

Education and Communication on Pharmaceuticals in the Water

Overview of Resources

Compiled by Rachel Golden Smith, NCDENR Office of Environmental Education – November 2008

Take-Back Programs and Proposals in Other States and Countries

* Unwanted Medicine Return Program in Washington State

<http://www.medicinereturn.com/>

* Report on the San Francisco Bay Area's Safe Medicine Disposal Days

<http://oracwa.org/files/news/168/SFBAYSafeMeds-Report-August2006.pdf>

* Oregon Pharmaceutical Takeback Stakeholder Group – Final Report

http://www.oracwa.org/downloads/drugtakeback-rpt_0907.pdf?PHPSESSID=8d66ce79f794d90ff1e373b1f7198fb5

Teleosis Institute (Berkeley, CA) Green Pharmacy Program

<http://www.teleosis.org/gpp-program.php>

P2D2 (Pontiac, IL) – started by a science teacher in Pontiac

<http://www.p2d2program.org/>

Safe Medicine Disposal for Maine

<http://www.safemeddisposal.com/>

Denver, CO

<http://www.denvergov.org/rechhw/ExpiredMedicationsDisposal/tabid/430060/Default.aspx>

RxMEDS (St. Louis, MO)

<http://www.mainebenzo.org/documents/RxMeds2.ppt#258,1,RxMEDS>

Great Lakes Earth Day Challenge 2008

<http://www.gather.com/viewArticle.jsp?articleId=281474977377151>

Get the Meds Out – Wisconsin Pilot Program

<http://drugtopics.modernmedicine.com/drugtopics/Hospital+Pharmacy/Safe-disposal-of-meds-tested-in-Wisconsin-pilot-pr/ArticleStandard/Article/detail/549105>

Canada – Post Consumer Pharmaceutical Stewardship Association

http://www.medicationsreturn.ca/home_en.php

Australia - Returning Unwanted Medicine

<http://www.returnmed.com.au/>

Legislation

* 2008 Prescription Drug State Legislation – an overview of all state legislation

<http://www.ncsl.org/programs/health/drugbill08.htm>

Washington State – HB 3064 – 2007-08

<http://apps.leg.wa.gov/billinfo/summary.aspx?bill=3064&year=2008>

Maine – LD 411

<http://janus.state.me.us/legis/LawMakerWeb/summary.asp?ID=280022859>

Iowa – SF 579

<http://janus.state.me.us/legis/LawMakerWeb/summary.asp?ID=280022859>

California – SB 966

http://info.sen.ca.gov/cgi-bin/postquery?bill_number=sb_966&sess=CUR&house=B&site=sen

Disposal Guidelines

Office of National Drug Control Policy

http://www.whitehousedrugpolicy.gov/publications/pdf/prescrip_disposal.pdf

SMARxT Disposal (U.S. Fish & Wildlife, American Pharmacists Association and the Pharmaceutical Research and Manufacturers of America)

<http://www.smarxtdisposal.net/>

Michigan Department of Environmental Quality

<http://www.deq.state.mi.us/documents/deq-ess-cau-rxbrochure.pdf>

Wisconsin Department of Natural Resources

<http://www.dnr.state.wi.us/org/aw/wm/pharm/household.htm>

* Florida Department of Environmental Protection

http://www.dep.state.fl.us/waste/quick_topics/publications/shw/meds/dontflushfinal.pdf

New York State Department of Environmental Conservation

<http://www.dontflushyourdrugs.net>

Connecticut Department of Environmental Protection

http://www.ct.gov/dep/cwp/view.asp?a=2708&q=335480&depNav_GID=1763

New Hampshire Department of Environmental Services

<http://des.nh.gov/organization/commissioner/pip/factsheets/sw/documents/sw-33.pdf>

Minnesota Pollution Control Agency

<http://www.pca.state.mn.us/oea/hhw/pharmaceuticals.cfm>

Colorado Department of Public Health and Environment

<http://www.cdphe.state.co.us/hm/hhw/howto/medications.htm>

Western Lake Superior Sanitary District

http://www.wlssd.duluth.mn.us/pollution_pharmaceutical.php

New Mexico Board of Pharmacy

<http://www.rld.state.nm.us/pharmacy/disposal.html>

Utah (Sponsored by several agencies)

<http://www.medicationsdisposal.utah.gov/>

Issue Overviews, Multi-agency Working Groups & Presentations

* Disposal of Unwanted Medicines: A Resource for Action in your Community – Illinois-Indiana Sea Grant

<http://www.iisgcp.org/unwantedmeds/>

* Pharmwaste – National Pharmaceutical Waste Management Listserv

<http://lists.dep.state.fl.us/cgi-bin/mailman/listinfo/pharmwaste>

* Product Stewardship Institute

<http://www.productstewardship.us/displaycommon.cfm?an=1&subarticlenbr=181>

EPA – PPCPs in Water

<http://www.epa.gov/waterscience/ppcp/>

Pharmaceuticals are in the Drinking Water: What Does It Mean? – GW School of Public Health and Health Services

http://www.gwumc.edu/sphhs/about/rapidresponse/download/Rapid_H2O_Final.pdf

Development of Consumer Education Products Focusing on Safe Medication Disposal

<http://www.mainebenzo.org/documents/BullmanMaineRxDisposalMeeting.ppt#256>

Scientific Articles

Collapse of a Fish Population After Exposure to Synthetic Estrogen. Kidd et al in the Proceedings of the National Academy of Sciences in the United States of America, May 2007, v. 104, no. 21.

<http://www.pnas.org/content/104/21/8897.full.pdf+html?maxtoshow=&HITS=10&hits=10&R>

A Reconnaissance for Emerging Contaminants in the South Branch Potomac River, Cacapon River, and Williams River Basins, West Virginia, April-October 2004

<http://pubs.usgs.gov/of/2006/1393/pdf/ofr20061393.pdf>

Patient Practices and Beliefs Concerning Disposal of Medications. Seehusen and Edwards in the Journal of the American Board of Family Medicine, 19:542-547 (2006).

<http://www.jabfm.org/cgi/content/full/19/6/542>

Popular Press Articles

Does the Dose Make the Poison?

<http://www.environmentalhealthnews.org/sciencebackground/2007/2007-0415nmdrc.html>

Mainers Get More Ways to Discard Unwanted Pills

<http://pressherald.maintoday.com/story.php?id=192612&ac=PHnws>

Health Facilities Flush Estimated 250M Pounds of Drugs a Year

http://www.usatoday.com/news/health/2008-09-14-drugs-flush-water_N.htm

Old Meds? Many Get Conflicting Disposal Advice

<http://www.msnbc.msn.com/id/26724228/>

This Fish Story Is True

<http://www.lasvegassun.com/news/2008/apr/21/fish-story-true/>

Hermaphrodite Frogs Found In Suburban Ponds

http://www.nytimes.com/2008/04/08/science/08frog.html?_r=3

Some Major U.S. Cities to Test for Drugs, Others Won't

http://www.watertechonline.com/news.asp?N_ID=69511

Mutated Fish Swimming in Tainted Water

<http://www.msnbc.msn.com/id/23504633/>

Man-Made Chemicals May Put Strain on Fish

http://www.washingtonpost.com/wp-dyn/content/article/2008/03/17/AR2008031702506_pf.html

Chemicals in our Waters are Affecting Humans and Aquatic Life in Unanticipated Ways

<http://www.sciencedaily.com/releases/2008/02/080216095740.htm>

Education Resources

* Save the Elephants: Don't Buy Ivory Soap

<http://www.azadocents.org/conferences/2001/saveelephants.pdf>

Understanding Young Children from Natural Wonders: A Guide to Early Childhood for Environmental Educators

<http://www.seek.state.mn.us/publications/naturalwonders-1.pdf>

Made to Stick: Why Some Ideas Survive and Others Die... by Dan Heath and Chip Heath

<http://www.madetostick.com/>

*** Highly recommended background information**



This fish is not depressed.

This fish does not have high blood pressure.

This fish is not worried about getting pregnant.

So why are we giving our leftover medications to the local fish population???

When we flush our unused medicines down the toilet, many of them end up in our local waterways. Waste treatment facilities are not equipped to deal with these materials. Some fish species are showing abnormalities that may be from drugs in the water, and this is the same water we swim in, fish from and drink. So what can you do to help???

Never flush any unused medicine down the toilet. Instead, bring it back to your local pharmacy for disposal that is safe for you and the environment!