

Breast Cancer and the Environment

Complementary Medicine Conference

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**CLEAN &
HEALTHY
NEW YORK**



CLEAN & HEALTHY NEW YORK

Our mission is to advance policy and market changes to promote safer chemicals, a sustainable economy, and a healthier world.



Discussion Topics

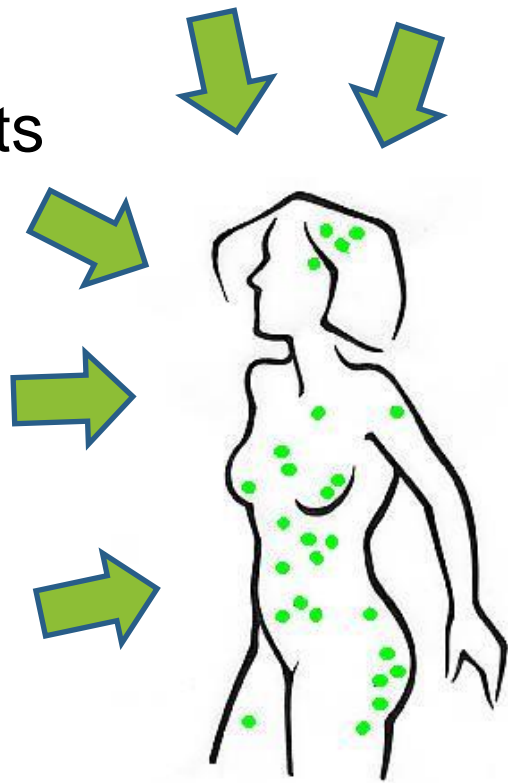
- Latest research on the links between cancer and the environment
- Endocrine disruptors
- Commonly used chemicals like BPA, triclosan, phthalates and parabens that affect human health
- How to avoid toxic exposures by making healthier product choices
- How to improve policy and shift markets so all people are protected



Health Factors: A Complex Web

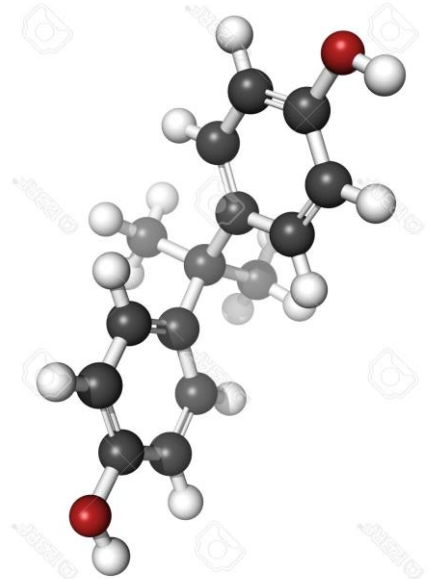
Factors affecting disease:

- exposure to environmental contaminants
- stress
- genetic susceptibility
- diet



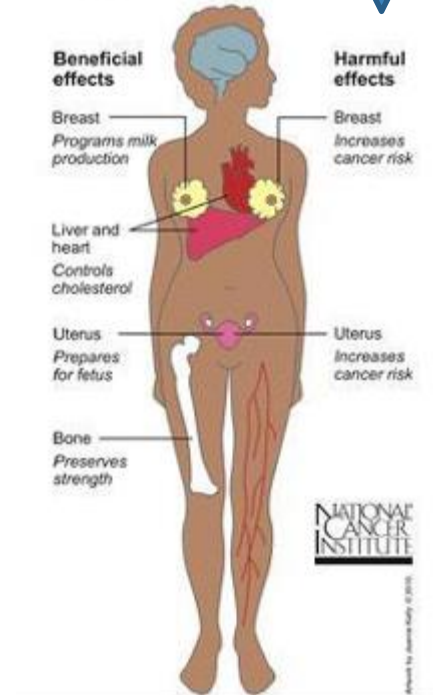
Toxic Chemicals

- Some chemicals or products inherently more toxic than others
- Timing and dose of exposure critical in determining the health impact
- Hundreds of industrial chemicals in our bodies
- More research needed to better understand how combination of multiple chemicals affect health



Breast Cancer and Chemicals

- Estrogenic chemicals mimic or block hormones in our body
- Used in plastics and body care products
- May increase risk of estrogenic cancers, i.e. breast and ovarian cancer
- Contributors: early puberty, late menopause
- Estrogen replacement therapy, phytoestrogens



Environmental Factors

- More than 85,000 chemicals on the market
- U.S. lacks health-protective chemical regulation
- Industrialized nations have higher rates of breast cancer
- Environmental racism: disproportionate exposure to toxic chemicals



Research: How do we know?

- Exposure is ubiquitous
- No unexposed control group
- Diverse approaches to scientific research
 - Human
 - Animal
 - Cell
 - Genomic

Source: Breast Cancer Fund



Research: Environmental health tracking

- Measures toxic exposures and the occurrence of disease by location and over time, usually in a large population.
- Allows for long-term surveillance of exposures and disease, as well as the cross-referencing of large bodies of data.



Research: Environmental monitoring

Measure chemicals in:

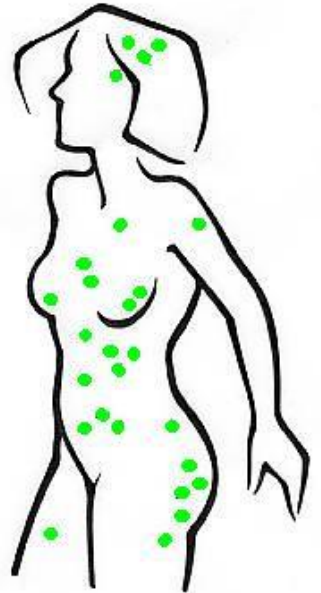
- outdoor environments (like air and water)
- indoor environments (household air, dust)
- specific products (electronic enclosures, toys, furniture foam)



Research: Biomonitoring

- Detects chemicals in people's bodies
- Measures more than 300 chemicals
- Blood, urine, breast milk, hair, nails
- Deepened understanding of environmental toxicant exposure pathways, bioaccumulation

Source: Breast Cancer Fund



Research: Biomarker monitoring

- Measures internal effects of exposures from the outside environment
- Looks at abnormal changes in cells, genes or biological processes
- These often result from toxic exposures but precede the development of a disease

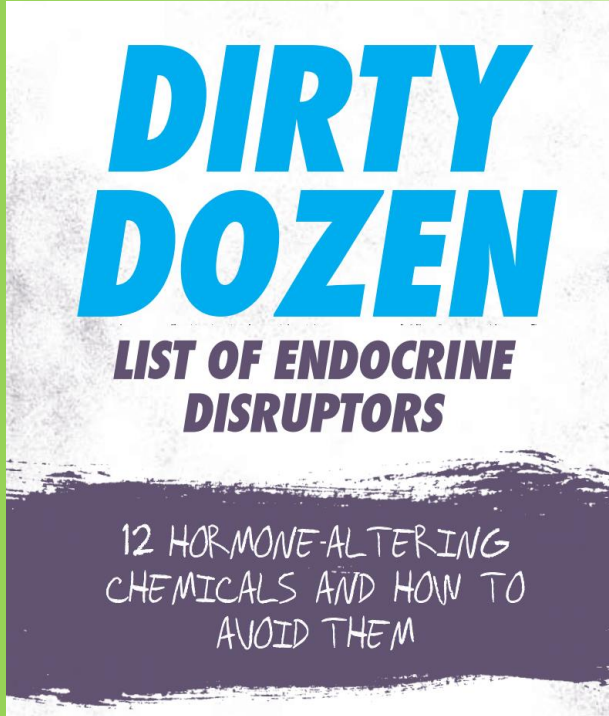


Source: Breast Cancer Fund

Cancer-Causing Chemicals in Products



EWG's Dirty Dozen Endocrine Disruptors



- BPA
- Dioxin
- Atrazine
- Phthalates
- Perchlorate
- Fire retardants
- Lead
- Arsenic
- Mercury
- **Perfluorinated chemicals**
- Organo-phosphate pesticides
- Glycol Ethers

www.keep-a-breast.org

ewg.org

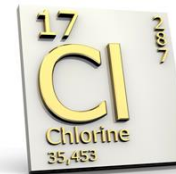
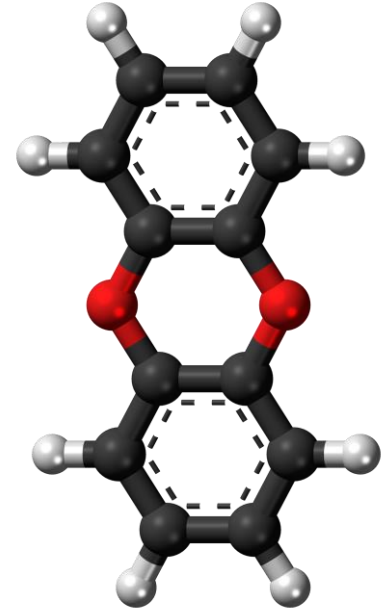
Bisphenol A (BPA)

- synthetic estrogen and endocrine disruptor;
- Increased risk for breast & prostate cancer, infertility, type-2 diabetes
- found in hard plastic, epoxy and food cans



Dioxins

- known carcinogens and hormone disruptors at very low levels
- found as biproduct in bleached and antibacterial products
- use declining due to regulation
- significant levels still found in human bodies



Triazine Herbicides (Atrazine)

- linked to increased risk of breast cancer
- used in agricultural and household pest control



Phthalates

- Hormone disruptor
- Increased risk for premenopausal breast cancer, birth defects, asthma, neurodevelopmental problems in newborns
- Found in plastics, fragrance



Fire Retardant Chemicals

- Polybrominated Diphenyl Ethers (PBDEs)
 - hormone disrupter, risk factor for breast cancer
 - found in foam (furniture, carpet padding, insulation), electronics
 - phased out, but present in older products, recycled materials
- Replacement chemicals also toxic



Heavy metals – Lead and Cadmium

- Lead and Cadmium
 - known carcinogens, linked to reduced fertility in women and men
 - found in lip products, eyeliner, nail color, jewelry, paint



Non-stick coatings

- Perfluorooctanoic Acid (PFOA)
 - endocrine disruptor, linked to increased risk of breast cancer
 - found in non-stick cookware; water- and stain-resistant coatings



Vinyl Chloride


- Vinyl Chloride
 - known carcinogen; linked to increased mortality from breast and liver cancer
 - Building block for “vinyl”, PVC: shower curtains, beach balls, siding, flooring, packaging. Found in tobacco smoke

Source: International Agency for Research on Cancer

Triclosan + Triclocarban

- Impacts male and female hormones including testosterone and estrogen
 - antibacterial products found in cosmetics, soap, deodorant, sponges, toothpaste





**“If a disease is made
by human beings, we
can prevent it.”**

- Dr. Philip Landrigan, Director of
the Center for Children’s Health and
the Environment, Mt. Sinai School
of Medicine

Make a difference at home: plastics

- Cook with stainless steel or cast iron pans
- Avoid non-sticking cooking surfaces
- Avoid bottled water when possible
- Keep plastic out of the microwave
- Choose glass and stainless steel baby bottles and child cups
- Toss old plastic toys
- Look at the recycling codes – better: 5, 4, 2, 1



Make a difference at home

- Use simple, non-toxic cleaning products (vinegar and baking soda can do most jobs!)
- Look for flame retardant-free furniture, avoid recycled foam
- Avoid pesticides in the home – use prevention and least-toxic options
- Love weeds! Or use non-toxic options
- Vacuum often and use a HEPA air filter



Make a difference at home: Smart buys

- Choose products with full ingredient disclosure
- Avoid products with “fragrance”
- If a product you use contains a toxic chemical, call the company and ask them to use safer alternatives.
- Use the SkinDeep database to check your personal care products:
www.cosmeticsdatabase.org



Make a difference at home: DIY Cleaners

Window Cleaner

Ingredients:

1-2 drops liquid soap

3 tablespoons vinegar

2 cups water

Spray bottle

Preparation: Put all the ingredients into a spray bottle, shake, and use!

The soap in this recipe cuts the wax residue from brands you might have used in the past



Make a difference at home: DIY

Soft Scrub Mix

Ingredients:

Baking soda

Liquid soap

Preparation: Mix together baking soda and liquid soap until you get a consistency like frosting. Make only as much as you need, as it dries quickly. Use on bathtubs and countertops.

Make a difference in your community

You can speak out in support of government and market policies that help prevent disease by strengthening limits on toxic chemicals



Government Change: Child Safe Products Act

- Creates a framework to identify and prioritize toxic chemicals
- Gathers information on chemical use
- Phases out priority chemicals in children's apparel and novelty products
- Passed Assembly 112-29
- S. 4102 Pending in Senate. **Call your Senator!**



Government Change: Counties Act

- Albany County passed the Toxic Free Toys Act, signed into law in January
- Bans antimony, arsenic, benzene, cadmium, cobalt, lead, mercury in products for children 12 and under
- Strongest law in the country
- Suffolk and Westchester Counties pending -- Who will be next?



Government change: Federal Toxic Substances Control Act

- The Federal Government must fix the broken chemical management system by reforming the **Toxic Substances Control Act (TSCA)**
- **EPA couldn't even ban asbestos!**
- The U.S. Senate and House have introduced legislation we would like to see strengthened



Federal policy must:

- Make the chemical industry prove that their chemicals are safe
- Taking immediate action on the worst chemicals
- The safety standard must protect the most vulnerable among us
- EPA must consider cumulative impact and exposure across chemical life cycles
- Protect state's right to act



Safe Cosmetics Act

- Overhauls the Food, Drug and Cosmetic Act
- Grants FDA authority and resources to ensure cosmetics don't contain harmful ingredients
- Requires safety assessment of all cosmetics ingredients
- Phases out cosmetic ingredients linked to cancer, birth defects and developmental harm
- Ensures long-term health: shifts away from toxic chemicals, spurs innovation



Support Chemical Plant Security

- Ensure use of safer, cost-effective technologies at chemical plants
- Many plants rely solely on conventional security methods - guards, gates, fences
- Adopt safer processes and reduce use of highly toxic and dangerous chemicals



Market Change: Retailers Act

Companies are responding to consumer demand (like yours!) and establishing lists of chemicals of concern.

Getting Ready for Baby campaign got Babies"R"Us and buybuyBABY to establish lists of chemicals of concern



Market Change: Real action

With public pressure:

- Ashley Furniture and others announced a date by which they will no longer add flame retardant chemicals
- Home Depot announced phase out of phthalates in vinyl flooring



Market Change: Manufacturers Act

Johnson & Johnson reformulated to remove formaldehyde releasers

SC Johnson agreed to list all fragrance ingredients (not just “fragrance”)

Procter and Gamble removed 1,4 dioxane from laundry detergents

Source: Women's Voices for the Earth



**WOMEN'S VOICES
FOR THE EARTH**
OUR HEALTH. OUR FUTURE. TOXIC FREE.

Resources

- Breast Cancer Fund: www.breastcancerfund.org
- NYS Breast Cancer Support and Education Network:
www.nycbcsen.org
- Silent Spring Institute: www.silentspring.org
- Women's Voices for the Earth: www.womensvoices.org
- JustGreen Partnership: www.just-green.org
- Getting Ready for Baby: www.gettingready4baby.org

Thank you! Stay in touch

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