

Sub-populations vulnerable to fluoride toxicity include pregnant women & their fetuses, bottle-fed babies & young children, ethnic & low income groups, the elderly and those in fragile health.

August 30, 2019

To: Leadership at American, Canadian, Mexican & other Schools of Public Health and Schools of Nutrition; and the Health & Medicine Division at the U.S. National Academies of Sciences

Dear Deans & Directors,

In a July 2019 report to the City of Calgary, the *O'Brien Institute of Public Health* at the University of Calgary acknowledged the high quality science that has consistently found a prenatal dose-response pattern of life-long adverse effects from maternal ingestion of low doses of fluoride consistent with 'optimal' fluoridation programs. Although not quite a reversal of their policy of aggressively promoting fluoridation as a public health initiative, the *O'Brien Institute* advised that fluoridation policy decision making belongs to legislatures. They also advised monitoring 'the issue' of prenatal neurological harm.

In August 2019, the highest ranking pediatric journal in the world published yet another study from the *Maternal-Infant Research on Environmental Chemicals* (MIREC) project using Canadian data. The MIREC findings validate the findings of a series of similar high-quality longitudinal cohort studies of Mexican mother-child pairs. These recent Canadian and Mexican studies confirmed a pattern of significantly lowered IQ and increased risk of learning disabilities resulting from low fluoride doses during pregnancy. Studies in these series and other studies have also noted fluoride's impact on hormonal functioning. Therefore, whether from food or water, maternal doses of fluoride endorsed by fluoridation proponents poison babies' bodies and brains in the womb.

The Mexican studies are part of the *Early Life Exposures in Mexico to ENvironmental Toxicants* (ELEMENT) project. They were conducted by expert researchers at the University of Toronto, the University of Michigan and Harvard University in collaboration with the Mexican government. Another major 2017 report from expert researchers in South America took it a step further. They advised that Chilean national water and food fluoridation policies were ineffective in preventing dental decay and "pose risks of various diseases in the asthmatic-skeletal, neurological, endocrine and skin systems" that disproportionately affect infants, children and adolescents due to timing of exposure.

Studies from the United States validate that bottle-fed babies and toddlers living in optimally fluoridated American communities routinely exceed the upper tolerable limits (UL) set by the *Food & Nutrition Board* of the National Academies of Science in a controversial 1997 decision that included fluoride as a non-nutrient element on a nutrient chart because of claims of apparent dental benefit and the faulty assumption that there were no adverse health effects up to the politically determined UL.

The resource section of this letter contains the citations to these and other valid studies documenting a range of harm that disproportionately affects consumers based on race, genetics and status. Documented neurological harm is most evident in the very young and the elderly but is by no means the only ill effect from chronic low dose exposure to fluoride. Inflammatory, endocrine and renal diseases are also documented ill effects. Because of the disproportionate harm to Latinos, Indigenous Peoples and Blacks, fluoridation policy constitutes an environmental injustice as well as a medical assault and battery on vulnerable populations. On behalf of consumers who experience chronic disease, lifelong disability and premature death because of the hubris of authority intent on protecting its own professional image rather than public health, we say #WeToo.



The signatories of this statement along with thousands of other professionals are on record in their science-based opposition to fluoridation as a public harm policy. The politicized and immoral decision to fluoridate may rest with legislatures as noted by the *O'Brien Institute*, but those non-medical and non-scientific bodies are influenced by credentialed authorities in matters of nutrition and health.

It is time for Schools of Public Health, Schools of Nutrition, and credentialed individuals to go on record with statements of opposition to water and food fluoridation schemes as public harm policies. It is time to abandon misguided good intentions and dated dental dogma. It is time to take action based on evidence of harm. Failure to do so amounts to complicity in scientific fraud.

Respectfully,

Michael D. Kohn, JD - President, National Whistleblower Center Hardy Limeback, BSc, DDS, PhD - 2006 National Research Council on Fluoride in Drinking Water

Stephanie Seneff, PhD - Senior Research Scientist, MIT

Kilmer S. McCully, MD - former Chief of Pathology & Laboratory Medicine at VA, Boston HealthCare System

Richard Shames, MD - Thyroid Health Specialist & Medical Author

James Fredenberg, MD - Anesthesiologist

Robert C. Dickson, MD, CCFP, FCFP - Founder of Safe Water Calgary

David Egilman, MD, MPH - Clinical Professor at Alpert School of Medicine, Brown University

Griffin Cole, DDS, NMD, MIAOMT - Clinical Instructor of Integrative Medicine & Dentistry

Henry Rodriguez - League of United Latin American Citizens, Texas Chapter

att: references

prepared by: KSpencer

RESOURCES

CANADIAN REFERENCES

<u>Association Between Maternal Fluoride Exposure During Pregnancy and IQ Scores in Offspring in Canada</u>. Rivka Green, Bruce Lanphear, Richard Hornung, et al. *JAMA Pediatrics*. August 19, 2019 [online ahead of print].

• Listen to August 19th <u>Podcast with JAMA Pediatrics Editors</u> re quality & controversy (12 min).

<u>Fluoride exposure and thyroid function among adults living in Canada: Effect modification by iodine status</u>. Ashley J. Malin, Julia Riddell, Hugh McCague, Christine Till. *Environment International*. Volume 121, Part 1, December 2018, Pages 667-674.

Community Water Fluoridation and Urinary Fluoride Concentrations in a National Sample of Pregnant Women in Canada. Christine Till, Rivka Green, John G. Grundy, et al. *Environmental Health Perspectives*. 2018.

<u>Community Water Fluoridation: Prepared for the Calgary City Council</u>. *O'Brien Institute of Public Health*. University of Calgary. July 2019.

MEXICAN REFERENCES

<u>Prenatal Fluoride Exposure and Cognitive Outcomes in Children at 4 and 6–12 Years of Age in Mexico</u>. Morteza Bashash, Deena Thomas, Howard Hu, et al. *Environ Health Perspect*. Sept 2017. Vol 125, Issue 9.

OP V – 2 Prenatal fluoride exposure and neurobehavior among children 1–3 years of age in Mexico. Deena Thomas, Brisa Sanchez, Karen Peterson, et al. Occup Environ Med. 2018;75:A10.

Prenatal fluoride exposure and attention deficit hyperactivity disorder (ADHD) symptoms in children at 6–12 years of age in Mexico City. Morteza Bashash, Maelle Marchand, Howard Hu, et al. *Environment International*. Volume 121, Part 1, December 2018, Pages 658-666.

<u>Fluoride exposure and pubertal development in children living in Mexico City</u>. Yun Liu, Martha Téllez-Rojo, Howard Hu, et al. *Environ Health*. 2019 Mar 29;18(1):26.

AMERICAN REFERENCES

<u>Fluoride Intake of Infants from Formula</u>. Claudia X Harriehausen, Fehmida Z Dosani, Brett T Chiquet, Michelle S Barratt, and Ryan L Quock. *Journal of Clinical Pediatric Dentistry*. Oct 2018.

<u>Are there good reasons for the fluoride labelling of food and drink?</u>. Zohoori FV, Maguire A. *British Dental Journal*. 2018, 224(4), 215-217.

<u>Fluoride in the diet of 2-years-old children</u>. Martinez-Mier EA, Spencer KL, Sanders BJ, et al. Community Dent Oral Epidemiol. 2017;00:1–7.

Impact of water fluoride concentration on the fluoride content of infant foods and drinks requiring preparation with liquids before feeding. Zohoori FV, Moynihan PJ, Omid N, Abuhaloob L, Maguire A. Community Dent Oral Epidemiol. 2012 Oct;40(5):432-40.

<u>Considerations on Optimal Fluoride Intake using Dental Fluorosis and Dental Caries Outcomes – A Longitudinal Study</u>. John J. Warren, Stephen M. Levy, Barbara Broffitt, et al. *Journal of Public Health Dentistry*. 2009;69(2):111-115.

CHILEAN REFERENCE

[The impact of tap water fluoridation on human health] (Article in Spanish). Verena Romero, Frances J. Norris, Juvenal A. Ríos, et al. *Rev. méd. Chile.* vol.145 no. 2 Santiago. Feb. 2017.

MORE STUDIES & REPORTS 2019

- Aluminium and fluoride in drinking water in relation to later dementia risk. Russ TC, Killin LOJ, Hannah J, Batty GD. The British Journal of Psychology. March 2019.
- Low-to-moderate fluoride exposure, relative mitochondrial DNA levels, and dental fluorosis in Chinese children. Zhou G, Yang L, Luo C, et al. Environment International. Volume 127, June 2019, Pages 70-77.
- <u>Fluoride related changes in behavioral outcomes may relate to increased serotonin</u>. Lu F, Zhang Y, Trevedi A, et al. *Physiology & Behavior*. 2019.
- <u>Fluoride exposure and kidney and liver function among adolescents in the United States: NHANES, 2013–2016</u>. Ashley J. Malin, Corin Lesseur, Stefanie A. Busgang, Paul Curtin, Robert O. Wright, Alison P. Sanders. *Environment International*. August 8, 2019 [online ahead of print]

- Role of fluoride induced epigenetic alterations in the development of skeletal fluorosis. Atule P. Daiwile AP et al. *Ecotoxicology and Environmental Safety*. Vol.169, March 2019, Pages 410-417.
- <u>Effects of drinking water fluorosis on L-type calcium channel of hippocampal neurons in mice</u>. Qiuli Yu, Dandan Shao. Rui Zhang, Wei Ouyang, Zigui Zhang. *Chemosphere*. Volume 220, April 2019, Pages 169-175.
- Roles of mitochondrial fission inhibition in developmental fluoride neurotoxicity: mechanisms of action in vitro and associations with cognition in rats and children. Zhao Q, Niu Q, Chen J. et al. Arch Toxicol. 2019.
- Fluoride Exposure Induces Inhibition of Sodium/Iodide Symporter (NIS) Contributing to Impaired Iodine Absorption and Iodine Deficiency: Molecular Mechanisms of Inhibition and Implications for Public Health. Waugh DT. Int. J. Environ. Res. Public Health. 2019, 16, 1086.
- Fluoride Exposure Induces Inhibition of Sodium-and Potassium-Activated Adenosine
 Triphosphatase (Na+, K+-ATPase) Enzyme Activity: Molecular Mechanisms and Implications for
 Public Health. Waugh DT. Int. J. Environ. Res. Public Health. 2019, 16(8), 1427.
- <u>Autophagy May Be Involved in Fluoride-Induced Learning Impairment in Rats</u>. Zhang C, Huo S, Fan Y, Gao Y, Yang Y, Sun D. *Biol Trace Elem Res*. 2019 May 20.
- Fluoride in Human Health & Nutrition. Stepec D, Ponikvar-Svet M. Acta Chim Slov. 2019, 66.
- <u>U.S. Water Fluoridation: A Forced Experiment that Needs To End</u>. Children's Health Defense Team. Kennedy News and Views. January 9, 2019.
- Statement in Opposition to Artificial Water Fluoridation. Safe Water Calgary. July 17, 2019.

2018

- Impact of Drinking Water Fluoride on Human Thyroid Hormones: A Case-Control Study. Kheradpisheh Z, et al. Scientific Reports. 2018, volume 8.
- <u>Potential Role of Fluoride in the Etiopathogenesis of Alzheimer's Disease</u>. Goschorska M, et al. *Int. J. Mol. Sci.* 2018, 19 (12), 3965.
- Threshold effects of moderately excessive fluoride exposure on children's health: A potential association between dental fluorosis and loss of excellent intelligence. Yu X, et al. *Environ International*. 2018 Jun 2;118:116-124.
- <u>Blood is Thicker Than Water: Flaws in a National Toxicology Program Study</u>. Spencer KF, Limeback H. *Medical Hypotheses*. Volume 121. December 2018. Pages 160-163.
- Open Letter to Nutritionists About the Fluoride Deception. Karen Spencer (ed). GreenMedInfo LLC, 26 October 2018.

2017

- <u>Genotoxic effect and rat hepatocyte death occurred after oxidative stress induction and antioxidant gene downregulation caused by long term fluoride exposure</u>. Campos-Pereira FD, Lopes-Aguiar L, Renosto FL, et al. <u>Chem Biol Interact</u>. 2017 Feb 25;264:25-33.
- Fluoride-Induced Oxidative and Inflammatory Stress in Osteosarcoma Cells: Does It Affect Bone Development Pathway? Gandhi D, Naoghare PK, Bafana A, et al. *Biol Trace Elem Res.* 2017.
- No Change in Bicarbonate Transport but Tight-Junction Formation Is Delayed by Fluoride in a Novel Ameloblast Model. Rácz R, et al. *Frontiers in Physiology*. 2017; 8: 940.
- Maternal fluoride exposure during gestation and lactation decreased learning and memory ability, and glutamate receptor mRNA expressions of mouse pups. Sun Z, et al. Human & Experimental Toxicology. February 13, 2017.
- <u>Developmental fluoride exposure influenced rat's splenic development and cell cycle via disruption of the ERK signal pathway</u>. Ma Y, Zhang K, Ren F, Wang J. *Chemosphere*. 2017;187:173-180.
- <u>Fluoride Induces Neuroinflammation and Alters Wnt Signaling Pathway in BV2 Microglial Cells.</u> Chen R, Zhao LD, Liu H. et al. *Inflammation*. 2017;40: 1123.
- International Academy of Oral Medicine and Toxicology (IAOMT) Position Paper against Fluoride
 <u>Use in Water, Dental Materials, and Other Products for Dental and Medical Practitioners, Dental
 and Medical Students, Consumers, and Policy Makers.</u> Kennedy D, Just A, Kall J, Cole G. 2017.
- <u>In utero exposure to fluoride and cognitive development delay in infants</u>. Valdez Jiménez L, López Guzmán OD, Cervantes Flores M, Costilla-Salazar R, Calderón Hernández J, Alcaraz Contreras Y, Rocha-Amador DO. Neurotoxicology. 2017 Mar;59:65-70.

2016

- Fluoride Exposure May Accelerate the Osteoporotic Change in Postmenopausal Women: Animal Model of Fluoride-induced Osteoporosis. Kakei M, Yoshikawa M, Mishima H. Adv Tech Biol Med 2016, 4:1
- Community water fluoridation predicts increase in age-adjusted incidence and prevalence of diabetes in 22 states from 2005 and 2010. K. Fluegge. Journal of Water and Health, 2016. Follin-Arbelet B, Moum B. Scand J Gastroenterol. 2016 May 19:1-6.
- Communicating risk for issues that involve 'uncertainty bias': what can the Israeli case of water fluoridation teach us? Gesser-Edelsburg A, Shir-Raz Y. *Journal of Risk Research*. Aug 2016.
- Pregnancy and Fluoride Do Not Mix. John D. MacArthur. CreateSpace. 2016.

2015

- Are fluoride levels in drinking water associated with hypothyroidism prevalence in England? A large observational study of GP practice data and fluoride levels in drinking water. Peckham S, Lowery D, Spencer S. J Epidemiol Community Health. 24 February 2015.
- Exposure to fluoridated water and attention deficit hyperactivity disorder prevalence. Malin A, Till C. Environmental Health 2015, 14:17
- Fluoride as a factor initiating and potentiating inflammation in THP1 differentiated monocytes/ macrophages. Gutowska I, et al. *Toxicology* in Vitro. Volume 29, Issue 7, October 2015, Pages 1661–1668.
- Expanding the test set: Chemicals with potential to disrupt mammalian brain development. Mundy WR, Padilla S, Breier JM, at al. *Neurotoxicology and Teratology*. Volume 52, Part A, November–December 2015, Pages 25–35.
- <u>Water fluoridation for the prevention of dental caries</u>. Iheozor-Ejiofor Z et al. Cochrane Database of Systematic Reviews 2015, Issue 6.
- <u>A critique of recent economic evaluations of community water fluoridation</u>. Ko L, Thiessen KM. International Journal of Occupational and Environmental Health. 2015. 21:2, 91-12.

Other Selections

- Compulsory Water Fluoridation: Justifiable Public Health Benefit or Human Experimental Research Without Informed Consent? Barnett-Rose R. 39 Wm. & Mary Envtl. L. & Pol'y Rev. 201 (2014).
- Feds: Blacks Suffer Most From Fluoride, Fluoridate Anyway. Alex Newman. New American. 16 October 2014.
- Fluoride in Drinking Water: A Scientific Review of EPA's Standards. Washington, DC: The National Academies Press. 2006.
- The Fluoride Deception. Christopher Bryson. Seven Stories Press. 2004.
- IOM Letter. From Bruce Alberts & Kenneth Shine to Albert W. Burgstahler et al., 20 Nov 1998.
- <u>DRI Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.</u> Standing Committee on the Scientific Evaluation of Dietary Reference Intakes, Food and Nutrition Board, Institute of Medicine. National Academies Press. 1997.
- <u>Neurotoxicity of Sodium Fluoride in Rats</u>. Mullenix PJ, Denbesten PK, Schunior A, Kernan WJ. Neurotoxicology and Teratology. 1995; Vol. 17, No. 2, pp. 169-177.
- <u>Fluoridation: The Great Dilemma</u>. George L Waldbott MD, Albert W Burgstahler Ph.D, H. Lewis McKinney, Ph.D. Coronado Press, 1978.
- A double blind test for determination of intolerance to fluoridated water. Preliminary report. Grimbergen GW. *Fluoride* 1974. 7(3):146-152.
 - 1993 Moolenburgh affidavit: https://fluorideinformationaustralia.wordpress.com/legal/affidavits/
 - 2014 Moolenburgh interview: https://www.youtube.com/watch?v=Jw3xbtS4vpM
- Optimum Fluoride Levels Memorandum. F.J. Maier. Division of Dental Public Health & Resources. January 10, 1962.
- <u>Fluoridation: Errors & Omissions in Experimental Trials</u>, 2nd ed. Philip R. N. Sutton. Australia: Melbourne University Press, 1960.
- <u>Prenatal and postnatal ingestion of fluorides A Progress Report</u>. Feltman R. *Dental Digest*. August 1956.