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OUR HABITS AND CONCERNS OVER TAP AND BOTTLED WATER

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Introduction

The availability of potable water supply is important in establishing economically viable and healthy communities. Potable water is considered safe when delivered to the consumer for drinking, cooking and washing. Safety of the potable water is ensured by a water treatment plant by processing and disinfecting through approved physical, chemical, bacteriological and radiological methods. At the same time, it is expected to be delivered to the consumers in sufficient quantity and at a reasonable price. The municipal (typically tap water) and bottled water are among the several sources of potable water available to the consumers today.

Bottled water is sold as "spring" or "mineral" water or water from other sources that may have been treated to make it fit for human consumption. Spring (mineral) water comes from an underground source and depending on the regulations of the country of origin, is further defined by the content of total dissolved solids (e.g., above 250 mg/L in the United States). The spring water is considered pure and often times the composition is unmodified during the bottling process to protect its freshness. Bottled water could be distilled or passed through deionization processes to remove minerals or simply be bottled with municipal water. The label on some bottles refers to the source of the water, while others such as "carbonated", "demineralized" or "distilled" water are associated with the water treatment.

Regulation and Quality

The quality of water is as important as the food we consume. The Canadian Food Inspection Agency (CFIA) regularly inspects samples of domestic bottled water for mostly bacteriological quality. Health Canada also recommends refrigerating single serve bottled water after opening to preserve the water quality. Similarly, the Canadian Bottled Water Association (CBWA) has the mandate to ensure that its members test water sources and the bottled water.

The common perceived taste associated with municipal water depends on the water source, treatment, and condition of the delivery systems before consumption. The concern about the taste of the municipal water has contributed to an increase in the amount of bottled water being purchased. The consumer should be educated on the causes and informed of the insignificant effect of the taste of water in relation to its quality. However, the undesirable taste of municipal water can be improved by filtering. Bottled water is perceived for its convenience, potability and safety in comparison to the municipal water. However, on the safety issue, the quality standards are less rigorous for bottled water than they are for municipal water. Municipal water supplies around the

world typically meet very strict regulations and undergo frequent tests to ensure the delivery of safe water.

Regarding the quality and safety of our drinking water, there are supporters for and against municipal and single serve bottled water. However, we should critically evaluate the sources of our water supplies since natural and anthropogenic (human activities) activities are constant sources of water pollutants. Oil spills, agricultural chemicals, and other chemical contaminants such as lead, nitrates, sulphur, manganese, arsenic and uranium continue to raise quality and health concerns in water treatment plants and amongst the consumers. Bottled water is usually considered safe for consumption when the ground water is contaminated with chemical wastes or subjected to environmental abuse. This is an undeniable fact which, should not be over stretched to habitually require the purchase of bottled water where the ground water is uncontaminated.

Environmental and economic impact

The bottled water industry could make accessing the potable water difficult as the cost of water is becoming higher than the gas price at the pump. These products should be made available in disaster regions to help save lives while the main water infrastructures are being replaced or repaired. To better address these facts, several cities and municipalities have banned or restricted the purchase and sale of single-use bottled water within their facilities, in council meetings, or in city buildings. These include London (Ontario), Charlottetown (Prince Edward Island), Nelson (British Columbia), Los Angeles, Chicago and Minneapolis while Manitoba and other provinces in Canada are debating this issue in the legislature. Debates are also focusing on the issues and concerns about the packaging material which are associated with serious health and environmental (such as, green house gasses, landfills) impacts.

Conclusions

As individuals however, we need to re-assess our changing drinking and using habits of water as more and more people lack access to potable water while many more prefer the quick, convenient and single serve options. Our habits are costing more than the content of the bottle and it indirectly translates into our environment, health, and wealth.

About the authors

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