

Toxic Environmental Exposures in Consumer Products

A Workshop for Advocates Mentoring Advocates
Karen Joy Miller and Laura Weinberg



+ Setting the Stage: What We'll Cover



- LEARNING OBJECTIVES ARE:
- To understand the Precautionary Principle – Why it's up to US!
- To identify chemical exposures of concern
- To identify which products contain these chemicals
- To explain how to identify these chemicals on product labels
- To provide options by reviewing safer alternatives



From education to action. Now you know - but what's next? What action can you take? **Different strokes for different folks!**

+ Breast Cancer: It Affects Us All But Some More Than Others

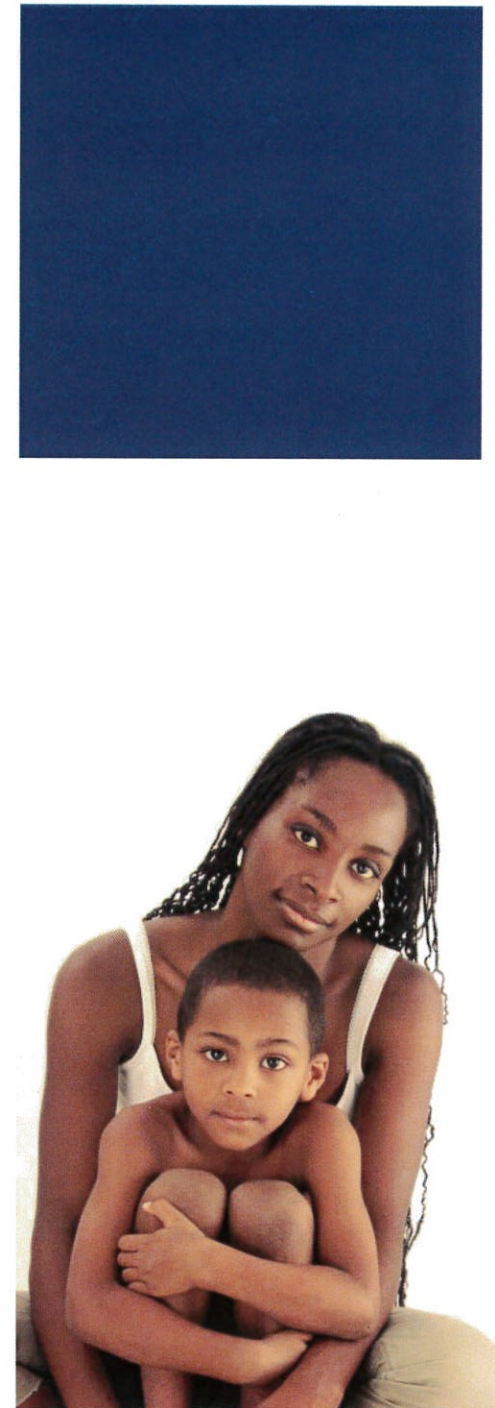


- No age, sex or race is immune.
- It affects us economically and personally
- It affects us physically and emotionally
- Despite decades of research, the number of people diagnosed continues to rise and the death toll rises as well: In 2012 alone - 227,000 women and 2,200 men will be diagnosed, 40,000 will die
- African-Americans have a lower survival rate



“The strength of the breast cancer movement exists due to the culmination of efforts by passionate women impacted by breast cancer who were never satisfied with the status quo; they gave voice to a silent disease and have voice in the continued quest to eradicate breast cancer.”

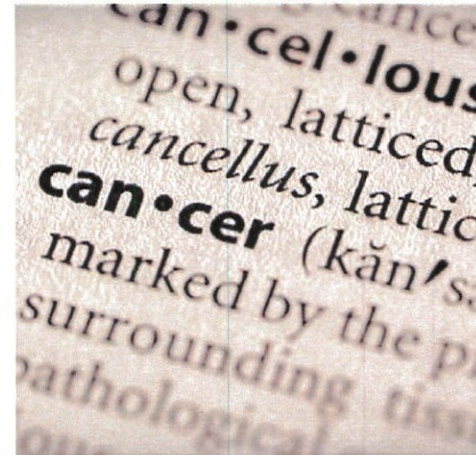
A Historical Perspective on Breast Cancer Activism in the United States:
From Education and Support to Partnership in Scientific Research;
Janet R Osuch, Kami Silk, Carole Price, Janice Barlow, Karen Miller,
Ann Hernick, Ann Fonfa ; Journal of Women's Health, March 2012.



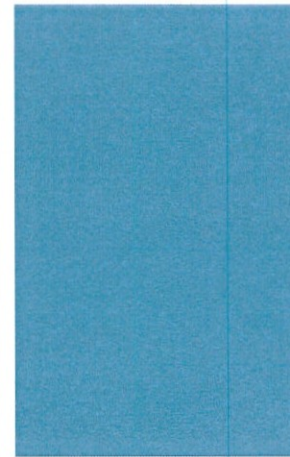


Your “Ah-Hah” Moment:

Something brought
you here – where will
it lead you?



Diagnosis?
Tragedy?
Outrage?
Enlightenment?



**Knowledge is the first step in discovering
your personal path to advocacy**

The information can seem overwhelming. But what matters most, is what matters to YOU. Every person is unique, every path is important. Find the path that speaks to YOU and together, we can make a difference.



Toxic Environmental Exposures

What Do We Know About Them?

Only 7%, or 200 chemicals on the market have been adequately tested for toxicity for chronic diseases.

7%

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Only five (5) chemicals have been removed from the U.S. market since 1976.

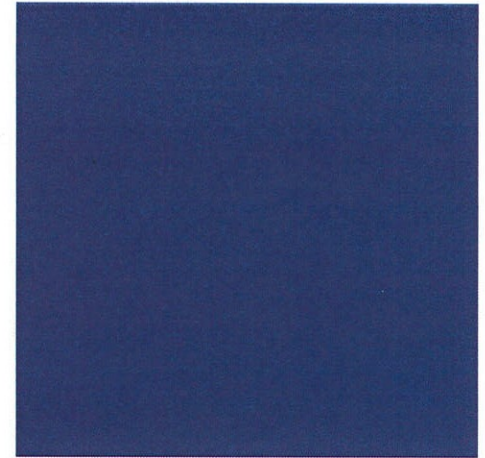
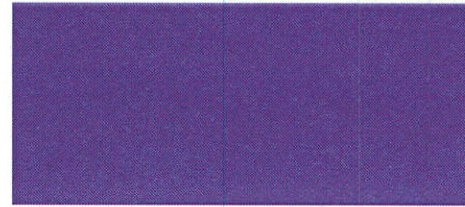
Over 85,000 chemicals are on the market today, most of which were “grandfathered” in during the 1970's.

Toxic chemicals are almost everywhere. And many of these chemicals are widely used in consumer household and children's products including: pesticides, plastics, cleaning supplies, personal care products and home furnishings.



Toxic Environmental Exposures

- Pesticides
- Cleaning Products & Air Fresheners
- Scented Candles
- Non-Stick Cookware/PFOA
- Plastics
- PAH (by-products of fuel burning)
- Dust



+Pesticides:

Taking More Than the Sting Out of the Bee

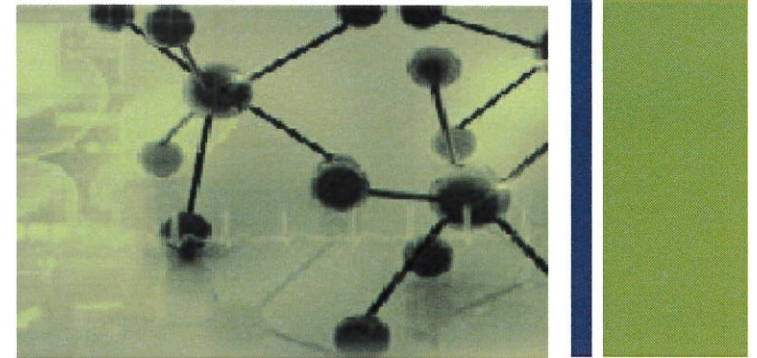
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- Many pesticides are categorized by the Environmental Protection Agency (EPA) as probable or possible carcinogens
- Certain pesticides are suspected of disrupting the body's hormonal system (endocrine disruptors)
- A growing body of evidence has linked certain pesticides with breast and other cancers



+ Endocrine Disruptors:

What They Are and What They Do



- An endocrine disruptor (ED) is a synthetic chemical, when absorbed into the body either **mimics or blocks hormones** and **disrupts the body's normal functions**
- Many chemicals, such as **pesticides & plasticizers** are suspected endocrine disruptors based on animal studies
- Researchers have linked endocrine disruptors with **breast, ovarian & prostate cancers and reproductive disorders** such as lowered fertility and endometriosis
- EDs have been linked with early puberty - which is a risk factor for breast cancer

+ Pesticides:

They Affect Us & Our Families

CHILDREN

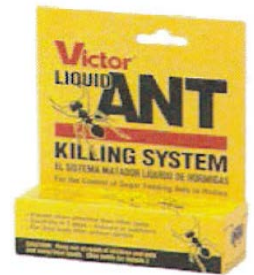
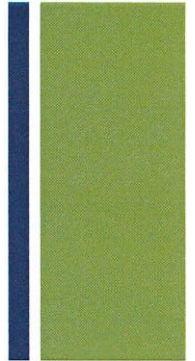


- Are exposed during a "window of susceptibility" while their bodies are still developing
- Children's livers, kidneys and other detoxification systems are not fully developed
- Put hands and toys in their mouths, crawl on grass and floors near outdoor and indoor pesticide applications
- Have more contact with pets - which may have pesticides on their fur
- The effects of pesticide exposure accumulate over the lifespan from infancy to adulthood.

+ Pesticides: Breaking & Entering

How They Get Into Our Homes

- Pesticide applications - Indoor: Pest/ant/roach sprays, etc. Outdoor: lawn & garden sprays, aerial spraying
- Food Products - Non-organic fruits, vegetables and products made from those foods
- Grocery Bags, Boxes and Cartons
- Luggage, Strollers and Walkers
- Shoes/footwear, pets paws and fur, track residue in from outside





The Preventative Approach

Simple Non-Chemical Strategies to Reduce Infestations

Make the environment inhospitable or inaccessible to pests:

- Remove food, water and shelter that attracts pests. Don't leave dirty dishes in sink. Keep cooking surfaces clean. Seal trash cans tightly and take it out regularly
- Caulk cracks & crevices.
- Install door sweeps, add weather stripping to windows, repair window screens.
- Use least-toxic pesticides as a last resort. Avoid "Fogs" and "Bomb" type pesticides. Use a fly swatter, sticky traps or bait stations instead.





How to Read a Pesticide Label

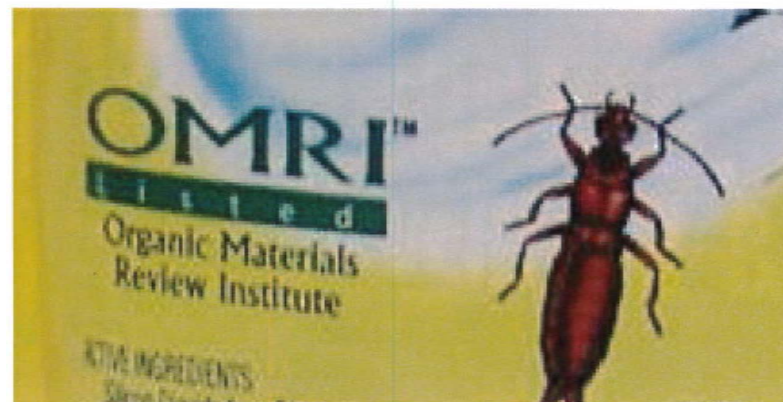
Beware of “inert ingredients” as they are sometimes more toxic than “active ingredients”

Inert ingredients are “trade secrets” – but it’s only a secret to the public

Be careful of labels which can be misleading... i.e. “Safe”, “Green”, “Organic” aren’t necessarily so

Look for “OMRI Approved” (Organic Materials Review Institute)

DANGER • POISON • WARNING • CAUTION
Is this what you want in your home?



+ Crawling Pests:

Ingredients to Avoid & Choose

AVOID

- Organophosphates
- Synthetic Pyrethroids
- Pyrethrin Sprays and Pyrethrin Dusts with Piperonyl Butoxide

NOTE: Keep all these products out of reach of children and only use in locations where it will not come into contact with people or animals.

*Recommendations are for "safer" least-toxic product options and are based on current product knowledge, however formulas can change. Be sure to read labels and follow all application procedures/instructions carefully.

CHOOSE

- Boric Acid Powder
- Boric Acid Gel
- Silica Aerogel
- Diatomaceous earth (apply in cracks and crevices)
- - Safer Brand*
- - Max Force*
- -Victor*



Victor®



+ The Preventative Approach:

No Mouse in My House

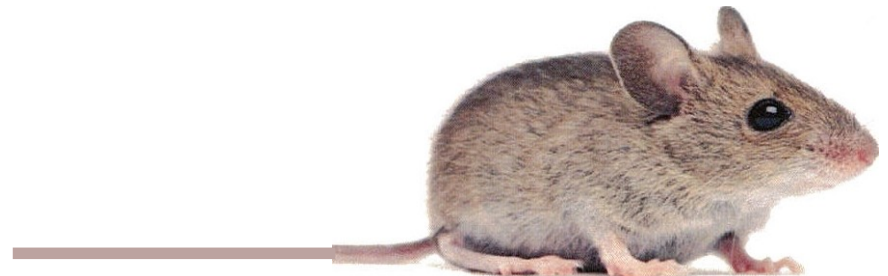


Additional precautions to deter mice and rodents:

- Stuff holes in walls and around drains and pipes with steel wool.
- Store all cereals, grains, rice, nuts, etc. in sealed glass, metal or plastic containers.
- Minimize clutter. Reduce or recycle unused items.

If needed:

- Try electronic sound-based rodent repellents.
- Choose tamper-proof bait boxes or Have-A-Heart Traps.
- Avoid chemical fumigants and loose pellets, granules or tracking powders which may be poisonous.



+ Household Plants/Indoor Gardens

AVOID

- Chemical pesticides for insects/fungus
- Spraying horticultural oils which contain Petroleum
- Spraying Mineral Oils
- Overwatering plants which creates fungus and attracts roaches and fruit flies

CHOOSE

- Wash plants in mild, soapy water to eliminate insects
- Spray Vegetable, Neem or Soybean Oils
- "OMRI Approved" on label



Preeautions:

Before and After Pesticide Applications

Always use a licensed, NYS registered professional for pesticide applications

- Remove children's and pet toys, exposed food, cookware, plates & utensils
- Ventilate the area well
- Wash all linens and towels
- Wipe down all surfaces and counters



+ Cleaning Products: The Real "Dirt"



2

- A growing body of evidence has linked chemicals used in some household cleaning products with breast and other cancers.
- These chemicals are suspected of disrupting the body's hormone system. They mimic or block natural estrogens and interfere with the thyroid (endocrine disruptors).
- Chemicals found in certain cleaning products and air fresheners may be linked to early puberty which is a breast-cancer risk factor.



Not So Clean Cleaning Products:

- All Purpose Cleaners
- Disinfectants
- Glass Cleaners
- Furniture Polish
- Toilet Bowl Cleaners
- Oven Cleaners
- Anti Bacterial Cleaners
- Stain Removers
- Fabric Softeners
- Air Fresheners



All of the these products could contain chemicals that are known or suspected endocrine disruptors or carcinogens



+ Chemicals of Concern: Clean with Care

- Triclosan - an endocrine disruptor
- Phthalate - an endocrine disruptor and suspected carcinogen, often found in artificial "fragrances" of air fresheners and other products
- Alkyphenols - an endocrine disruptor
- Formaldehyde - a known carcinogen
- "Perc" aka Tetrochloroethylene or Perchloroethylene - reasonably anticipated to be/probable carcinogen
- Paradichlorobenzene - reasonably anticipated to be a carcinogen

- Did You Know?

- A growing body of evidence has linked a chemical - common in both both spray and "plug-in" type air fresheners - with breast cancer
- **Buyer Beware!: Non disclosure of chemicals of concern**



+ The Preventative Approach: Non-Toxic Household Cleaners

- Certain markets and health food stores now carry ready made, non-toxic cleaning supplies
- Home-made cleaners can be made with simple, every day ingredients such as:
 - Baking Soda
 - Vinegar
 - Hydrogen Peroxide
 - Orange Peels
 - Lemons



+ Recipes for Good Health

Safe Homemade Cleaning Alternatives



DISINFECT with Hydrogen

Peroxide: (typical 3% solution)

Use in spray bottle to
disinfect:

Garbage Cans, Cutting Boards
Mold & Mildew, Tile & Grout
Countertops

DEODORIZE with Baking Soda:

Remove odors in refrigerator
and diaper pails

Sprinkle on carpet before
vacuuming

Use on damp sponge to scour
and clean kitchen counters



FRESHEN AIR: Heat orange peels or cinnamon in pan of water on stove.

KILL MOLD & DISINFECT using

Essential Oil spray mix:

1 teaspoon oil to 2 cups water

Lavender, Clove or Tea Tree Tea
(a natural fungicide)

Grapefruit extract spray (use 20
drops to 1 quart of water)

DEODORIZE, CLEAN with Vinegar:

Remove paint smells from rooms

Pour down drain-sit 30 minutes
and rinse to clean & unclog

Vinegar/Water mixture (50/50)
to clean out the refrigerator

+ Increased Exposure = Increased Risk



- Like household cleaning products - many personal care products such as: Shampoos, moisturizers, hair dye, cosmetics, nail polish, etc. contain some of the same potentially harmful chemicals:
 - Fragrance, phthalates, triclosan, formaldehyde
- When you consider that we apply many of these products to our skin and home EVERY DAY - the increased exposure and increased risk is obvious and greatly concerning

+ Non-Stick Cookware and PFOA: It's a Sticky Situation

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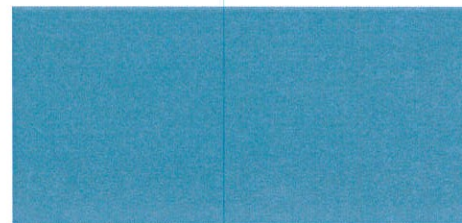
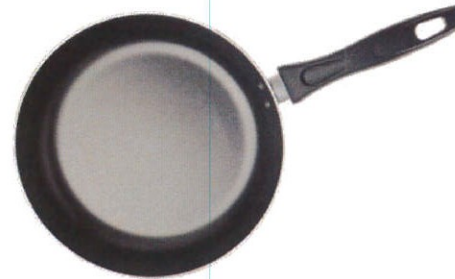
- The Environmental Protection Agency classifies PFOA* as a likely human carcinogen.
- PFOA is a suspected endocrine disruptor. This compound has the capacity to interfere with the normal female reproductive system.
- A growing body of evidence has linked chemicals used in non-stick cookware with breast cancer.

* Perfluorooctanoic acid (PFOA)- a man-made chemical used for making non-stick cookware



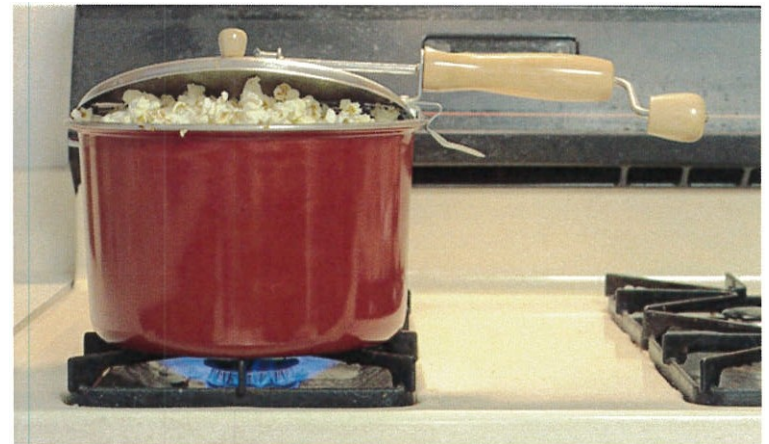
Where Is PFOA Found?

- Non-Stick Cookware
- Microwave popcorn bags
- Pizza box linings



+ PFOA Prevention: Easy Alternatives

- Replace chipped, scratched and scored non-stick cookware with stainless steel.
- Make popcorn the old fashion way- with kernels and oil on the stovetop or use an air popper machine.



+Plastics:

BPA - Beyond Toxic Baby Bottles

4

- A growing body of evidence has linked certain chemicals in plastics with breast cancer.
- Certain plastics contain suspected endocrine disruptors.
- **Bisphenol A (BPA)** used in baby bottles and sippy cups was banned for sale in New York State in 2010, but BPA can still be found in other products.



+Plastics: By the Numbers

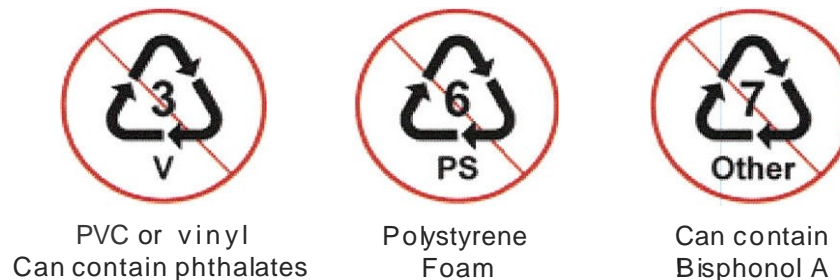
Remember...

5, 4, 1, 2 – All the rest are BAD for you!*

*Choose safer plastics:*¹



Plastics to avoid:^{2,3}



*Source: Dr. Philip Landrigan, Ichan School of Medicine at Mount Sinai
Chart-Source: Dr Luz Claudio, Ichan School of Medicine at Mount Sinai



Unlucky Numbers: Plastics to Avoid

3-6-7

- **Plastic #3:** Polyvinyl chloride (PVC): PVC leaches plastic and is linked to earlier puberty. Often found in: Plastic wrap, shower curtains, school supplies, backpacks, vinyl flooring
- **Plastic #6:** Polystyrene (Styrofoam): Styrene is a carcinogen. Often found in: Food containers, Styrofoam cups, plastic cups
- **Plastic #7:** Usually Polycarbonate: Contains BPA which is estrogenic in many cell and animal studies. Often found in: Canned food, canned infant formula, dental resins, plastic food containers and sales receipts

Reducing Plastic Dependency:

Preventable Approaches

AVOID

- Plastic numbers 3, 6 and 7 - and do not re-use plastic #1
- Microwaving and storing food in plastic wrap or containers
- Buying/drinking bottled water
- Canned foods or baby formula
- #3 PVC Plastic Wrap
- Excessive handling of thermal receipts with BPA
- Floor Tiles and School Supplies with PVC/Vinyl

CHOOSE

- Plastics labeled "BPA FREE" - which is now the law for baby bottles and sippy cups
- Use glass, pyrex or porcelain to microwave and paper towels to prevent splatter
- Use glass containers or stainless steel thermos for water - or water filter system (faucet or Brita type)
- Buy fresh or frozen produce; breast feed or use powdered infant formula
- Use wax paper bags and parchment paper or cloth
- Electronic receipts (via email, text)
- Look for and choose PVC-Free Flooring and School Supplies



Scented Candles: Good Mood or Bad News?

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- Evidence has linked chemicals in certain scented candles with breast cancer
- Several of these chemicals are carcinogenic according to the National Toxicology Program (NTP)





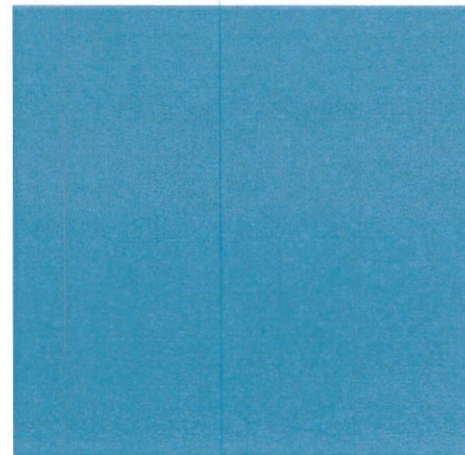
**Avoid
Exposure:
Read Labels**

Scented Candle Guidelines:

- Avoid "Fragrance" which may contain diethyl phthalate (DEP)
- Avoid Paraffin candles which have been shown to emit the chemical Benzene into our home environment
- Look for LEAD-FREE wicks and FORMALDEHYDE-FREE candles



Safer Alternatives



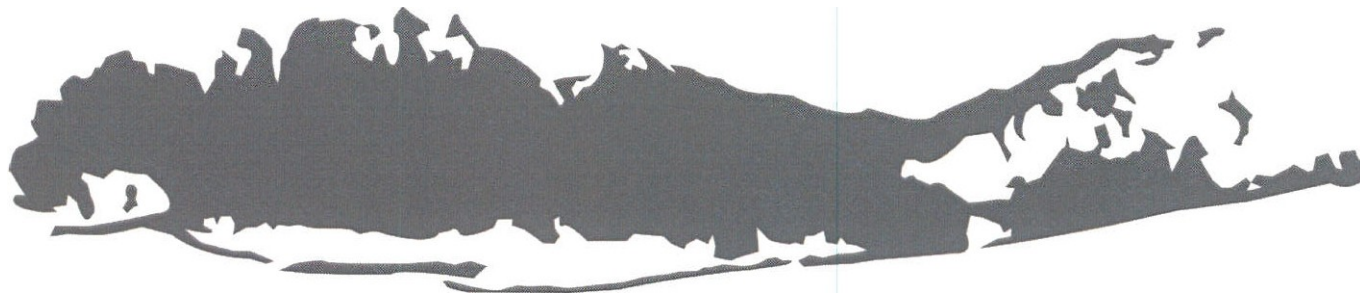
- Beeswax candles
- Soy-based candles
- Candles scented with essential oils
- Candles with lead-free cotton wicks
- Homemade fruit and oil candles
- Electric candles



+ Polycyclic Aromatic Hydrocarbons (PAHs): Hold Your Breath

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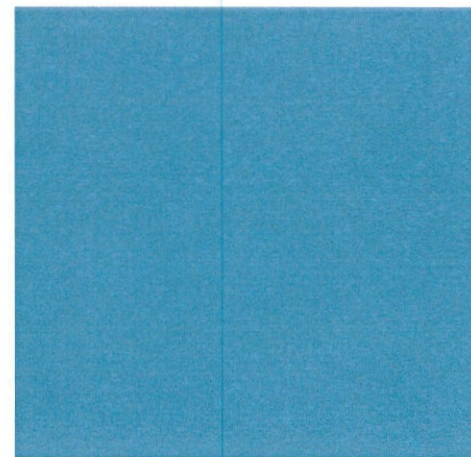
- A growing body of evidence has linked PAHs with breast cancer.
- The Long Island Breast Cancer Study Project found a 50 percent greater risk of breast cancer in women with the highest level of PAH-DNA adducts. (PAH-DNA adducts are indicators of problems in DNA cell repair).





PAHs: Where They Hide

- Diesel exhaust from automobiles, trucks and buses
- Cigarette smoke



PAHs can also be found in:

- Char-grilled foods





How to Limit or Avoid PAH Exposure

- Avoid standing near bus or car exhaust
- Avoid smoking and being around second hand smoke
- Avoid char-grilled and blackened foods

+ The Dangers of Dust: Why Cleanliness Matters

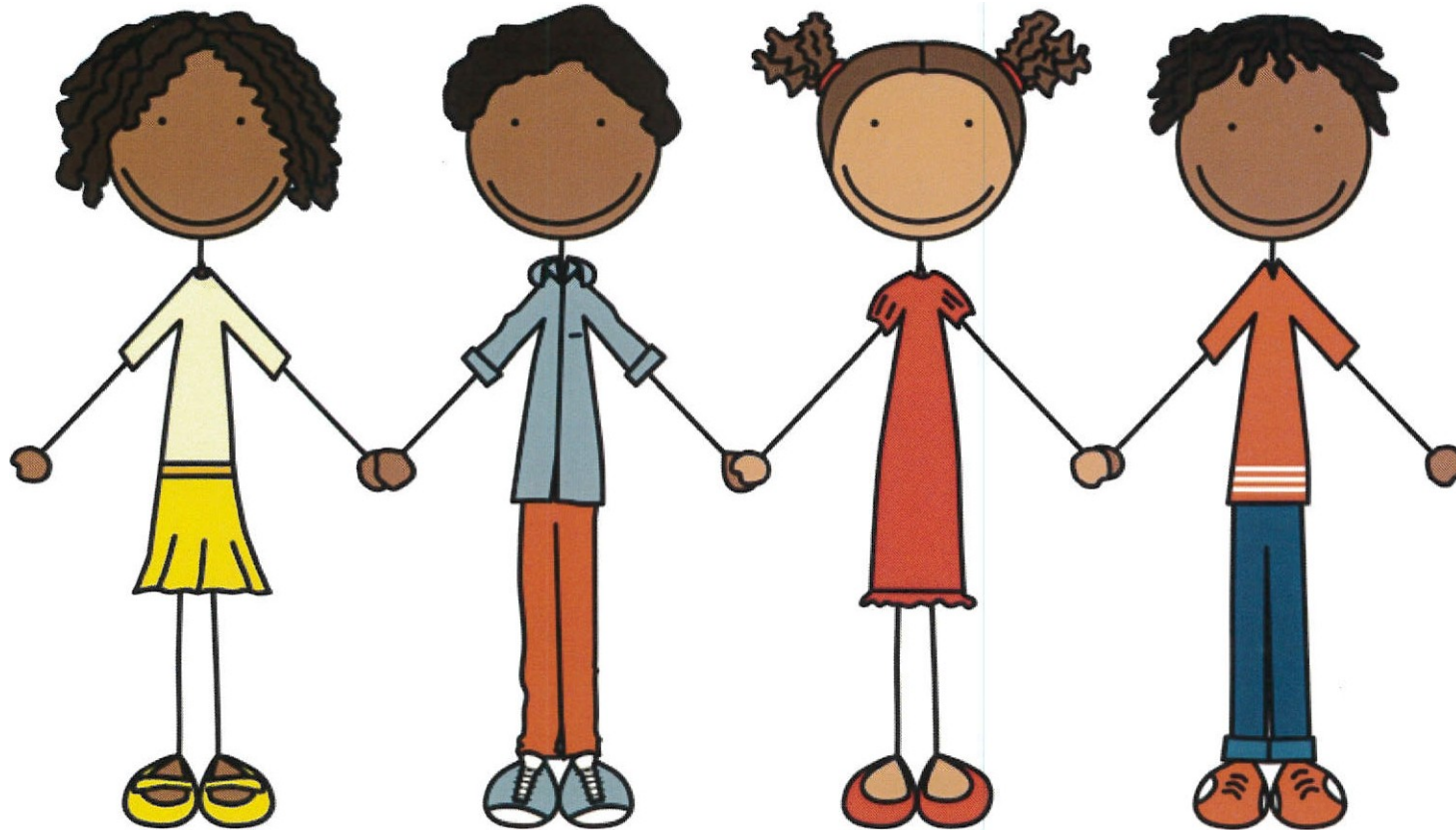


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Many of the chemicals we discussed in this presentation have been found and measured in house dust in several studies. To reduce risk, we suggest the following:

- **Vacuum frequently** (use HEPA filter if possible)
- **Wet mop (not dry mop or sweep)** uncarpeted floors frequently
- **Use microfiber or wet cotton cloths** to clean, they trap dust best
- **Caulk and seal cracks & crevices** to deter dust build-up
- **Change air conditioner and heater filters regularly**
- **Damp dust your electronic equipment**
- **Get Down On It! Clean areas where kids crawl, sit and play**
- **Wash, wipe or clean children's toys often**

+ Sticking Points: What struck a chord?



What matters to you and your community?
Identify your interests and move forward!