

Exposure to common THM levels in drinking water not associated with breast cancer

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Exposure to trihalomethanes (THMs) in residential water is not associated with an increased risk of breast cancer. This is the main conclusion of a new study by the Barcelona Institute for Global Health (ISGlobal). Long-term exposure to THMs, a byproduct of chemical disinfection of drinking water, has long been associated with an increased risk of bladder cancer, but the evidence linking these compounds to other cancers, including breast cancer, is very limited.

The new study, published in *Environmental International*, assessed whether long-term exposure to THMs was associated with increased [breast cancer](#) risk. The study enrolled 2,000 women, half of whom had breast cancer, from various parts of Spain (Asturias, Barcelona, Cantabria, Gipuzkoa, León, Madrid, Navarre and Valencia). Participants were interviewed to ascertain residential history, type of [drinking water](#) consumed, frequency and duration of showers or baths, as well as major recognized risk factors for breast cancer. Mean adult-lifetime residential levels of chloroform, brominated THMs, and the sum of both were calculated.

The study found "no relationship between breast cancer and the type of water consumed at home," explained ISGlobal researcher Cristina Villanueva, who coordinated the study. Approximately 75 percent of participants said they drank tap water, while 21 percent drank bottled water.

Laia Font-Ribera, lead author of the study, commented: "At common THM levels for Europe, long-term residential exposure to total THMs is not related to breast [cancer](#)." However, the findings do suggest "a moderate association with chloroform in high-exposure cases," explained Font-Ribera, "although more analysis is needed to understand this relationship."

"This epidemiological study eliminated the methodological shortcomings of previous work, but

more research is needed to confirm the results," added Villanueva.

More information: Laia Font-Ribera et al, Long-term exposure to trihalomethanes in drinking water and breast cancer in the Spanish multicase-control study on cancer (MCC-SPAIN), *Environment International* (2017). [DOI: 10.1016/j.envint.2017.12.031](#)

Provided by Barcelona Institute for Global Health (ISGlobal)

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