Don’t Eat it
Touch it or
Breathe it!

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• I have no relevant financial relationship to disclose
AKA

• Endocrine disruptors and what they do

"I warned you about the hormones in all that meat & dairy you eat."
Endocrine-disrupting Chemicals

- Chemicals that act by interfering with the biosynthesis, secretion, action, or metabolism of naturally occurring hormones.

- Many classes of chemicals are considered endocrine disruptors
  - Plastics
  - Plasticizers
  - Pesticides
  - Flame-retardants
Diseases Associated with Environmental Toxins

- Allergies and Asthma
- Diabetes
- Obesity
- Chemical sensitivity (any adverse physical, mental or emotional reaction to the presence of a chemical smell)
- Fibromyalgia
- Fertility problems and birth defects
- Parkinsonism
- Bone marrow cancers – Lymphomas, Leukemias, Multiple Myeloma
- Chronic infections
- Autoimmune diseases such as Lupus, Rheumatoid arthritis, Hashimotos thyroiditis, etc.
Figure 6

Endocrine Disrupting Chemicals
Biological Impacts on Human Health

- Immune function and Disease
- Thyroid-related Disorders
- Bone Disorders
- Metabolic Disorders
- Hormone Related Cancers
- Neurodevelopmental disorders in children

Source: State of the Science of Endocrine Disrupting Chemicals – 2012
Inter-Organization Programme for the Sound Management of Chemicals
True or False?

The following quiz questions came from the University of Arizona Center for Integrative Medicine
True or False?

40% of recently tested products containing foam designed for infants, toddlers, and children were found to contain chemical flame retardants considered toxic to children.

True
False
False

- 80% of these products, including car seats covers, breast feeding pillows, and changing pads, tested positive (Stapleton, 2011)

1. Flame retardants are not bound to foam.
2. They off-gas from foam and settle into dust.
3. Dust is ingested through hand-to-mouth contact.
Mystery of the wasting House-cats
• Flame retardant (PDEs) are chemicals that are meant to decrease fire risk.

• Known to build up in human fat tissue, causing damage to the nervous system, liver and kidneys.

• Studies also implicate PDEs in causing sexual dysfunction, thyroid problems and brain disorders.

(Johnson-Restrepo, 2005; Petreas, 2011; Chen, 2010; Letcher, 2009)
True or False

If you are not in the immediate proximity (~2 football fields away) of pesticide spraying you are not at high risk of exposure.
False

Pesticide poisoning from drift exposure and soil fumigation are major concerns, not only for agricultural workers, but also for adjacent homes, families, communities, and schools.
True or False?

The effects of endocrine-disrupting chemicals can be transmitted to future generations, through direct genetic modification of the germ cell line.
Some of the most concerning research about the endocrine disruptors highlights:

- susceptibility of the fetus, embryo, and primordial germ cells to environmental chemicals
- chemicals affect gene regulation and can result in diseases in childhood or later life
- Can be transmitted genetically across generations.
Which toxicants have been identified as potentially harmful to health care workers in hospitals?

- A. Triclosan
- B. Tetracaine
- C. Bisphenol-A & Phthalates
- D. Perchloroethylene (PERC)
- E. A and B only
- F. A and C only
Correct A & C (Triclosan, BPA, & Phthalates)

- **Triclosan**
  - Common antimicrobial found in healthcare settings
  - Primarily in hand sanitizers and personal care products, household items, and sports items
    
    (Dhillon, 2015; 2010; Clarke, 2011).

- **Bisphenol-A and phthalates**
  - Both ubiquitous in hospitals
  - Have been found in elevated levels even in premature infants in the NICU

  (Barrett, 2009; Calafat, 2009; Weuve, 2006).
4 Major Chemical Toxicants

- Phthalates
- Flame Retardants
- BPA
- Pesticides
BPA

- Bisphenol A, often known as BPA is a chemical which can behave in a similar way to estrogen and other hormones in the human body.

- Electronics, Dental fillings, Eyeglass lenses, Sports gear, Drink cans, Epoxy resins, Food Packaging
BPA Side Effects

- **Reproductive disorders** - scientists from Brigham and Women's Hospital showed that BPA exposure can affect egg maturation in humans.

- **Male impotence** - Kaiser Permanente's Division of Research in CA, reported in the journal Human Reproduction that BPA exposure may raise the risk of erectile dysfunction. Sexual desire and problems with ejaculation were also linked to BPA exposure.

- **Heart disease in adults** - another US study linked BPA exposure to diabetes and heart disease in adults.

- **Sex hormones in men** - an August 2010 study linked BPA exposure to changes in sex hormones in men.

- **Type 2 diabetes** - A UK study linked higher levels of urinary BPA to type 2 diabetes, cardiovascular disease and liver-enzyme abnormalities.
BPA Side Effects

• **Brain function, memory, learning** - Potential problems with memory and learning, as well as depression.

• **Women's eggs** - Californian researchers found that exposure to bisphenol A may affect the quality of a woman's eggs retrieved for in vitro fertilization (IVF).

• **Chemotherapy** - University of Cincinnati scientists found that BPA exposure may reduce chemotherapy treatment efficacy.

• **Breast cancer** - A Yale School of Medicine study found a possible increase in breast cancer risk among females exposed to BPA and DES (Diethylstilbestrol) in the womb.

• **Asthma**
BPA in Food sources

Consumer Reports tested several foods and found BPA in soups, juice, tuna, green beans, Pizza boxes and 19 other foods –even organic.
Especially tomatoes
STOP BEFORE YOU POP!

5 REASONS TO BANISH MICROWAVE POPCORN FROM YOUR KITCHEN
Put it in the bag please
Can I get rid of BPA?

- Olestra
- Fat substitute that adds no fat, calories
A new study has found that Olestra might actually be good for you, at least in one way: it could help rid your body of BPA.
Methylparabens

- Parabens are chemicals used to kill bacteria, yeast, and mold in:
  - Lotions
  - Sunscreens
  - Cosmetics
  - Toothpaste
  - Pharmaceuticals
  - Hair products
  - Shaving gels
  - Especially prevalent in deodorants and antiperspirants
EU and Japan banned parabens

Parabens are banned across the European Union.

Why not the United States?

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Parabens

- Replaced formaldehyde over 10 years ago
- Linked to breast cancer
Gatekeeper Genes: GOOD

BRCA genes SUPPRESS tumor cells. They repair damaged DNA
Safe Cosmetics

• Makeup:
  o 100% Pure - herbs to replace parabens for antimicrobial effects
  o Burts Bees
  o Organic Wear
  o Sephora Physicians Formula
Body lotions and washes

- Waleda
- Dr. Bronners- soap, shampoo, toothpaste
- Suki
- Indigo Wild- zum soap
- Primal Life Organics
- Trillium Organics - acne, rosacea, eczema, diaper rash
Sunscreen

- Badger Balm - Zinc oxide
- Raw elements - Zinc Oxide
- Kabana Skincare - Zinc Oxide + vitamin D
- Mexitan Zinc oxide + self Tanner
- Sun Bum
Deodorants

- Primal Pit Paste - coconut based
- Thai Crystal - comes in a spray
- Coconut + Baking soda 50:50
- Kiss My Face
- Tom’s Unscented
Phthalates

FOUND IN: Color cosmetics, fragranced lotions, body washes and hair care products, nail polish
Air Fresheners and Candles

- Heavy metals
- Benzene
- Formaldehyde
- Phthalates
Why you should think twice about using Air Fresheners

☒ Air Fresheners contain allergens and potential carcinogens
☒ Air Fresheners don't "purify" the air
☒ Air Fresheners contain Phthalates, a dangerous toxin
☒ Air fresheners have little to no regulation
☒ Air fresheners don't support your health

Instead, essential oils smell great while naturally supporting your health and emotional well being. Freshen your air without toxins!
Essential Oil Diffusers
Be Thoughtful...
Clean, Breathe, Soothe
Essential oils

- **Lavender**: Helps with relaxation, improves mood and heals burns and cuts

- **Eucalyptus**: Improves respiratory issues like bronchitis, sinusitis and allergies. Also invigorating

- **Lemon**: Great to use in homemade cleaning products

- **Tea tree oil** (melaleuca): natural anti-bacterial, anti-fungal, reduces bad odors and can help stimulate the immune system
Triclosan

- Chemical found in toothpaste and most antibacterial soaps
- Endocrine disruptor
- Linked to weakening of heart muscle in lab animals
- Originally used as pesticide
Antibacterial Toothpaste can increase your risk of superbug generation.

Colgate Total (contains Triclosan):
- Increases antibacterial resistance
- Possibly disrupts hormone and immune systems
- Stays in your blood (triclosan) over an extended time
- Associated with allergies and hay fever

Crest (no triclosan):
Contains antibacterial ingredient "stannous fluoride" which has limited to no risk compared to TRICLOSAN!
Products containing Triclosan
Purge this Toxic Ingredient

- **Minnesota** effective January 1, 2017 was the first state to ban **triclosan**, an active ingredient in hand sanitizers and soaps, because of health concern.
Parkinson's disease and Pesticides

PESTICIDES INCREASE RISK UP TO 80%

70% of specialized nerve cells are “killed off” before the first symptoms arise

“Pesticides are so good at killing these neurons that Pesticides are used in lab animals to create Parkinson’s”
Hand Sanitizers

- Method hand sanitizer 7.5
- CCS Instant hand sanitizer 7.2
- Burts Bees Witch hazel sanitizer 6.5
- Johnson’s hand and face wipes 6.2
Toothpaste Recommendations

- Tom’s of Maine Botanically bright 7.4
- Crest whitening Plus 6.6
- Weleda Calendula 6.4
- Aim tartar control 6.3
Safe Cleaning Supplies

- Mrs. Meyers multisurface
- Greenworks
- Simple green
- Seventh Generation
What's More Dangerous: Zika or Bug Spray?

- NALED used for aerial spraying - Organophosphate toxic to the Nervous system
Detox every few months

Not a colon cleanse
"How is the detox going?"