Creating partnerships for protecting our water sources, wildlife and public health

Anna McCartney
Pennsylvania Sea Grant
Audience:
◆ General public
◆ College Students
◆ Health Care Professionals

Teach others to spread the word!
Isle's native flora and fauna as Duathlon proceeds go
address are not required.

Farretare conducting a survey to learn about pharmaceutical disposal.
Pharmaceutical Pollutant Task Force meeting with State Rep. John Hornaman and a panel of experts to discuss chemicals contained in

The Duathlon proceeds go toward Erie bike racks

Some leftover medications can get into the hands of children and teens. The special

The Mercyhurst Green Team wants you to participate in the "Pedal for the Planet Duathlon"

Participants will run 3.1 miles, transport in Erie. To register:

The project partners will also address pharmaceutical residues in

And Earth Action, to reach over

For the past six months, Pennsylvania Sea Grant, can be reached by e-mail at

Contributing writer

The Environmental Protection Agency has informed the public

Investigative reporting by the Associated Press informed the public

Drugs taken by people and

Because many communities

But when unused medications

301 Peninsula Drive, Suite 5

No

Yes

1. Are you 16 years of age or older?

2. Would you take expired medications?

3. Do you think these drugs are safer than

4. Would you throw in the garbage __

5. Do you think these drugs are safer than

A contributing writer

Earth Action project, JrPLEWA

PPCPs out of our water.

They also collect in

Drugs taken by people and

Many of these substances act

Farretare conducting a survey to:

To contact Pat Lupo, OSB, at 835-8069,

Turn in unused drugs, meds at Erie-area sites

Some __

medication disposal on the

No __

Not a good idea __

Yes __

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Farretare conducting a survey to:

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Workshops/power point presentations
Dose of Reality
Remedies to keep everyday chemicals out of waterways

Toxins
Everyday products contaminate waterways and drinking water

Problems
Inadequate laws, outdated waste treatment and health risks

Solutions
An ounce of prevention really is worth a pound of cure

Illustration by Gina Longstreet from Central Career and Technical School in Erie, PA

Burden of PPCP Pollution
Presentation for Health Care Professionals
Anna McCartney
Communication and Education Specialist

Sea Grant Pennsylvania
Great Lakes Restoration
Great Lakes Network
These are some of the unwanted and expired medications collected during the medication recovery and disposal event held Aug. 20 at the LECOM Medical Fitness & Wellness Center.

Elliott Cook, Pharm.D., LECOM School of Pharmacy Assistant Professor, explains how discarded medications can get into the water and landfills, flushed into the sewage system, or ended up in the hands of children went to an incinerator for safe disposal following a medication take-back event in Erie.

The Lake Erie College of Osteopathic Medicine and Pennsylvania Sea Grant sponsored a medication recovery and disposal event on Saturday Aug. 20. LECOM School of Pharmacy faculty members and students collected unwanted and expired medications at the LECOM John M. & Silvia Ferretti Medical Fitness and Wellness Center in Erie, Pa.

More than 100 citizens brought in unused over-the-counter medications, supplements, prescription drugs, and controlled substances. LECOM pharmacy students sorted the loose pills, caplets, vials, and solutions and asked patients why the medications were not ingested. The information will help them determine which medications are not being used and the reasons why.

LECOM School of Pharmacy assistant professor Elliott Cook, Pharm.D., said the improper disposal of medications is a major problem. He said many patients throw unwanted medications in the garbage or flush them down the toilet, which is not recommended.

"The majority of pharmaceuticals are carbon compounds that can leak into our environment or the water supply," Dr. Cook states.

In addition to environmental concerns, unused medications sitting in home medicine cabinets can create patient safety issues and lead to substance abuse. Dr. Cook said seventy percent of those who abuse drugs started by getting their drugs from the medicine cabinets of friends or relatives.

Pennsylvania Sea Grant has co-sponsored three medication collection events with the LECOM School of Pharmacy since April.
3 reasons PPCP use should matter to you

- ≤1% freshwater is usable for humans and organisms that rely on it
- 7 billion people/unknown population of countless species
- No usable water NO LIFE!
PPCP toxins everywhere

- Prescription and over the counter pharmaceuticals for humans
- Prescription and over the counter pharmaceuticals for pets
- Concentrated Animal Feeding Operations, CAFOs
- Personal Care Products
Personal Care Products, PCPs

The average woman in the US uses 12 products containing 168 unique ingredients daily.

Men on average use 6 products daily with 85 unique ingredients.

www.cosmeticsdatabase.com/research/exposures.php
"Pharmaceuticals are new pollutants. What makes them different is that the whole point of a drug is to have a very targeted effect from the lowest dose possible."

-Yves Levi of the University of Paris-Sud

“Doctors and pharmacists should keep in mind the potential for unintended exposure. Drug waste in water is like doctors prescribing a cocktail of unknown medications to healthy people at random.”

- Christian Daughton of the U.S. Environmental Protection Agency,
Will the water that has sustained life for millions of years be able to sustain future generations?
CHEMICALS TO AVOID:

- 2-BROMO-2- NITROPROPANE-1,3-DIOL
- BHA
- DMDM HYDANTOIN
- OXYBENZONE
- TRICLOSAN
- BORIC ACID & SODIUM BORATE
- DIBUTYL PHTHALATE & TOLUENE
- FRAGRANCE
- DYES.
- CETEARETH & PEG compounds
- PARABENS
- TRIETHANOLAMINE (TEA)
- BENZYL & ISOPROPYL ALCOHOL
- METHYLCHLOROISOTHIA- ZOLINONE
- METHYL- ISOTHIAZOLINONE
- IODOPROPYNYL BUTYLCARBAMATE

To Use: Apply generously to feet as needed. For best results, exfoliate rough skin with bodysource® Botanicals Foot Scrub then follow with our foot lotion.

INGREDIENTS: WATER, ISOPROPYL PALMITE, CETYL ALCOHOL, CETEARETH-20, STEARLY ALCOHOL, DIMETHICONE SODIUM BICARBONATE, ALOE BARBADENSIS GEL, MENTHA PIPERITA (PEPPERMINT) OIL, MELALEUCA ALTERNIFOLIA (TEA TREE) OIL, STEARETH-2, PROPYLENE GLYCOL, BUTYROSPERMUM PARKII (SHEA BUTTER) FRUIT, GLYCERIN, TOCOPHEROL, FRAGRANCE, DMDM HYDANTOIN, TETRASODIUM EDTA, CYCLOPENTASILOXANE, MENTHOL, IODOPROPYNYL BUTYLCARBAMATE, CARBOMER, BHT, TRIETHANOLAMINE.

CAUTION: FOR ADULT USE ONLY. FOR EXTERNAL USE ONLY. KEEP OUT OF REACH OF CHILDREN AND PETS.

Not Tested on Animals • Please Recycle®
Chemicals to avoid and the reasons why you should avoid them:

- **2-BROMO-2- NITROPROPYL-1,3-DIOL**: Allergen that forms cancer-causing chemicals
- **BHA**: Causes skin depigmentation
- **DMDM HYDANTOIN**: Allergen that forms cancer-causing chemicals
- **OXYBENZONE**: Allergen; forms free radicals to damage skin
- **TRICLOSAN**: May disrupt growth hormones from the thyroid
- **BORIC ACID & SODIUM BORATE**: Unsafe for infants according to industry experts
- **DIBUTYL PHTHALATE & TOLUENE**: Found in nail polish/ play makeup; hormone disruption, cancer concerns
- **FRAGRANCE**: Allergen; neurotoxin (affects brain and nervous system), hormone disruption concerns
- **DYES**: Some cause cancer and are banned outside the U.S.
- **CETEARETH & PEG compounds**: Can contain cancer-causing impurities
- **PARABENS**: Hormone disruption, cancer concerns
- **TRIETHANOLAMINE (TEA)**: Allergen that forms cancer-causing chemicals
- **BENZYL & ISOPROPYL ALCOHOL**: Skin irritation and neurotoxicity concerns
- **METHYLCHLOROISOTHIAZOLONE & METHYL- ISOThIAZOLINONE**: Allergens with neurotoxicity concerns
- **IODOPROPYNYL BUTYL CARBAMATE**: Chemically similar to neurotoxic pesticides

This list is included in our resources and available from Environmental Working Group
70% of medications are prescribed for preventable illnesses.
The Solutions

Would we use PPCPs with more caution if we knew how chemicals in PPCPs affect the environment/health?

Shouldn’t labels have environmental warnings too? ... like...

“This pesticide may contribute to antibiotic resistance in bacteria and is harmful to fish and other wildlife because it is an endocrine disruptor.”
Read the labels
Choose wisely
The Domino Effect & Purchasing Power

Partnerships exponentially increase number of people reached.

If people stopped purchasing personal care products with harmful chemicals and started taking better care of their health wouldn’t we see immediate results?
The quality of our local creeks, Great Lakes, our ocean, our drinking water and our health is linked to our choices.
Undo the environmental chemical brew

Protect Great Lakes water for future generations

Keep the chemicals in pharmaceuticals and personal care products (PPCPs) out of the environment!

Monitor PPCP purchase, use, storage and disposal.
Read labels, reduce use and replace products with safer alternatives.
Insist on standards that avoid toxic chemicals and encourage green chemistry.

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