

ACCES for Pet Health

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Keep Pet Medications out of the Water Supply

By Beth Davidow, DVM DACVECC

In an ongoing effort to reduce our environmental impact, we recently investigated the best way to get rid of medications that had expired in our hospital. When we spoke to the chemical recycling agencies, they recommended mixing the expired drugs with our used microscope slide stain and then when the carboy was filled, the whole thing will be returned for recycling. It seemed like a very odd way to get rid of medications but the solution actually accomplishes several things:

- 1) It allowed us to avoid pick up for very small quantities that was cost prohibitive but still have the material recycled.
- 2) It keeps the expired medications off our shelf and in a compound that will not be ingested

I hadn't really thought about the impact of not handling these drugs correctly until reading Parade magazine on a recent Sunday. There was a short article about drugs in our water supply. A 2002 study noted that trace amounts of drugs such as codeine, antibiotics, and prozac were found in 139 streams in 30 states ([Parade](#)

[magazine](#), June 21, 2009).



Drugs in the drinking water

Tests have detected minute concentrations of pharmaceuticals in the drinking water supplies of at least 46 million people in two dozen major American metropolitan areas, an Associated Press investigation has found. The federal government does not regulate prescription drugs in water.

I started doing further reading and investigating and found that drugs get into our water supply in several ways. Some drugs are passed in human waste when we take medications. Some medication that is put in the garbage leeches into the water from tablets and liquids decomposing in landfills. Sometimes animals can get into the garbage and ingest the medication and then pass the byproducts in their tissues and waste. Finally, it used to be recommended to flush unused medications down the toilet or pour them down the drain so that neither pets nor children could get into them. Unfortunately, most municipal water treatment plants can't filter out the numerous pharmaceuticals so trace amounts are in the water supply.

What is the impact of trace pharmaceuticals in our waterways? This is an area of active research but no one knows the answer. The medications are in low enough amounts that they aren't doing what they were designed to do. However, there is a possibility for accumulation in fish tissue, a possibility for chemical interaction between the medications, and we know that low level exposure to antibiotics can lead to the development of antibiotic resistance (see previous blog).

A campaign was started by the American Pharmacists Association, U.S. Fish and Wildlife Service and Pharmaceutical Research and Manufacturers of America to reduce contamination of our waterways. The campaign is called SMARxT disposal.. Their recommendations are easy and if implemented, allow all of us to

minimize our impact on our water supply:

- 1) Do not flush or pour medications down the toilet or drain.
- 2) At home, mix unused tablets or liquids with coffee grounds, kitty litter or sawdust in a sealed plastic bag and place in the garbage. This makes the medications unpalatable for pets, children or anyone "dumpster diving." In a hospital setting, chemical recycling agencies can dispose of larger quantities of medications safely.
- 3) Washington State Department of Ecology has more information on safe waste disposal at www.ecy.wa.gov

SMARxT also provides handouts and brochures to distribute with medications so that we can continue to inform others of these important steps. Their website has very helpful information: <http://www.smarxtdisposal.net/>



Flushing unused medication pollutes the water supply.

Posted by **Christina Ryan** at July 10, 2009 10:03 a.m.

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