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IN MY OPINION Andrew Harris

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Fluoridatation: Weigh the risks along with the benefit

H ouse Bill 2025 would mandate the fluoridation of drinking water in Oregon municipal systems serving more than 10,000 people. At first glance that may sound like a healthy idea. After all, conventional wisdom is that fluorides help prevent caries of the teeth.

As a physician, I was a proponent of drinking water fluoridation for many years. Like many of my colleagues, I assumed that the science behind fluoridation was solid. But then I dug a bit deeper and learned some startling facts.

When fluorides were first added to drinking water in the 1940s and 1950s, the additive typically was sodium fluoride. Now more than 90 percent of fluorides used in drinking water are in the form of hydrofluosilicic acid and sodium silicofluoride from industrial wastes.

These two toxic chemicals are derived from pollution-scrubbing systems, designed to capture fluorides during the manufacture of phosphate fertilizers. The effluent from the scrubbers is classified as hazardous waste and cannot be discharged into oceans, rivers or landfills, or allowed to escape into the air, because it can harm plants, animals and humans.

This untreated industrial waste must be disposed of at a licensed hazardous waste facility. But -- are you ready for this? -- it can also be sold to municipalities to fluoridate their drinking water.

Despite assurances by proponents of water fluoridation that the effluent is safe, according to the federal Environmental Protection Agency there is not one study of the safety of either hydrofluosilicic acid or sodium silicofluoride on health and behavior.

Furthermore, this effluent contains arsenic, lead and other heavy metals. And we now know that even minute amounts of these toxic substances, just a few molecules, can have adverse effects on fetal and early childhood development. According to an article in The New England Journal of Medicine in April 2003, there is no safe level of lead exposure.

Thus, the issue of fluoridating water is not about adding pharmaceutical grade sodium fluoride purchased from a chemical supply house. The effluent from industrial scrubbers contains known carcinogens and neurotoxins, chemicals that have been implicated in learning disabilities, attention-deficit disorder and aggressive and delinquent behavior.

Returning to the central issue of healthy teeth in children, research in recent years has found that the primary benefit of fluorides on teeth is not from systemic fluoride ingestion, as in drinking water, but rather from the topical application of fluoride, especially in toothpaste and mouthwashes.

Parallel declines in tooth decay over past decades have occurred in industrialized countries across the board, regardless of whether they are fluoridating their drinking water. Western Europe, which has a fluoridated population of only 2 percent, has decay rates that are comparable to, or even lower than, those in the United States.

The medical community would welcome solid research on this controversial subject because we have yet to see good-outcome studies on fluoridation safety. In the meantime, rather than exposing fetuses and children to potentially toxic chemicals, we should follow the advice of Hippocrates: "First do no harm."

Andrew Harris is a Salem physician who is on the national board of Physicians for Social Responsibility, which has not taken a position on fluoridation.