

Are THMs in drinking water bad for our health?

Chlorine can react with organic matter in water to form trihalomethanes

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The use of chlorine is essential to ensure safe drinking water, but when organic matter is present it can react with the chlorine to form trihalomethanes (THMs). This is often the case in Ireland, as most of our drinking water comes from surface-water sources, such as rivers, lakes and streams, that often have high levels of vegetation or organic matter.



The concentration of THMs in drinking water varies according to the level of organic matter in the water, the amount of chlorine used to treat the water and the temperature of the water.

Some studies have suggested a link between cancer and long-term exposure (over years) to THMs, and also that THMs can have an effect on reproduction. There is some evidence that THMs cause cancer in animals. As a result, they are classified as “possibly carcinogenic” to humans.

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The problem with THMs in Irish drinking water supplies has been known about for many years. It is estimated that more than 400,000 people may be receiving excessive amounts of the chemicals in their supplies, with the worst-affected counties being Donegal, Kerry and Wicklow.

The Environmental Protection Agency said 91 per cent of public water supplies were THM-compliant in 2015, with 59 supplies showing excessive amounts.

A national plan has been drawn up to deal with the problem, but it is dependent on a significant injection of funds to update reservoir and treatment infrastructure.

The Health Service Executive says excessive THMs in drinking water over the short term is unlikely to result in any risk to health. It also says that the potential risk from drinking untreated water far outweighs any possible risks from long-term exposure to THMs.

Information on drinking water parameters for all public supplies is available on the Irish Water website. Users can check the results of tests on their supplies by entering their address and scrolling through the table on the linked page.

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