



FLUORIDE SCIENCE REVIEW

Lauren Jenks, MPH, CHES

Panel Co-Chairs

Assistant Secretary for Environmental
Public Health

State Health Officer



Participants on Panel

Local Health Officer

- Eastern part of state
- Western part of state

Local Public Health

- General
- Environmental Health

Tribal Health Officer

State Board of Health staff

Participants on Panel

Department of Health

- Toxicologist
- Office of Drinking Water
- Regional Medical Officer
- State Epidemiologist for Non-Communicable Conditions
- Epidemiologist
- Prevention and Community Health



Charge to the Panel

- The panel was charged with listening, learning, and considering all relevant science in their discussions of community water fluoridation.
- The panel was then charged with summarizing their learnings and interpreting the science so that the State Board of Health can consider it in potential policy action.
- In addition, the findings of the panel are expected to inform oral health work at the Department and communications about community water fluoridation from the public health system.

Process

- The panel met 10 times from January through June 2025.
- The meetings were held virtually and generally lasted about 2 hours.
- Questions were answered in the meeting, if possible.
- The meetings were recorded.





Information Reviewed

- Dr. Kyla Taylor's explanation of the NTP monograph on a Collaborative for Health and the Environment webinar
- DOH toxicologist explanation: *Fluoride, Neurodevelopment, and Cognition: A National Toxicology Program Monograph*
- DOH legal and toxicology staff analysis: 2024 EPA court judgement of fluoride
- DOH oral health staff: Review of oral health, relative efficacy of different fluoride applications, and oral health disparities
- HCA staff discussed access to dental health care



Information Reviewed, Cont.

- DOH staff and EIS officer summarized 2024 Cochrane Review: *Water fluoridation for the prevention of dental caries*
- DOH RMO reviewed additional information on oral health and fluoride including two case studies of community water fluoridation not included in Cochrane
- DOH Economist: reviewed literature on economics of fluoridation including the costs of harms
- Dr. Christine Till presented an overview of the emerging science on fluoride toxicology and her work on several studies included in the NTP report



Community Input

- Several members of the community, including dentists, advocates, researchers, and concerned lay members of the public, volunteered to provide information to the panel.
- We heard summaries of the science of fluoride toxicity and the efficacy of community water fluoridation. Different people reached different conclusions based on the science. Some told painful personal stories of sensitivity to fluoride. We heard powerful endorsements.
- People passionately expressed deeply held values that inform their opinion on community water fluoridation.



Panel Discussion

- As the work of the panel developed, the discussion began to center around how to weigh evidence of benefit vs evidence of risk:
 - Evidence of benefit: CWF is associated with improved oral health in children, though to a lesser degree now than when it was first introduced in the 1940s
 - Evidence of risk: higher estimated fluoride exposures (exceeding the concentrations used for CWF) are associated with lower IQ in children.

Controversy

Community water fluoridation has been controversial since it began in 1945.

Generally, people who oppose community water fluoridation do so out of concerns for public safety, the value for bodily autonomy, and concerns about the proper role of government.

Generally, people who support community water fluoridation do so because of the long history of apparently safe water fluoridation in the US, the belief that community water fluoridation prevents dental caries, and the value for equitable public health approaches to disease prevention that do not depend on access to care or other resources.

Science is less clear than we would like

There is still scientific uncertainty and insufficient evidence on:

- The impact of CWF on oral health disparities in children
- Whether the fluoride concentration used for CWF in the US, combined with other sources of fluoride, results in a toxic dose of fluoride for children at sensitive points in brain development.



Next steps

- Panel continues to develop consensus statements and recommendations
- Touch of vetting (e.g. New Secretary of Health)
- Present summary of science, consensus statements, and recommendations to the State Board of Health at August meeting





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