Train-the-Trainer: Reducing Toxics in Everyday Life

Kate McArdle
Community Outreach Specialist
Carey Institute for Global Good - November 7, 2016
IT'S MONDAY
Don't FORGET TO BE AWESOME.
Disclaimer

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# Agenda

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<th>Session</th>
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<tr>
<td>9:00am- 9:30am</td>
<td>Introductions</td>
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<td>Overview of P2I</td>
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<td>Train the Trainer</td>
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<td>9:30am- 10:00am</td>
<td>Personal Care Products</td>
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<td>10:00am-10:30am</td>
<td>Household Cleaners</td>
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<td>10:30am-10:45am</td>
<td>Break</td>
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<td>10:45am- 11:30am</td>
<td>Safer Household Products</td>
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<td>11:30am- 12:00pm</td>
<td>Toys and Children's Products</td>
</tr>
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<td>12:00pm-1:00pm</td>
<td>Lunch</td>
</tr>
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<td>1:00pm- 2:00pm</td>
<td>Breakout Session &amp; Discussion</td>
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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

"Be the change you wish to see in the world"

– Mahatma Gandhi
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
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
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)

- 10% of what they read
- 20% of what they hear
- 30% of what they see
- 50% of what they see and hear
- 70% of what they say and write
- 90% of what they do.

People are able to...
(learning outcomes)

- Define
- List
- Describe
- Explain
- Demonstrate
- Apply
- Practice
- Analyze
- Define
- Create
- Evaluate

Read

Hear

View Images
Watch Videos
Attend Exhibits/Sites
Watch a Demonstration
Participate in Hands-On-Workshops
Design Collaborative Lessons
Simulate, Model, or Experience a Lesson
Design/Perform a Presentation - "Do the Real Thing"
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

• 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).

Ingredients Prohibited & Restricted by FDA Regulations, http://www.fda.gov/Cosmetics/ProductandIngredientSafety/SelectedCosmeticIngredients/ucm127406.htm
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

**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

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

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

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

**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

http://www.dailymail.co.uk/femail/beauty/article-1229275/Revealed--515-chemicals-women-bodies-day.html
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

Product & ingredient info, including number of chemicals & possible side effects from EWG’s SkinDeep at [www.ewg.org/skindeep](http://www.ewg.org/skindeep), accessed 5/28/13
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

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

Fragrance

What is the concern?

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

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

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

FDA Parabens, [http://www.fda.gov/Cosmetics/ProductandIngreidentSafety/SelectedCosmeticIngreidents/ucm128042.htm](http://www.fda.gov/Cosmetics/ProductandIngreidentSafety/SelectedCosmeticIngreidents/ucm128042.htm)
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

<table>
<thead>
<tr>
<th>Formaldehyde &amp; Formaldehyde Releasing Preservatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Look for</strong> DMDM hydantoin, diazolidinyl urea, Quaternium-15, bronopol, imidazolidinyl urea, formalin, formic aldehyde</td>
</tr>
<tr>
<td>FORMALDEHYDE has been found in nail treatment, nail polish, eyelash glue…</td>
</tr>
<tr>
<td>FORMALDEHYDE RELEASING PRESERVATIVES have been found in shampoo, conditioner, styling gel/lotion, body wash, moisturizer, foundation, eye shadow, powder, blush, mascara…</td>
</tr>
<tr>
<td>QUATERNARY AMMONIUM COMPOUNDS have been found in spray cleaners, disinfecting air fresheners, disinfectant/antibacterial cleaners…</td>
</tr>
<tr>
<td><strong>Known</strong> human carcinogen, asthmagen, neurotoxicant, developmental toxicant</td>
</tr>
<tr>
<td><strong>Can cause</strong> allergic skin reactions</td>
</tr>
<tr>
<td><strong>Quats</strong> are very toxic to aquatic life</td>
</tr>
</tbody>
</table>

Example products that contain formaldehyde releasing preservatives

Environmental Working Group, Guide to Healthy Cleaning, [http://www.ewg.org/guides/cleaners](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

<table>
<thead>
<tr>
<th>Organic Solvents</th>
<th>Acrylics</th>
<th>Prevents Chipping</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
<td>Methyl methacrylate: vapors irritate eyes, nose, and throat; irritates skin(^1); toxic to fish(^2)</td>
<td>Benzyl acetate: irritating to skin, eyes, and respiratory tract(^1); toxic to fish, very persistent in air(^2)</td>
</tr>
<tr>
<td>Methyl ethyl ketone: vapors irritate eyes, nose &amp; throat(^1); very persistent in air(^2)</td>
<td>Ethyl methacrylate: vapors irritate eyes and respiratory system, irritates skin(^1); toxic to fish(^2)</td>
<td></td>
</tr>
<tr>
<td>Acetone: vapors irritate eyes, nose, and throat(^1); very persistent in air(^2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 PBT Profiler, [http://www.pbtprofiler.net](http://www.pbtprofiler.net)
Video

• 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

1. MIMIC a natural hormone
   - Causes an overproduction or underproduction of hormones (e.g. over- or under-active thyroid)

2. BLOCK the effects of hormones
   - For example, blocks growth hormones required for normal development

3. DIRECTLY STIMULATE or INHIBIT the endocrine system
   - 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)

Example known & suspected endocrine disruptors:
- Oral contraceptives
- Phthalates
- Parabens
- Bisphenol A
- DDT
- Some flame retardants
- Teflon


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

Endocrine Disruption
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.

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

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

Data from the US EPA's PBT Profiler, [http://www.pbtprofiler.net](http://www.pbtprofiler.net)
“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.
### 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®**

### 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>]

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Type(s)</th>
<th>Score</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Makes 3 Soap Bar, Coriander Ginger Oatmeal</td>
<td>Bar Soap</td>
<td>1</td>
<td>Fair</td>
</tr>
<tr>
<td>2. Beautycounter Charcoal Cleansing Bar</td>
<td>Bar Soap</td>
<td>1</td>
<td>Limited</td>
</tr>
<tr>
<td>3. Makes 3 Soap Bar, Eucalyptus Cedarwood</td>
<td>Bar Soap</td>
<td>1</td>
<td>Limited</td>
</tr>
<tr>
<td>4. Makes 3 Soap Bar, Lavender Vanilla</td>
<td>Bar Soap</td>
<td>1</td>
<td>Limited</td>
</tr>
<tr>
<td>5. Makes 3 Soap Bar, Orange Blossom</td>
<td>Bar Soap</td>
<td>1</td>
<td>Limited</td>
</tr>
<tr>
<td>6. Makes 3 Soap Bar, Super Shea</td>
<td>Bar Soap</td>
<td>1</td>
<td>Limited</td>
</tr>
</tbody>
</table>
Dove White Beauty Bar

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:

Overall Hazard

Cancer

Developmental & reproductive toxicity

Allergies & immunotoxicity

Use restrictions

Other HIGH concerns: Multi-use, 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

Ingredient Concerns

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concerns</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRAGRANCE</td>
<td>Allergies/immunotoxicity, Miscellaneous, Irritation (skin, eyes, or lungs), Organ system toxicity (non-reproductive), Ecotoxicology</td>
<td>8</td>
</tr>
<tr>
<td>COCAMIDOPROPYL BETAIN</td>
<td>Use restrictions, Allergies/immunotoxicity, Ecotoxicology, Contamination concerns (&lt;COCAMIDOPROPYL DIMETHYLAMINOMETHYLPROPYLAMINE, 3-DIMETHYLAMINOMETHYLPROPYLAMINE, NITROSAMINES&gt; in the presence of nitrosating agents), Data gaps, Ecotoxicology</td>
<td>4</td>
</tr>
</tbody>
</table>
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

EWG’s Healthy Living App
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

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 180-lb male
- **Caution**: One ounce to one pint may be harmful/fatal to a 180-lb male

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

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

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
SAFETY RATINGS FOR MORE THAN 2,500 PRODUCTS

1. TOP PRODUCTS
   Find greener cleaners for household needs

2. LABEL DECODER
   Translate technical terms and ad hype

3. ABOUT THIS REPORT
   EWG looked beyond labels to rate products

IT'S EWG's GUIDE TO HEALTHY CLEANING
All Purpose Cleaners

551 Results - Page 1 of 56

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.
# Windex Advanced Glass & Multi-Surface Cleaner

**See:** General Purpose Cleaner  
**Brand:** Windex  
**Company:** S.C. Johnson

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma/Respiratory</td>
<td>Moderate Concern</td>
</tr>
<tr>
<td>Skin Allergies &amp; Irritation</td>
<td>Some Concern</td>
</tr>
<tr>
<td>Developmental &amp; Reproductive Toxicity</td>
<td>Low Concern</td>
</tr>
<tr>
<td>Cancer</td>
<td>Low Concern</td>
</tr>
<tr>
<td>Environment</td>
<td>Moderate Concern</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Health, Environment, and Disclosure Concerns</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AMMONIUM HYDROXIDE</strong></td>
<td><strong>High Concern:</strong> acute aquatic toxicity; <strong>Moderate Concern:</strong> respiratory effects; <strong>Some Concern:</strong> damage to vision, skin irritation/allergies/damage</td>
<td>![F]</td>
</tr>
<tr>
<td><strong>ETHANOLAMINE</strong></td>
<td><strong>Moderate Concern:</strong> respiratory effects, general systemic/organ effects; <strong>Some Concern:</strong> chronic aquatic toxicity, nervous system effects, skin</td>
<td>![F]</td>
</tr>
</tbody>
</table>

---

**Product ingredients**

**Known Ingredients**

- **AMMONIUM HYDROXIDE**
- **ETHANOLAMINE**

---

**Contact Company**

**Green-Certified?**

---

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

---

**EWG'S FOOD SCORES**

RATE YOUR PLATE
Take A Break
Safer Household Products
foam furniture

flooring

electronics

lighting

food prep & consumption

waste

wood furniture

outside your home

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

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

**PC** Polycarbonate

**PLA** Polylactic acid

**PLA** Polylactic acid

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.
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.

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


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


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 number.”

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

Perfluoroctanoic 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

US EPA, Perfluoroctanoic Acid and Fluorinated Telomers, https://www.epa.gov/oppt/pfoa/
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


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

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

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


Flame Retardants

Many household products typically contain them:

- Couch cushions & upholstered furniture
- Car seats
- Carpet padding
- Molded foam
- Children’s products
- Fabric
- Electronics
- Foam
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/](http://www.epa.gov/oppt/pbde/)
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
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:

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
Vinyl flooring is made from polyvinyl chloride

Hardwood flooring is a good option

example cork floor

example bamboo floor

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

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

US EPA, Indoor Air Pollution: A n introduction for healthcare professionals
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

ASTDR, Formaldehyde ToxFAQs, [http://www.atsdr.cdc.gov/tfacts111.pdf](http://www.atsdr.cdc.gov/tfacts111.pdf)
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 prelabeled 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/](http://www.epa.gov/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

≈ 22 Incandescent lamps

Compact Fluorescent Lamp (CFL)
15 Watt
900 Lumens
8,500 lifetime hours

≈ 3 CFL lamps

LED Lamp
12.5 Watt
800 Lumens
25,000 lifetime hours

≈ 1 LED lamp

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

a. True

b. False

c. I don’t apply pesticides/fertilizers
Outside Your Home

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

pesticides
- Direct away from paved surfaces & storm drains
- Only treat affected areas
- Use notification signs

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

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

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

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

downspouts
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

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](http://www.epa.gov/iaq/pesticid.html);
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.

Information taken from: http://www.baltimorecountymd.gov/Agencies/environment/groundwatermgmt/hazwaste.html
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
- April 21, 2016
- May 5, 2016
- May 19, 2016
- June 2, 2016
- September 1, 2016
- September 15, 2016
- October 6, 2016
- October 20, 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

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 to 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

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

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](http://www.dec.ny.gov/chemical/45083.html)

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

2 GAO-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
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

<table>
<thead>
<tr>
<th>Kitchen</th>
<th>Living &amp; Bed Rooms</th>
<th>Bathroom</th>
<th>Outside</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food storage</td>
<td>Furniture</td>
<td>Personal care products</td>
<td>Pesticides</td>
</tr>
<tr>
<td>Cookware</td>
<td>Electronics</td>
<td>Shower curtain</td>
<td>Fertilizers</td>
</tr>
<tr>
<td>Cleaners</td>
<td>Cleaners</td>
<td>Cleaners</td>
<td>Watering</td>
</tr>
<tr>
<td>Lighting</td>
<td>Lighting</td>
<td>Lighting</td>
<td>Mowing</td>
</tr>
<tr>
<td>Flooring</td>
<td>Flooring</td>
<td>Flooring</td>
<td>Yard Maintenance</td>
</tr>
</tbody>
</table>
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

$4.66
NUK Orthodontic Trendline, 10 oz.

$1.43
Evenflo Classic Light Tint Nurser, 8 oz.

$4.99
Dr. Brown's BPA Free Polypropylene Bottle, 8 oz.

Example Glass Bottles

$1.70
Evenflo Classic Glass Bottle, 8 oz.

$12.32
Lifefactory Glass Baby Bottle with Silicone Sleeve, 9 oz.

$5.79
Born Free Glass Bottle with Bonus Sleeve, 9 oz.
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 boys\textsuperscript{2-5}
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

<table>
<thead>
<tr>
<th>Use</th>
<th>Good</th>
<th>Better</th>
</tr>
</thead>
</table>
| Car seats | ✓ 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) | ✓ 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'Oreal 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 Wash
- $1.32/oz California Baby Shampoo & Bodywash

Prices from Amazon.com, accessed 2/20/13. Prices may reflect multi-pack 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!

<table>
<thead>
<tr>
<th>Unregulated terms</th>
<th>Preferable terms &amp; labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Toxic</td>
<td>USDA Organic Label</td>
</tr>
<tr>
<td>Natural</td>
<td>USDA Certified Biobased Product Label</td>
</tr>
<tr>
<td>Eco-friendly</td>
<td>NSF/ANSI 305: Personal Care Products Containing Organic Ingredients with logo</td>
</tr>
<tr>
<td>Eco-healthy</td>
<td>Free of phthalates, sulfates, parabens, etc</td>
</tr>
</tbody>
</table>
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
Its not what is poured into a student but what is planted. – Linda Conway
Questions?

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