# Safe Disposal of Medicines and Personal Care Products



If you're like most people, your medicine cabinet contains unused and expired medicines and personal care products like makeup, shampoo, and facial cleansers. Perhaps you chose not to use all of a prescribed medication, or maybe a product expired before you could use it all. Whatever the reason, you find yourself cleaning out the medicine cabinet and wondering how to get rid of these items. So, what is the best way to dispose of unfinished prescriptions, expired cold medicine, and personal care items?

Flushing medicine down the toilet or pouring unused liquids down the sink may have been acceptable and even encouraged in the past, but today we are discovering that these are not desirable disposal methods. Modern wastewater treatment plants simply are not designed to address medication disposal. And if your home uses a septic system, the chemicals you flush or pour down the drain can leach into your local groundwater.

A 2002 report by the Toxic Substances Hydrology Program of the United States Geological Survey (USGS) indicated that testing of 139 streams in 30 states during 1999 and 2000 revealed a broad range of chemicals from human and veterinary drugs, among other household, industrial, and agricultural chemicals. One or more chemicals were detected in 80 percent of the streams sampled, and 82 of the 95 chemicals were detected at least once. Insect repellents, caffeine, steroids, hormones, and other compounds were among the list of chemicals found in the stream samples.

Wastewater treatment plant biosolids (sludge) are often sought after as nutrientrich plant fertilizers by homeowners, landscapers, and farmers. Recent analysis of a small sampling of commercially or publicly available biosolids by the USGS Toxic Substances Hydrology Program revealed that 55 of the 87 organic chemicals measured were detected in at least one of the samples, with as many as 45 chemicals found in any single sample. Twenty-five of the chemicals measured—including antihistamines, anti-microbial disinfectants, and anti-epileptic drugs—were detected in every biosolid sample.

Disposal of pharmaceuticals and personal care products is becoming a complex environmental issue. According to the USGS, little is known about the potential health effects to humans or aquatic organisms exposed to the low levels of most of the chemicals or mixtures commonly found in their study. But the safety and health of the environment is directly affected by the disposal method, so it is important that we all be responsible when disposing of these products.

#### **Disposal in Trash**

Throwing medications and personal care products in the trash can be dangerous since children and pets can find and accidentally consume them. Likewise, with the recent increase in prescription drug abuse, placing these products in the trash also leaves them susceptible to scavenging by drug abusers.

Some municipal or local trash services may offer programs where household medications can be dropped off for incineration. Contact your local trash service to inquire about such options in your area. Expired medication is considered hazardous waste, so your local hazardous waste disposal facility may have recommendations for proper disposal.



If you have no other options and must dispose of medications or personal care products in the trash, take precautions to help ensure that the products cannot be taken accidentally by a child or pet. Solidify liquids by mixing them with kitty litter, sawdust, or flour. Solid medications can be crushed or dissolved in liquid prior to adding kitty litter or sawdust to make them unpalatable.

## Return to Local Pharmacy or Doctor Office

Some pharmacies offer "clean out your medicine cabinet" drives where customers are encouraged to drop off expired or unused medications and over-the-counter products for disposal. Check with your local pharmacy for options, but remember that pharmacies are not required to accept unused medications. With enough local interest, your pharmacy may consider hosting such an event. Likewise, doctors' offices may be willing to accept these types of products for disposal, but like pharmacies, are not required to do so.

### Better Yet, Follow These Steps To Reduce the Amount of Waste

- Only purchase what you need and can use prior to reaching the product's expiration date.
- Refuse samples from your doctor or other sources (store displays and mailing lists) if you do not expect to use them.
- Keep track of the medications and personal care products you have in your home by keeping them organized so you are not as likely to purchase more than you can use.
- Donate over-the-counter products that have not yet expired to friends, family, or local organizations.

Remember, though, NEVER to share prescription medications!! Baby care products, unopened bottles of pain killers and other medicines, and even skin and hair cleansing products could be donated to your local food pantry or other public assistance organizations, which can likely find appreciative recipients of these products.

If you have products sitting around that are expired or no longer needed, remember to assess all of your options for disposal before you throw it in the trash or pour it into the sink or toilet. You may even want to consider organizing a collection event for unwanted medications and per-

sonal care products. Chances are your friends and neighbors have products to dispose of, too.

#### References

- Buxton, H.T. and D.W. Kolpin. 2002. Pharmaceuticals, hormones and other organic wastewater contaminants in U.S. streams, 1999-2000: A national reconnaissance. Environmental Science and Technology, v. 36, no. 6, pp. 1202-1211.
- Kinney, C.A., E.T. Furlong, S.D. Zaugg, M.R. Burkhardt, S.L. Werner, J.D. Cahill and G.R. Jorgensen. 2006. Survey of organic wastewater contaminants in biosolids destined for land application. Environmental Science and Technology, v. 40, no. 23, pp. 7207-7215.



Copyright 2008 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi State University Extension Service.

By Amy M. Schmidt, Extension Water Quality Specialist

Discrimination based upon race, color, religion, sex, national origin, age, disability, or veteran's status is a violation of federal and state law and MSU policy and will not be tolerated. Discrimination based upon sexual orientation or group affiliation is a violation of MSU policy and will not be tolerated.

#### Information Sheet 1844

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. MELISSA J. MIXON, Interim Director (POD-10-08)