



Train-the-Trainer: Reducing Toxics in Everyday Life

Kate McArdle
Community Outreach Specialist
Carey Institute for Global Good- November 7, 2016



Disclaimer



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Agenda



9:00am- 9:30am

Introductions

Overview of P2I

Train the Trainer

9:30am- 10:00am

Personal Care Products

10:00am-10:30am

Household Cleaners

10:30am- 10:45am

Break

10:45am- 11:30am

Safer Household Products

11:30am- 12:00pm

Toys and Children's Products

12:00pm- 1:00pm

Lunch

1:00pm- 2:00pm

Breakout Session & Discussion

Introductions



- Name & Organization
- What inspired you to come today (*SPARK)
- What do you want to learn today
- What is your training goal at your own organization (or within your community)

Introduction- Kate McArdle



*Spark! – Trip to the Adirondacks
Education –

B.A. Environmental Studies, St.
Lawrence University

Work –

Foodlink

- Special Projects Director
- Child Care Council
- Environmental Education Coordinator
- NYS Pollution Prevention Institute
- Community Outreach Specialist



NYS Pollution Prevention Institute



- Established in 2008 “**NYSP2I**”
- HQ at RIT
- **\$4M** in annual NYS funding
- Focus on reduction of natural resource consumption (water, raw material, energy) and elimination of waste and toxics
- P2 research, technical assistance, education and outreach
- **15+** full-time staff

R·I·T

Clarkson
UNIVERSITY
defy convention



Department of
Environmental
Conservation

UB University at Buffalo
The State University of New York



Rensselaer



Division of
Science, Technology
& Innovation

A Division of Empire State Development



MEP • MANUFACTURING
EXTENSION PARTNERSHIP
National Institute of Standards and Technology

Business Assistance



- Must be **NY-based** company
- Technical assistance provided from an interdisciplinary team of experts including engineers and environmental scientists
- Typical project cost ranges **\$15-\$50K**
- P2 funding offsets most of the project cost to the company
- **3** years of post-project reporting
- Expenses are non-capital expenses
- Typical project takes about **2-4** months



Areas of Technical Expertise



- P2 problem identification, reducing environmental “footprint” of process or facility
- Technology assessments, validation and effectiveness studies
- Supply chain sustainability assessments, strategy, and implementation
- Green or eco-innovation products in the commercialization stages
- Food waste reduction and pathway utilization

Results



As of January 2016,

- Over **170+** companies assisted to date
- Nearly **\$2M** in R&D projects funded to solve industry problems
- Over **\$1M** invested across nearly **80** communities in NYS
- Impact
 - Almost **10M** pounds of waste & emissions reduced
 - **70M+** gallons in avoided water use and **44M+** gallons of avoided discharges
 - Nearly **9M kWh** in reduced electricity use



Community Grants Program



*Since 2008, NYSP2I's Community Grants Program has received **222** applicants from across the New York State and supported **77** community grant projects with over **\$1,105,170** worth of funding.*



Sharing with your Community



- Know your audience
- Have a clear objective & listen to your participants needs
- Enabling interaction between participants
- As much as possible facilitate not lecture
- Reflection
- Feedback
- Evaluation

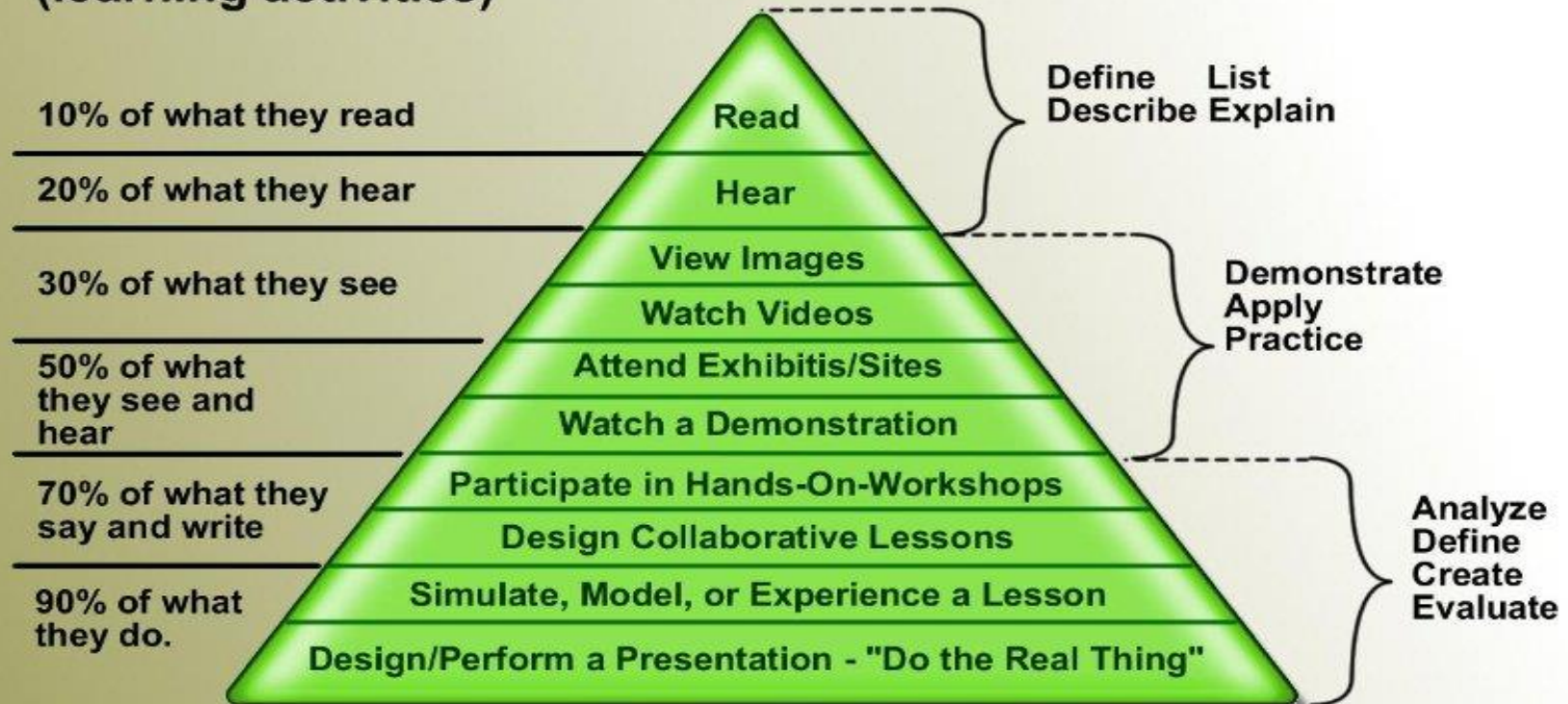
Train the Trainer



Edgar Dale's Cone of Experience

**People generally remember...
(learning activities)**

**People are able to...
(learning outcomes)**



Toxics in Every Day Life



[How TSCA Evaluates Chemicals](#)

Every Day Chemical Exposure



Food

pesticides in produce, mercury in fish, chemicals stored in fat



Indoor Environment

cleaning products, toys, plastics, fabrics, personal care products, dust, wastes, paint, carpets, cookware, furniture, tobacco smoke, lighting, clothes



School & Hobbies

furniture, chemicals, cleaners, markers, art supplies

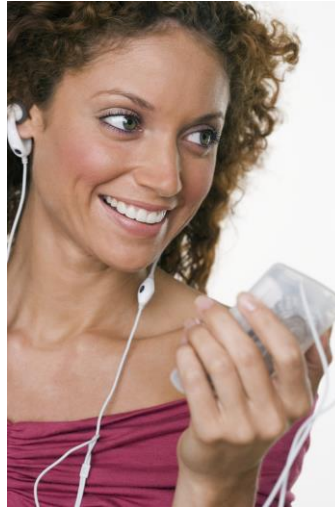


Outdoor Environment

air pollutants, pesticides, fertilizers contaminated soil, pharmaceuticals in water



Understanding Risk



- Our own experiences influence risk
- What does reducing risk cost?
- Is there a right answer?

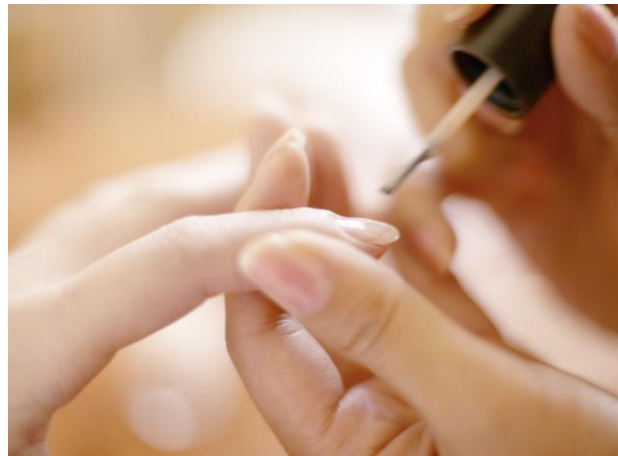


Personal Care Products

Personal Care Products



- How are PCP's regulated?
- What is your risk?
- What ingredients should be avoided?
- What are the environmental impacts?
- What can you do and who can you share this information with?



How are PCP's regulated?



*"...the safety of a product can be adequately substantiated through (a) reliance on already available toxicological test data on individual ingredients and on product formulations that are similar in composition to the particular cosmetic, and (b) performance of any additional toxicological and other tests that are appropriate in light of such existing data and information."
(Federal Register, March 3, 1975, page 8916).*

How many products do you use?



How many products do you use?



- **Cleansing:** soap, body wash, shampoo, conditioner, bubble bath, toothpaste, mouthwash, etc.
- **Hair styling:** spray, gel, pomade, etc.
- **Shaving:** cream, gel
- **Moisturizing:** face & body lotion
- **Nail:** polish, remover
- **Perfume, cologne, body spray, etc.**
- **Deodorant and antiperspirant**
- **Cosmetics:** foundation, concealer, mascara, eyeshadow, eyeliner, lipstick, lip gloss, etc.



Body Burden



PERFUME

Avg no. of chemicals: 250
Possible side effects: mouth, throat, and eye irritation; nausea; linked to kidney damage

SHAMPOO

Avg no. of chemicals: 15
Possible side effects: irritation, eye damage

FAKE TAN

Avg no. of chemicals: 22
Possible side effects: rashes, irritation, hormone disruption

DEODORANT

Avg no. of chemicals: 15
Possible side effects: eye, skin, & lung irritation; headache; dizziness; respiratory problems

NAIL VARNISH

Avg no. of chemicals: 31
Possible side effects: fertility issues, problems in developing babies

BODY LOTION

Avg no. of chemicals: 32
Possible side effects: rashes, irritation, hormone disruption

HAIRSPRAY

Avg no. of chemicals: 11
Possible side effects: allergies, irritation to eyes, nose, and throat; hormone disruption

EYESHADOW

Avg no. of chemicals: 26
Possible side effects: linked to cancer, infertility; hormonal disruptions and damage to the body's organs

BLUSH

Avg no. of chemicals: 16
Possible side effects: rashes, irritation, hormonal disruption

FOUNDATION

Avg no. of chemicals: 24
Possible side effects: allergies, disrupts immune system, links to cancer

LIPSTICK

Avg no. of chemicals: 33
Possible side effects: allergies, links to cancer

Body Burden

SHAMPOO Old Spice High Endurance

Number of chemicals: 13 + fragrance
Possible side effects: cancer; toxic to organs; allergies; & irritation

SHAVING CREAM Edge Shave Gel Clean & Refreshing

Number of chemicals: 13
Possible side effects: affects development, reproductive system and organs; hormone disruption; allergies & irritation; persistent & bioaccumulative

COLOGNE Hollister Newport Beach

Number of chemicals: 8 + fragrance
Possible side effects: affects development, nervous & reproductive systems, and organs; hormone disruption; cancer; allergies & irritation; persistent & bioaccumulative

DEODORANT Axe Antiperspirant/Deodorant - Phoenix

Number of chemicals: 9 + fragrance
Possible side effects: affects development, nervous & reproductive systems, and organs; hormone disruption; cancer; allergies & irritation

HAIR GEL Redkin for Men Maneuver

Number of chemicals: 27 + fragrance
Possible side effects: biochemical or cellular level changes; affects development, reproductive system and organs; cancer; endocrine disruption; allergies & irritation; persistent & bioaccumulative

FACIAL SOAP Clean & Clear Facial Scrub, Morning Burst

Number of chemicals: 27 + fragrance
Possible side effects: biochemical or cellular level changes; affects development, reproductive system and organs; cancer; hormone disruption; allergies & irritation; persistent & bioaccumulative

MOUTHWASH Listerine Cool Mint

Number of chemicals: 12
Possible side effects: affects development, reproductive system and organs; persistent & bioaccumulative

SOAP Irish spring

Number of chemicals: 15 + fragrance
Possible side effects: cancer; toxic to organs; allergies & irritation; persistent & bioaccumulative



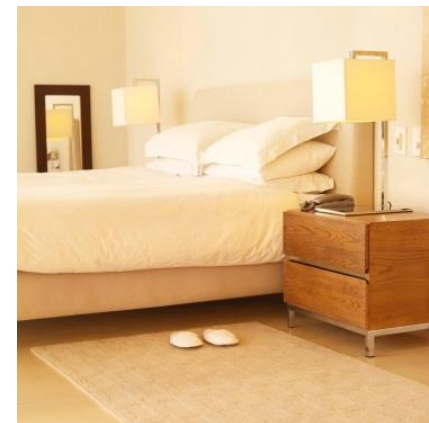
What ingredients in body care products should we be concerned about?

Volatile Organic Compounds (VOCs)



Chemicals that are emitted from solids or liquids at room temperature & contaminate air

Concentrations of many VOCs can be **up to 10 times higher indoors** than outdoors



US EPA, An Introduction to Indoor Air Quality (IAQ), Volatile Organic Compounds, <http://www.epa.gov/iaq/voc.html>

Volatile Organic Compounds (VOCs)



Health effects

- Effects include: **eye, nose, and throat irritation; nosebleed; headache, loss of coordination, nausea; allergic skin reaction; damage to liver, kidney, and central nervous system**
- Some can **cause cancer in animals**; some are **suspected or known to cause cancer in humans**
- Long term exposure can cause **sick building syndrome**

Actions you can take

- ✓ Choose water based products
- ✓ Choose pump sprays instead of aerosols (including non-stick cooking spray)
- ✓ Use products according to manufacturer's directions and meet or exceed any label precautions
- ✓ Provide plenty of fresh air when using

US EPA, An Introduction to Indoor Air Quality (IAQ), Volatile Organic Compounds, <http://www.epa.gov/iaq/voc.html>

Fragrance



What is the concern?

- Where do you find fragrance?
- What is fragrance made of?



EPA <http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/phthalates.html>; Campaign for Safe Cosmetics, <http://safecosmetics.org/article.php?id=643>

Environmental Health Association of Nova Scotia, Guide to Less Toxic Products, <http://www.lesstoxicguide.ca/index.asp?fetch=household>

Fragrance



Chemicals typically found in fragrance

Phthalates

- Act as solvents and carriers for those chemicals that create the scent in a fragrance
- **Linked to diabetes and asthma, potential risks to reproductive system & thyroid**
- *EPA is concerned about phthalates because of their toxicity and the evidence of pervasive human and environmental exposure to these chemicals*

Synthetic Musks

- Man-made chemicals produced to replicate musk scents originally obtained from musk deer & musk ox
- Don't break down in the environment and can accumulate in our bodies
- **Potential hormone disruptors and may break down the body's defenses against other toxic chemical exposure**

Testing shows **phthalates are in about 75% of all PCPs**

Nail polish, hair spray, solvents & perfumes in other products contain ~10%

Can be transferred through breast milk from mom to baby

Fragrance



Is there a difference between Fragrance Free & Unscented?



example fragrance free products

Fragrance



Actions you can take

- ✓ Choose **fragrance free products** labeled “free of perfumes and dyes” or “fragrance free” – “Unscented” does not mean the same as “fragrance free”
- ✓ Use **homemade fragrance free** cleaners
- ✓ Choose **naturally scented products**
- ✓ Use **baking soda** to naturally absorb odors
- ✗ Avoid products with “-phthalate”, “musk”, “parfum”, or “fragrance” as an ingredient
- ✗ Avoid **air fresheners and scented candles**

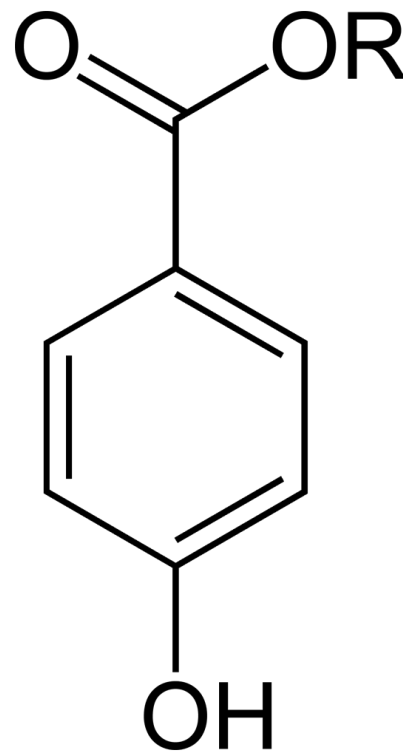


example fragrance free products

Parabens



Do you know
what parabens
are?



Parabens



Prevent bacteria from growing in water based products

- The most widely used preservatives
- Most common parabens are methyl-, ethyl-, and butyl-
- Studies have detected parabens in breast tumors but it's unclear whether the presence leads to cancer

Parabens

Look for methyl, ethyl, propyl, butyl parabens on product labels

Found in

Cleaners: air fresheners, deodorizers

Body care: moisturizers, face & skin cleansers, shampoo, conditioner, sunscreen, toothpaste, makeup

Linked to cancer, endocrine disruption, reproductive toxicity, immunotoxicity, neurotoxicity, skin irritation

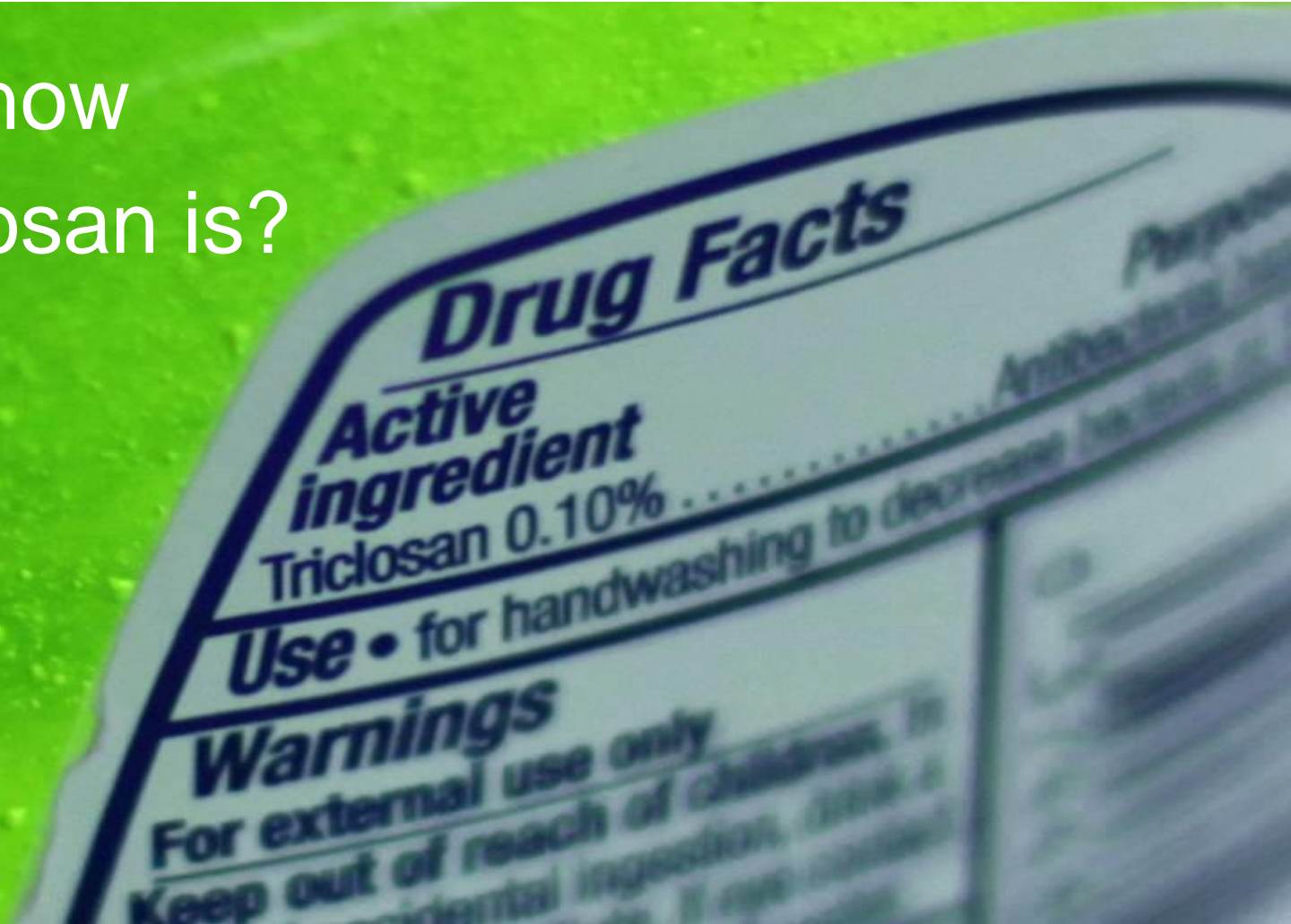


example products that contain parabens

Triclosan



Do you know
what triclosan is?



Formaldehyde-Releasing Preservatives



Formaldehyde is used as a preservative & is an impurity released by a number of cosmetic preservatives

Formaldehyde & Formaldehyde Releasing Preservatives

Look for DMDM hydantoin, diazolidinyl urea, Quaternium-15, bronopol, imidzaolodinyll urea, formalin, formic aldehyde

FORMALDEHYDE has been found in nail treatment, nail polish, eyelash glue...

FORMALDEHYDE RELEASING PRESERVATIVES have been found in shampoo, conditioner, styling gel/lotion, body wash, moisturizer, foundation, eye shadow, powder, blush, mascara...

QUATERNARY AMMONIUM COMPOUNDS have been found in spray cleaners, disinfecting air fresheners, disinfectant/antibacterial cleaners...

Known human carcinogen, asthmagen, neurotoxicant, developmental toxicant

Can cause allergic skin reactions

Quats are very toxic to aquatic life



example products that contain formaldehyde releasing preservatives

Environmental Working Group, SkinDeep database, <http://www.ewg.org/skindeep/>
Environmental Working Group, Guide to Healthy Cleaning, <http://www.ewg.org/guides/cleaners>

Nail Polish

- Look for brands that advertise their polish as “three free” on the product packaging or website
- May contain other ingredients of concern

Sally Hansen

ULTA
BEAUTY

REVLON

essie

ORLY

butter
LONDON

O.P.I
The World Leader in Professional Nail Care

example three free brands

Organic Solvents	Acrylics	Prevents Chipping
Xylene: hazardous by all routes of exposure, can cause headache, dizziness, skin and eye irritation, kidney and liver impairment ¹ ; very persistent in air ²	Methyl methacrylate: vapors irritate eyes, nose, and throat; irritates skin ¹ ; toxic to fish ²	Benzyl acetate: irritating to skin, eyes, and respiratory tract ¹ ; toxic to fish, very persistent in air ²
Methyl ethyl ketone: vapors irritate eyes, nose & throat ¹ ; very persistent in air ²	Ethyl methacrylate: vapors irritate eyes and respiratory system, irritates skin ¹ ; toxic to fish ²	
Acetone: vapors irritate eyes, nose, and throat ¹ ; very persistent in air ²		

¹ National Library of Medicine, Hazardous Substances Data Bank, <http://toxnet.nlm.nih.gov>

² PBT Profiler, <http://www.pbtprofiler.net>

- [The Story of Cosmetics](#)



How may these products be affecting our health & the environment?



Endocrine Disruption



Disruption of the endocrine system can occur in various ways

Example known & suspected endocrine disruptors:

- Oral contraceptives
- Phthalates
- Parabens
- Bisphenol A
- DDT
- Some flame retardants
- Teflon

- For example, blocks growth hormones required for normal development

- Causes an overproduction or underproduction of hormones (e.g. over- or under-active thyroid)

1
MIMIC a natural hormone

- Fools the body into over-responding (e.g. growth hormone that results in increased muscle mass)
- Fools the body to respond at inappropriate times (e.g. producing insulin when not needed)

2
BLOCK the effects of hormones

3
DIRECTLY STIMULATE or INHIBIT the endocrine system

Exposure in animals is linked to: learning disabilities, attention deficit disorder, cognitive and brain development problems, sexual development problems, feminizing of males or masculine effects on females

Endocrine Disruption



Link to Breast Cancer in Women

- Studies have shown a **link between exposure to endocrine disruptors and breast cancer**
- Exposure to diethyl phthalate may be associated with an increased risk of breast cancer in premenopausal women



Link to Reproductive Effects in Men

- Prenatal **phthalate exposure at environmental levels can adversely affect** reproductive function in adult men
- Link between **phthalate exposure and DNA damage in sperm** from men that were not exposed to high levels of phthalates



Link to Behavioral Effects in Children

- In boys and girls ages 3-9, **phthalates** are associated with mental development, behavioral problems, poor social cognition

Environmental Effects



Ingredients have been found in water bodies - research is needed to determine the extent of harm they cause

Found in water because they **don't dissolve easily nor evaporate** at normal temperature and pressures

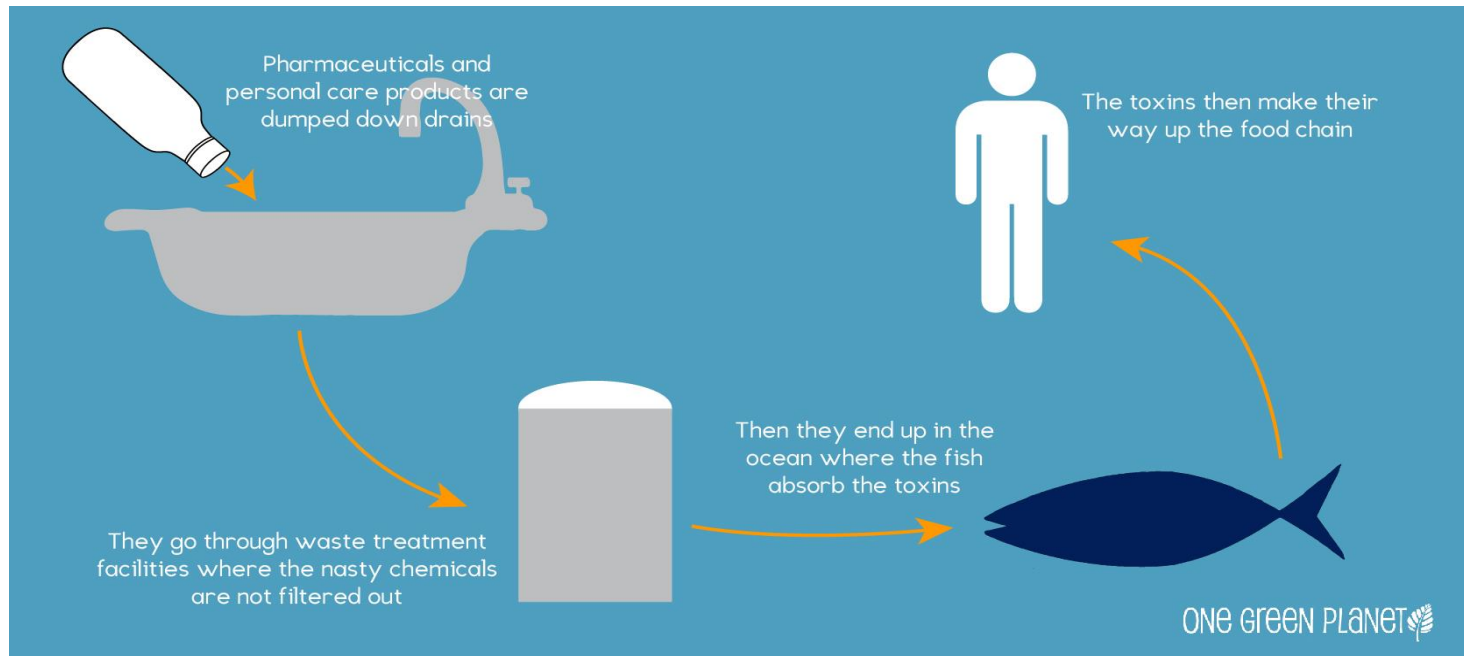


Image Source: One Green Planet, <http://www.onegreenplanet.org/environment/why-you-shouldnt-pour-personal-care-products-down-the-drain/>

Environmental Impact



- Some ingredients take a long time to break down into non-toxic counterparts when they enter the environment
- Some ingredients are toxic to fish

Chemical	Days to be removed from water	Days to be removed from sediment	Toxic to Fish
Methyl paraben (preservative)	90	840 (~2.3yr)	YES
Triclosan (antibacterial)	360	3240 (~8.8yr)	YES
Dibutyl phthalate (nail polish, fragrance)	52	468 (~1.3yr)	YES
Formaldehyde (nail polish, preservative)	90	840 (~2.3yr)	MODERATELY

Data from the US EPA's PBT Profiler, <http://www.pbtprofiler.net>

Tools- Detox Me



“A Clever Way To Avoid Toxic Chemicals In Everyday Products.”

THE HUFFINGTON POST



Detox Me

The most reliable clean lifestyle guide that empowers you to eliminate toxic chemicals from your daily life.

This free smartphone app walks you through simple, research-based tips on how to reduce your exposure to potentially harmful chemicals where you live and work—and it keeps track of your progress.

We believe knowledge is not just power, but a prescription for prevention.



**Donate \$65 or more
to get the first-ever
EWG VERIFIED™
product box today!**

DONATE NOW



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Search

Smarter Choices, Healthier Living



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EWG's Healthy Living Corner

**Is the hormone-disrupting
cosmetic ingredient propyl
paraben in your food?**

**USE EWG'S FOOD SCORES
TO FIND OUT!**

Featured Research & News

Essential Tips and Facts

See that long list of ingredients on the back of the bottle? Some probably aren't as safe as you'd hope.

- 1 Top tips for safer products
- 2 Frequently asked questions (FAQs)

Essential Tips and Facts

See that long list of ingredients on the back of the bottle? Some probably aren't as safe as you'd hope.

- 1 Top tips for safer products
- 2 Frequently asked questions (FAQs)
- 3 Why Skin Deep®?
- 4 Myths on cosmetic safety
- 5 User's guide to Skin Deep®



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FOR YOUR HEALTH

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Skin Care | Cleansing | Bar Soap

Showing 1 - 50 of 1,394 results **See more:** [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) ... [28](#) [Next>](#)

	Product	Product Type(s)	Score ▼
1.	 <u>Makes 3 Soap Bar, Coriander Ginger Oatmeal</u>	Bar Soap	  Data: Fair
2.	 <u>Beautycounter Charcoal Cleansing Bar</u>	Bar Soap	  Data: Limited
3.	 <u>Makes 3 Soap Bar, Eucalyptus Cedarwood</u>	Bar Soap	  Data: Limited
4.	 <u>Makes 3 Soap Bar, Lavender Vanilla</u>	Bar Soap	  Data: Limited
5.	 <u>Makes 3 Soap Bar, Orange Blossom</u>	Bar Soap	  Data: Limited
6.	 <u>Makes 3 Soap Bar, Super Shea</u>	Bar Soap	  Data: Limited

Score:

Data available: ● Limited

Product Summary

Ingredient Concerns

Animal Testing?

Label Information

Where to Purchase

Discuss This Product

Data last updated:

July 2016



LEARN MORE



Get The Guide!

Want a free Cosmetics Guide?
Donate \$10 to EWG today!

Donate Now!

Dove White Beauty Bar

See all: [Unilever](#) [Dove](#) [bar soap](#)

EWG scientists reviewed Dove White Beauty Bar for safety according to the methodology outlined in our Skin Deep Cosmetics Database. We assess the ingredients listed on the labels of personal care products based on data in toxicity and regulatory databases, government and health agency assessments and the open scientific literature. EWG's rating for Dove White Beauty Bar is 4.



Ingredient Concerns:

low

moderate

high

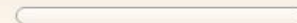
Overall Hazard



Cancer



Developmental & reproductive toxicity



Allergies & immunotoxicity



Use restrictions



Other HIGH concerns: Multiple, additive exposure sources, Miscellaneous, Occupational hazards; **Other MODERATE concerns:** Contamination concerns, Irritation (skin, eyes, or lungs), Organ system toxicity (non-reproductive); **Other LOW concerns:** Enhanced skin absorption, Data gaps, Ecotoxicology

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Ingredient Concerns

Ingredient	Concerns	Score
FRAGRANCE	Allergies/immunotoxicity, Miscellaneous, Irritation (skin, eyes, or lungs), Organ system toxicity (non-reproductive), Ecotoxicology	<div> </div> Data: Fair
COCAMIDOPROPYL BETAINE	Use restrictions, Allergies/immunotoxicity, Ecotoxicology, Contamination concerns (COCAMIDOPROPYL DIMETHYLAMINE , 3-DIMETHYLAMINOPROPYLAMINE , NITROSAMINES -in the presence of nitrosating agents)	<div> </div>



EWG's Healthy Living App



HEALTHY LIVING JUST GOT THAT EASY

Ratings for more than 120,000 food and personal care products, now at your finger tips.



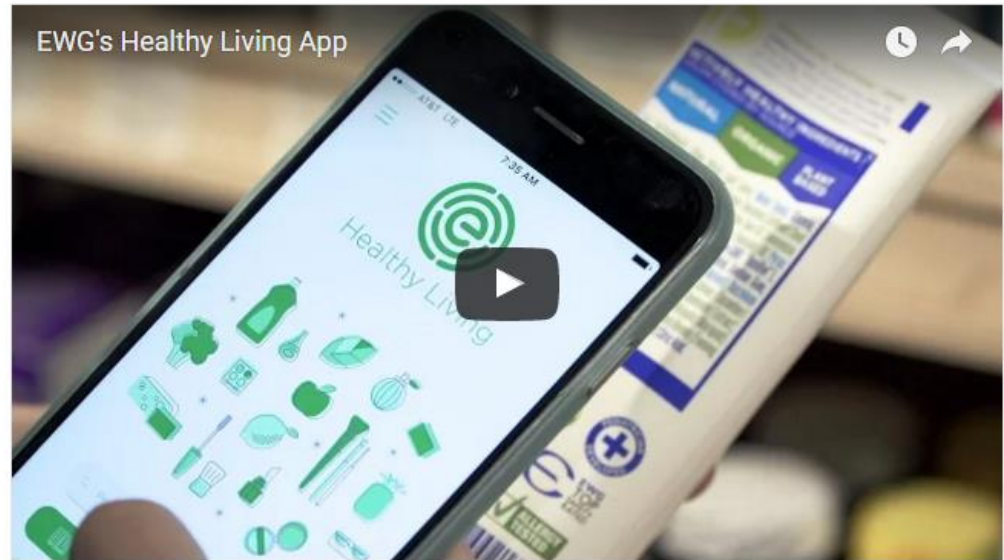
Scan a product



Review its rating



Pick the better choice





Household Cleaners

Why is it important to Green Your Clean?



Health

Many ingredients in cleaning products can be hazardous to your health

- Skin, nose, throat, and eye irritation
- May interfere with, mimic or block hormones
- Contribute to or cause asthma

Environment

Products are released to the environment during normal use through evaporation of volatile components and rinsing down the drain of residual product from cleaned surfaces, sponges, etc.

- A May 2002 nationwide study by the U.S. Geological Survey (USGS) showed that nearly **70% of the streams tested contained breakdown products of detergents, while 66% contained disinfectants¹**

US EPA, Greening Your Purchase of Cleaning Products: A Guide For Federal Purchasers, <http://www.epa.gov/epp/pubs/cleaning.htm>

¹U.S. Geological Survey (2002). Emerging Contaminants Project. May 2002. <http://toxics.usgs.gov/regional/emc/index.html>

Cleaning Product Labels



- **Toxic:** poisonous or lethal when ingested, touched and/or inhaled
- **Danger:** extremely flammable, corrosive or highly toxic
 - One taste to one teaspoon is fatal to a 180-pound male
- **Warning:** One teaspoon to one ounce may be harmful/fatal to a 180lb male
- **Caution:** One ounce to one pint may be harmful/fatal to a 180lb male



16CFR1500.129, Substances named in the Federal Caustic Poison Act; Federal Hazardous Substances Control Act, 15USC1261

Alternative Cleaning Ingredients



Product	Use	Practical example
Baking soda	Clean, deodorize, water soften, scour	Clean toothbrush, hairbrush, soap scum in shower/tub
Unscented, non-antibacterial soap	Clean a huge range of materials and surfaces	Hand soap, dish soap
Lemon	Fight household bacteria	Rub on cutting board, grind in garbage disposal
Borax	Clean, deodorize, disinfect, water soften, clean floors, wallpaper, and printed walls	Alternative to bleach, boosts soaps, and removes stains
White vinegar	Cuts grease, removes mildew, odors, some stains, and wax build-up	Remove grease from clothes, towels, carpets, rugs Use in place of liquid fabric softener
Cornstarch	Clean windows, polish furniture, shampoo carpets and rugs	Absorb smell; sprinkle on carpet, let sit for 30 minutes, and vacuum up
Citrus solvent	Cleans paint brushes, oil and grease, some stains	Clean paint materials

Restoring Eden, Choosing Wise Alternatives to Risky Cleaning Products, <http://restoringeden.org/resources/alternative-cleaners>

What You Can Do

1. SIMPLIFY- eliminate unnecessary products and prioritize cleaners used on infants, elderly, pregnant women
2. DIY- make your own products
3. RESEARCH- [choose 3rd party](#) certified products, from companies you trust
4. USE TOOLS- like Detox me and EWG
5. SHARE- get involved, share the information



example third party certifications



Know your environment.
Protect your health.

Donate

ewg guides

updates

faq

info



EWG's Guide to Healthy Cleaning

Search more than 2,500 products

Search

Product Updates Find out more

SAFETY RATINGS FOR MORE THAN 2,500 PRODUCTS



Search more than 2,500 products

Search

1
2
3

TOP
PRODUCTS

Find greener cleaners for
household needs



LABEL
DECODER

Translate technical terms
and ad hype



ABOUT
THIS REPORT

EWG looked beyond labels
to rate products



IT'S EWG'S GUIDE TO



EWG's Guide to Healthy Cleaning

[Back](#)

Products:

Air Fresheners (288)

All Purpose (507)

Disinfectant (69)

Dusting (7)

General Purpose Cleaner (396)

Glass/Window Cleaner (61)

Graffiti/Stain Remover (2)

Mold and Mildew Remover (16)

Bathroom (227)

Dishwashing (368)

Floor Care (166)

Furniture (155)

Kitchen (93)

Laundry (817)

Other (82)

IT'S EWG'S GUIDE TO
HEALTHY CLEANING
BUT FOR FOOD!

EWG's
FOOD SCORES
RATE YOUR PLATE

All Purpose

Jump To:

Summary

Products: 551

Brands: 112

Companies: 81

How the products rank:

61 products scored an	A	<div></div>	11.9%
45 products scored a	B	<div></div>	8.8%
96 products scored a	C	<div></div>	18.8%
170 products scored a	D	<div></div>	33.2%
140 products scored an	F	<div></div>	27.3%



Print



Share on:   

All Purpose Cleaners

551 Results - Page 1 of 56

← Previous 1 2 3 4 5 6 7 8 9 ... 55 56 Next →



[Bon Ami Powder Cleanser](#)



[Dr. Bronner's Sal Suds Liquid Cleaner](#)

[There is more than one version of this product.](#)



[Sun & Earth All Purpose Cleaner, Light Citrus](#)

[There is more than one version of this product. Grades vary from A to F.](#)



[Ecover Cream Scrub](#)

[There is more than one version of this product. Grades vary from A to D.](#)



[Dr. Bronner's Pure-Castile Soap, Peppermint](#)

[There is more than one version of this product.](#)



« Back





See more:


Product Ingredients

Health & Environmental
Concerns

Warnings & Directions

 Green-Certified?

 Animal Testing?

 Contact Company

IT'S EWG'S GUIDE TO
HEALTHY CLEANING
BUT FOR FOOD!

EWG's
FOOD SCORES
RATE YOUR PLATE



Windex Advanced Glass & Multi-Surface Cleaner

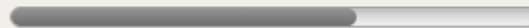
See:

General Purpose Clea...

Brand: Windex

Company: S.C. Jo...

Asthma/Respiratory



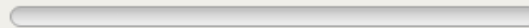
Moderate Concern

Skin Allergies &
Irritation



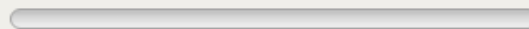
Some Concern

Developmental &
Reproductive Toxicity



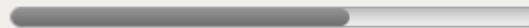
Low Concern

Cancer



Low Concern

Environment



Moderate Concern

How does it rate: Scores for similar cleaners ranged **from A to F**. Search for a [better General Purpose Cleaner](#)

Top Scoring Factors: May contain ingredients with potential for acute aquatic toxicity; respiratory effects; nervous system effects



Ingredient Disclosure: poor



Green Certified:

NO



Print



Share on:



Product ingredients

Known Ingredients

Ingredient

Health, Environment,
and Disclosure Concerns

Score

AMMONIUM HYDROXIDE

High Concern: acute aquatic toxicity; **Moderate Concern:** respiratory effects; **Some Concern:** damage to vision, skin irritation/allergies/damage



ETHANOLAMINE

Moderate Concern: respiratory effects, general systemic/organ effects; **Some Concern:** chronic aquatic toxicity, nervous system effects, skin



Take A Break





Safer Household Products



Image source: <https://blog.broadcom.com/home-networking/moca-2-0-performance-boost-for-tvs-home-network/>










How often do you consume food/beverages from polystyrene (Styrofoam) containers?

- a. Never
- b. Once a year
- c. Monthly
- d. Weekly
- e. Daily

Deciphering Plastics



PREFERRED	PETE Polyethylene terephthalate	Soft drink & water bottles, detergent and cleaning containers, peanut butter jars	Recyclable	
PREFERRED	HDPE High density polyethylene	Milk & water jugs, shampoo bottles, some plastic bags	Recyclable	
AVOID	PVC Polyvinyl chloride	Cosmetics, pacifiers, shower curtains, teething rings, soft toys, portable electronics, detergent & window cleaner bottles, flooring	Can leach phthalates and lead Not recyclable Creates toxic dioxin during manufacture and disposal	
PREFERRED	LDPE Low density polyethylene	Food storage, soft and pliable parts, most plastic wraps, some bottles	Recyclable	
PREFERRED	PP Polypropylene	Reusable microwaveable containers, deli soup, syrup, yogurt, margarine containers, disposable diapers, clouded plastic containers, baby bottles	Recyclable	
AVOID	PS Polystyrene	Packing peanuts, disposable cups, plates, plasticware, Styrofoam, CD cases	Can leach styrene Recyclable, but rarely recycled Most end up in landfills	
UNCERTAIN	Other PC Polycarbonate PLA Polylactic acid	Reusable water bottles, baby bottles, electronics, canned food Disposable cups	Can leach bisphenol-A, not recyclable Not recyclable, can be composted	

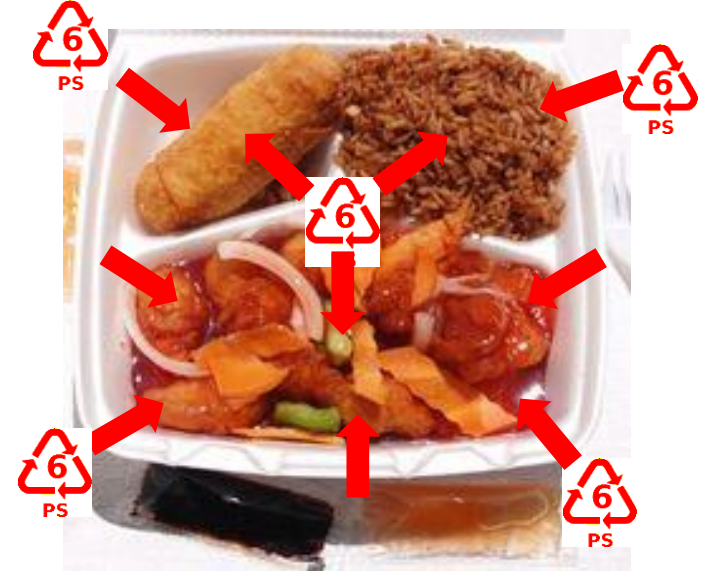
Food prep & consumption



Polystyrene

Styrene can leach from **polystyrene**, especially when hot. Over the long term, this can act as a neurotoxin.

Studies on animals report harmful effects of styrene on red-blood cells, the liver, kidney, and stomach organs



Styrene can be absorbed by food, and once ingested can be stored in body fat. It is thought that repeated exposure can cause it to build up in the body.

US Environmental Protection Agency "Styrene". Air Toxics Website.

WHO International Programme On Chemical Safety "Styrene". Environmental Health Criteria

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Food prep & consumption



Polystyrene Examples

- Styrofoam®
- Disposable plates & utensils
- Foam take out cups & containers
- Foam meat trays & egg cartons
- Yogurt cups & other opaque single serve containers



Polystyrene free alternatives:

- Reusable cups, plates, and utensils
- Wax lined paper cups & take out containers
- “eco” containers
- LDPE & PET single serve containers





How often do you consume canned food/beverages? Do not include food in plastic bottles or aluminum cans.

- a. Never
- b. Once a year
- c. Monthly
- d. Weekly
- e. Daily

Food prep & consumption



Bisphenol A

- BPA is typically found in polycarbonate, shatter resistant plastic, resin used to line metal cans, and thermal receipt paper
- BPA is an **endocrine disruptor**
 - Linked to down's syndrome, obesity, hyperactivity, breast & prostate cancer
 - Causes breast cancer, testicular cancer, and diabetes in lab animals at low doses
- BPA can **leach out of containers into food/drink** and it is then ingested
 - Water soluble
 - Heating a container increases BPA leaching
- It is toxic to fish



Braun, et. al., Impact of Early Life Bisphenol A Exposure on Behavior and Executive Function in Children, Pediatrics, 2011;128;873
National Toxicology Program, Bisphenol A fact sheet, http://www.niehs.nih.gov/health/assets/docs_a_e/bisphenol-a-factsheet.pdf
Washington Toxics Coalition, BPA, <http://watoxics.org/chemicals-of-concern/bisphenol-a-bpa>

Bisphenol A



How can we be exposed to BPA?



Studies show that **99% of our exposure comes from food** and BPA has been found in both solid and liquid food.

The **US Food & Drug Administration (FDA)** is concerned about potential effects on the **brain, behavior, and prostate gland of fetuses, infants and children**

Source: USFDA, Bisphenol A (BPA): Use in Food Contact Application, January 2010; updated March 30, 2012

Braun, et. al., Impact of Early Life Bisphenol A Exposure on Behavior and Executive Function in Children, Pediatrics, 2011;128;873
National Toxicology Program, Bisphenol A fact sheet, http://www.niehs.nih.gov/health/assets/docs_a_e/bisphenol-a-factsheet.pdf

Washington Toxics Coalition, BPA, <http://watoxics.org/chemicals/bpa/> Funding provided by the New York State Department of Environmental Conservation. © 2016 Rochester Institute of Technology

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No Silver Lining

An Investigation into Bisphenol A in Canned Foods

“The amount of BPA in canned goods cannot be predicted by age, price, quality, nutritional value, the store it was purchased in, the part of the country it was purchased in, or the batch number¹”

DAILY BPA EXPOSURE IN (µg/kg body weight)	HEALTH EFFECTS OBSERVED IN LABORATORY STUDIES ⁵¹
0.0001	Alterations in cell signaling pathways ⁵²
0.025	Persistent changes to breast tissue, predisposes cells to hormones ⁵³
0.025	Permanent changes to genital tract ⁵⁴
0.2	Decreased antioxidant enzymes ⁵⁵
0.25	Altered development of fetal mammary glands ⁵⁶
1	Long-term adverse reproductive and carcinogenic effects ⁵⁷
2	Increased prostate weight ⁵⁸
2	Increased aggression ⁵⁹
2.4	Weight gain and early onset of puberty ⁶⁰
2.4	Signs of early puberty, increased anogenital distance ⁶¹
2.4	Decline in testicular testosterone ⁶²
2.5	Predisposes breast cells to cancer ⁶³

¹ National Workgroup for Safe Markets, No Silver Lining: An investigation into bisphenol A in canned foods, May 2010.

Food prep & consumption



Actions you can take to avoid BPA

- ✗ Limit the amount of canned foods you consume each day
- ✗ Avoid purchasing **canned acidic foods**
- ✓ Choose **fresh foods** when possible, followed by dried or frozen products over canned goods
- ✓ Choose products in **glass jars or aseptic boxes** (TetraPaks)
- ✓ Choose products in less toxic plastics
- ✓ Choose canned foods in “BPA free” cans





How often do you cook with non-stick (Teflon®) coated pans?

- a. Never
- b. Once a year
- c. Monthly
- d. Weekly
- e. Daily

Food prep & consumption



Perfluorooctanoic acid

- Teflon® coated non-stick pans contain **small amounts of PFOA**
- Most non stick pans are Teflon® coated
- PFOA may be emitted from the pan as it's heated
- PFOA has been **found in house dust, water, food, industrial waste, stain resistant carpets, carpet cleaning liquids, microwave popcorn bags**
- PFOA **remains in people for a very long time & does not break down in the environment**



United States. Environmental Protection Agency. Long-Chain Perfluorinated Chemicals (PFCs) Action Plan. 2009.

US EPA, Perfluorooctanoic Acid and Fluorinated Telomers, <http://www.epa.gov/oppt/pfoa/>

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Food prep & consumption



What products contain PFOA & chemicals like it?

- These chemicals have been used for decades to make **products that resist heat, oil, stains, grease and water**

Products that may contain these chemicals:

- Stain resistant carpets & furniture
- Grease proof food papers
- Non-stick pans
- Cosmetics
- Cleaners
- Clothing



"PFCs: Global Contaminants: PFOA and other PFCs come from common products in every home." *Environmental Working Group*. April 2003.
United States. Environmental Protection Agency. Long-Chain Perfluorinated Chemicals (PFCs) Action Plan. 2009.

US EPA, Perfluorooctanoic Acid and Fluorinated Telomers, <http://www.epa.gov/oppt/pfoa/>

Food prep & consumption



What are the potential health effects of PFOA?

The information that the EPA has available does not indicate that the routine use of consumer products poses a concern. ¹



¹United States. Environmental Protection Agency. Long-Chain Perfluorinated Chemicals (PFCs) Action Plan. 2009.

US EPA, Perfluorooctanoic Acid and Fluorinated Telomers, <http://www.epa.gov/oppt/pfoa/>

Food prep & consumption



Actions you can take to avoid PFOA at home

- ✗ Avoid **overheating nonstick pans**
- ✗ Avoid **burning food in nonstick pans**
- ✓ Choose **non-reactive cookware** and cooking utensils, such as uncoated metal, silicone, glass, and cast iron
- ✓ **Vacuum and dust** your home frequently
- ✗ Avoid **stain resistant** carpets, furniture, clothes, and other fabrics



Alternative Cookware



Material	Cooking Ability	Safety
Aluminum	Lightweight Conducts heat well Fairly inexpensive	1-2mg of aluminum dissolves into food while cooking, 50mg/day is acceptable Dissolves most easily from worn or pitted pots and pans & leafy vegetables Acidic foods, such as tomatoes and citrus products, absorb the most aluminum.
Anodized aluminum	conducts heat as well as ordinary aluminum has hard, non- stick surface which makes it scratch-resistant, durable, and easy to clean	Anodizing reduces aluminum leaching and getting into food
Ceramic, enamel or glass	easily cleaned and can be heated to fairly high temperatures	Minimal concern from pigments, lead, or cadmium used in making, glazing, or decorating them but risk of them entering food is controlled during the manufacturing process
Silicone	non-stick stain-resistant cools quickly tolerates extreme temperatures Flexible, may not be suitable for some foods it will melt if exposed to high temperatures (>428F)	synthetic rubber which contains bonded silicon and oxygen. There are no known health hazards
Stainless steel	strong and resists wear and tear inexpensive long-lasting most popular cookware in North America	Contains iron, nickel, and chromium – Provides less than 20% of total daily iron intake - well within safe levels Does not add significant amounts of nickel to food 45 micrograms of chromium dissolves into food while cooking, safe intake is 50 to 200 micrograms/day
Tempered glass	Scratch resistant Quick change in temperature can cause it to explode	No known health hazards

Foam Furniture



What is the concern?

- **Chemicals** are added to plastics & foam products to make them less likely to catch fire and burn
- These chemicals are released from the product they're in, and **we inhale them or ingest dust** that contains them
- **Children's exposure may be greater than adult's**



Bromine is toxic to the liver, brain, reproductive system & may affect thyroid function

High levels of antimony can cause fertility problems and lung cancer in animals

Chlorinated compounds may cause cancer; damage to the liver, kidney, brain, and testes; and reproductive harm



United States Environmental Protection Agency, PBDEs, <http://www.epa.gov/oppt/pbde/>

ATSDR ToxFAQs, <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=900&tid=183>

CDC, Fourth National Report on Exposure to Environmental Chemicals, <http://www.cdc.gov/exposurereport/pdf/FourthReport.pdf>

National Resources Defense Council, Smarter Living: Chemical Index Tris--TDCP, TCEP, last revised 12/27/2011, www.nrdc.org/living/chemicalindex/tris.asp

Flame Retardants



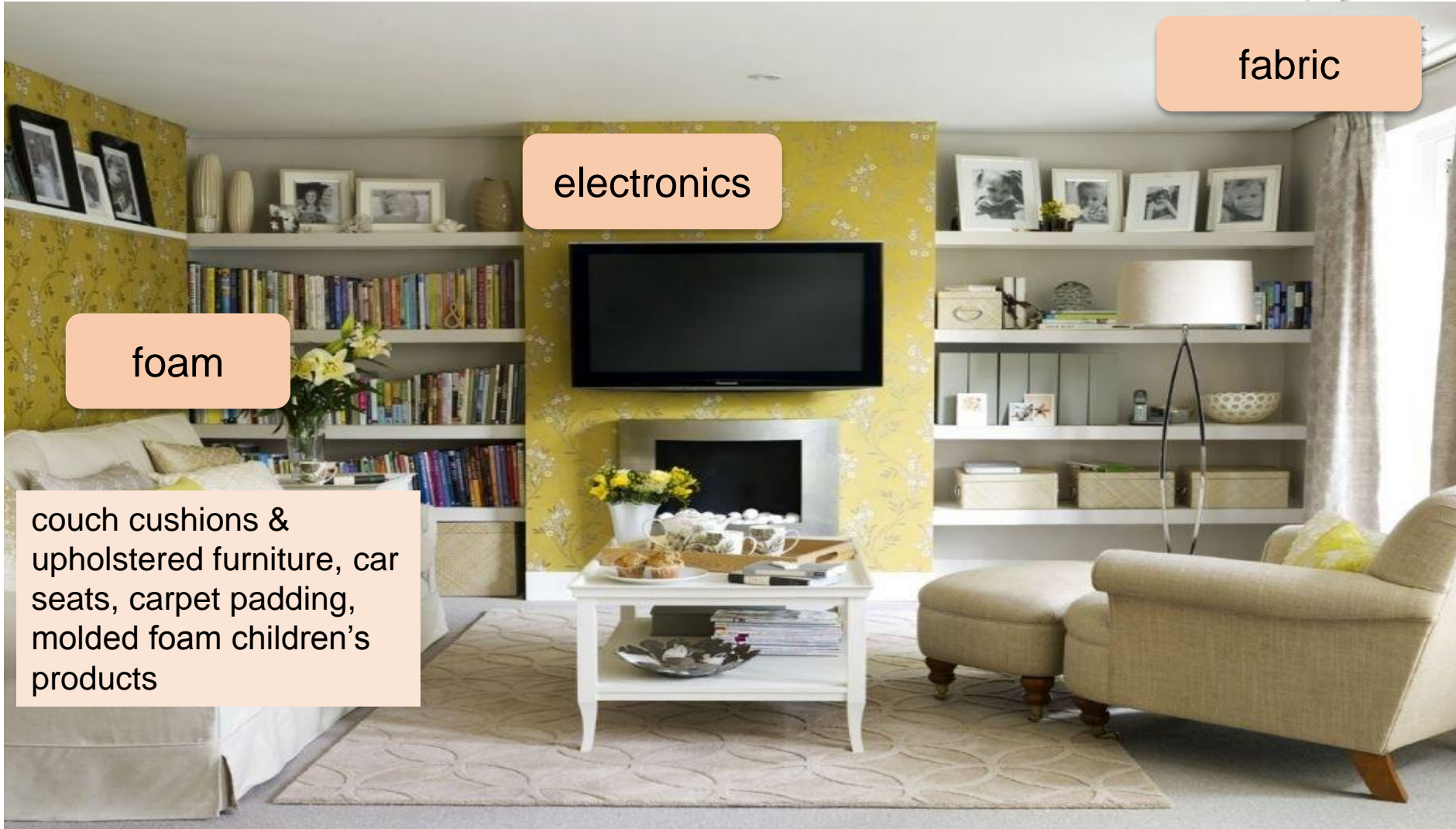
Many household products typically contain them

fabric

electronics

foam

couch cushions &
upholstered furniture, car
seats, carpet padding,
molded foam children's
products



Flame Retardants



What are the potential health & environmental concerns?

Human Health Concerns

- Animal studies and detection of PBDEs in human tissue, blood, and breast milk raise concern for potential health hazards.

Environmental Concerns

- Persistent in the environment & bioaccumulate in the food chain



United States Environmental Protection Agency, PBDEs, <http://www.epa.gov/oppt/pbde/>

ATSDR ToxFAQs, <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=900&tid=183>

CDC, Fourth National Report on Exposure to Environmental Chemicals, <http://www.cdc.gov/exposurereport/pdf/FourthReport.pdf>

Flame Retardants



Actions you can take

- ✓ Opt for **materials that may not contain flame retardants**, like leather, wool, or cotton
- ✓ When purchasing **electronics**, choose from brands that do not contain or are committed to phasing out brominated & chlorinated flame retardants
- ✓ **Wash foam products & covers regularly** with soap and water
- ✓ Avoid children **chewing on electronic products**, including toys
- ✓ **Vacuum** your home regularly with a HEPA filter
- ✓ **Dust** your home regularly
- ✓ **Inspect and replace** foam items when they start to rip, tear, or degrade

What are Phthalates?



Group of chemicals commonly used as a **softener in PVC plastic & components of fragrance** in scented products



ASTDR, ToxFAQs, DEHP <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=377&tid=65>

US EPA, Phthalates Action Plan , <http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/phthalates.html>

Campaign for Safe Cosmetics, Phthalates, <http://safecosmetics.org/article.php?id=290>

USCDC, Fourth National Report on Human Exposure to Environmental Chemicals, 2009, <http://www.ehponline.org/exposurereport/pdf/FourthReport.pdf>

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Phthalates



How can we be exposed?

- Products that may contain phthalates:
 - **Products made from PVC**
 - **Personal care products**
 - **Scented products**
- Children are at **especially high risk as they mouth things**
- **Infants may have greater exposures** from ingesting **indoor dust**
- Phthalates can **be transferred through breast milk** from mom to baby

Studies have linked prenatal exposure to problems in children ages 3- 9^{1,2,3,4}:

1Engel, S, et. al., Prenatal Phthalate Exposure is Associated with Childhood Behavior and Executive Functioning, Env Health Persp, 118:4, April 2010.

2 Swan, S., Prenatal phthalate exposure and reduced masculine play in boys, Int J Androl, 2010 April, 33(2): 259-269

3 Miodovnik, A, et. al., Endocrine Disruptors and Childhood Social Impairment, Neurotoxicity, 2011 March; 32(2): 261-267.

4 Whyatt, R., et. al., Maternal Prenatal Urinary Phthalate Metabolite Concentrations and Child Mental, Psychomotor, and Behavioral Development at 3 years of age, Env Health Persp, 120:2, Feb 2012

Phthalates



Shower curtains

- **Plastic shower curtains** may be made out of PVC
- Alternatives
 - ✓ **Plastic curtains made from safer plastics**, such as polypropylene, polyethylene, EVA, and PEVA
 - Cost about the same as PVC curtain
 - ✓ **Fabric curtains**, similar to those used in hotels, keep water in the tub and can be washed

Phthalates



Actions you can take

- x Avoid plastic with **#3 or PVC identification**
- x Avoid products labeled “**vinyl**”
- x Avoid **unnaturally scented products that contain “fragrance”** as an ingredient
- x Avoid children’s products that may contain vinyl
- ✓ **Air out vinyl products** before bringing them into your home
- ✓ Choose products labeled **phthalate, vinyl, and/or PVC free**
- ✓ Choose **toys made of safer plastics, wood, organic fabric, cloth**
- ✓ Choose **shower curtains** made from safer plastics (ie. EVA or PEVA) or fabric

Flooring



Vinyl & Hardwood

Vinyl flooring is made from polyvinyl chloride



example cork floor

Hardwood flooring is a good option



example bamboo floor

US EPA, Green Building: Bedroom, <http://www.epa.gov/greenhomes/bedroom.htm>

US EPA, Environmentally Preferable Purchasing, Greening Your Purchase of Carpet, <http://www.epa.gov/epp/pubs/carpet2.htm>

Flooring

Carpet



- What are some possible concerns about installing carpet?
- When purchasing carpet, what should you look for?
- Choose carpet that meets **the Carpet and Rug Institute's (CRI) Green Label/Green Label Plus (GLP)** requirements
- Carpet America Recovery Effort can provide info and advice on recycling your old carpet



Ruthann A. Rudel, Laura J. Perovich, Endocrine disrupting chemicals in indoor and outdoor air, Atmospheric Environment, Volume 43, Issue 1, January 2009,

US EPA, Green Building: Bedroom, <http://www.epa.gov/greenhomes/bedroom.htm>

US EPA, Environmentally Preferable Purchasing, Greening Your Purchase of Carpet, <http://www.epa.gov/epp/pubs/carpets2.htm>

Flooring



Installing Carpet

- Ask the retailer to unroll and air out
- Consider leaving the house
- Open doors and windows
- Use window fans and room air conditioners
- Operate ventilation systems
- **Contact the retailer** if the carpet has an objectionable odor
- Once installed, **vacuum carpet**

Wood Furniture



What are the concerns?

- Volatile organic compounds are used in some wood furniture
- VOCs are emitted into the air



Actions you can take

- ✗ Avoid particleboard & fiberboard furniture
- ✓ When using particleboard & fiberboard furniture
 - ✓ Air it out in a garage for a week before bringing it into your house or ventilate the room it will be used in
 - ✓ If it cannot be aired out, avoid spending a lot of time in the room with the furniture for at least a week



Compact fluorescent light bulbs (CFLs) contain a toxic chemical.

a. True

b. False



Compact fluorescent light bulbs (CFLs) can be recycled.

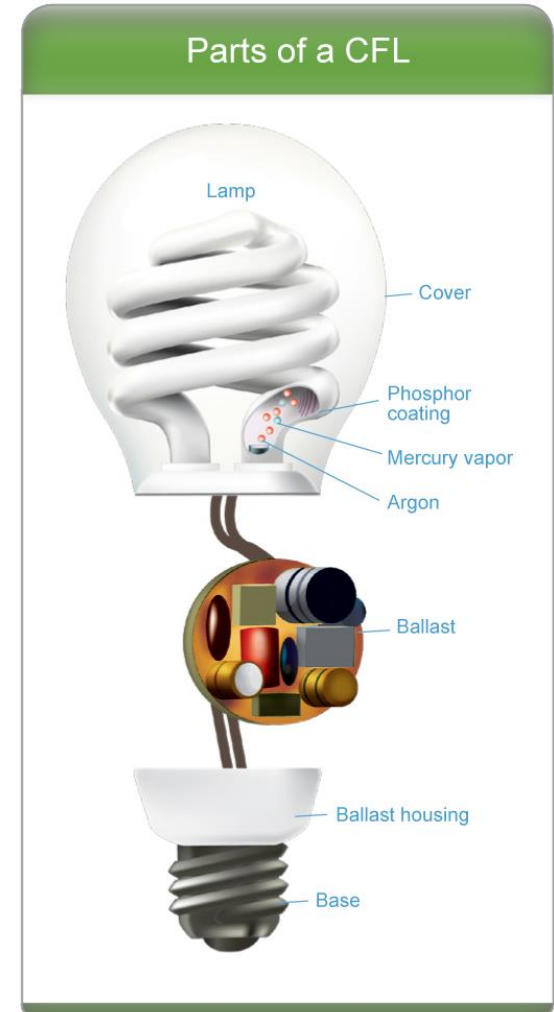
- a. True
- b. False

Compact Fluorescent Lights



What is the concern?

- CFLs use about **75% less energy than incandescent bulbs**
- Contain **mercury vapor**
 - About 4mg per bulb (old thermometers contain about 500mg)
 - Mercury can affect the brain and nervous system
- **Recycle CFLs instead of trashing them**
 - Some retailers collect & recycle them for free: Ace Hardware, Home Depot, Lowe's, True Value
 - Some bulb manufacturers have free pre-labeled mailing kits to send them back
 - Take to your local household hazardous waste disposal facility for recycling



US EPA, CFLs, <http://www.epa.gov/cfl/>
Energy Star, Learn About CFLs,

http://www.energystar.gov/index.cfm?c=cfls.pr_cfls_about

US EPA, Cleaning up a Broken CFL

<https://www.epa.gov/cfl/cleaning-up-a-broken-cfl>

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Compact Fluorescent Lights (CFLs)



Why is it important to clean up a broken CFL safely?

- CFLs release mercury into the air and ground when broken
- Vapor can travel through ductwork at home, contaminating air throughout the house
- If you are concerned about exposure to mercury, contact your physician

See [US EPA's guide](#) to *Cleaning up a Broken CFL for the right way to clean up a broken CFL*

LED Lighting



Incandescent Lamp
(IND)

60 Watt

900 Lumens

1,000 lifetime hours



Compact Fluorescent
Lamp (CFL)

15 Watt

900 Lumens

8,500 lifetime hours



LED Lamp

12.5 Watt

800 Lumens

25,000 lifetime hours

~ 22 Incandescent lamps



~ 3 CFL lamps



~1 LED lamp



US Department of Energy, Life Cycle Assessment of Energy and Environmental Impacts of LED Lighting Products, February 2012,
http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/2012_LED_Lifecycle_Report.pdf



I consider the weather before applying pesticides and/or fertilizers.

a. True

b. False

c. I don't apply pesticides/fertilizers

Outside Your Home

- Store locked out of children's reach
- Remove children, pets, and toys before applying
- Only treat affected areas
- Use notification signs

pesticides

watering

- Only water when necessary & during coolest part of the day
- Lawns need 1" water/week

fertilizers

- Avoid water soluble fertilizers
- Don't apply when rain is expected
- Use no or low phosphorus fertilizer or compost/naturalalts when possible
- Use chemical fertilizers sparingly
- Apply in fall for better growth the next year

mowing

- Keep grass tall
- Mulch grass to return nutrients to the lawn
- Compost/mulch leaves & yard debris

downspouts

- Direct away from paved surfaces & storm drains

drive way

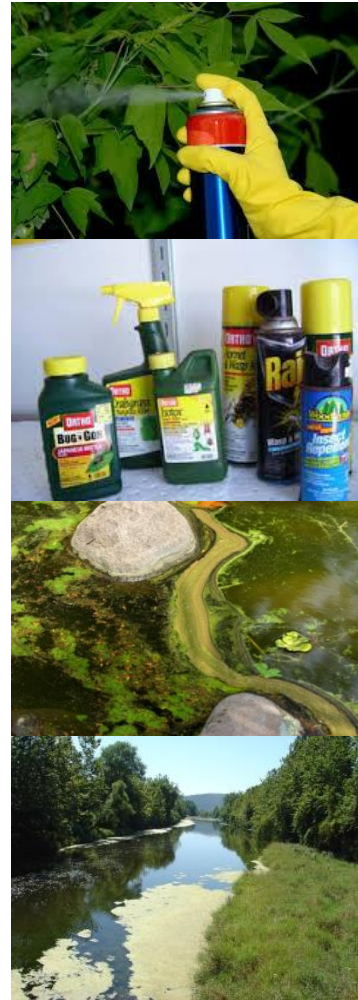
- Choose asphalt based & avoid coal tar based sealers
- Wash cars in carwash or lawn/unpaved surface

Pesticides & Fertilizers



What is the concern?

- **Pesticides end up in storm sewers without being treated**
- **Lab studies show that pesticides can cause serious health problems**
- **Many fertilizers contain significant amounts of nitrogen and phosphorus**



US EPA, Pesticides and Food: Health Problems Pesticides May Post, <http://www.epa.gov/pesticides/food/risks.htm>

US EPA, Pesticides and Food: Why Children May be Especially Sensitive to Pesticides, <http://www.epa.gov/pesticides/food/pest.htm>

Pesticides



How are we exposed?

Indoor

Contamination sources

- soil or dust from outside,
- stored pesticide containers

Non-chemical alternatives:

- To **disinfect**, dissolve 1/2 cup borax in a gallon of water
- Spray **houseplants** with luke warm soapy water & rinse
- Use live traps for **rodents** and prevent them by eliminating food sources and sealing entry holes

Outdoor

Types

- Lawn and garden products
- Swimming pool chemicals
- Animal repellants

Non-chemical alternatives:

- Ultraviolet or ozone light systems instead of **pool chemicals**
- For **rodents**, build a screen & bury it in the ground

*80% of most people's exposure to pesticides occurs indoors and measurable levels of up to 12 pesticides have been found in the air inside homes**

*EPA Pesticide Website: <http://www.epa.gov/iaq/pesticid.html>; New York State. Department of Environmental Conservation. *Managing and Disposing of Household Hazardous Waste*.

EPA Pesticide Website: <http://www.epa.gov/iaq/pesticid.html>;

New York State. Department of Environmental Conservation. *Managing and Disposing of Household Hazardous Waste*.

Pesticides



Methods to reduce your exposure through food

- **Trim fat from meat and poultry**
- **Remove the skin from fish**
- **Rinse fruits and vegetables & scrub with a brush and peel them, if possible**
- **Cook or bake foods**
- **Grow your own food**
- **Follow local fishing guidelines**
- **Do not pick wild plants** that are growing right next to a road, utility right-of-way, or hedgerow between farm fields



I know what products in my home are household hazardous waste and how to properly dispose of them.

- A. Strongly agree
- B. Somewhat agree
- C. Neither agree nor disagree
- D. Somewhat disagree
- E. Strongly disagree

Household Hazardous Waste



What is household hazardous waste?

*Leftover household products that contain **corrosive, toxic, ignitable, or reactive ingredients** that should be disposed of differently to avoid contamination*



REACTIVE

may cause
violent
chemical
reaction



CORROSIVE

causes
chemical
burns on
contact



TOXIC

can be
harmful
to human
health



FLAMMABLE

potential to
ignite



EXPLOSIVE

potential to
explode

Household Hazardous Wastes: What's the Danger?

Things to watch for:

- 1) Old batteries
- 2) Old Lightbulbs
- 3) Old Paint
- 4) Cleaning Supplies
- 5) Old Medications

Harm to the Environment -

Chemicals and unwanted medicines can contaminate lakes and rivers, or public drinking water supplies if simply flushed down the toilet or poured down the drain.

Fire Hazards - Some products such as gasoline, thinners, lighter fluid or glues and adhesives can catch fire.

Toxicity to Humans - Many chemicals including lawn and garden or cleaning chemicals, can be toxic if inhaled or ingested

Explosion Hazards - Pool chemicals and bleaches can react violently with other materials to explode or produce toxic gases.

Household Hazardous Waste



Hierarchy

- **Reduce** the quantity & number of products you buy that will be disposed of as HHW
- **Reuse** products by donating them to others that may have a use for them
- **Recycle** certain wastes, such as Hg from CFL light bulbs
- **Dispose** of waste correctly to prevent pollution





I know how to dispose of household hazardous waste in my municipality.

A.True

B.False



City of Albany

Household Hazardous Waste & Electronics Drop-off Days

As in years past Albany residents will have multiple chances to dispose of their household hazardous and electronic waste in an environmentally safe way. Residents must pre-register to participate. To pre-register call the Department of General Services at 434-CITY (2489) or visit www.albanyrecycles.com to register online.

Everyone must pre-register. The following dates have been scheduled for this year:

April 7, 2016

September 1, 2016

April 21, 2016

September 15, 2016

May 5, 2016

October 6, 2016

May 19, 2016

October 20, 2016

June 2, 2016

Household Hazardous Waste



Safe Storage

- Never store hazardous products in food containers
- Keep products in their original containers and never remove labels
- Corroding containers should be repackaged and clearly labeled
- Never mix household hazardous waste with other products
- Store in an out-of-the-way location, away from heat and children or pets



Environmental Protection Agency. *Household Hazardous Waste: Steps to Safe Management*. 1993

New York State. Department of Environmental Conservation. *Managing and Disposing of Household Hazardous Waste*.

E-Waste



Electronics recycling in NYS

E-Waste contains hazardous materials

- lead, mercury, and cadmium can be toxic if released
- used electronic equipment needs to be managed properly

NYS Electronic Equipment Recycling & Reuse Acts

Manufacturers are required provide free and convenient recycling of electronic waste to most consumers in the state



E-Waste Covered by NYS Law

- TVs, VCRs, DVRs, DVD players
- Small scale servers
- Computers, Monitors and peripherals
- Electronic keyboards or mice
- Fax machines, scanners, printers
- Portable digital music players
- Digital converter boxes
- Cable or satellite receivers
- Video game consoles

NYS Department of Environmental Conservation. *Used Electronic Equipment*. 2011.

3 Easy Steps to e-Cycle in NY



1. **Go to DEC's list of electronic equipment manufacturers registered in NYS**
2. **Find the manufacturer's brand of equipment you wish to recycle**
3. **Follow the instructions listed on the manufacturer's website or provided over the telephone**



The proper way to disposed
of waste or old medication
is to flush it down the
toilet.

A.True

B.False

C.I don't know

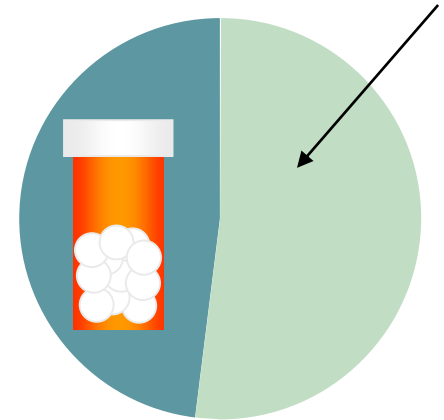
Pharmaceuticals



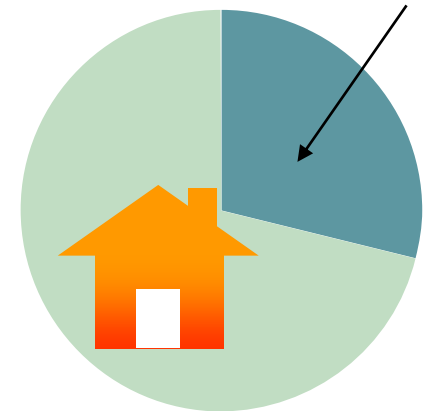
Proper Management of Pharmaceutical Waste

- Unwanted pharmaceuticals stored at home can contribute to
 - Pollution of our waterways
 - Diversion and Drug Abuse, such as illegal possession, trafficking, and abusing addictive medicines
 - Accidental Poisoning

52% **unused** medication



29% **expired** medication



*This section developed by the Center for Environmental Initiatives,
Rochester*

Pharmaceuticals



What is the concern?

- Medication ends up in the environment
- Adverse effects on fish have occurred
- Scientists feel they may be indicative of similar effects on humans
- There are many concerns, but the long term effect on people is still unknown



Drugs in New York's Waters, How drugs get into our waters and why DEC is concerned, www.dec.ny.gov/chemical/45083.html

¹NYSDEC ; Stoner, Scott . A New Prescription; Do Not Flush Your Unused Drugs. New York State Conservationist, April 2009.

²GAO-11-346 Environmental Health Action Needed to Sustain Agencies' Collaboration on Pharmaceuticals in Drinking Water, August 2011; page 23

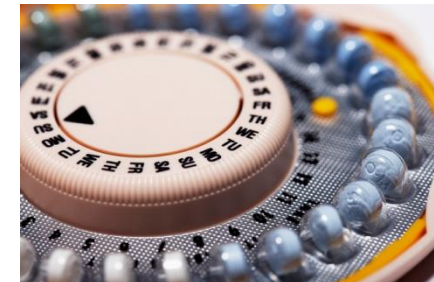
Pomati et al. (2006) Effects of a complex mixture of therapeutic drugs at environmental levels on human embryonic cells.

Pharmaceuticals



Medications of Particular Concern

- Hormones and Endocrine Disrupting substances
- Antibiotics
- Painkillers
- Depressants – sleeping pills and anti anxiety drugs
- Stimulants like those used to treat ADHD
- OTC cough suppressants containing Dextromethorphan



Pharmaceuticals



What should you do ?

Medication Drop Boxes
Located in Albany County:
New York State Police Troop G
760 Troy Schenectady Road
Latham, NY 12110

Some [pharmacies](#) also accept
returned medications



Summary



- Many household products contain ingredients which may negatively affect the environment and human health
- Consider the safety of ingredients and how the product will be used when selecting household products
- Prioritize replacement of products with high hazards and/or regular use

Kitchen	Living & Bed Rooms	Bathroom	Outside
Food storage	Furniture	Personal care products	Pesticides
Cookware	Electronics	Shower curtain	Fertilizers
Cleaners	Cleaners	Cleaners	Watering
Lighting	Lighting	Lighting	Mowing
Flooring	Flooring	Flooring	Yard Maintenance



Toys and Children's Products



Healthy Child, Healthy World Video



Glass bottles are cheaper than plastic.

- A. True
- B. False
- C. I don't know

The Cost of Going Green



Example Plastic Bottles



\$1.43

Evenflo Classic
Light Tint Nurser, 8
oz.



\$4.66

NUK Orthodontic
Trendline, 10 oz.



\$4.99

Dr. Brown's BPA Free Polypropylene
Bottle, 8 oz.

Example Glass Bottles



\$1.70

Evenflo Classic Glass Bottle, 8oz.



\$5.79

Born Free Glass Bottle
with Bonus Sleeve, 9 oz.

\$12.32

Lifefactory Glass Baby
Bottle with Silicone
Sleeve, 9 oz.

Prices from Amazon.com, accessed 2/20/13. Prices may reflect multi-pack or bulk quantity containers.

Any opinions, results, findings, and/or interpretations of data contained herein are the responsibility of Rochester Institute of Technology and its NYS Pollution Prevention Institute and do not represent the opinions, interpretation or policy of the State.



I am more likely to use glass bottles now.

A. agree

B. my opinion didn't change

C. disagree



What is the main source of phthalates for the average person?

- A. Diet
- B. PVC pipe
- C. Personal care products
- D. Other PVC plastic products

Review: Phthalates



How can pregnant women & infants be exposed?

- **Main source is diet**, particularly fatty foods
- **Products that may contain phthalates**
- Children are at **especially high risk as they mouth things**
- **Infants may have greater exposures from ingesting indoor dust**
- Phthalates can **be transferred through breast milk** from mom to baby

Prenatal exposure is linked with developmental and behavioral problems such as aggression, ADHD, and depression in young boys & girls and reduced masculine play in young boys²⁻⁵

PVC may contain lead.

- A. True
- B. False
- C. I don't know



Things made with foam, like infant car seats and swings always contain chemical flame retardants.

- A. True
- B. False
- C. I don't know



Car Seats



- Use of brominated flame retardants is declining, but many seats contain them
- Amount of bromine varies from manufacturer to manufacturer and model to model
- May be found in foam and plastic parts



two versions of the same model car seat
LEFT has **56x more bromine** in the seat

(source: HealthyStuff test results)



Car Seats



Use	Good	Better
Car seats	<ul style="list-style-type: none"> ✓ Do your homework and find a car seat that meets your needs & avoids chemicals of concern ✓ Get information from the product packaging and/or manufacturer's website ✓ Are brominated or chlorinated flame retardants used? In foam? In plastic frame or buckles? ✓ What type of plastic is used for foam, frame, and buckles? ✗ Avoid babies sleeping & spending time in car seats for longer than necessary (2hr max) 	<ul style="list-style-type: none"> ✓ Air out new car seats & wash the cover before using. Remove the seat from the packaging. Place the seat, uncovered, in your garage or other ventilated space for a couple weeks before using. Wash the cover per the manufacturer's instructions and keep the cover off the seat until needed. ✓ Choose seats with low levels of flame retardants.



All baby and children's pajamas must be treated with a chemical flame retardant to protect the child in case of fire.

- A. True
- B. False
- C. I don't know

Sleepwear & Flame Retardants



Children's sleepwear 9mo-14yr must be flame resistant



Sleepwear Tips

Sleepwear smaller than 9 months is exempt

Look for yellow tag when purchasing snug-fitting sleepwear

Don't buy oversized snug-fitting sleepwear

Not advised for baby to sleep in loose non flame resistant clothes

Flame Retardant Labels



The Cost of Going Green



Example Conventional Products



\$0.16/oz

Suave Shampoo
Kids 2in1



\$0.20/oz

Johnson's Baby
Shampoo



\$0.35/oz

L'Oréal Paris Kids
2-in-1 Shampoo



\$0.44/oz

Aveeno Baby
Wash & Shampoo

Example Greener Products



\$0.48/oz

Johnson's Baby
Natural Shampoo



\$0.60/oz

Burt's Bees
Baby Bee
Shampoo and
Wash



\$0.80/oz

Yes To Baby Carrots
Fragrance Free
Shampoo and Body



\$1.32/oz

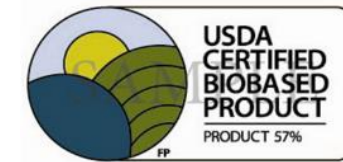
California Baby
Shampoo &
Bodywash

Prices from Amazon.com, accessed 2/20/13. Prices may reflect Washack or bulk quantity containers.

Eco Friendly Products



- The use of most eco friendly terms are not defined or regulated
- Third party certifications (someone other than the company) are preferable
- Just because a product or ingredient is 'organic', doesn't mean it's safe!



Unregulated terms	Preferable terms & labels
Non Toxic Natural Eco-friendly Eco-healthy	USDA Organic Label USDA Certified Biobased Product Label NSF/ANSI 305: Personal Care Products Containing Organic Ingredients with logo Free of phthalates, sulfates, parabens, etc

Summary



- ✓ **Shop smart** and choose products wisely
- ✓ **Only buy products you really need** & eliminate unnecessary products
- ✓ **Use products in a safe way** to reduce or eliminate exposure to chemicals of concern
- ✓ **Choose powdered formula** in cardboard boxes/cans and BPA free plastic bottles
- ✓ **Opt for materials that may not contain flame retardants** and **vacuum & dust your home regularly** to avoid exposure to them
- ✓ **Choose cotton snug fitting pajamas** for children over 9 months to avoid chemical flame retardants
- ✓ **Choose personal care products without harsh chemicals**
- ✓ **Use product safety rating sources** like SkinDeep and GoodGuide or testing sources like HealthyStuff to help you shop smarter

Product Safety Regulations



- Companies do not have to disclose to consumers what is in toys and other children's & consumer products
- Consumer Product Safety Commission
 - Protects the public from unreasonable risk from consumer products
 - Protects from products that pose fire, electrical, chemical, or mechanical hazard or can harm children
 - Operates voluntary recall program
- CPSC can't test products before sale to ensure they are safe



A photograph of four people sitting around a wooden table in a meeting. A woman with dark hair, wearing a grey sweater over a white collared shirt, is smiling and looking towards the left. Next to her is a bald man in a blue sweater, also looking left. On the far left, the back of a person's head and shoulders are visible, wearing a light grey sweater. On the far right, the back of a person's head and shoulders are visible, wearing a red sweater. The table has some papers and an orange folder. The background is a white wall with some colorful sticky notes or posters.

Group Discussion



*Its not what is poured into a
student but what is planted. –
Linda Conway*

Questions?



Contact us at:

New York State Pollution Prevention Institute
Rochester Institute of Technology
111 Lomb Memorial Drive, Bldg. 78-2000
Rochester, NY 14623

Kate McArdle

Phone: (585) 475-2399

Email: kwmp2i@rit.edu

Web: www.rit.edu/affiliate/nysp2i/

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