

**The Connection Between Women’s Health and the Environment**

**Toxic Chemicals in the Environment**

Women’s Voices for the Earth (WVE) defines the environment as the places people live, work and play. It is estimated that between 80,00 and 85,000 chemicals are in use in the environment in United States, yet only about 200 of these chemicals have been tested for safety. Of those chemicals that have been tested, most have been evaluated only for their acute impacts to adult males in industrial settings. The chemical exposure routes and health impacts on women—specifically girls, women of color and women of reproductive age, are different and have historically been largely overlooked.

Toxic chemicals that enter the environment either through contaminated water, the food chain, air pollution, or household products pose health problems for women unique from that of men. Surveys conducted show that women are significantly greater users than men of personal care products including soaps, cosmetics, lotions and the like. For example, the Campaign for Safe Cosmetics indicates that women use an average of nine personal care products each day – exposing themselves to a mixture of over 100 individual chemicals. Twenty-five percent of women (but only one in a hundred men, or 1%) report using an average of 15 products daily[[1]](#footnote-0).  Similarly, Women who spend most of their time at home may also have a higher exposure to potentially hazardous cleaning chemicals.  While gender roles and societal expectations have changed over time, a national study showed that women today are still doing over 70% of the housework in the average home[[2]](#footnote-1). Unfortunately there is little regulation determining what kinds of chemicals can be used in these products, leaving the door open to a variety of toxic exposures. These small daily exposures can lead to chemicals building up in women’s bodies, which add up over a lifetime of use.

**The Impact of Toxic Chemicals on Women’s Health**

Women also carry the impacts of toxic chemical exposure differently than men.  Many chemicals accumulate in fat and women generally have a higher percentage of fat tissue than men. For example, in 2003, the Centers for Disease Control and Prevention (CDC) reported that women, as compared to men, had significantly higher levels of 10 of the 116 toxic chemicals they tested.  Three of the 10 chemicals were phthalates – a group of chemicals found commonly in health and beauty products that are linked to birth defects[[3]](#footnote-2).

Women are also the first environment for the next generation. Many chemicals stored in a woman’s body are passed onto her child during pregnancy and later through breast-feeding. A 2005 study by the Environmental Working Group revealed that at least 287 hazardous industrial chemicals pass through the placenta to the fetus[[4]](#footnote-3). Synthetic chemicals are so prevalent in a woman's breast milk today that, if bottled for sale, most breast milk would not pass FDA regulations. While studies still document that breastfeeding remains the best option for building infant immunity, the quantity of chemicals to which women are exposing their young is of grave concern and poses an unnecessary burden on the developing child.

Research indicates women’s health problems are on the rise, and this may be related to toxic chemical exposure. Household cleaning and pesticide products may contribute to breast cancer because many contain endocrine disrupting chemicals[[5]](#footnote-4). Over the last two decades, breast cancer rates have risen from a lifetime risk of one in 20 to one in eight[[6]](#footnote-5).  The onset of puberty is occurring at an earlier age among young girls, with girls starting menstruation on average a few months earlier than they did 40 years ago, and developing breasts up to one to two years earlier[[7]](#footnote-6).  Endometriosis, a leading cause of female infertility, is far more common today than it was 50 years ago. It is estimated that about 10 to 20 percent of women of reproductive age in the United States suffer from endometriosis[[8]](#footnote-7).

**Women of Color are at Greater Risk for Toxic Chemical Exposure**

Women of color bear a greater burden of chronic diseases in the United States that have been linked with exposure to toxic chemicals. For example, 90% of the individuals diagnosed with the autoimmune disease, Lupus, are women.[[9]](#footnote-8) Lupus affects African-American women at three times the rate of white women and is also more common in women of Latina, Asian and American Indian descent[[10]](#footnote-9). While the precise causes of Lupus are unknown, some studies show that exposure to heavy metals or organic solvents may be associated with the disease[[11]](#footnote-10). African American women are also more likely to have premature births and infants with low birth rates, which are also linked to environmental contamination[[12]](#footnote-11). According to the CDC, African American women are 34% more likely to die of breast cancer than white women[[13]](#footnote-12). Many products marketed to women of color, such as skin lighteners, hair relaxers and dyes contain some of the most toxic chemicals on the market which are known cancer-causing agents. One study showed that chemicals in hair straighteners may absorb into the scalp, and that the greatest users of these straighteners are African-American women who generally have a treatment every 4 to 8 weeks[[14]](#footnote-13). The amount of toxins found in breast milk disproportionately affects women in the Arctic, where in the last 12 years, flame retardant chemicals found in electronics and furniture have increased by 40% in the breast milk of Inuit women[[15]](#footnote-14).

In addition, people of color, including African Americans, Latinos, and Asian Americans, now comprise a majority in neighborhoods with commercial hazardous waste facilities. Forty six percent of housing units for the poor, mostly people of color, sit within about a mile of factories that reported toxic emissions to the EPA[[16]](#footnote-15). As a result, people of color and Latinos suffer higher-than-average rates of asthma, lead poisoning, exposure to contaminated water, pesticides and mercury than their white counterparts[[17]](#footnote-16).

These factors, when combined with workplace exposure, use of certain consumer products and diet can have greater adverse effects on the health of women of color. For indigenous people, reliance on traditional diets of fish and marine mammals put them at greater risk of exposure to toxins which are found in seafood. A study of the Yupik people of St. Lawrence Island in Alaska found that polychlorinated biphenyls (PCBs) persist in their blood at levels 6-9 times higher than the general population in the lower-48 states[[18]](#footnote-17).

**Occupational Exposures to Women**

Certain female-dominated occupations put women at greater risk for toxic chemical exposure as well. The Bureau of Labor Statistics reported that in 2008 1.5 million people worked in the “maids and housekeeping cleaners” industry[[19]](#footnote-18) and 89% of them were female[[20]](#footnote-19). Nationally, among males and females, 40% of housekeeping cleaners are Latino/a, while another 16% are African American[[21]](#footnote-20). A study in Spain found that female domestic cleaners with asthma or chronic bronchitis suffered short term respiratory symptoms more commonly on days that they worked and specifically in relation to exposure to cleaning chemicals such as diluted bleach, degreasing sprays and air fresheners[[22]](#footnote-21).

Women account for up to 97% of the nail salon industry’s workforce in the United States. The majority of nail salon workers are women of color, and the largest ethnic group represented is Vietnamese women who comprise 40% of nail technicians nationwide[[23]](#footnote-22). Nail salon products contain a host of toxic chemicals that may impact women’s health. For example, toluene, formaldehyde, and dibutyl phthalate, which have been linked to both reproductive harm and cancer, are found in many nail polishes. Women working in nail salons are increasingly reporting health concerns such as headaches, skin rashes, difficulty breathing, cancers, and miscarriages. Nationwide, 58% of nail workers are of reproductive age[[24]](#footnote-23) putting them at risk for spontaneous abortions and bearing infants with birth defects.

**Women are Motivated to Protect Health and the Environment**

When surveyed, women consistently rate the environment as one of their greatest concerns.  Focus group data gathered in Seattle in 2002 indicate that women are more concerned about dangers posed by toxic chemicals than are men[[25]](#footnote-24). Nationwide polling shows that women feel this concern regardless of their political party affiliation; a majority of both Democratic and Republican women described themselves as very concerned about chemical pollution in our environment[[26]](#footnote-25).  Generally, women also remain the primary providers of healthcare oversight for their families.  A poll conducted by the federal Office of Women’s Health found that nearly two-thirds of women indicated that they alone were responsible for healthcare decisions for their family, and 83% had sole or shared responsibility for financial decisions regarding their family’s health[[27]](#footnote-26). A poll conducted by Kaiser Family Foundation found that about 80% of all mothers are responsible for selecting their child’s doctor, taking children to doctor’s appointments, and follow-up care[[28]](#footnote-27). In addition, women are the primary consumer decision makers in 85% of all United States households[[29]](#footnote-28), making them a very powerful consumer group that can persuade corporations to change their ways.

1. Campaign for Safe Cosmetics. 2004. Exposures Add Up Survey Results June 2004 . Available: <http://www.cosmeticsdata> base.com/research/exposures.php [↑](#footnote-ref-0)
2. Bird, C. 1999. Gender, Household Labor, and Pyschological Distress: The Impact of the Amount and Division of Housework. Journal of Health and Social Behavior 40(1): 32-45. [↑](#footnote-ref-1)
3. Centers for Disease Control and Prevention (CDC). 2003. Second National Report on Human Exposure to Environmental Chemicals. Department of Health and Human Services. NCEH Pub No. 02-0716. 2003 Jan; 1-257. [↑](#footnote-ref-2)
4. Environmental Working Group (EWG). 2005. Body Burden 2: The Pollution in Newborns. Available: <http://archive.ewg>. org/reports/bodyburden2/ [↑](#footnote-ref-3)
5. Zota, A.R., A. Aschengrau, et. al. 2010. **Self-reported chemicals exposure, beliefs about disease causation, and risk of breast cancer in the Cape Cod Breast Cancer and Environment Study: a case-control study.** Environmental Health.  *9:40*. [↑](#footnote-ref-4)
6. Breast Cancer Fund. 2008. State of the Evidence: The Connection Between Breast Cancer and the Environment, fifth edition. Available: http://www.breastcancerfund.org/publications [↑](#footnote-ref-5)
7. Steingraber, S. 2007. The Falling Age of Puberty. The Breast Cancer Fund. Available: <http://www.www.breastcancerfund> .org/puberty [↑](#footnote-ref-6)
8. Program on Reproductive Health and the Environment at University of California, San Francisco.2008.Shaping our Legacy: Reproductive Health and the Environment. Report on Summit on Environmental Challenges to Reproductive Health and Fertility. 2008 Sep; 1-80. [↑](#footnote-ref-7)
9. Lupus Foundation. Statistics on Lupus. Available: [http://www.lupus.org/webmodules/webarticlesnet/templates/ new\_newsroomreporters.aspx?articleid=247&zoneid=60](http://www.lupus.org/webmodules/webarticlesnet/templates/%20new_newsroomreporters.aspx?articleid=247&zoneid=60) [↑](#footnote-ref-8)
10. Centers for Disease Control and Prevention, Office of Minority Health and Health Disparities. 2008. Eliminate Disparities in Lupus (Online Factsheet). Available: http://www.cdc.gov/omhd/amh/factsheets/lupus.htm [↑](#footnote-ref-9)
11. Edwards, CJ. and Cooper, C. 2006. Early Environmental Exposure and the Development of Lupus. Lupus. 15(11): 814-819. [↑](#footnote-ref-10)
12. Maddox, Whitney. 2010. In Whose Backyard?: Chemical Toxins, Reproductive Health, and Communities of Color. Center for American Progress. Available: http://www.americanprogress.org/issues/2010/04/backyard.html [↑](#footnote-ref-11)
13. Center for Disease Control and Prevention. 2010. Finding Solutions to Health Disparities: At A Glance 2010. Available: <http://www.cdc.gov/chronicdisease/resources/publications/AAG/reach.htm> [↑](#footnote-ref-12)
14. Cheryl Blackmore-Prince. 1999. Chemical Hair Treatments and Adverse Pregnancy Outcome among Black Women in Central North Carolina. American Journal of Epidemiology. Available: [http://aje.oxfordjournals.org/cgi/reprint/149/8/712 .pdf](http://aje.oxfordjournals.org/cgi/reprint/149/8/712%20.pdf) [↑](#footnote-ref-13)
15. Dewailly E. 1993. Inuit exposure to organochlorines through the aquatic food chain in arctic Quebec. Environmental Health Perspective. 101: 618. [↑](#footnote-ref-14)
16. Bullard, R; Saha, R; Wright, B. 2007. Toxic Wastes and Race and Twenty 1987-2007: Grassroots Struggles to Dismantle Environmental Racism in the United States. Report for United Church of Christ Justice & Witness Ministries. Available: http://www.ejnet.org/ej/twart.pdf [↑](#footnote-ref-15)
17. Ibid. [↑](#footnote-ref-16)
18. Physicians for Social Responsibility. Available: <http://www.psr.org/resources/toxic-chemicals-and-environmental-justice.html> [↑](#footnote-ref-17)
19. Bureau of Labor Statistics. Occupational Outlook Handbook, 2010-2011 Edition. Available: <http://www.bls.gov/oco/ocos174.htm> [↑](#footnote-ref-18)
20. Bureau of Labor Statistics. 2009. Table 11: Household Data Annual Averages. Employed Persons by Detailed Occupation, Sex, Race, and Hispanic or Latino ethnicity, 16 yrs/older. Available: <http://www.bls.gov/cps/cpsaat11.pdf> [↑](#footnote-ref-19)
21. Ibid. [↑](#footnote-ref-20)
22. Medina-Ramón, M; Zock, J. P, et al. 2006. Short-term respiratory effects of cleaning exposures in female domestic cleaners. European Respiratory Journal. 27:1196-1203. [↑](#footnote-ref-21)
23. # NAILS Magazine. 2009. Industry Statistics. NAILS Magazine 2000-2010 Big Book. Available: [http://www.nailsmag.com/ pdfView.aspx?pdfName=NAILSBB2009-10stats.pdf](http://www.nailsmag.com/%20pdfView.aspx?pdfName=NAILSBB2009-10stats.pdf)

    [↑](#footnote-ref-22)
24. # Ibid.

    [↑](#footnote-ref-23)
25. Survey Research on Toxic Chemicals, Voter surveys conducted in Washington, Michigan and Maine by Fairbank, Maslin, Maulin & Associates, April 7, 2003. [↑](#footnote-ref-24)
26. Ibid. [↑](#footnote-ref-25)
27. "Majority of Women Control Health Care Decisions", based on a survey conducted by EDK Associates, Merck Media Minutes, Summer 1997. [↑](#footnote-ref-26)
28. Kaiser Women’s Health Survey. 2001. The Kaiser Family Foundation. Available: [http://www.kff.org/womenshealth/loader .cfm?url=/commonspot/security/getfile.cfm&PageID=14293](http://www.kff.org/womenshealth/loader%20.cfm?url=/commonspot/security/getfile.cfm&PageID=14293) [↑](#footnote-ref-27)
29. The Women’s Foundation of California. On the Road to Equity: A Statewide Agenda for Women and Girls. Available: http:// www.womensfoundca.org/atf/cf/%7BF4E8B0D2-94CD-4B29-B9F4-FEE4BA76EAE1%7D/FINALequity\_report.pdf [↑](#footnote-ref-28)