

High bacteria levels found in bottled water in Canada



Michel Lavelle, of the Canadian Bottled Water Association, calls the study 'unnecessarily alarming.' He says commercial bottled water is not meant to be sterile, so the presence of bacteria in itself is not news.

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A Montreal laboratory is raising worries about bacteria in bottled water, noting they've found "revolting" levels that could put certain vulnerable people at risk.

Researchers from C-crest Laboratories in Montreal decided to randomly test bottled water for bacteria after a fellow employee complained of a foul taste from some bottled water and became ill.

They tested a handful of popular brands (which they did not name) and found that more than 70 per cent of the samples contained bacteria at levels that far exceed recommended limits in the U.S.

Some of the bacteria were at levels dozens of times higher than those permitted by the United States Pharmacopeia (USP).

"There were so many that at first, we couldn't count. We had to dilute the samples," Sonish Azam, one of the researchers in the study told CTV News.

Azam and her team presented their findings to the general meeting of the American Society of Microbiology in San Diego.

The types of bacteria they found were heterotrophic, a category of bacteria that includes those that survive by consuming organic matter.

Regulatory bodies such as the U.S. Food and Drug Administration, Environmental Protection Agency (EPA) and Health Canada have not set limits for the heterotrophic bacteria counts in bottled drinking water.

"Bottled water is considered to be a food product and is regulated under the Food and Drugs Act and Regulations. These regulations include requirements for microbiological quality, composition and labeling," a Health Canada spokesperson told CTV News in an email.

"Under these regulations, bottled water is required to be free of disease causing organisms. Like most foods, bottled water may contain naturally occurring bacteria which typically have little or no health significance.

"In numerous studies, heterotrophic bacteria isolated from water have been shown to be of no human health consequence."

According to the USP, no more than 500 colony forming units (cfu) per milliliter of bacteria should be present in drinking water. The C-crest team found counts in some of samples at 100 times those levels. In comparison, the average count for different tap water samples was 170 cfu/mL.

"Microbiologically speaking, tap water is purer than bottled water -- most bottled water," Azam said. "We didn't know this until we conducted the research."

The researchers stress that the bacteria they found "most likely" do not cause disease, but Azam says that's still unclear. She suggests it's possible that the bacteria they found could be pathogenic and pose a risk for vulnerable populations such as the elderly, pregnant women, infants, and immunocompromised patients.

"I cannot rule out that these organisms might be harmful, but I do not know," Azam said. "But in microbiology there is a rule: guilty until proven innocent."

She says many Canadians assume bottled water is safer than tap water and might be surprised to learn how much bacteria is in their bottled water.

"Bottled water has a price tag to it, [so we assume] that must mean it is safer and you are buying safety with that money," she notes.

Michel Lavelle, of the Canadian Bottled Water Association, calls the study "unnecessarily alarming." He says commercial bottled water is not meant to be sterile, so the presence of bacteria in itself is not news.

"When you say the word bacteria it sounds like it is dangerous. But you eat bacteria on salad and fruits all day long. And these are the same bacteria found in the water," he told CTV News.

He notes that the bacteria detected are non-coliform and non-pathogenic and don't do any harm, which is why regulators haven't set limits on these bacteria.

"They don't regulate these bacteria because they are not linked to disease," he says.

Still, Azam's team concedes that while bottled water is not expected to be free from microorganisms, they were stunned at the high levels of bacteria they found.

They were also stunned that there were not limits in Canada on levels of these microorganisms in bottled water.

"The cfu observed in this study is surprisingly very high. Therefore, it is strongly recommended to establish a limit for the heterotrophic bacteria count as well as to identify the nature of microorganisms present in the bottled water," she said.

With a report from CTV medical specialist Avis Favaro and producer Elizabeth St. Philip