

Do you have expired medications in your cabinet? If so, you are not alone. An Ohio study found that more than half the elderly patients surveyed had medications that should have been thrown out. Holding onto outdated drugs can add to “medicine chest confusion” and can potentially contribute to the problem of adverse drug reactions, which were reported by 49% of people in the above study.

Unfortunately, many people dispose of medications by putting them down the toilet or sink (a 1996 study found that 35% of patients did so). According to the Environmental Protection Agency, not all pharmaceutical compounds are effectively destroyed by water treatment. And disposal into a septic system introduces the chemicals directly into the environment, without treatment.

It appears that trace amounts are becoming widespread, and likely are reaching the sources of water for both bottled water and municipal systems. A study conducted four years ago by the United States Geological Survey found that 80 percent of streams sampled across the country detected chemicals commonly found in prescription drugs, including antidepressants, antacids, steroids, and hormones.

Although experts say the levels are so low as to not be harmful to humans, concern for ecological systems is rising. For instance, it is well-known that even trace amounts of hormones disrupt the reproductive abilities of amphibians and fish.

Currently neither municipal nor bottled water is tested for pharmaceutical residues. These compounds aren't regulated, and testing for them is expensive, so the only testing being done is in research studies.

A two-year research grant is allowing the City of Ann Arbor to test its water for pharmaceutical residues. Preliminary results of the study (see the Water Treatment Plant page of the City's website) show that although many of the compounds were found in untreated water, most were successfully removed by the City's extensive treatment process.

Despite rising awareness of this issue, cuts to water treatment regulations and funding are in the works: the EPA is expected to finalize a change to the Clean Water Act that would allow sewer operators to legally discharge inadequately treated sewage into our waterways whenever it rains. And under the Bush administration's proposed 2006 budget, Michigan will face a 35% reduction in funding to our water treatment infrastructure.

Therefore it's very important that we all dispose of our prescription and non-prescription drugs properly: wrap securely, and place in your regular garbage. To render the contents useless, add cayenne pepper, or water and kitty litter. For privacy, black out the patient's name on the label.

Or take the unused meds back to the pharmacy that sold them to you—many will accept them as a service to their customers, which they send back to manufacturers for proper disposal. Unfortunately, the County's Household Hazardous Program can't accept medications, because according to federal rules, it is illegal for a home toxics program to take controlled substances.

Submitted by: Barbara Lucas, Program Assistant  
Washtenaw County Planning and Environment  
Phone: 734-222-6874  
E-mail: [lucasb@ewashtenaw.org](mailto:lucasb@ewashtenaw.org)  
Webpage: <http://recycle.ewashtenaw.org>