

EARTH TALK

Questions & Answers
About Our Environment

Dear EarthTalk: Pharmaceuticals were in the news again recently, how they are polluting water and raising a host of health issues because we dispose of them both unused and used through body waste elimination. What can be done?

— Lucy Abbot,

Macon, GA

Pharmaceutical drug contamination in our groundwater, rivers, lakes, estuaries and bays is a growing problem. Millions of us are flushing unused medications down the toilet and discharging them in our body waste—even though sewage treatment plants and septic systems were never designed to deal with such contaminants.

Additional discharges by health-care facilities exacerbate the problem. As a result, researchers have identified traces of pharmaceutical drugs in the drinking water supplies of some 40 million Americans.

A nationwide study conducted by the U.S. Geological Survey in 1999

and 2000 found low levels of pharmaceuticals—including antibiotics, hormones, contraceptives and steroids—in 80 percent of the rivers and streams sampled.

According to Citizens Campaign for the Environment (CCE), the effects of constant, low-level exposure of pharmaceuticals on ecosystems and humans are uncertain, though “possible health concerns include hormone disruption, antibiotic resistance and synergistic effects.” And antidepressants, says CCE, can “alter the behavior and reproductive functions of fish and mollusks.”

CCE cites a recent Stony Brook University study showing that some fish species in New York’s Jamaica Bay are experiencing “feminization”—the ratio of female to male winter flounder was 10 to one in the studied area—likely a result of flushed pharmaceuticals that can act as “hormone mimics” and cause such effects.

New York’s Department of Environmental Conservation concurs, citing a number of other studies underscoring the impacts on aquatic life. What irks CCE about the problem is that almost all known sources of drugs in the environment first pass through wastewater treatment plants where they could be filtered out, but these facilities are not required to be equipped with pharmaceutical filter devices.

In light of the problem, the U.S. Food & Drug Administration (FDA) in 2007 established its first set of



Researchers have identified traces of pharmaceutical drugs -- including antibiotics, hormones, contraceptives and steroids -- in the drinking water supplies of some 40 million Americans. (Photo courtesy of Stockbyte)

guidelines for how consumers should dispose of prescription drugs.

First and foremost, consumers should follow any specific disposal instructions on a drug’s label or the patient information that accompanies the medication—and shouldn’t flush the drugs down the toilet.

If there are no disposal instructions, the FDA recommends finding out from your municipality if any take-back programs are in place. Also, the U.S. Drug Enforcement Administration sponsors National Prescription Drug Take Back Days across the country at various sites a few times a year.

“If no instructions are given on the drug label and no take-back program is available in your area, throw the drugs in the household trash, but first take them out of their original contain-

ers and mix them with an undesirable substance, such as used coffee grounds or kitty litter,” says the FDA.

This will make them less appealing to children, pets or people who may intentionally go through your trash, says the agency, which adds that a final step is to put the medication into a sealed bag or other container to prevent leaks.

CONTACTS: CCE, www.citizenscampaign.org; National Prescription Drug Take Back Days, www.nationaltakebackday.com; FDA’s “How to Dispose of Unused Medicines.”

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Water Project Impacts SW Streets

Resuming work in **October**, a contractor for the **Portland Water Bureau** will install 5,000-feet of 36-inch diameter steel mains to replace an old supply pipeline that is critical to the water system.

Working from north to south, the six-month open trench construction -- with some work at night* -- affects the following streets:

- **SW Naito Pkwy.***, between SW Clay St. & SW Caruthers St.
- **SW Caruthers St.**, between SW Naito Pkwy. & SW Water Ave.
- **SW Water Ave.**, between SW Caruthers St. & SW Baker St.
- **SW Baker St.**, between SW Water Ave. & SW Water Ave.
- **SW Water Ave.**, from SW Baker St. under SW Naito Pkwy.
- **SW Hooker St.**, under SW Naito Pkwy. to SW 1st Ave.
- **SW 1st Ave.**, between SW Hooker St. & SW Porter St.

Other work in October includes boring under SW Naito Pkwy. at SW Hooker St. to install a large steel casing to protect the new pipeline from the weight of vehicles atop this heavily used roadway.

The **Portland Water Bureau** encourages motorists and bicyclists to avoid these streets when work is underway. The public's cooperation is appreciated as we work to upgrade the city's century old water system.



PORTLAND WATER BUREAU
FROM FOREST TO FAUCET