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ESTHER BUSH

Water quality

This month, the "Take Charge of Your Health Today" page focuses on a timely issue in Pittsburgh—water quality. Jennifer Jones, MPH, community engagement senior coordinator at the University of Pittsburgh Clinical and Translational Science Institute, discussed this topic with Esther L. Bush, president and CEO of the Urban League of Greater Pittsburgh.

EB: Good morning, Jennifer. So many people are talking about water quality in Pittsburgh right now.

JJ: I know. We scheduled this topic a few months ago. But now is the perfect time to discuss this, especially given recent events with the boil water advisory that affected many city residents last month.

EB: This is a topic that I feel very passionate about. Americans have a tendency to think that water is not a problem here because we're not a developing nation. Recent local events, and other news stories from around the country, show us that water safety and quality are issues we need to be concerned about in the United States—and also worldwide.

JJ: Yes, I agree. I don't pretend to be an expert on water. I'm glad that we have expert researchers, like Dr. Aaron Barchowsky from Pitt Public Health, who study water and the environment. Water quality is an important public health issue. Water is the most basic human necessity. Water helps our bodies to flush out harmful toxins (poisons), carries nutrients to our cells, gives us energy and promotes healthy skin. The majority of our body composition—approximately 60 percent—is water.

EB: Jennifer, can you tell me a little bit about the Environmental Protection Agency's (EPA) work with water?

JJ: Sure. The EPA is a government organization with a mission to protect human health and the environment. This includes air, land and soil and water quality. The organization does a lot of research about harmful toxins. It provide laws and regulations. In the case of water, approximately 286 million people (88 percent of the total population) get their water from public water systems. These water systems are regulated by the EPA. Even with regulations and testing, water contamination can happen, making drinking water unsafe. Contamination can come from sewage releases; chemicals like lead, arsenic or radon; or land use practices, like pesticides. When contamination occurs, negative health effects can result, especially in children and pregnant women.

EB: It's so important that we as citizens are educated on this topic. I attended a conference on water a few years ago, and it was so interesting and engaging. Because of that, I have a greater appreciation, but also a greater concern, about the water I drink. It's expensive to buy water and filters. Because so many people rely on public access to water, it's essential to have safe water.

I'm glad that we are connecting readers to information on the Allegheny County Health Department's website. This is a great resource to all of us. I'm glad there are professionals that concentrate on these issues every day. Water is a precious natural resource that we cannot take for granted. I encourage people to think about ways they can conserve water. And if you do drink water out of bottles, recycle them.

JJ: It's always so nice to talk with you, Ms. Bush, and hear your insights. If anyone has any questions, the Urban League of Greater Pittsburgh has a Health Education Office that would be glad to connect you to resources. I look forward to talking with you next month, as April is National Minority Health month.

Any questions or comments can be sent to partners@hs.pitt.edu.

How worried should I be about my drinking water?

In the past year, clean drinking water has become a concern for some residents of Allegheny County. From the discovery of high lead levels in some City of Pittsburgh residents' tap water to the recent boil-water advisory in some parts of the city, people are wondering how worried they should be about their tap water.

Federal and state laws require that public drinking water suppliers test water regularly for anything that might make the water impure (contaminants) or unsafe to drink or use. In the summer of 2016, many City of Pittsburgh residents received letters from their water provider, Pittsburgh Water and Sewer Authority (PWSA), that tests from tap water in some homes showed high levels of lead. As PWSA, the City of Pittsburgh and residents continue working to fix the situation, one question weighs heavily on many people's minds: How do we protect ourselves and our loved ones? It is important to understand why lead in drinking water



(Photo by Aaron Warnick/PublicSource)



ACHD Safe and Healthy Homes Program

by Karen Hacker, MD, MPH

Lead poisoning has been a hot topic in the media in recent months. In addition to concerns with lead in the water of our local systems, the Flint crisis continues to drive changes to state and federal laws, and there are continued efforts to educate the public about the need to reduce sources of lead. With so much information, it makes it difficult to understand what it is that you need to know.

Let's start with the basics. Lead is a metal that affects brain development, particularly in children who are at the highest risk because their brains are still developing. Even low levels of lead in children's blood can affect their IQ, ability to pay attention, academic achievement and criminal behavior. There are many sources of lead—with the most common being deteriorated paint and lead-contaminated household dust in homes. Lead can also be found in soil, water and in toys and jewelry from some foreign countries.

So, what can you do? Because of the presence of lead in the environment, the Health Department (ACHD) recommends that all children be tested for lead at 9-12 months of age and again at 24 months. Your health care provider can do the test and, depending on the results, may also repeat the tests or recommend an investigation to determine the source.

You can also take steps to reduce the risk of exposure in your home if it was built before 1978. Have your house checked for lead-based paint. If renovating, repairing or painting, use only lead-safe certified firms—if you rent, talk with your landlord about fixing surfaces with peeling or chipping paint. Keep painted surfaces in good condition. Wash children's hands, bottles, pacifiers, and toys often. Damp dust and wet mop your home and children's play areas frequently. Get your soil tested before you start gardening, or before allowing children or pets to play in bare soil. If you work with lead, shower and change clothes before going home and wash your work clothes separately from other clothes.

What about your water? If you have lead plumbing or pipes, and have not used your water for a few hours, turn on the cold water faucet and let the water run for a couple minutes to flush any lead particles out. Use cold water for cooking and preparing baby formula. Purchase and install a NSF-approved filter for removing lead from water used for drinking. Get your water tested by talking with your local water provider, or contacting a DEP-accredited lab for more information.

Our community still has work to do to decrease the risk for all children, but we are seeing improvement. More children are being tested (in 2009, over 10,000 children compared to nearly 14,000 children in 2015). While 3% of children tested positive for elevated blood lead levels in 2009, those numbers are now below 1% as of 2015. We can continue to see those numbers decrease through education and awareness, and ACHD is committed to being a partner with the community to help.

For more information visit <http://www.achd.net/safehomes/index.html> (Karen Hacker is director, Allegheny County Health Department)

is dangerous. No amount of lead exposure is safe. It is especially dangerous to infants, young people and pregnant women. Lead is stored in the bones and can affect people later in life. In pregnancy, babies get lead from the mother's bones. Early exposure can slow brain development and cause difficulty learning. Lead damages the brain, kidneys, muscle development and the nervous system.

"Lead in water mostly comes from old pipes," says Aaron Barchowsky, PhD, professor of environmental and occupational health at the University of Pittsburgh Graduate School of Public Health. Because many Pittsburgh homes were built decades ago, the pipes that bring water to their houses from the main service lines are often made of lead.

If you are concerned about lead in your water, find out what is coming out of your faucet. PWSA customers can ask for a free lead test (<http://pgh2o.com/lead-testing-kits>). Private wells are not monitored. Owners of private wells should get their water tested. The Allegheny County Health Department also provides information on how to lower your risk of lead exposure (<http://www.achd.net/safe-homes/drinking-water.html>). People can buy bottled water, but that can be expensive and the bottles, if not recycled, create more waste in the environment. Filtered water pitchers or faucet attachments can remove some contaminants. Each brand of filter has its own claims as to what it filters, so it is best to read very carefully the information provided with those purchases.



People can buy bottled water, but that can be expensive and the bottles, if not recycled, create more waste in the environment. (AP Photo/File)

However, Dr. Barchowsky notes that, while lead in water is worrisome, "biologicals are the largest concern." Biological contaminants range from e. coli to giardia

Helpful websites

Helpful websites with information about water quality and safety:
ACHD: www.achd.net/safehomes/drinking-water.html.
PWSA: <http://pgh2o.com/>
PA Department of Environmental Protection: www.dep.pa.gov/Citizens/My-Water/PublicDrinkingWater/Pages/default.aspx



PWSA Executive Director Bernard Lindstrom speaks at press conference Feb. 1, 2017 at the Allegheny County Emergency Operations Center to provide an update on recent boil-water advisory. (Photo by J.L. Martello)

to other bacteria. E. coli comes from animal or human waste getting into a water source, infected food or from contact with someone who has it. It can cause infections, serious diarrhea, nausea and stomach cramping, among other symptoms. But water companies are continuously testing for biological contaminations.

"There's an active treatment process to make sure drinking water is safe, and it is monitored constantly," says Dr. Barchowsky. "Water companies have a chlorination process to purify the water. Decontaminants—called chloramines—are put in the water to keep bacteria levels down throughout the water system. Water companies publish the steps they've taken to keep water clean. Law requires that the companies notify consumers if any problems happen."

According to PWSA, it issued the recent boil-water advisory in some parts of the City of Pittsburgh because testing at one site had revealed a low level of chlorination. No harmful levels of bacteria were found, but consumers were cautioned in case any bacteria had gotten into drinking water because of the low levels of chlorination.

To make sure drinking water is free of any harmful contaminants, Dr. Barchowsky suggests getting tap water tested. Or, consumers can contact their water companies to ask how they are meeting environmental guidelines to keep water clean. He recommends that owners of private wells get their water tested because, otherwise, that water is not being tested.