

Does Fluoride Cause Cancer?

America has been preventing tooth decay with fluoridated water for more than 75 years. Community water fluoridation is safe, effective and benefits everyone equitably. That's the conclusion of [every major health organization](#) in the United States. About 75% of U.S. communities enjoy fluoridated water.

A public health practice that touches the lives of so many people must be thoroughly tested for safety. Health effects of fluoride in drinking water have been studied for many decades. A large body of evidence continues to prove that fluoridation poses no risk to health, despite claims to the contrary.

One of those claims has been that fluoride causes cancer. Here is a sample of the valid scientific evidence from around the world showing that fluoride does not cause cancer.

- A 2014 [review](#)¹ of evidence by the Royal Society of New Zealand found that claims that fluoride contributes to the risks of cancer are **not supported by the scientific evidence**.
- In 2011, the California [Office of Environmental Health Hazard Assessment](#)² voted unanimously that an extensive review of scientific evidence **did not support** classifying fluoride as a cause of cancer.
- A 2011 [review](#)³ by the European Commission's Scientific Committee on Health and Environmental Risks (SCHER) **found no link** between fluoride and cancer, and classifying fluoride as a cancer-causing agent.
- Because fluoride is deposited in bone, there has been concern that osteosarcoma (bone cancer) might be associated with fluoride. Because osteosarcoma is rare, its study is difficult. Recently, this concern has been definitively addressed by two types of case-control studies of data collected from 9 hospitals across the US. A [2011 study](#)⁴ using precise measurement of the fluoride content of bone – found no link between fluoride and bone cancer. More recently, a [2020 study](#)⁵ determined that residence in a fluoridated community was not related to an increase in risk for osteosarcoma. This should not be surprising given that ingestion of fluoridated water is a common exposure and osteosarcoma remains a rare disease.

After decades of study, no link has been found between fluoride and cancer. The weight of international scientific evidence, and decades of experience in the United States and elsewhere, have demonstrated the safety and effectiveness of community water fluoridation.

For more information, see:

- [American Cancer Society](#)
- Centers for Disease Control and Prevention, [Scientific Reviews and Reports: Assessing the Evidence](#)
- [National Cancer Institute](#)
- [National Cancer Registry of Ireland](#)
- [U.S. Public Health Service Recommendation for Fluoride Concentration in Drinking Water for the Prevention of Dental Caries](#)
- [U.S. Health and Human Services, Statement on the Evidence Supporting the Safety and Effectiveness of Community Water Fluoridation.](#)

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Citations

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- ¹ Health effects of water fluoridation: a review of the scientific evidence. Royal Society of New Zealand website. <https://www.royalsociety.org.nz/assets/documents/Health-effects-of-water-fluoridation-Aug-2014-corrected-Jan-2015.pdf>. Accessed February 9, 2023.
- ² California Office of Environmental Health Hazard Assessment. Proposition 65. Meeting Synopsis and Slide Presentations Carcinogen Identification Committee Meeting Held on October 12, 2011. http://oehha.ca.gov/prop65/public_meetings/cic101211synop.html Accessed February 9, 2023.
- ³ European Commission Directorate-General for Health and Consumers, Scientific Committee on Health and Environmental Risks (SCHER). Critical review of any new evidence on the hazard profile, health effects, and human exposure to fluoride and the fluoridating agents of drinking water. Brussels, Belgium: European Commission; 2010. http://ec.europa.eu/health/scientific_committees/environmental_risks/docs/scher_o_139.pdf. Accessed February 9, 2023.
- ⁴ Kim FM, Hayes C, Williams PL, et al. An assessment of bone fluoride and osteosarcoma. J Dent Res. 2011;90(10):1171-1176. <http://journals.sagepub.com/doi/abs/10.1177/0022034511418828>. Accessed February 9, 2023.
- ⁵ Kim FM, Hayes C, Burgard SL, et al. A Case-Control Study of Fluoridation and Osteosarcoma. Journal of Dental Research. 2020;99(10):1157-1164. doi:10.1177/0022034520919385. Accessed February 9, 2023.