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Facts about Bottled Water[1]

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Water is essential for life. It makes up about 60% of your body weight. In order to keep our bodies functioning at their best, we need to get enough water every day from the fluids and foods in our diet. We get about 20% of the water our bodies need from the foods we eat. The remainder comes from beverages, including drinking water. With our busy lifestyles, it is no surprise that bottled water has become a popular way to meet these needs; half of all Americans now consume bottled water regularly. As the popularity of bottled water has increased, so have the questions about its safety. This document addresses some of these concerns.

What are my bottles made of?

Most disposable water bottles are made from a type of plastic called polyethylene tere*phthalate*, or PET for short. PET is used because it is lightweight and doesn't break easily. The Food and Drug Administration (FDA) enforces current good manufacturing practices to ensure the safety of bottled water and monitors and inspects processing plants. FDA standards for bottled water are similar to quality standards for tap water that are set by the Environmental Protection Agency (EPA). Bottlers who are members of the International Bottled Water Association ensure that contaminant levels are below FDA standards with annual product and facility inspections.

Does bottled water affect my oral health?

Your oral health depends on many things, such as how often you floss and brush your teeth, how often you go to the dentist, and the types of foods and drinks you consume. Making sure you are getting enough fluoride also plays a role.

Fluoride is a mineral that is added to tap water in most cities because it has been shown to prevent tooth decay in people of all ages. It is important to get enough fluoride to keep your teeth healthy. People also can get fluoride from their toothpaste, mouthwash, special dental treatments, foods, and some beverages. Most bottled water does not contain fluoride, so unless you drink bottled water that is fortified with fluoride, you won't get the extra protection against cavities. If you aren't getting fluoride from other sources you may want to consider switching bottled water brands to one that is fortified

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with fluoride or drinking fluoridated tap water every day.

How can I find out if the bottled water I drink contains fluoride?

The FDA does not require manufacturers to list the fluoride content of the water they bottle. If the fluoride content is not listed, you can contact the company to get this information by calling the 800 number provided on the label, or by visiting the company's website. Knowing if the water you drink contains fluoride can help you know how important it is for you to include other sources of flouride for your dental health.

Recycling: Go with the Flow

More than 80% of Americans have access to a plastics recycling center. Once you have emptied your disposable water bottle, it is important to place it in a recycling bin or take it to your city's recycling center. Recycling reduces waste that litters highways and waterways. It also allows the materials to be reused for things such as toys, sleeping bags, and other goods. According to the Container Recycling Institute, about 86% of the 30 billion disposable water bottles sold each year are thrown in the trash and not recycled. Not sure if your bottle is recyclable? Flip your bottle over and look for the recycling symbol.

Figure 1. Recycling symbol (Source: http://commons.wikimedia.org/)

Things I should do with my disposable water bottle:

- Use it before the expiration date
- Recycle it after it is empty
- Always follow the instructions on the bottle

Things I should *not* do with my disposable bottle:

- Share it with others
- Keep it past the expiration date
- Reuse it

Bottled Water Facts...Watered Down

Most disposable water bottles should not be reused! They are intended to be single-use bottles and it is best to throw them away after you have used them. Disposable water bottles are often soft and flexible and are not meant for harsh cleaning.

Don't Drown in the Myths

Let's take a look at some of the more common myths about bottled water....

MYTH: All bottled water comes from a natural spring.

FACT: About 25% of all bottled water is taken from city water sources and then purified multiple times. If the bottled water comes from a city source it must be stated on the label unless it has been further purified; in this case the label will say purified water.

MYTH: My bottled water is cleaner and more pure than tap water.

FACT: As long as both the city water and the bottled water are following regulations, bottled water is no safer than tap water. Tap water is regulated by the Environmental Protection Agency (EPA), a government agency. They create guidelines for what can be in the water and have high standards that must be met. Bottled water is regulated by the Food and Drug Administration (FDA), which has guidelines that are not as strict as the EPA guidelines for tap water. Bottled water and tap water are not required by either agency to be 100% free of contaminants; this would be an impossible standard. For more information about what is in your bottled water call the 800 number listed on the label.

MYTH: Freezing bottled water or leaving it in a hot car is dangerous because the plastic can leak dioxins, a cancer-causing agent, into the water.

FACT: This myth has been circulated on the Internet for years and was dispelled by Dr. Rolf Halden, a researcher at Johns Hopkins University's Department of Environmental Health Sciences and Center for Water and Health. Dr. Halden stated that dioxins are not found in plastics and that this myth is an urban legend. In fact, freezing bottled water would work against this myth as it slows the release of chemicals. Heating plastics could increase the leaching of phthalates into the water, but there is no bottled water standard for this chemical. Experts say any phthalate found in the water is likely from the plastic cap or liner.

Take the Plunge

One reason people drink bottled water is because they don't like the taste of their tap water. There are many inexpensive filters available that can be attached to your home faucets to give tap water the purer taste of bottled water. There are also inexpensive purifiers that can be refilled and stored in the refrigerator. These options do not remove the fluoride present in tap water. Try filtering your own water at home and bring it with you in one of the many durable reusable water bottles sold in stores. These come in lots of fun colors, designs, shapes, and sizes. Most of these bottles are made from materials such as high density polyethylene (HDPE), low density polyethylene (LDPE), and stainless steel. When purchasing water bottles, make sure they are bisphenol A-free (i.e., BPA-free). The materials from which these bottles are made are listed on the bottom of the bottle, just like disposable water bottles.

Recommended Websites

Centers for Disease Control and Prevention – This website contains credible health and nutrition information supplied by the government. Material is available in nine languages.
http://www.cdc.gov/fluoridation

National Cancer Institute – This website provides general information about fluoride and fluoridation with a focus on cancer risk.
http://www.cancer.gov/cancertopics/factsheet/Risk/fluoridated-water

U.S. Food and Drug Administration – This site provides information about bottled water and how it is regulated.
http://www.fda.gov/Food/ResourcesForYou/Consumers/ucm046894.htm

For more information on obtaining other extension publications, contact your county Cooperative Extension service.