BREAST CANCER ACTION

What You Should Know About Breast Cancer & the Environment

[*Last revised 01/2011*]

Powerful evidence indicates that there is a connection between toxic environments and breast cancer.[i] While we pursue the research that will lead to even more definitive answers, we can work toward reducing our exposure to substances we believe cause cancer.

The link between breast cancer and the environment

- **50-70% of people with breast cancer have none of the known risk factors.**[ii] Known risk factors include family history, early menstruation, late menopause, late childbirth or no childbirth at all, alcohol consumption and ionizing radiation.

- **Non-industrialized countries have lower breast cancer incidence rates than industrialized countries.** In fact, groups which migrate from one country to another tend to develop cancers at the sites and rates prevalent in their adopted countries.[iii]

- **Evidence shows increased risk for breast cancer among those who work with toxic chemicals and ionizing radiation**, such as farmers, nail technicians, chemists, dental hygienists, and radiology technicians.[iv]

- **Exposure to chemicals can persist well beyond the time they were banned.** For example, the pesticide DDT banned in 1972 was found in 65% of Cape Cod and 85% of California dust samples in 1999-2001.[v]

What we know

- **High levels of estrogen have been linked to breast cancer risk.** Xenoestrogens are manmade chemicals in the environment that mimic estrogen in our bodies. **Xenoestrogens include parabens** (found in lotions), **atrazine** (found in weed killers), **butylated hydroxyanisole** (a food preservative) and **phthalates** (a plasticizer found in baby bottles, toys, etc.).

- **Many personal care and cleaning products are potential sources of endocrine-disrupting compounds** – chemicals that disrupt the body's sensitive hormone system and may contribute to breast and other hormonal cancer risks, as well as adverse developmental and reproductive effects.[vi]

Products should *not* contain:
Ethanolamines
Organofluorines
Anti-microbials (e.g., triclosan)
Alkylphenol-based surfactants
Dichlorobenzene
Phthalates (or labeled as containing vinyl)

- **The use of terms, such as "natural", "non-toxic", and "safe" in product labeling is not adequately regulated in the US:** the US Federal Trade Commission has created some guidelines for environmental marketing, but they are rarely enforced.[vii]

- **Production and use of harmful chemicals is on the rise.** Of an estimated 100,000 synthetic chemicals in commercial use today, more than 90% have never been tested for their effects on human health.[viii] Meanwhile, production of these chemicals is rising at least 3.3% per year.[ix]

- **Almost 20% of pesticides are known to cause cancer, almost 10% are known to damage the nervous system, and more than 10% are known to harm the reproductive system.**[x] Most recent data shows that approximately 5 billion lbs. of pesticides were used in the US in 2000 - 2001.[xi]

- **The Toxic Substances Control Act (TSCA) of 1976 gave all chemicals that were in existence prior to 1976 a free pass by not requiring any testing for safety to remain on the market.** In the 34 years since TSCA was enacted only 200 of the 100,000+ chemicals used and produced in the USA have been tested.[xii]

What needs to be done

- **Instead of requiring government and the public to demonstrate a chemical's harm, we must require manufacturers to test for safety.** The government's regulation of chemicals takes a reactive approach – conclusive evidence of a chemical's toxicity is required *before* it is banned. "Conclusive" is an extremely elusive standard, especially when industry controls the scientific data, funds election campaigns, and makes intensive use of lobbyists. As the history of the tobacco industry illustrates, it can take years –years during which much irreversible harm is done – to conclusively prove harm. **As a society and individuals we must adopt the Precautionary Principle to public health – a proactive prevention-oriented approach to prohibit the licensing of chemicals *until* they are proven safe**.

- **Governments must enact laws** that require labeling of hazardous chemicals in consumer products and food.

- **Product labeling must be straightforward and easy to interpret by consumers.**

- **Consumers must demand labeled information** on the health hazards of ingredients and contaminants in consumer products.

- **Research into environmental links to diseases should be a priority.** In order to stop cancer where it starts, we need to spend as much time and money researching causes as we have spent developing treatments.

Take action

Avoid exposures to toxins. When possible, buy organic food. Use non-toxic cleaning and pest-control products (*see BCA's 'Non-toxic Cleaning Recipes'*). Chemicals in plastics are more likely to seep out when plastics get hot, so don't use plastic containers to microwave food. Avoid unnecessary x-rays.

Get informed! Read Living Downstream by Sandra Steingraber, Silent Spring by Rachel Carson, and Exposed by Mark Shapiro.

Subscribe to BCA's newsletter, the Environmental Health News, the Center of Environmental Health newsletter, and the Green Guide newsletter.

Check out the following environmental health and justice organizations:

Californians for Pesticide Reform
www.pesticidereform.org

Center for Environmental Health
www.ceh.org

Communities for a Better Environment
www.cbecal.com

The Center on Race, Poverty and the Environment
www.crpe-ej.org

Women's Voices for the Earth
www.womensvoices.org

Environmental Working Group
www.ewg.org

Pesticide Action Network North America
www.panna.org

Campaign for Safe Cosmetics
www.safecosmetics.org

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[i] Gray, Janet. *State of the Evidence: The connection between breast cancer and the environment 2010 (sixth edition*). Published by Breast Cancer Fund. Available at http://www.breastcancerfund.org/assets/pdfs/publications/state-of-the-evidence-2010.pdf

[ii] "California Breast Cancer Research Program - SRI - Reports - Identifying Gaps." *California Breast Cancer Research Program (CBCRP).* Ed. Julia Brody et al. http://www.cbcrp.org/sri/reports/identifyingGaps/index.php

[iii] John, E. M. "Migration History, Acculturation, and Breast Cancer Risk in Hispanic Women." *Cancer Epidemiology Biomarkers & Prevention* 14.12 (2005): 2905-913.

[iv] "The

[v] Dunagan, S.C., et al., Toxics use reduction in the home: lessons learned from household exposure studies, J
Clean Prod (2010), doi:10.1016/j.jclepro.2010.06.012

[vi] Ibid.

[vii] Ibid.

[viii] Gray, J. *State of the Evidence: The connection between breast cancer and the environment, 2010 (sixth edition).* Published by Breast Cancer Fund. Available at http://www.breastcancerfund.org/assets/pdfs/publications/state-of-the-evidence-2010.pdf

[ix] Steingraber, S., Living Downstream: A Scientist's Personal Investigation of Cancer and the Environment, p.281, New York: Vintage Books, 1998.

[x] *Pesticide Protection Zones: Keeping Kids Safe at School, March 2010.* http://pesticidereform.org/downloads/SchoolProtectionZones.pdf

[xi] "2000-2001 Pesticide Market Estimates: Usage | Pesticides | US EPA." *US Environmental Protection Agency*. Web. 29 Nov. 2010. <http://www.epa.gov/opp00001/pestsales/01pestsales/usage2001.htm#3_1>.

[xii] *The Health Case for Reforming the Toxic Substances Act.* Safer Chemicals: Healthy Families Health Report
http://healthreport.saferchemicals.org/introduction.html