Clean Safe Office Water is the True Staff of Life

By Janice Nath

**** et aside bread — water is the true "staff of life," particularly in **J** the workplace where the water cooler is "ground zero" for refueling our bodies as well as catching up on office gossip. Water, which carries oxygen to our body's cells, makes up more than half of our body weight, and we can't live for more than a few days without it. While our bodies don't get water just from drinking water alone-as any fluids we drink contain water as well as certain foods (think juicy peaches or ripe tomatoes)-consuming pure, fresh, clean water is vital for our good health. How can we ensure that our drinking water is safe in the workplace?

The vulnerability of the world's water to contamination and pollution is part of our 21st century reality, and we must all play the first line of defense in ensuring our water is clean and contaminant free.

Even our military have been exposed to unsafe drinking water. From 1957 to 1987, the drinking water at Marine Corps Base Camp Lejeune, a military training facility in North Carolina, was contaminated with toxins up to 3,400 times permitted by safety standards with the primary chemicals detected being perchloroethylene (PCS), benzene, and trichloroethylene (TCE). In August 2012, President Obama signed the "Honoring Americans and Caring for Camp Lejeune Family Act" bill approved by Congress. The bill provides health benefits to Marines and family members exposed to contaminated drinking water at Camp Lejeune.



Scientists and government regulators are committed to detecting, observing, and regulating potential contaminants in our water. The Safe Drinking Water Act (SDWA) was passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law requires many actions to "protect drinking water and its sources—rivers, lakes, reservoirs, springs and ground water wells" according to the EPA. However, drinking water safety cannot be taken for granted, and the toll of time can result in a system that may wear out as well as inadvertent mistakes that can happen.

When the system breaks down, we run the risk of toxic chemicals that can find their way into the ground's surface and into our tap water. To ensure our best health, we do need to find out if there are any contaminates in our water and what their concentration levels are and if they are contaminants that potentially pose health risks. The United States Environmental Protection Agency, *http:// water.epa.gov/drink/index.cfm*, is a great resource to learn more about the safety of the ground water and drinking water in your region.

In many commercial and institutional office buildings, general drinking water for occupants is overseen by the building or facilities manager who is responsible for oversight of proper maintenance of the water pipes. Drinking water also makes its way into buildings from catering suppliers, installation of office cooler systems and individual employees who bring in their own drinking water via bottles and coolers.

Everyone has to be their own primary first line of defense in ensuring that health and safety of their drinking water at work. Here are of some of my primary tips to ensure you keep out of "hot water" and enjoy fresh, clean, and safe drinking water in the workplace:

• Avoid Plastic Water Bottles—Plastic bottles are convenient for toting water around on the go, but not all plastic bottles are created equal. Besides taking a toll on the environment by adding to our landfills, the plastic from plastic water bottles, particularly when warmed up, can leak into our drinking water. A study published in the *Journal* of Agricultural and Food Chemistry by Dr. X.L. Cao noted "significant migration of BPA, or bisphenol-A, especially in hot conditions."

Some portable water is bottled in containers that include polyethylene terephthalate and may potentially leak DEHA, a carcinogen, into the water. Some other portable water bottles contain bisphenol A, which is similar to the female hormone estrogen, which some studies have linked to cancer and immune and neurological problems.

- Don't Reuse Plastic Water Bottles-While I recommend that you totally ditch plastic water bottles, if you remain zealously committed to them, it is best not to reuse them. Contamination problems can result from reusing plastic water bottles without appropriate washing between each use. And even with thorough washing, toxic chemicals from the plastic water bottle are more likely to break down and drift into the water inside. There have been research studies which demonstrate that the disintegration of toxins in plastic water bottles is actually accelerated by daily cleaning with hot water and soap.
- Ditch the Office Water Cooler— In addition to the physical strength needed to hoist up a new water cooler bottle into the tank, there is also a major health hazard for offices that fail to regularly clean and disinfect the tank. A Tufts University research study on water coolers found that "organisms from each new bottle of water adhere to a cooler's reservoir the 'well' in which the bottle sits—and also to its hot and cold water spigots, accumulating over time and thereby boosting the bacterial count of any

water that passes through on the way to a cup or glass."

• Investigate Faucet Filters—If the tap water doesn't taste appealing and there are concerns about heavy metals, chlorine, or other contaminants in the water supply, water filters used in a pitcher or attached to the faucet can be a viable option. Not every filter type eliminates every type of contaminant. The Environmental Protection Agency requires that community water systems provide customers with an annual water quality report. for potential regulation based on risk and how often they occur in water supplies." To aid in this effort, the EPA ensures that "certain water systems monitor for the presence of contaminants for which no national standards currently exist and collect information for their occurrence." This health risk assessment is based on measuring risks to the most sensitive of our population which includes infants, children, pregnant women, immunecompromised, and senior citizens. The EPA then sets a "legal limit for the contaminant in drinking water or a required treatment technique."

DRINKING WATER SAFETY CANNOT BE TAKEN FOR GRANTED.

These Consumer Confidence Reports provide information about the quality of the drinking water supply. Once your review this report, you can assess what contaminants may be in play and which filter works best to address it.

• Scrutinize Water Vendor-Not all water delivery services are created equal, and it is important that whoever is charge of contracting a drinking water vendor thoroughly checks out the reputation and background of the company. Is the water regularly monitored to ensure it is contaminant free? Is there a help desk available to employees to call? What types of filters are used and are they appropriate for screening out the types of contaminants found in your region? Is the water delivery company a reputable business with tenure and great customer recommendations?

The U.S. EPA has established standards for tap water that "help ensure consistent quality in our nation's water supply under the Safe Drinking Water Act. The EPA prioritizes contaminants Drinking water standards in the United States are legally enforceable, which means that our individual state and the EPA can take enforcement actions against water systems that do not meet safety standards. The City of San Diego issues an annual Drinking Water Quality Report that includes important information about the water we drink.

For San Diego and other cities, you can also request a copy of your area water quality report from your water company or visit the Environmental Protection Agency at *www.epa.gov*. Invest in a testing kit and test your water in the office. These samples can be submitted to laboratories for analysis. The safety of our drinking water should never be taken for granted, and we should do everything we can to ensure our liquid "staff of life" is clean and fresh from biocontaminants.

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