

## Pharmaceuticals, Personal Care Products, and the Environment

What to do with unused or expired pharmaceuticals and personal care products (PPCPs) is a growing concern in a number of states including Idaho.

PPCPs are products used for health or cosmetic reasons. Pharmaceuticals include prescription and over-the counter therapeutic drugs and veterinary drugs. Personal care products include soaps, fragrances, cosmetics, and sun-screen products. These products are comprised of thousands of diverse chemical substances.

We are beginning to recognize that improper disposal of unused or expired PPCPs can adversely impact our environment. We are also concerned about improper disposal of pharmaceuticals leading to increased drug abuse and accidental poisonings.

*PPCPs are among the top five  
"emerging" contaminants  
affecting human and  
ecological health.*

*U.S. EPA's Office of Research and  
Development Strategy Plan 2000*

Properly disposing of PPCPs can help protect the environment and personal health. This brochure includes information on how to safely dispose of unused and unwanted pharmaceuticals.

## For more information

### Idaho Department of Environmental Quality

State Office  
1410 N. Hilton  
Boise, ID 83706

**Waste Management & Remediation Division:**  
**(208) 373-0502**

#### Regional Offices

##### Boise

1445 N. Orchard  
Boise, ID 83706  
(208) 373-0550  
toll-free: (888) 800-3480

##### Coeur d'Alene

2110 Ironwood Parkway  
Coeur d'Alene, ID 83814  
(208) 769-1422  
toll-free: (877) 370-0017

##### Idaho Falls

900 N. Skyline, Suite B  
Idaho Falls, ID 83402  
(208) 528-2650  
toll-free: (800) 232-4635

##### Lewiston

1118 F Street  
Lewiston, ID 83501  
(208) 799-4370  
toll-free: (877) 541-3304

##### Pocatello

444 Hospital Way #300  
Pocatello, ID 83201  
(208) 236-6160  
toll-free: (888) 655-6160

##### Twin Falls

1363 Fillmore Street  
Twin Falls, ID 83301  
(208) 736-2190  
toll-free: (800) 270-1663

#### On the Web

##### Pharmaceuticals and the Environment

[http://www.deq.idaho.gov/water/prog\\_issues/surface\\_water/pharmaceuticals/index.cfm](http://www.deq.idaho.gov/water/prog_issues/surface_water/pharmaceuticals/index.cfm)

##### How to Dispose of Unused Medicines

[http://www.fda.gov/consumer/updates/drug\\_disposal062308.pdf](http://www.fda.gov/consumer/updates/drug_disposal062308.pdf)

##### Proper Disposal of Prescription Drugs

[http://www.whitehousedrugpolicy.gov/publications/pdf/prescrip\\_disposal.pdf](http://www.whitehousedrugpolicy.gov/publications/pdf/prescrip_disposal.pdf)



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## Proper Disposal of Pharmaceuticals

Idaho Department of  
Environmental Quality  
[www.deq.idaho.gov](http://www.deq.idaho.gov)



## Why are we concerned about PPCPs?

PPCPs are of concern due to their unknown potential for carcinogenicity, biological activity, and promotion of antibiotic resistance in certain organisms.

As noted by the U.S. Environmental Protection Agency, PPCPs have probably been present in water and the environment for as long as humans have been using them. With advances in technology that have improved the ability to detect and quantify these chemicals, however, we are just now beginning to identify what effects, if any, these chemicals may have on human and environmental health.

When PPCPs are excreted, flushed down the toilet, washed off the body, or poured down the drain, they enter municipal wastewater treatment systems which are not designed to remove PPCPs. Wastewater with trace amounts of PPCPs is then discharged into waterways or seeps into ground water.

According to the U.S. Geological Survey, studies have found the presence of a variety of pharmaceutical compounds in environmentally significant quantities in discharges from wastewater treatment facilities in Europe and across the eastern United States.



It is becoming clear that water bodies contaminated with pharmaceuticals can adversely affect aquatic life. Studies have linked hormone exposure to reproductive defects and changes in behavior in fish, and environmental exposure to antibiotics to the development of drug-resistant germs. Effects on humans are unknown at this time.

## Sources of PPCPs

- Human activity
- Residues from pharmaceutical manufacturing
- Illicit drugs
- Veterinary drug use, especially antibiotics and steroids
- Agribusiness

## How PPCPs enter the environment

- Excreted from humans and farm animals
- Flushed down the toilet or sink

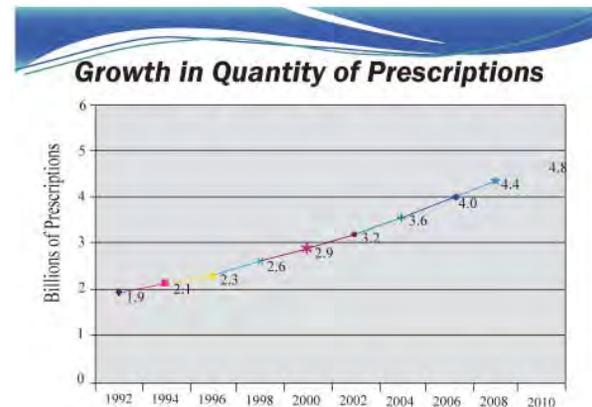


- Washed off the body
- Improperly discarded in the trash



## Increased drug consumption

From 1992-2008, the number of prescriptions rose 130%.



## Safe disposal of pharmaceuticals

- Do **NOT** flush pharmaceuticals (or any PPCPs) down the toilet unless the label or accompanying patient information instructs you to do so.
- Take pharmaceuticals to community take-back event or household hazardous waste collection facility, if available.
- If no take-back or collection program is available:
  1. Remove pharmaceuticals from original containers.
  2. Mix with an undesirable substance, such as cat litter or used coffee grounds.
  3. Put mixture into a disposable container with a lid, such as an empty margarine tub, or a sealable bag.
  4. Conceal or remove personal information on the empty containers by covering with black permanent marker or duct tape or scratching off.
  5. Place sealed container with mixture and empty containers in trash.



Photo by Michael Ermarth, FDA

## Other ways to help

- Purchase drugs in small amounts, limiting expired medications.
- Ask for medications with low environmental impact.
- Share the message of safe disposal with family and friends.
- Commit to wellness strategies to reduce reliance on medications.