

28 April 2023

Kathleen M. Gray, PhD  
Chair, NTP Board of Scientific Counselors  
National Institute of Environmental Health Sciences

Dear Dr. Gray,

Thank you for the opportunity to provide comment on the outcomes of the recent National Toxicology Program's (NTP) Board of Scientific Counselors (BSC) Working Group Report on the Draft State of the Science Monograph and the Draft Meta-Analysis Manuscript on Fluoride.

As the former Scientific Director of the Division of Translational Toxicology (formerly, Division of the National Toxicology Program) at the National Institute of Environmental Health Sciences (NIEHS), I had the great privilege to work with the dedicated scientists who conducted the analyses and produced the reports that were the focus of this review. These reports provide an important addition to our developing understanding of the potential for human health effects from exposure to fluoride. The delay in their publication has been unfortunate and has prevented many from applying these analyses for personal, policy and regulatory decision-making.

I have been incredibly impressed with the commitment of the NIEHS scientists who conducted this work to ensure its scientific rigor, balanced representation and clear communication. They have, from its inception, recognized the importance of these analyses, concerns about the validity of the data supporting them and the public health implications of them being misinterpreted or misused. Those contextual challenges have been considered in the products that they have produced. Additionally, they have recognized and represented that this work is a scientific hazard assessment rather than a risk assessment and have been careful to remain true to that important and discrete role. Not everyone who has reviewed, critiqued or commented on these analyses recognizes that distinction which has contributed to the challenges they've experienced in progressing their work.

An important representation of these scientist's commitment to a scientifically rigorous product is reflected in their self-initiated review by the National Academies of Science, Engineering and Medicine (NASEM) of a systematic review that proposed a 'hazard classification' for fluoride as a neurodevelopmental toxin. NASEM reviewers rightly challenged whether the existing evidence was sufficient to support the generalization of a hazard classification. NIEHS scientists considered the useful feedback from the NASEM reviewers, applied their suggestions and narrowed their hazard assessment to where the data was strongest resulting in the current products. The NASEM reviewers are to be commended for their thoughtful input.

I would also like to commend the members of the NTP BSC Working Group who reviewed the responses of the NIEHS scientists to additional reviews for their time, dedication and effort. Dr. David Eaton, former Chair of the NTP BSC and Chair of this Working Group, and Dr. Mary Wolfe, DTT Deputy Director for Policy, Review and Outreach, are to be particularly commended for their tireless efforts in supporting the timely execution of this review. The efforts and input of this Working Group will certainly improve the final products.

Despite the rigor and transparency applied to the analyses represented in these scientific products, they are imperfect as are all scientific products. Are they consistent with current standards of scientific practice. Absolutely. Can they be incrementally improved with additional review? Likely. Can they inform important decisions? Absolutely. Does a delay in their publication impact public health? Yes.

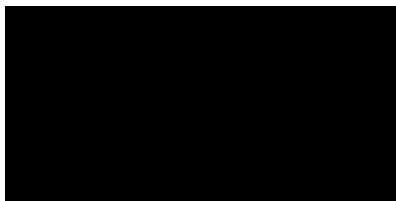
The inordinate and unprecedented challenge and review that have been applied to these products have, in my opinion, been obstructive. Likewise, I don't believe that they are consistent with the White House Office of Science, Technology and Policy's (OSTP) policy aimed at protecting the integrity and independence of science ([01-22 Protecting the Integrity of Government Science.pdf \(whitehouse.gov\)](#)). Accordingly, the people who are most exposed to fluoride in their environment and most likely to be harmed by those exposures have been prevented from applying the learnings from these analyses because of concerns about the strength of the evidence for those that are less exposed. That doesn't particularly serve the most vulnerable very well.

Most unfortunate in the current debate is that we've known for over a decade that we needed more data to better understand the potential for harm to those who are exposed to levels of fluoride most common in the United States. It is regrettable that we haven't put the effort into generating the data that would have better informed these analyses for those citizens. Rather than continuing to challenge this work, the public health policy and research communities should focus on how best to communicate the certainties and uncertainties of this data, inform concerned citizens about possible responses and conduct the studies that would support more certainty. This past year would have been better spent doing those things.

I've not seen anyone argue that there are people in this world (and even in the United States) that are exposed to levels of fluoride that could have health effects. I don't personally know whether levels of exposure in the U.S. that are lower and more common are without potential for health effects and I expect no one else does either. I think our commitment to our fellow citizens should be to do everything we can to generate the data to know whether there are potential harms and to manage our exposures to prevent them. In the interim, we should inform those for whom the evidence is more certain. Our science must certainly be rigorous but it must also be protected from inordinate challenge and obstruction when the outcomes challenge current beliefs.

Again, I appreciate the opportunity to comment. I'm looking forward to the final publication of these important analyses.

Regards,



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