Tap or bottled water: Which is better for you? [1]

Dear Alice,

Which is better for you, tap or bottled water?

Answer

Dear Reader,

By which is better, do you mean healthier, or safer? The amount of dissolved minerals in water, in general, is extremely small. In fact, no vitamins, proteins, fats, and carbohydrates are in water. Many American tap water supplies contain fluoride; this is added at processing plants. Bottled water, on the other hand, is not necessarily fluoridated. So, nutrient-wise, bottled water may be inferior in terms of fluoride content. This is especially problematic for children who are forming teeth. As far as safety is concerned, believe it or not, both tap and bottled water must adhere to similar standards of quality. The main difference between the two: one comes at a price, while the other is free.

All water, bottled and tap, contains microbiological and chemical contaminants that enter our water supply through nature, by animals, or from humans. In everyday terms, it would not be feasible to eliminate all contaminants from water? not only would it be extremely expensive, but it also wouldn't offer any more health protection. That is why maximum levels of many substances have been established, including:

<table>
<thead>
<tr>
<th>Contaminant type</th>
<th>Common examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microorganisms</td>
<td><em>Coliforms, giardia lamblia, cryptosporidium</em></td>
</tr>
<tr>
<td>Disinfectants and disinfection by-products</td>
<td>Bromate, chlorine, haloacetic acids</td>
</tr>
<tr>
<td>Inorganic chemicals</td>
<td>Arsenic, chromium, lead, mercury, nitrite</td>
</tr>
<tr>
<td>Organic chemicals</td>
<td>Benzene, chlordane, dioxin</td>
</tr>
<tr>
<td>Radionuclides</td>
<td>Radium 226 and 228, uranium</td>
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</tbody>
</table>

In the United States, municipal water (public water supply, such as town or city drinking water, a.k.a., tap water) must meet state and federal safety requirements for acceptable levels of contaminants. To help ensure the safety and quality of tap water, public water suppliers are obligated to provide an annual report, sometimes referred to as a consumer confidence report, on the quality, source, and contaminants found in their water supply. These are available on the U.S. Environmental Protection Agency (EPA) Web site [2] and are organized...
Some contaminants, such as iron, sulfur, and chlorine, can affect the taste and smell of tap water. Various types of treatment devices can be installed in the home to further filter drinking water. They are separated into point of entry methods (where the water enters the house) and point of usage methods (where the water is used, such as from the faucet). Two methods for home treatment include:

- **Home filtration units.** These contain activated carbon, which adsorbs organic contaminants and constituents that affect taste and odor, such as chlorination by-products, cleaning solvents, and pesticides. Canisters must be changed according to manufacturer’s recommendations. These units don’t remove lead or copper.
- **Boiling water.** This kills bacteria, but since it reduces the volume of water, it can concentrate other contaminants that aren’t affected by temperature.

More information on home filtration methods is available on the [National Sanitation Foundation Web site](http://www.nsf.org).

Bottled water is regulated by the U.S. Food and Drug Administration (FDA), just as any other packaged food or beverage. It has to be processed, packaged, shipped, and stored in a sanitary manner, and labeled accurately and truthfully. Bottled water must meet the same requirements for safety as public drinking water.

According to FDA regulations, standard definitions of bottled water products have been established. Bottled water products must be labeled accurately, meaning that a company must fill their bottles with water that fits the description on the label. If their product does not meet the standards, they can be fined for mislabeling and misbranding. The criteria for the various bottled water terms are as follows:

- **Artesian water** is obtained from a well that gets its water from a confined aquifer (a water bearing rock, rock formation, or group of rocks) and whose water level must be higher than the natural water table.
- **Distilled water** is the product of distillation, which involves evaporating and condensing water so that it no longer contains dissolved minerals.
- **Purified water** is produced by suitable processes that meet the U.S. Pharmacopoeia standards for purified water, including distillation, deionization (passing water through resins that remove most of the dissolved minerals), or reverse osmosis (the use of membrane filters to remove dissolved solids).
- **Spring water** is obtained from an underground formation from which water flows naturally to the surface, or would if it were not collected underground through a borehole where a spring emerges. If an aquifer were tapped (a hole is bored, drilled, or constructed in any other way), the resulting water would be called "well" water.
- **Mineral water** must originate from a protected underground water source and contain at least 250 parts per million in total dissolved minerals, such as calcium, magnesium, sodium, etc.

Water coming from a municipal source must clearly state this on the label. Prior to this law, companies had been merely selling tap water as bottled water. If municipal water is processed and meets the requirements for distilled or purified water, the municipal source need not be named.
In the aftermath of September 11, 2001, many are concerned with the safety of the United States’ drinking water. Since the EPA oversees our drinking water supply, they state that most contaminants would need to be used in enormous quantities in order to be threatening. The risk, however, is minimized due to the following:

1. Our water supply is locally based, with local water supplies not being interconnected. As a result, it is virtually impossible for all of the water in the U.S. to become contaminated.
2. The FBI has worked together with the EPA in advising local law enforcement agencies of the steps they can take to watch for possible threats to the water systems.
3. Most importantly, the treatment processes currently in place would inactivate most contaminants.

Since safeguards are in place, our water supply certainly should be secure. Keeping bottled water on hand in case of any unexpected emergencies, such as if the pipes break, is not a bad idea, though. For instance, if you live in an area likely to have natural disasters, such as earthquakes, bottled water is useful to have available.

Whether you prefer bottled or tap water is a personal choice. Neither is significantly superior; the difference may only be felt in your wallet and recycling bin.

Alice!
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Body Maintenance [6]
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