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Safe Medicine Disposal in Arkansas

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Introduction

Do you have problems clearing out your medicine cabinet, overflowing with expired medicines? Do you enjoy drinking clean water or spending time with wildlife in the great outdoors? If you answered yes to either of these questions, you may also wonder what the two have in common. The answer is: Improper disposal of medicine can have serious impacts on our health, safety and natural environment.

> *"Medications that are flushed down the toilet or thrown straight into the garbage can and do find their way into our nation's waterways every day. Those drugs are present in water that supports many species of fish and other wildlife. We are concerned about reports of fish abnormalities possibly caused by improperly disposed prescription medications."*
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> Sam D Hamilton, Southeastern Regional Director of the U.S. Fish and Wildlife Service (March 2007)

Whether you live in a rural county or urban area, this publication will provide you with all the necessary information you need to know to keep your family and your environment safe.

Reasons to Be Aware of Proper Medicine Disposal

A Health and Safety Problem

Many household poisonings are due to accidental medicine ingestion, especially in children under the age of five. Some medicines can be so potent that even a small ingestion can be lethal to both humans and pets.

Some medicines can degrade into toxic forms if left standing for too long.

An Environmental Problem

Whether you live in an urban or rural area, the quality of our streams and lakes ultimately affects every living being including humans. Increased contamination of surface and ground water may require increased treatment cost to meet drinking water standards. Beyond aesthetic beauty, our natural environment provides a habitat for wildlife and if altered, can affect the food chain and, ultimately, the food we eat. In many rural areas, where residents may not have garbage disposal, it's easier to just dump medicines in sinks, toilets, septic tanks or burn them in the backyard. However, this practice pollutes the air that residents breathe in and the water that residents and wildlife drink.

Water Quality

Many people believe that our wastewater treatment plants take care of cleaning water, but that is not always the case. Although we have new technology that is capable of detecting low concentrations of chemical wastes, including pharmaceuticals, not all pharmaceuticals and by-products are detected and removed. In fact, studies conducted by the University of Arkansas and the United States Geological Survey have detected 31 pharmaceuticals and other organic compounds, albeit at very low concentrations, in streams below wastewater treatment plants. These studies have found that

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antibiotics can be retained in streams at considerable distances from the wastewater treatment plants and could harm wildlife that live in the streams or nearby and affect humans who have contact with the water.

The medicines found in the waters that affect our environment come primarily from patient use. Sometimes we just flush medications down the drain or toilet. However, another way that medications get into our water is from our own bodies. We do not always metabolize all of the medications we take, and small amounts of medications can pass through our bodies and also make their way through the municipal wastewater treatment system.

In other situations, if we just throw our medications away, we may be exposing our personal information, as well as access to drugs, to people who practice "dumpster diving" (or those people digging through garbage). Sometimes garbage may overturn, and if the medication is loose, this is another way for it to get absorbed into our environment or harm wildlife searching for food.

Septic Tanks

Septic tanks have living organisms (bacteria) that digest the waste. If they are feeding on medications, then the health of the organisms will be affected, the contents of the septic tank will not be digested properly and eventually your septic tank will not work effectively.

Septic tanks can become corroded, and this will cause them to leak their contents out into the environment.

Septic tanks need to be cleaned out occasionally. The cleaning system waste eventually gets processed the same way all waste does: through the wastewater treatment system (which has not shown to be able to prevent all medications from getting into our waters and environment).

Burning Trash

Some people question whether an alternative to throwing away medications in the trash is burning it. Many areas do not allow legal burning of trash. Although by law, all areas should have access to garbage disposal, some people do not purchase it. Burning medications is not recommended for the following reasons:

- Burning trash produces many toxic chemicals such as dioxins, lead, carbon monoxide, mercury and other volatile compounds. The ash from burning trash is hazardous to human health. This ash can also seep from the surface into water, groundwater and food grown in ash-contaminated soil.
- Burning trash, which includes medications, emits much more pollution than if the same amount of trash was burned in an industrial incinerator. Current research indicates that backyard burning is far more harmful to our health than previously thought. It can increase the risk of heart disease, aggravate respiratory ailments such as asthma and emphysema and cause rashes, nausea or headaches. Backyard burning also produces harmful quantities of dioxins, a group of highly toxic chemicals that settle on crops and in our waterways where they eventually wind up in our food and affect our health. In fact, burning trash is one of the largest known sources of dioxins in the country.
- Usually when people burn meds, they don't throw the pills out. They burn the plastic along with the pills. This leaches dangerous chemicals, like dioxins, into the air.
- Burning about 10 pounds a day of trash in a household burn barrel may produce as much air pollution as a modern, well-controlled incinerator burning 400,000 pounds a day of trash!

Disposing of Medicines Properly

The best way to dispose of medicine properly is to use a take-back program.

A take-back program is a site where residents can legally discard all of the medicines which they no longer need, or which are expired, to one site. The medicines are disposed in an environmentally-friendly manner by a waste disposal company.

Take-back programs are coordinated by the law enforcement officials in communities. Some communities have permanent sites where residents can drop off their medicines in a locked drop box. Other areas have take-back events on a regular basis. Contact the following for more information about take-back in your area:

- Local law enforcement agency
- Arkansas DEA Take-Back: http://www.artakeback.org
- The National Drug Enforcement Administration: http://www.deadiversion.usdoj.gov/drug_disposal/takeback/index.html

For example, law enforcement officials in Arkansas participated in the national DEA take-back program in 2011 where they collected over 3.5 tons of medicines including approximately 10.3 million pills from 143 locations around the state. If there is no registered site in your area, as a resident, you can request one by calling your local law enforcement agency.

What You Can Dispose

The following medicines can be disposed at take-backs:

- Prescription medicines
- Over-the-Counter medicines
- Dietary Supplements
- Pet medicines
- Needles (not all locations)

Needle Disposal

Needles cannot be accepted at permanent drop box take-backs. However, some take-back events will accept needles, but you will need to call the law enforcement in your area to check. It is important to know methods for proper disposal of needles because they are dangerous. Needles can harm other people and spread germs and disease. Always treat needles as disease-carriers.

Needles should never be placed loosely in the trash, flushed down toilets or placed in recycling. In the event that your county does not have a take-back for needles, there are many options for disposing of them:

- Call your local disposal service to see whether they offer a "special waste" pickup service. Sometimes you may need to call to have a special pickup; others have a regular pickup schedule.
- Some medical waste facilities, hospitals and doctors' offices have collection programs. Ask your health care provider if they are aware of any in your area.
- The North American Syringe Exchange Program lets you trade your used needles for new ones. Currently, there are none in Arkansas, but a concerned citizen might contact this network for more information by visiting the web site www.nasen.org or calling them at (253)272-4857.
- There is a national mail-back service where a company will mail you a container in which to place your needles and a package in which to mail it back. This is a pay service, and the price depends on the size of the package. For more information, contact the Coalition for Safe Needle Disposal, 1-800-643-1643, or visit their web site http://www.safeneedledisposal.org. You will find information on proper needle management and a list of companies that provide this service.
- You can buy approved needle destruction devices that will destroy the needles for you. There are many kinds of devices. They can destroy needles by burning, bending or cutting the needle off. Once destroyed, the needle can then be safely disposed in the garbage. There are also devices that will melt the needles at very high heat and reduce them to BB-sized balls. Once the needle is incinerated, the remaining syringe can be safely discarded in the garbage (but never the recycling bin).

Disposing of Needles at Home

A legal but less safe option is to dispose of needles at home. Here are the steps:

- Find a puncture-resistant bottle, such as a used detergent or fabric softener bottle.
- Label container "Do not recycle."
- Place needles with sharps points in first.
- Once the container is two-thirds full, fill the container with 1 part bleach to 10 parts water, covering all the needles. Let sit for at least 10 minutes.
- After soaking, drain the excess liquid into your toilet or down the sink.
- Close the bottle by screwing the cap on. You can secure it even better by taping the top.
- You can then place the secured jar in your garbage or check with your local waste management company whether they accept medical waste separately.

Although by state this is allowable, you still need to check with a local authority to ensure this is an acceptable practice in your county. For more information, contact the Arkansas Department of Health Medical Waste Program Manager.

Help! There Is No Take-Back in My Area!

Some areas do not host take-back programs. If you live in one of those areas, you can call your local Arkansas law enforcement to see if you can bring your medicines to them.

In Arkansas, law enforcement is often the only entity authorized to accept medicines. Most pharmacies are not able to accept take-back medications. Nursing homes, charitable institutions and other entities are not legally able to accept medicines.

If your local law enforcement will not take your medicine, follow these steps to dispose of your medicines safely in your home:

1. Take all medicines (this does not include needles) and dump them into a plastic zip-top bag (include unneeded pet medicines too).
2. Add a little bit of water to the bag and swirl the medicines until they start to dissolve.
3. Add an undesirable substance to the medicine. An undesirable substance can include anything from used coffee grounds to cat litter to sawdust.
4. Seal the bag and drop it in your trash.
5. Make sure you strip the pill bottle of your personal identifying information.

Never flush medicines down the toilet, down your sink drain or in your septic tank. Although the FDA recommends some particularly dangerous medicines to be flushed, the Arkansas Drug Enforcement Administration recommends that medicine be disposed in the manner described above in case you do not have access to a community take-back program.

Conclusion

Keep Arkansas clean and beautiful while protecting your health and that of your family and friends by keeping medicines out of the water. Never flush medicines down sinks or toilets and support your local take-back initiatives.

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