



1 IN 8 AMERICANS IS AFRICAN AMERICAN



1 IN 3
AFRICAN
AMERICANS
WORKS IN
A BLUE
COLLAR JOB



COULD THIS ACCOUNT FOR THE HIGHER RATES OF CANCER?

HOUSEHOLD PRODUCTS

We know that many products are harmful or poisonous because they have warnings on the labels. Many of the products that we use to clean our homes, cars, and offices can cause serious illness or injury. These products can contain cancer-causing ingredients. In addition, tobacco smoke and indoor air pollution cause asthma and cancer, two serious health concerns for the African American community.

The Center for Environmental Oncology of UPCI advises women to take "precaution" to reduce their risk of breast cancer and other diseases by reading labels and limiting exposure to chemicals that are known or suspected to be harmful or cancer-causing.

RESOURCES

For more information and supporting documents please see the following resources.

- **Center for Environmental Oncology of the University of Pittsburgh Cancer Institute (UPCI)** www.environmentaloncology.org
- **National Toxicology Program** (tests of hazardous chemicals) <http://ntp.niehs.nih.gov/>.
- **U.S. National Library of Medicine** (database of common household products) www.householdproducts.nlm.nih.gov
- **Environmental Working Group** (known and suspected health hazards of ingredients found in personal care products) www.ewg.org.
- **The U.S. Centers for Disease Control and Prevention** www.cdc.gov
- **National Cancer Institute** www.cancer.gov

The Center for Environmental Oncology of UPCI offers free public and health professional education on topics that may be of interest to the community, governments, universities, faith-based groups and other concerned parties.

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ENVIRONMENTAL RISKS OF BREAST CANCER IN AFRICAN AMERICAN WOMEN

WHY SHOULD AFRICAN AMERICANS BE CONCERNED?

More African American women die of breast cancer than do white women. We do not yet know why, but scientists, including researchers at the Center for Environmental Oncology of University of Pittsburgh Cancer Institute (UPCI) (www.environmentaloncology.org) are working to find the reasons.

Like all Americans, African Americans should be concerned because there are many health hazards found in our everyday environments (homes, neighborhoods, workplaces, outdoors) that may cause cancer. The good news is that some of these exposures can be avoided.

Many competing priorities can distract you from paying attention to these important environmental health issues. Paying the bills, raising the kids and managing your health are all important priorities. But, too often, focus on day-to-day survival issues does not always leave people with enough time to become actively involved in the decision-making process that shapes our communities. For example, how does the local government decide where to locate a diesel bus garage, a trash dump or a company that makes plastic? Community involvement in these decisions can make a difference.

Many people feel powerless when it comes to environmental issues because there is so much that we cannot control. **However, there are actions we can take to reduce our risk by learning what are avoidable environmental exposures.** This pamphlet introduces you to basic environmental health and breast cancer concepts. Educating yourself on the issue helps you make more informed decisions about what you choose to eat and drink, and the products that you use in your homes, at work, and those you choose to use on your body (shampoos, soaps, perfumes, hair straighteners and dyes).



PREVENTION STARTS HERE.

RACIAL DISPARITIES

The U.S. Centers for Disease Control and Prevention report that African American women, overall, fare worse than white women when it comes to breast cancer. Here are some of the reasons why:

- Minorities and the poor may be diagnosed at later stages of illness.
- African Americans may not have access to quality health care or health insurance.
- Some people may delay treatment because they mistrust doctors and hospitals and are not aware of screening services.
- African American women are often diagnosed with tumors that are more aggressive.
- Workplace exposure to toxic chemicals is proportionally greater for African Americans. In part, what you are exposed to at work can affect your cancer risk.

Although 1 in 8 Americans is African American, 1 in 3 housekeepers and blue collar workers and 1 in 2 workers in sanitation jobs are African American.

PRECAUTIONARY PRINCIPLE

Better Safe than Sorry!

In the majority of cases, scientists currently cannot predict who will get breast cancer and who will not. Because it can take a long time for cancer to develop, it is not always possible to have scientific proof in humans showing a causal link between any specific exposure and the development of breast cancer. Some of the food and drinks that you may consume, the chemicals that you are exposed to at work or during your hobbies, and the personal care products that you put on your body can contain chemicals that we know promote cancer and other serious illnesses in humans. These chemicals also cause cancer and disease when tested in animals.

RISK FACTORS FOR BREAST CANCER

Each of us is born with a unique set of genes inherited from our families that makes us who we are. These distinct genes can affect who gets cancer and who does not. Although genetic risk is important, the National Cancer Institute (NCI) has reported that one in ten cases of breast cancer is caused primarily by gene defects we get from our parents. This means that 90% of breast cancer has environmental causes including lifestyle factors and exposure to agents in air and water. Although the exact mechanisms are currently unclear, scientists at the Center for Environmental Oncology of UPCI are conducting research to help us better understand the role of the environment in causing cancer.

Your environment can increase your chances of getting breast cancer. For example, your health can be affected by smoking, not exercising or eating unhealthy food. Exposure to ionizing radiation, radon or chemicals in your home and workplace (polluted air or water) may also increase your risk of breast cancer. Researchers at the NCI have reported that when a woman moves to the United States from other countries where the risk of breast cancer is lower, within a single generation her risk of developing the disease increases to that of a

woman who was born in this country. This is why scientists at the World Health Organization and elsewhere believe that at least 80% to 90% of breast cancer cases have some environmental component.

ENVIRONMENTAL RISKS OF BREAST CANCER INCLUDE:

- Cigarette smoke (including second-hand smoke)
- Drinking more than two drinks of alcohol every day
- Obesity and being overweight, especially after menopause
- Getting little or no exercise
- Diets high in well-done, smoked, preserved, fried or barbecued meats or fish
- Diets low in fruits and vegetables
- Exposure to chemicals found in:
 - polluted water and air
 - smoke: exhaust fumes from cars, trucks, and buses
 - combustion products formed from burning wood chips, rubber and when cooking meat or fish at high temperatures
 - some workplaces such as:
 - dry cleaning, nursing, medicine
 - hairdressers, barbers, truck/bus drivers

PERSONAL RISK FACTORS ASSOCIATED WITH BREAST CANCER INCLUDE:

- Personal history of breast cancer (whether or not you've had breast cancer before)
- Your family history (whether aunts, mother, grandmothers on both sides of your family have had the disease)
- Gender (being a woman)
- Your age (being older than age 60)
- Use of hormone replacement therapy for more than a few months

HOW CAN ENVIRONMENTAL EXPOSURES AFFECT BREAST CANCER? The Hormone Connection-One Important Link

Scientific studies that look at risk suggest that the longer lifetime exposure to estrogen, the greater the chance that breast cancer can develop. The earlier in life that a girl begins to menstruate and the later in life that a woman enters menopause, the more hormones she is exposed to and the greater the odds are that she may develop breast cancer. Hormones occur naturally and regulate body functions. They tell glands and organs what to do and when to do it. The amount of hormone that a woman's body makes varies over time and depends on her body size, when she becomes sexually mature and when she enters menopause.

Hormones are not bad for a woman unless you have more than your body needs. When it comes to breast cancer, excess estrogen and progesterone exposure can increase one's risk of the disease. These hormones can cause tumors to grow larger and faster. Although your

body makes estrogen naturally, chemicals that act like estrogen (called hormone-mimicking compounds, or endocrine disrupting compounds, EDCs) can be found elsewhere.

The use of low dose birth control pills and patches does not appear to be linked with breast cancer risk. In contrast, the Women's Health Initiative has shown that hormone replacement therapy increases breast cancer risk, and the longer a woman uses hormones to treat the symptoms of menopause the greater the risk. On the other hand, short-term use of hormones after menopause, for only a few months, does not appear to increase breast cancer risk.

Products that we and our families use for daily hygiene, household chores and killing pests can contain chemicals that act like estrogen. Herbal remedies can also behave this way. Estrogen-like "hormone mimics" can get in the way of our body's ability to tell organs and glands what to do.

Exposures (Dose and Timing Can Matter)

Cancer usually takes years to develop. The amount of chemicals that people are exposed to (dose) and when that exposure happens (timing) have major impacts on a person's health. People may be repeatedly exposed to small doses of many different chemicals over time. For this reason, it can be difficult to determine the role of any single exposure in causing cancer.

When an exposure happens (over the course of a lifetime) can also affect whether a person gets sick or not. Research suggests that a woman's breasts are more sensitive to exposures during certain times of life — the prenatal period (before birth), adolescence (before puberty), pregnancy, and at the start of menopause. Exposures to toxic chemicals during these times of life may increase the chance a woman will get breast cancer later on.

PERSONAL CARE PRODUCTS

From studies conducted a decade ago we know that some personal care products such as lotions, dyes, nail polishes, skin treatments, hair products, oils and creams can contain hormones and substances that act like hormones. In some cases, personal care products still contain chemicals that are known carcinogens. A few studies have shown that premature sexual development can occur due to regular exposure to personal care products containing hormones that act like estrogen. Several doctors have reported that African-American toddlers between one and three years of age developed breasts when their mothers applied hormone-containing personal care products to their scalps, or when their fathers used hormonal creams and had frequent contact with their children. When the use of these products was stopped, the premature breasts on these girls went away (reviewed in Donovan M et al., Personal care products that contain estrogens or xenoestrogens may increase breast cancer risk. Med Hypothesis 68(4):756-766, 2006).

In 1997, review of product ingredients and testing of personal care products carried out by a U.S. military physician and pediatric endocrinologist, Dr. Chandra Tiwary, revealed that some widely used personal care products, many of them hair care products, contained hormones. At this time, we do not know if these products still contain estrogen or estrogen-like chemicals, because the Food and Drug Administration does not require special labeling or testing of such products routinely to see whether they contain hormone-mimicking chemicals. We suggest that people lower their risk by learning more about the contents of the products they use.

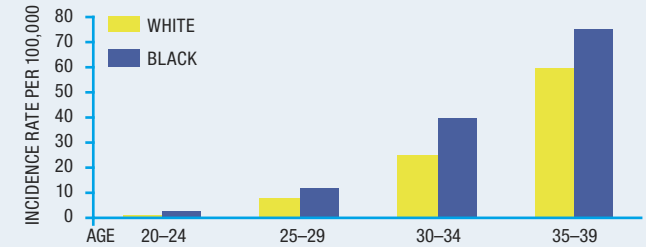
Table 1: Widely used personal care products that were reported to the Food and Drug Administration to contain estrogen in 1993

- Queen Helene Placenta Cream Hair Conditioner (placental enzymes)
- Perm Repair with placenta
- Proline Perm Repair with placenta
- Mexican Spanish Super Gro Placenta
- Isoplus Hormone hair treatment with Quinine (contains hormone constituents)

**At this time, we do not know if these products are still sold and if they are sold whether they still contain estrogen or estrogen-like chemicals. However, regular use of these hormone-containing products in the past may have contributed to increased exposure to hormones, and therefore, a greater risk of breast cancer.*

Fig. 1: Breast Cancer Incidence

For women under 40 years old, AA women have more breast cancer (blue bars) compared with white women (yellow bars).



Figs. 2 and 3: Breast Cancer Mortality

For all age groups, AA women with breast cancer have more deaths (red bars) compared with white women (blue bars).

