis/symptoms.

What the researchers found

An increase of 0.5 mg/L of fluoride in tap water was associated with a rise in ADHD prevalence from 5.5% to 14%. Higher fluoride levels in tap water and living in an area with community water fluoridation (CWF) was associated with more hyperactive/inattentive symptoms in adolescents.

RDC Datasets used

2010 Survey of Household Spending

Policy areas this research can inform

- Children and youth
- Environment
- Health
- Society and community

Policy implications of this research

Fluoridation of public water supplies has been a debated topic for many decades. A growing body of evidence – including the results of this study – indicates that fluoride may be associated with adverse health effects. Given the enormous public health implications, a comparison of the potential risks and benefits of community water fluoridation is urgently needed with an emphasis on vulnerable populations. Because of the unique vulnerability of the developing brain, there is a greater potential for adverse outcomes due to early childhood fluoride exposure. The field of public health must be open to reviewing existing policies as new evidence accumulates.

Read the full article

Riddell, J. K., Malin, A. J., Flora, D., McCague, H., & Till, C. (2019). Association of water fluoride and urinary fluoride concentrations with attention deficit hyperactivity disorder in Canadian youth. *Environment international*, 133, 105190. <https://doi.org/10.1016/j.envint.2019.105190>

