

Icahn
School of
Medicine at
Mount
Sinai



Breast Cancer & the Environment





ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI AND THE MOUNT SINAI
HOSPITAL
RESEARCH INFORMATION SHEET

Study ID #: 09-1248

Form Version Date: 7/9/14

Reaching Multicultural Communities: Advocates Mentoring Advocates
Researcher :Mary Wolff, Ph.D
Preventive Medicine, 19 East 102nd Street, D3-104
X57040

The purpose of this research study is to gather information about your knowledge of the environmental risk factors for breast cancer. The responses that you give will help us evaluate the effectiveness of the education presentation that will be given today. You are being asked to take part in a research study because you are participating in today's education presentation at a community site and you are over the age of 18.

Being in a research study is completely voluntary. You can choose not to be in this research study. You can also say yes now, and change your mind later. Deciding not to be in the research study, now or later, will not affect your ability to receive medical care at Mount Sinai Medical Center.

If you agree to take part in this research, you will be asked to complete a survey about your knowledge of the environmental risk factors for breast cancer and methods to reduce exposures before the education presentation and after the education presentation. We will also ask you for some information about your age, ethnicity, marital status, employment status, level of education, and household income. You can choose not to answer any question in the survey you do not wish to answer. You can also choose to stop taking the survey at any time. You must be at least 18 years old to participate. If you are younger than 18 years old, please stop now.

Your participation in this study will take about one hour and 15 minutes. We expect that no more than 50 people will take part in this research study. You will receive a round trip Metro card(\$5.00) at the end of the program to compensate for your time and effort. We will report the number of people attending and the number of Metro Cards distributed. Your name and any other identifying information will not be collected.

The possible risks to you in taking part in this research are possible discomfort in answering the survey questions. The possible benefits to you for taking part in this research are learning new information about breast cancer and the environment.

To protect your identity as a research subject, your name, address or other identifying information will not be collected. In any publication about this research your name or other private information will be used.

If you have any questions about this research, please contact the Dr. Mary Wolff at 1-212-824-7040. You can also call the Program for the Protection of Human Subjects Office at 1-212-824-8200.

This project was determined to be exempt from federal human subjects research regulations.

Demographic Questions



**Some questions before and after this workshop
to help us learn more about you.**

**You will use your personal keypad to answer
these questions.**

Are you..

A. Female

B. Male

C. Other

What is your age?

A. 18-29

B. 30-39

C. 40-49

D. 50-59

E. 60 and over

What do you consider yourself?

A. African-American/Black

B. Latino/Hispanic

C. White

D. Other

What is your marital status?

A. Married/Partnered

B. Divorced

C. Widowed

D. Separated

E. Never Married

Are you currently employed?

A. Yes

B. No

What is the highest level of education you have completed?

- A. Less than high school
- B. 12 years or completed high school/GED
- C. Post high school vocational training other than college
- D. Some college
- E. College and/or beyond

What is the estimated total income for your household for the past year?

- A. Less than \$15,000
- B. \$15,000 to \$24,999
- C. \$25,000 to \$29,999
- D. \$30,000 to \$49,999
- E. \$50,000 or more
- F. I'd rather not answer

What kind of health insurance do you have now?

- A. Medicaid
- B. Medicare
- C. Medicaid and Medicare
- D. Insurance through my workplace
- E. Private insurance that I pay for
- F. New York State Exchange
- G. None / Not sure

Pre Education Questions



**Some questions before and after this workshop
to help us learn more about you.**

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these questions.**

Windows of Susceptibility refers to:

- A. Times in a woman's life when she is more likely to develop breast cancer
- B. Times over the course of a woman's life when her breast tissue is more sensitive to exposure to toxins in the environment
- C. A person's chance of getting cancer

The ethnic group with the highest rates of female breast cancer mortality (death) in the United States is:

A. White

B. Hispanic

C. African-American

When you read the label of a personal care product:

- A. It will list all the chemicals it contains
- B. It may not list all of the chemicals it contains
- C. You can be assured that the product is safe to use

Endocrine Disrupting Chemicals:

- A. Are not in any personal care products
- B. Definitely cause breast cancer
- C. Mimic or block hormones that then disrupt/interfere with the body's normal functions

Most women who are diagnosed
with breast cancer:

- A. Have a family or genetic history of breast cancer
- B. Have been previously hit in the breast and develop a “knot.”
- C. Have no identified risk factors

Formaldehyde is a chemical that
is found in:

- A. Many brands of nail
polish
- B. Hair-straighteners
- C. Both A & B

“Better Safe Than Sorry” is a way to describe:

- A. Worries women have about the causes of breast cancer
- B. The Precautionary Principle
- C. The need to use all organic products

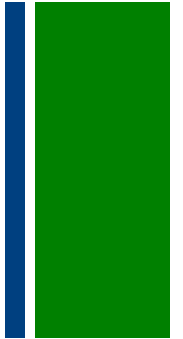
There are two sisters who are ages 52 and 63. Their mother had breast cancer when she was 80 years old. It is probable that:

- A. They both will develop breast cancer because their mother had it
- B. The 63 year old sister will get it because she is older and her breasts are larger
- C. We don't know if either will get breast cancer because there are other factors that put women at risk



BREAST CANCER AND THE + ENVIRONMENT

+ OBJECTIVES

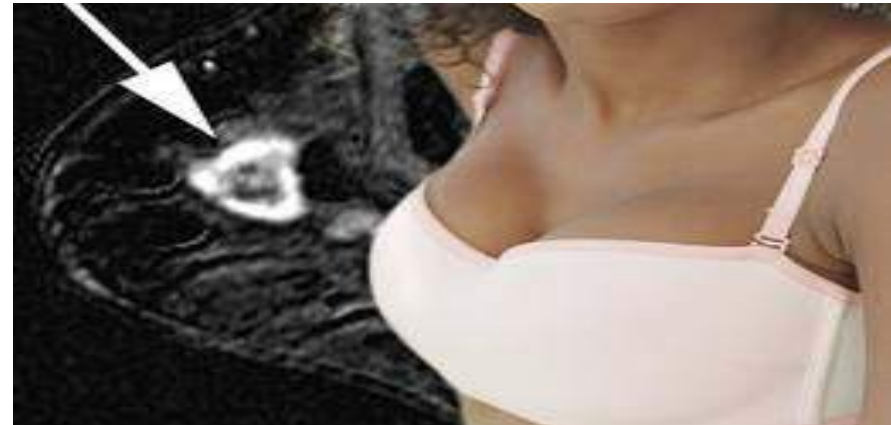


After this workshop, you will be able to:

- Identify environmental risk factors for breast cancer
- Understand why some populations are more susceptible to risk factors than others
- Understand the Precautionary Principle
- Identify products containing chemicals that have the potential to increase breast cancer risk
- Choose safer products and practices to reduce exposure to chemicals of concern that may be linked to breast cancer
- Take action within your communities to reduce toxic exposures

+ Breast cancer and African - American women

- Most common cancer
- #2 cause of death from all cancers
- Compared with white women, African-American women:
 - Have lower breast cancer rates
 - BUT...Have **more aggressive tumors**
 - AND are **41% more likely to die** from breast cancer
- Environmental factors may account for differences in breast cancer rates among racial/ethnic groups



+ Myths about Breast Cancer

- Only women over 50 get breast cancer
- Breast cancer can't be cured
- Breast cancer is a fatal disease
- Only women get breast cancer
- If someone hits me in the breast it will turn into cancer
- If you get breast cancer the doctor will remove your breast
- Mammograms are dangerous
- No breast cancer in my family means I won't get it
- Breast cancer is only a genetic disease




+ Myths about environmental risk factors for breast cancer

- Since consumer products are sold in stores they must be safe
- The FDA (Food and Drug Administration) reviews all ingredients in cosmetics for safety before they can be sold
- Manufacturers of cosmetics and cleaning products must list **ALL** ingredients on the label
- Pesticides registered by the EPA (Environmental Protection Agency) don't have any harmful health effects
- It's okay to heat food in plastic containers that say "microwave safe"
- One person can't change our toxic environment



It's on the shelf - is it safe?

- 
- **Federal health statutes do not require companies to test personal care or cleaning product ingredients for safety before they are sold.**
 - **Food and Drug Administration does not verify that product contents are as listed.**
 - **Trade secrets, byproducts, and contaminants are not on the label**

+ Precautionary Principle

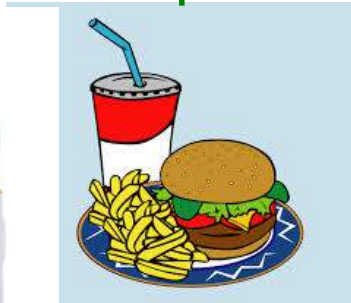


- Avoid exposure when:
 - Risk of harm is suspected
 - Existing scientific evidence cannot prove cause and effect

“Better Safe Than Sorry”



Breast Cancer Risk



+ Endocrine Disrupting Chemicals

- Substances that change the way hormones act in your body
- Present in many every day products



+ Windows of Susceptibility

Not just *WHAT*, but *WHEN*



Prenatal

Neonatal

Puberty

Pregnancy

Menopause

Breast
Cancer



During these different time periods, the developing or changing breast is most sensitive to certain environmental toxins.

+ Personal care products: What are we talking about?



+ How to Read a Product Label

Not every ingredient is listed

Trade secrets (fragrance)

Contaminants (formaldehyde)

Beware of “greenwashing”

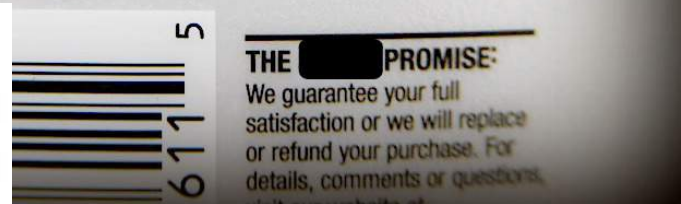
“Natural”

“Organic”

“Eco”

To Use: Smooth lotion on hands and body every day to moisturize and fragrance skin.

INGREDIENTS: Water, Glycerin, Stearic Acid, Mineral Oil, Glycol Stearate, Dimethicone, Fragrance, Pisum Sativum (Pea) Extract, Viola Odorata Flower/Leaf Extract, Glyceryl Stearate, Triethanolamine, Cyclopentasiloxane, PEG/PPG-20/15 Dimethicone, Cetyl Alcohol, Magnesium Aluminum Silicate, Carbomer, Disodium EDTA, Stearamide AMP, Methylparaben, DMDM Hydantoin, Iodopropynyl Butylcarbamate, Blue 1, Red 33, Yellow 5, Titanium Dioxide.



Look for:



+ Label reading for safer products

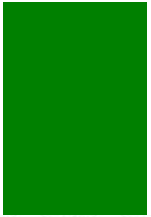
AVOID

- **Phthalates**
- **Fragrance/Parfum**
- **Formaldehyde**
- **Triclosan**
- **Antibacterial products**
- **Parabens**

CHOOSE

- **Fragrance Free**
- **Three-Free Nail Polish**
- **Formaldehyde-free hair straightening methods**
 - Flat iron/Hot combs
 - Argan oil
- **Plain soap and water**
- **Alcohol based sanitizer**

+ Group Exercise: Can You Read a Label?



INGREDIENTS: WATER, GLYCERIN, CETEARYL ALCOHOL, *ALOE BARBADENSIS LEAF JUICE, CETEARETH-20, CETYL ESTERS, **CHOLESTERYL ISOSTEARATE, DIMETHICONE, C12-15 ALKYL BENZOATE, GLYCERYL DILAURATE, MINERAL OIL, STEARIC ACID, CETYL ALCOHOL, ISOPROPYL MYRISTATE, SODIUM CARBOMER, METHYLPARABEN, PROPYLPARABEN, DMDM HYDANTOIN, FRAGRANCE.

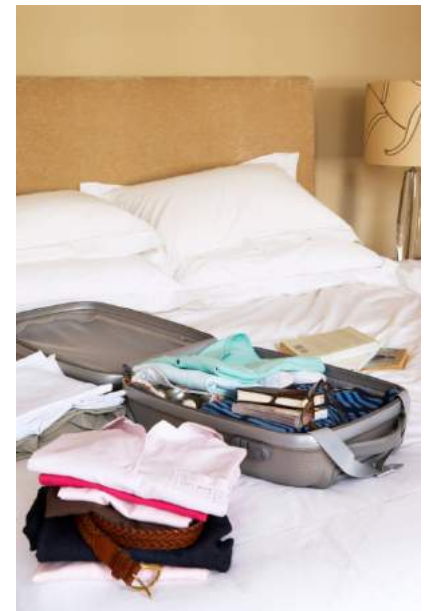
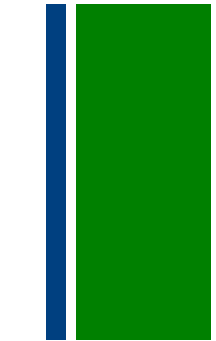




Pesticides: Breaking & Entering

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





How to Read a Pesticide Label

Beware of “inert (inactive) 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?



+ Cleaning Products: Not So Clean!

- Triclosan – endocrine disruptor
- Phthalate – endocrine disruptor and suspected carcinogen, found in artificial “fragrances” of air fresheners and other products
- Alkylphenols – endocrine disruptor
- Formaldehyde – known carcinogen
- “Perc” aka Tetrochloroethylene or Perchloroethylene – probable carcinogen, used in dry cleaning
- Paradichlorobenzene (PDB)- reasonably anticipated to be a carcinogen, in moth balls and deodorizers



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



- 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.
- Preliminary evidence is showing that chemicals used in non-stick cookware may be associated with breast cancer.
- * Perfluorooctanoic acid (PFOA)- a man-made chemical used for making non-stick cookware

Reducing Plastic Dependency: Preventable Approaches

AVOID

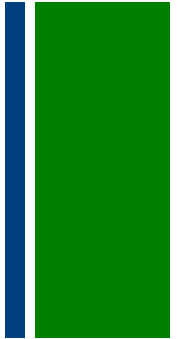
- Plastic numbers 3, 6 and 7
- Microwaving and storing food in plastic wrap or containers
- Bottled water
- Canned foods or baby formula
- Plastic wrap
- Excessive handling of thermal receipts
- Floor Tiles and School Supplies with PVC/Vinyl

CHOOSE

- Plastics labeled “BPA FREE”
- Glass, pyrex or porcelain to microwave
- Glass or stainless steel containers
- Fresh or frozen produce; breast feed or use powdered infant formula
- Wax paper bags and parchment paper or cloth
- Electronic receipts (via email, text)
- PVC-Free Flooring and School Supplies



Polycyclic Aromatic Hydrocarbons (PAHs): Hold Your Breath



- 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).



+ The Dangers of Dust: Why Cleanliness Matters



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) frequently**
- **Use microfiber or wet cotton cloths**
- **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**

+ Safer Alternatives, Simple Solutions





Steps In the Right Direction:

But Why Are We Still Exposed to Harmful Chemicals?

- Current federal laws and regulations aren't strong enough
- **Local bans** and **community action** lead the way for others to follow and serve as a path for bigger victories to come.
- Every victory *regardless of its size or scope* leaves an imprint for others to follow.



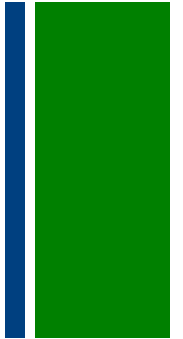
+ Influencers with Authority: NEVER Let Them Stomp Out Healthy Options

- Health Department
- Landlords
- Community Boards
- Supervisors: Water and Park Districts
- School Boards
- Faith-Based Organizations
- NYS and NYC Elected Representatives
- U.S. Senators and Congressmen
- U.S. President



+ Summary

- Environmental factors may increase breast cancer risk
- Some populations may be more susceptible to risk factors than others
- Exposure to some factors during Windows of Susceptibility is more likely to increase breast cancer risk
- Exercising the Precautionary Principle can help us to reduce exposure to factors that may increase breast cancer risk
- Reading product labels can help reduce exposure to some chemicals that may increase breast cancer risk.
- Taking action within our communities can help to reduce exposure to environmental risk factors for breast cancer
- **Knowledge is the first step on the path to personal action to reduce breast cancer risk!**



Post-Education Questions



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THANK YOU!



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