

# A New Prescription

## Do not flush your unused drugs.

By Scott Stoner

Pharmaceutical contamination is now emerging as a potentially significant environmental problem. Pharmaceuticals can reach our waters from a variety of sources, including the flushing of unused drugs by households and institutions, discharge from drug-manufacturing facilities, and via drugs that pass through our bodies, largely unchanged. Typical wastewater treatment is not designed to remove pharmaceuticals, and is only partially effective at doing so.

Scientists have learned that when aquatic and amphibian species are exposed to only small amounts of pharmaceuticals and personal care products (collectively known as PPCPs), there can be serious effects. The risk to aquatic life from PPCPs in water is perhaps of greater immediate concern than human health impacts. Because they spend their entire lives in the water, including sensitive developmental

life stages, fish and other aquatic animals and invertebrates are exposed continuously to contaminants found in water. Species exposed to these products have shown decreased reproduction rates, delayed development, and even additional appendages in some species. Also, pharmaceuticals in the water may lead to bacteria that are resistant to antibiotics. In 2002, 80% of streams sampled (139 rivers in 30 states) by the U.S. Geological Survey showed evidence of drugs, hormones, steroids and personal care products such as soaps and perfumes. While a number of human health concerns (including endocrine disruption and an increase in antibiotic-resistant bacteria) have been raised about the presence of pharmaceuticals in

### Awareness campaign focuses on keeping pharmaceuticals out of New York's waters.

drinking water sources, the risks posed to humans by long-term consumption of small amounts of these substances are unknown.

New York's water bodies are among the state's most valuable resources, vital for people, industry, commerce and transportation. To protect this critical resource, DEC and the New York State Department of Health (DOH) are actively working to educate the public about safe drug and pharmaceutical disposal. Because of the potential risks from the disposal of pharmaceuticals "down the drain" into wastewater treatment systems, Governor Paterson recently announced a new Don't Flush Your Drugs campaign. In announcing the campaign,

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To keep New York's water bodies healthy, the state is working to prevent pharmaceuticals from entering our waters.

Governor Paterson stated, "Because of concerns about potential impacts of long-term exposure to low-level pharmaceuticals, we should take a precautionary approach to reducing discharges of drugs into the state's waterways." He called on New Yorkers to do their part by safely disposing of unused pharmaceuticals.

The initial goal of the campaign is to reduce the intentional disposal of drugs in wastewater by flushing or pouring into drains. DEC has launched a website ([www.dontflushyourdrugs.net](http://www.dontflushyourdrugs.net)) to educate the public about the environmental problems created by flushing pharmaceuticals, and to provide proper disposal methods for prescription and over-the-counter medications (see sidebar on page 16).

The flushing of unused medications from institutions such as hospitals, long-term care facilities, and nursing

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homes is another source of drugs to the environment. To address this issue, an interagency work group is developing new guidance for institutions to promote environmentally sound practices for the disposal of unused pharmaceuticals.

DEC is encouraged by a number of regional, voluntary "take-back" programs for unused pharmaceuticals. To date there have been six such programs in the state, two sponsored by pharmacy chains and four by counties. Several other counties are in the process of planning pharmaceutical collection events for their residents. In central New York, DEC is working with local governments and other stakeholders to further expand pharmaceutical

collection opportunities. To demonstrate the need for, and feasibility of pharmaceutical collection programs, DEC is also seeking federal funding for additional pilot projects such as "mail-back" programs.

Other options for managing pharmaceutical waste include studying successful European and Canadian practices of product stewardship developed in conjunction with drug manufacturers. These programs require that manufacturers develop convenient collection, or "take-back" programs for unused pharmaceuticals. For example, in British Columbia, pharmaceutical companies finance a system in which 98% of the pharmacies take back customers' unused drugs.

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DEC's long-term strategy includes working with pharmaceutical industries to clean up production sites and reformulating drugs so that they will break down more readily in the environment. DEC will also promote efforts to improve water treatment technologies that might remove these and other emerging contaminants at the "end-of-pipe."

We need to act now to protect our waterways, before pharmaceuticals pose a significant health threat. It's clear that a precautionary approach aimed at eliminating the intentional discharges of pharmaceuticals is a reasonable and prudent first step.

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This new flier is displayed in pharmacies and other locations across New York where medications are sold.

## Proper Disposal of Household Prescriptions and Over-the-Counter Drugs

**Do NOT flush or pour any drugs down the drain or into the garbage disposal.** This includes expired and unused prescriptions, and over-the-counter drugs.

**Where available, take your medications to a local collection event.** Contact your local pharmacy, recycling coordinator, or municipality to find out if there is a household hazardous waste collection event that accepts these materials near you. While waiting for a collection event, keep all medications in a safe, secure place in your home, out of reach of children.

**Important information regarding controlled substances.** To protect public health from unauthorized use of controlled substance medications, the Department of Health must approve events that collect these substances. Before you take controlled substances to a collection event, check with the event organizers to see if they are authorized to accept them.

**Medications self-administered by injection with a needle or "sharp" may be disposed of in the trash.** If such medications include an attached needle, they should be placed in a puncture-proof container, sealed with tape and labeled as "sharps." However, the state strongly recommends that medications with attached needles be disposed of at hospital-based household sharps collection programs. All hospitals in New York State (except for federal facilities) are required to collect sharps from households. Medications without attached needles may be disposed of in household trash as described herein.

**If there is no collection event in your area, dispose of drugs in your household trash. Before placing drugs in the trash, follow these steps to avoid accidental or intentional misuse:**

- Treat medications (liquids and pills) by adding water and then salt, ashes, dirt, cat litter, coffee grounds, or another undesirable substance.
- Hide all medications in an outer container, such as a sealable bag, box or plastic tub to prevent discovery and removal from the trash. Seal the container with strong tape.
- Dispose of drugs as close to your trash collection day as possible to avoid misuse and/or misdirection.
- Do not conceal discarded drugs in food, because they might be eaten by scavenging wildlife or people.

**CAUTION:** Be careful in handling medications since some drugs can cause harm if handled by people other than those to whom they were prescribed. Also, avoid crushing pills as some medications can be harmful in powder form.

**NOTE:** The preceding guidelines are for households and individual consumers only.

[www.dontflushyourdrugs.net](http://www.dontflushyourdrugs.net)