

Ask the Expert: Thinking About Water

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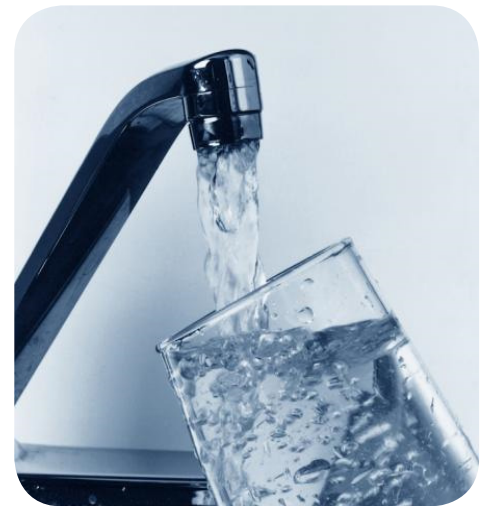
The choices in water and water-type beverages have expanded dramatically over the years. Drinking water is a great way to stay hydrated and limit calories. According to the Institute of Medicine, adequate water intake is about 125 ounces (about 15 cups) for men and 91 ounces for women (about 11 cups) but this includes water in all foods and beverages.

Tap water is the most common source of drinking water in the U.S. Tap water includes fluoride to maintain the dental health of Americans and prevent dental caries. Public water systems are subject to the Safe Drinking Water Act to control the quality and safety of drinking water. Tap water is usually disinfected with chlorine to get rid of contaminants. If you have a private drinking water source rather than public water system, well water for example, it is important to take additional tests to ensure a safe drinking water supply. The local health department can provide more information on quality tests and water analyses.

Bottled water is widely available; sales in this beverage have steadily increased over recent years. The Food and Drug Administration (FDA) regulates bottled water as a packaged food based on standards set by the Environmental Protection Agency (EPA). In other words, the FDA is responsible for classifying bottled water based on its origins and making sure bottled water is safe and properly labeled.

Another source of drinking water is alkaline water. Tap water has a pH of 7.0, while pH of alkaline water is above 7.0. The alkalinity increases when minerals and electrolytes such as bicarbonate, potassium, and calcium are added. These additives may alter the taste of the original water. Mineral water is a common example of alkaline water.

The variety of water choices present many options for consumers to consider. The general safety of most tap water in the US provides an economical, environmental, and safe source of water. However, for people living in areas with untested well water, known problems in public tap water, or just wanting a convenient low-calorie beverage, bottled water may provide a healthy alternative for staying hydrated at home and on the go.



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Source: Heil DP. Acid-base balance and hydration status following consumption of mineral-based alkaline bottled water. J Int Soc Sports Nutr. 2010;7:29. Retrieved from <http://www.webmd.com/diet/a-z/alkaline-diets>; https://www.epa.gov/sites/production/files/2015-11/documents/2005_09_14_fa_q_fs_healthseries_bottledwater.pdf; http://foodsafety.wisc.edu/consumer/fact_sheets/waterbottles.pdf; <https://www.hsph.harvard.edu/nutritionsource/healthy-drinks-full-story/>; <http://www.nationalacademies.org/hmd/Reports/2004/Dietary-Reference-Intakes-Water-Potassium-Sodium-Chloride-and-Sulfate.aspx>; Picture: <https://www.epa.gov/water-research/small-systems-monthly-webinar-series>

Food Safety:

Drinking Water Standards

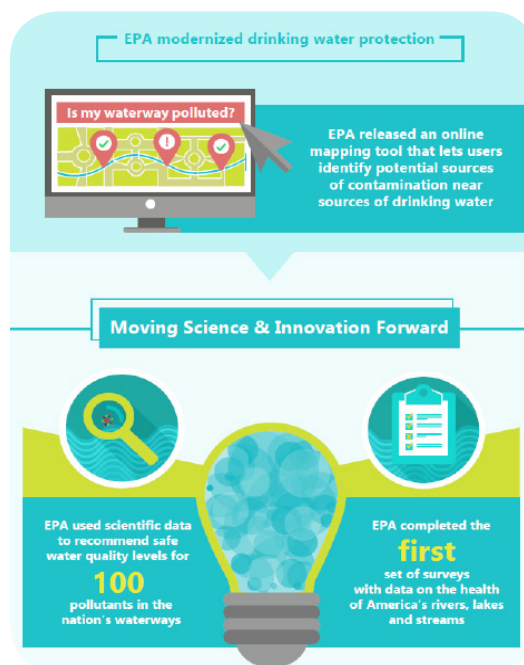
Written by Quynh Nguyen, Undergraduate Student in Department of Pre-Pharmacy, Purdue University

The Safe Drinking Water Act (SDWA) set forth a process for the U.S. Environmental Protection Agency (EPA) to identify contaminants in drinking water. Currently, the EPA monitors and limits over 90 contaminants. The states may set their own additional standards as long as they also meet minimum national standards.

There are two main groups of contaminants: chemical and microbial. Chemical contaminants are inorganic components such as lead, arsenic, copper, mercury, and organic components from pesticides and disinfectants. Microbial contaminants are disease-causing microorganisms from human and animal fecal waste. The Ground Water Rule, issued by the EPA, aims to improve drinking water quality and protects humans from waterborne pathogens.

What about unregulated contaminants? The EPA also monitors suspected contaminants, whose potential health effects are not yet known. These suspected contaminants may be added to the regulated contaminants list if studies link the contaminants with health problems or disease.

Consumers have the right to know the quality of drinking water from public water systems. A drinking water quality report, called the Consumer Confidence Report (CCR), should be sent to customers annually. Consumers may also call their water supplier or use the [EPA's CCR search tool](#) to get a copy. Each CCR contains basic information about the source of the water, the list of contaminants, possible health effects, educational information on some contaminants, contact information of the water system and hotline number of the EPA.



Juicing versus Eating Whole Fruits and Vegetables

Written by Kristen Herrera, Undergraduate Student in the Department of Pharmaceutical Sciences, Purdue University



Fruits and vegetables contain key nutrients that have been associated with lower risks of heart diseases, type 2 diabetes, and certain types of cancers. Juicing is a type of food processing that extracts liquid from fruits and vegetables while the pulp, or insoluble fiber, is left behind. Juicing may be promoted as a way to increase intake of fruits and vegetables. However, juicing can also be expensive; it takes more fruits or produce to make a serving of juice compared with a serving of whole fruit or vegetables. In addition, the juice may include many added sugars. Eating whole fruits and vegetables are recommended by the Dietary Guidelines for Americans and provide some advantages over juicing. Whole fruits and vegetables may improve feelings of fullness while also incorporating fiber, a nutrient that most Americans do not consume enough of. Choose whole fruits and vegetables to eat healthy and save money!

Sources: <https://www.washington.edu/wholeu/2015/03/11/juicing-vs-blending/>; <https://www.choosemyplate.gov/fruits-nutrients-health>; Picture: <http://www.fda.gov/Food/ucm292277.htm>

Beef and Vegetable Soup

Ingredients (8 servings)

- **1 pound ground beef**
- **1 ½ cans (about 23 ounces) low-sodium whole kernel corn**
- **1 can (about 15 ounces) low-sodium carrots**
- **1 can (about 15 ounces) low-sodium sliced potatoes**
- **1 can (about 15 ounces) low-sodium diced tomatoes**
- **1 small onion, diced**
- **½ cup macaroni, dry**
- **1 teaspoon garlic powder**
- **1 teaspoon onion powder**



Directions:

1. Brown ground beef over medium heat for 8-10 minutes in a large pan. Drain off fat.
2. Add corn, carrots, potatoes, tomatoes, and onions to pot.
3. Cook for 25 minutes over medium heat. Stir every 10 minutes.
4. Add macaroni, garlic powder, and onion powder to pot.
5. Cook for 20 minutes over medium heat. Stir every 10 minutes.

Recipes Source: <https://whatscooking.fns.usda.gov/sites/default/files/featuredlinks/HarvestofRecipes.pdf>

Beef and Vegetable Soup

Per serving: 258 Calories, 15g Total Protein, 30g Total Carbohydrate, 4g Total Dietary Fiber, 5g Total Sugars, 9.3g Total Fat, 3.4g Total Saturated Fat, 336mg Sodium

Great Northern Bean Soup

Per serving: 327 Calories, 25g Total Protein, 41g Total Carbohydrate, 13g Total Dietary Fiber, 3g Total Sugars, 7.4g Total Fat, 1.2g Total Saturated Fat, 260mg Sodium

Pictures: <http://www.tasteofhome.com/recipes/ground-beef-vegetable-soup>; <https://whatscooking.fns.usda.gov/sites/default/files/featuredlinks/HarvestofRecipes.pdf>

Great Northern Bean Soup

Ingredients (6 servings)

- **2 cups Great Northern beans, dry**
- **3 cups water**
- **½ cup onion, chopped**
- **½ pound chicken, thawed, cut up, and skin removed from each piece**
- **¼ pound ham, chopped**
- **2 tablespoons vegetable oil**
- **8 cups water**
- **1 cup tomatoes, diced (or ½ can, about 8 ounces, low-sodium diced tomatoes)**
- **1 tablespoon distilled white vinegar**



Directions:

1. Soak beans in 3 cups of water overnight in a medium-sized bowl.
2. Drain the water and rinse beans.
3. Brown onion, chicken, and ham in oil over medium to high heat in a large pan for 5 minutes.
4. Add water, beans, and salt to pot. Mix well.
5. Bring pot to a boil and cook for 5 minutes.
6. Lower heat and cook for about 1 hour. Stir pot every 15 minutes.
7. Add tomatoes and vinegar to pot. Keep cooking over low heat for about 20 minutes. Serve hot.

Underlining denotes TEFAP commodity ingredient



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This newsletter is edited by Quynh Nguyen, Yibin Liu, PhD and Heather A. Eicher-Miller, PhD and is created by the Eicher-Miller Lab in the Department of Nutrition Science at Purdue University. This institution is an equal opportunity provider.

Changes in the Nutrition Facts Label

Written Clara Vasquez-Mejia, Food Scientist, B.Sc, M.Sc, Department of Food Science, Purdue University

In May 2016, the U.S Food and Drug Administration (FDA) proposed major changes to the Nutrition Facts label on food packaging. The new label aims to provide more accurate nutrition information to consumers and help them make informed decisions about the foods they eat. All changes were based on current scientific information, recent Dietary Guidelines for Americans, and input from the public. These changes include:

- 1) Serving size information updated in order to reflect how much consumers generally eat in one sitting.
- 2) Added sugars reported on the label to inform consumers of this dietary component to limit.
- 3) Vitamin D and potassium reported on the label to inform consumers of these nutrients to increase.
- 4) Vitamin A and C reporting is no longer mandatory, but can be reported voluntarily.

The compliance date for these changes is July 26, 2018 for companies with \$10 million or more in annual food sales. Companies with annual sales below \$10 million will have an additional year to make the changes.

NEW LABEL / WHAT'S DIFFERENT

| Nutrition Facts | |
|--------------------------------------|----------------------|
| 8 servings per container | |
| Serving size | 2/3 cup (55g) |
| Amount per serving | |
| Calories | 230 |
| % Daily Value* | |
| Total Fat 8g | 16% |
| Saturated Fat 1g 5% | |
| Trans Fat 0g | |
| Cholesterol 0mg | 0% |
| Sodium 160mg | 7% |
| Total Carbohydrate 37g | 13% |
| Dietary Fiber 4g | 14% |
| Total Sugars 12g | |
| Includes 10g Added Sugars 20% | |
| Protein 3g | |
| Vitamin D 2mcg 10% | |
| Calcium 260mg 20% | |
| Iron 8mg 45% | |
| Potassium 255mg 0% | |

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Servings: larger, bolder type

New: added sugars

Change in nutrients required

Serving sizes updated

Calories: larger type

Updated daily values

Actual amounts declared

New footnote

Source and Picture: <http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm385663.htm>