

TSCA FLUORIDE TRIAL WITNESS SPOTLIGHT

## DR. HOWARD HU

MD, MPH | Chair of Preventive Medicine at USC Keck School of Medicine

Over 300 papers published in peer-reviewed journals.

Author of two longitudinal prospective cohort studies on fluoride and neurodevelopment.

"Fluoride is a developmental neurotoxicant at levels of exposure seen in the general population in water-fluoridated communities."

Dr. Howard Hu was the plaintiff's first witness called to the stand in the recent TSCA fluoride trial.

Dr. Hu is a medical doctor with a Masters in Public Health and a Doctorate of Science in Epidemiology from the Harvard School of Public Health. He has taught epidemiology at Harvard, University of Michigan, University of Toronto, and USC Keck School of Medicine where he currently serves as the Chair of Preventive Medicine.

He has authored over 300 papers published in peerreviewed journals and has published five studies on fluoride, including two prospective cohort studies<sup>1, 2</sup> on fluoride and neurodevelopment published in prominent environmental health journals.

In 1993, Dr. Hu co-founded the ELEMENT research project<sup>3</sup>, a pregnancy and birth cohort funded by the Environmental Protection Agency and the National Institutes of Health. Through the ELEMENT cohort, Dr. Hu has studied how prenatal exposure to environmental toxins such as lead, mercury and, fluoride, affect a child's neurodevelopment.



As an expert witness in the TSCA fluoride trial, Dr. Hu provided a summary of opinions to the court on behalf of the plaintiffs, which included the Fluoride Action Network, including compelling testimony that prenatal fluoride exposure is associated with substantial and significant adverse effects on IQ and ADHD.

Dr. Hu's opinions were buttressed by two key points...

- The ELEMENT prospective cohort studies of fluoride's neurodevelopmental effects are methodologically rigorous studies that provide scientifically reliable and robust results."
- The results of the ELEMENT prospective cohort studies are consistent with and support the conclusion that fluoride is a developmental neurotoxicant at levels of exposure seen in the general population in water-fluoridated communities."

(ELEMENT is an internationally-known database of women in Mexico funded by the EPA and U.S. National Institutes of Health, studied for years for their exposure to toxins.)



In a commentary looking at the wealth of studies published on fluoride's neurodevelopmental harm in recent years, Dr. Hu commented:

Overall, these studies inform the ongoing debate over the benefits vs risks associated with the fluoridation of water. Clearly, more research is needed. Meanwhile, since the beneficial effects of fluoride predominantly occur at the tooth surface after teeth have erupted, whereas fluoride is not essential for growth and development, a cautious step could be avoidance of fluoridated products and water by women during pregnancy and by infants during the first 6 months of life."

Click here to access Dr. Hu's full declaration.

## **References:**

- 1. Bashash et al, Prenatal Fluoride Exposure and Cognitive Outcomes in Children at 4 and 6-12 Years of Age in Mexico, Environmental Health Perspectives, Sept. 19, 2017 https://ehp.niehs.nih.gov/ehp655/
- Bashash et al, Prenatal Fluoride Exposure and Attention Deficit Hyperactivity Disorder (ADHD) Symptoms in Children at 6-12 Years of Age in Mexico City, Environment International, Dec. 2018 <a href="https://pubmed.ncbi.nlm.nih.gov/30316181/">https://pubmed.ncbi.nlm.nih.gov/30316181/</a>
- 3. National Institute of Environmental Health Sciences, Early Life Exposures in Mexico to Environmental Toxicants (ELEMENT) <a href="https://tools.niehs.nih.gov/cohorts/index.cfm/main/detail/ids/c49">https://tools.niehs.nih.gov/cohorts/index.cfm/main/detail/ids/c49</a>

