



BOH - New information on Fluoride's link to reduced IQ in children - Request to be placed on January agenda

Bryan Moss

Thu, Dec 17, 2020

To: boardofhealth@shrewsburyma.gov

Cc: Kerry Stockwell <kstockwell@shrewsburyma.gov>

Dear Board of Health,

While deciding whether to have me present at the January meeting, please consider the following. There are new developments and information that have come out since we last discussed. The best summary to catch you up in the quickest amount of time is a recent op-ed appearing in the Environmental Health News titled "*Op-ed: It is time to protect kids' developing brains from fluoride*" (*link provided below*).

This op-ed is so important is because it was co-authored by toxicologist and microbiologist, Linda Birnbaum, PhD who was the former director of both the National Institute of Environmental Health Sciences and the National Toxicology Program of the National Institutes of Health. She was the director from 2009 to 2019. While reading the op-ed, please consider this statement praising Dr. Linda Birnbaum written by the current Director of the National Institutes of Health (NIH) so you gain context as to her credentials, honors, and remarkable career at the NIH.

Statement on the retirement of Dr. Linda Birnbaum (Former Director of the National Institute of Environmental Health Sciences (NIEHS) and the National Toxicology Program (NTP) from 2009-2019) **by Francis S. Collins, M.D., Ph.D.** (Current Director, National Institutes of Health, from 2009-present)
<https://www.nih.gov/about-nih/who-we-are/nih-director/statements/statement-retirement-dr-linda-birnbaum>

If that wasn't enough, another co-author of the op-ed is Bruce Lanphear, MD, MPH, a physician, clinical scientist, and professor at Simon Fraser University in Vancouver, Canada. He has been extensively relied upon by environmental and public health agencies, including the EPA who cited his pooled analysis of blood lead and IQ (Lanphear 2005) as the critical study upon which the Agency based the current national air standard for lead. More on his background and credentials:

Lanphear is also an award winning researcher who has been a member of two National Academies of Science Committees, is a member of the Environmental Protection Agency's Lead Review Panel, and is renowned for his research on low-level lead exposure and many other environmental neurotoxins. He has studied the impact of toxic chemicals, including lead and pesticides, on children's brain development for over 20 years. His research has been almost exclusively funded by federal agencies, including the EPA and CDC and has been published in leading medical and scientific journals, including Journal of the American Medical Association, New England Journal of Medicine, and Pediatrics. He has also served on the editorial boards of seven academic journals, including Public Health Reports (the official journal of the U.S. Surgeon General), PLoS Medicine (a peer-reviewed medical journal published by the Public Library of Science), and Environmental Health Perspectives (a journal funded by the National Institutes of Environmental Health Sciences). He has also served on numerous scientific committees on environmental health issues impacting children, including multiple scientific advisory boards for the EPA and the Executive Council on Environmental Health for the American Academy of Pediatrics. His work with the EPA has included invited expert advisory roles on EPA's (i) Science and Research Work Group of the Children's Health Protection Advisory Committee (1998-2001); (ii) Workshop on Assessing Environmental Exposures to Children (2000-2002); (iii) Clean Air Scientific Advisory Committee (2006-2008); (iv) Science Advisory Board for Evaluating Dust Lead Standards (2010-2012); and (v) Science Advisory Board for Evaluating Hazards of Partial Water Line Replacement (2011-2012).

The op-ed entitled "*It is time to protect kids' developing brains from fluoride*" highlights the mounting evidence that fluoride is impairing brain development, and compares the response from the public health community to its delayed response to the obvious harm caused by lead. The authors call for the U.S. "to rethink this exposure for pregnant women and children," and state that "Given the weight of evidence that fluoride is toxic to the developing brain, it is time for health organizations and regulatory bodies to review their recommendations and regulations to ensure they protect pregnant women and their children. Here is the link to the op-ed:

10/07/20 - Environmental Health News - Op-ed: It is time to protect kids' developing brains from fluoride -
Mounting evidence suggests fluoride may be hampering brain development and reducing kids' IQ. The US needs to rethink this exposure for pregnant women and children.

by Bruce Lanphear , Christine Till and Linda S. Birnbaum

<https://www.ehn.org/fluoride-and-childrens-health-2648120286.html>

The op-ed references the recently revised 2nd draft of the U.S. National Toxicology Program (NTP) report "DRAFT NTP MONOGRAPH ON THE SYSTEMATIC REVIEW OF FLUORIDE EXPOSURE AND NEURODEVELOPMENTAL AND COGNITIVE HEALTH EFFECTS" that was released on September 16th, 2020. You can find the pdf file on the following National Academies of Sciences webpage (link below). While this is still a draft, the conclusion that the "NTP concludes that fluoride is presumed to be a cognitive neurodevelopmental hazard to humans." was re-confirmed during the first peer review by the National Academies of Sciences, Engineering and Medicine (NASEM). It is now undergoing a second peer review. While the conclusion mentions >1.5ppm, please remember that Shrewsbury fluoridated its water at 1.0ppm from 1952 to 2015 and now fluoridates it at 0.7ppm - hardly an adequate margin of safety to take into account the wide range of individual sensitivity expected in a large population and the wide range of doses to which people are exposed. If the EPA applied the normal toxicological procedures and appropriate margins of safety to fluoridation, the practice would be prohibited. This is because in toxicology a standard safety factor of 10 is generally used to extrapolate from the result of a small study group to find a dose which is protective of everyone in a large population (say several million). This is called the "intra species safety factor". In protecting public health, you have to be conservative. In short, regulators have to assume that there are individuals in the large population who are ten times more sensitive to the toxic chemical in question, than anyone in the small study group.

Review of the Revised NTP Monograph on Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects (Meeting 2)

<https://www.nationalacademies.org/event/10-19-2020/review-of-the-revised-ntp-monograph-on-fluoride-exposure-and-neurodevelopmental-and-cognitive-health-effects-meeting-2#sectionEventMaterials>

Here is the direct link to download the fluoride_monograph_draft_9_16_2020.pdf document:

<https://www.nationalacademies.org/event/10-19-2020/docs/DDA97C9170D1A255D69C004CEB77B698E8D005011EFB>

Here is the conclusion from the draft:

Conclusions: Because the majority of available studies evaluated cognitive neurodevelopmental effects in children, the focus of the hazard conclusions is on cognitive neurodevelopmental effects, primarily IQ. When focusing on findings from studies with exposures in ranges typically found in drinking water in the United States (0.7 mg/L for optimally fluoridated community water systems)² that can be evaluated for dose response, effects on cognitive neurodevelopment are inconsistent, and therefore unclear. **However, when considering all the evidence, including studies with exposures to fluoride levels higher than 1.5 mg/L in water, NTP concludes that fluoride is presumed to be a cognitive neurodevelopmental hazard to humans. This conclusion is based on a moderate level of evidence that shows a consistent and robust pattern of findings in human studies across several different populations demonstrating that higher fluoride exposure (e.g., >1.5 mg/L in drinking water) is associated with lower IQ and other cognitive effects in children.** Limited and weaker evidence is considered to provide an inadequate level of evidence that fluoride is associated with cognitive effects in adults. The evidence from animal studies is inadequate to inform conclusions on cognitive effects, and the mechanisms underlying fluoride-associated cognitive neurodevelopmental effects are not well characterized.

I also have updates on the ongoing Federal trial against the EPA with significant admissions in the trial record by the CDC, FDA, and EPA in regards to fluoride's risk to the developing brain.

I would like to request to present this information to the BOH at it's January meeting.

**Thank you,
Bryan Moss
Town Meeting Member, Precinct 8 (2015-present)**

On Fri, Dec 11, 2020 Bryan Moss wrote:

Dear Board of Health,

I would like to request to be placed on the December 18th BOH agenda to discuss recent information in regards to Water Fluoridation and its risks to pregnant women and their fetus. I would like to request to speak for 10 minutes. There has been recent developments including a revised draft of the U.S. National Toxicology Program (NTP) report "DRAFT NTP MONOGRAPH ON THE SYSTEMATIC REVIEW OF FLUORIDE EXPOSURE AND NEURODEVELOPMENTAL AND COGNITIVE HEALTH EFFECTS" that was released on September 16th as well as an

ongoing Federal trial involving the EPA under the Toxic Substance Control Act (TSCA) with statements on record from the CDC, FDA, and EPA. I would like to update the board on this recent information and how it relates to the request I made last year for the town to notify pregnant women about the latest studies on fluoride's link to reduced IQ in children.

Please let me know if you are able to accommodate my request to provide public input to the board on this important topic that may affect the health of children in our town.

My plan would be to follow-up this weekend and send the board references to the materials so you will have a chance to review them prior to next week's meeting.

Please feel free to reach out to me with any questions - thanks!

Thank you,
Bryan Moss