

Bottled vs. Tap Water

Background

Bottled water companies haul in \$11 billion a year in the United States with marketing campaigns that describe the stuff as pristine, natural and being better than tap water. Yet 44 percent of the bottled water produced here comes from the same municipal sources as tap water. Additionally, 85 percent of the 30 to 40 billion single use plastic bottles end up in landfills. So is drinking bottled water worth it: Economically? Environmentally?



Economics

Average cost of a 20 ounce (0.16 gallons) single use bottled water = **\$1.46**

Average cost of 128,000 ounces (1000 gallons) of tap water = **\$1.46**

Calculate

Price per ounce of bottled water = _____ oz. / ¢

Price per ounce of tap water = _____ oz. / ¢

FYI: 1 ¢ of tap water = 45.5 single use 20 ounce bottles of water!

Bottled vs. Tap

To date, no independent investigation has shown that bottled water passes more safety and health checks than tap water. In fact, the National Resources Defense Council (NRDC) tested 103 brands of bottled water and concluded there was no assurance that water out of a bottle is cleaner or safer than water from the tap. As for the fitness water craze, skip it. Fitness and specialty waters will not give an athlete an advantage or edge. In fact, vitamin-fortified waters may pose a risk for over-supplementation.

The NRDC reported that a five-year supply of bottled water cost over \$1,000 compared with a few dollars for the same amount of tap water. Not to mention the environmental impact of the many discarded plastic water bottles that are not recycled.

Tap water may sometimes look or taste differently, but that doesn't mean it's unsafe. In fact, the most dangerous contaminants are those that consumers cannot see, smell or taste. Consumers don't need to worry about their presence, since municipal water systems (place where the tap water comes from) are subject to the federal Safe Drinking Water Act. As such, the water is constantly and thoroughly tested for harmful substances. If there is a problem, consumers will be warned through the media or other outlets.

Another advantage of tap water which many people don't think about is it typically contains fluoride. Many communities add fluoride to drinking water to promote strong teeth and prevent tooth decay in residents.

Given the lack of objective research or evidence to favor bottled water over tap water, the decision on which to drink comes down to an individual choice. However, two things we know for certain: bottled water is more expensive than tap water and more environmentally damaging than tap water.

Questions

1. Is there any evidence that suggests bottled water is better than tap water?
2. How much money could you save if you drank tap water for a year instead of bottled water?
3. In 2005, 2.3 billion single use water bottles were consumed in New York State. 80% of those bottles were NOT recycled. Based on this data, calculate how many bottles were thrown into New York landfills in 2005. NOTE: New York has now added a 5 cent deposit on bottled water to encourage returning.
4. What effect would drinking tap water have on the number of bottles being sent to the landfills?



Consider purchasing several water bottles (see right) made from 2, 4, or 5 plastic (these are considered safe) and refill them daily with tap water. To know what type of plastic you are purchasing, look on the bottom of the bottle for a symbol similar to the one on the left. Or you could avoid plastic altogether and switch to glass or lightweight stainless steel containers.



Did you know: it takes $\frac{1}{4}$ of the bottle size equivalent in oil to create the single use water bottle, fill it with water, transport it to your area, cool it and get it to your home? So for each 20 ounce bottle of water, it takes 5 ounces of oil for it to reach you in present form.

Background Source: [Bottlemania by Elizabeth Royle \(2008\)](#)

Average Source: Suffolk Water Authority

Bottled vs. Tap Source: <http://health.yahoo.com/experts/healthnews/4505/water-facts-bottled-or-tap/>

Chris Sheehan (2009) – www.newyorkscienceteacher.com