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BREAST CANCER AND THE ENVIRONMENT

Taking Action in Your Community

STEPS YOU CAN TAKE **NOW**

www.info.bcerp.org

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Breast Cancer: An Urgent Public Health Priority

According to the National Cancer Institute (NCI), breast cancer is the second leading cause of cancer deaths in American women today.

- 1 out of every 8 women will develop breast cancer during her lifetime.
- About 40,000 women annually will die of breast cancer.
- Risk factors for breast cancer include personal and family health history, genetics, menstrual and reproductive history, race, and lifestyle choices.

Environmental Exposures and Breast Cancer Risk

Certain things in the environment may change the way a girl's body develops as she grows, making her more vulnerable to developing breast cancer as an adult. In this context, the environment includes the air we breathe, the food we eat, the water we drink, and things we touch and put on our skin.

Scientists in the Breast Cancer and the Environment Research Program (BCERP), supported by the National Institutes of Health (NIH), are exploring whether exposure to certain chemicals and foods may change how girls' bodies mature.

This brochure describes how puberty, chemicals, and lifestyle factors are related to breast cancer risk.

More detailed information on these topics is available at www.info.bcerp.org.

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The Puberty Connection

Puberty is a time when a child's body goes through many changes. Both genetics and the environment influence the timing of puberty. While the timing of

puberty is different for every child, experts believe that many girls are entering puberty earlier than in past decades. Other studies have also shown that girls who begin puberty early may be at a greater risk for developing breast cancer later in life.

The Chemical Connection

There has been a worldwide decline in the use of – and exposure to – some chemicals believed to be connected to cancer risk, such as pesticides and persistent organic pollutants like PCBs. Meanwhile, concerns about other chemicals referred to as “endocrine disruptors” have surfaced. These chemicals produce harmful effects in laboratory animals, wildlife, and humans, and may interfere with the normal action of the body’s hormones. BCERP researchers are studying two types of endocrine disruptors more closely: phthalates and bisphenol A (BPA).

Phthalates (THAL-ates) are chemicals in some detergents; personal care products, like fragrances, nail polish, deodorant, hair care products, and body lotions; food and beverage containers; and toys. They may enter a girl’s body through the skin, the air she breathes, the food she eats, and the water she drinks. Plastic food and drink containers and plastic or vinyl toys with the number 3 in the recycling triangle contain phthalates.

BPA (or bisphenol A) is a chemical in some plastic bottles, food and beverage containers, and the lining of cans. It can leak into food and drinks. Plastic food and drink containers with the number 7 in the recycling triangle often contain BPA.

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Children and pregnant or breastfeeding women are especially vulnerable to environmental exposures. Chemicals present in a pregnant or breastfeeding women’s body may enter a baby’s bloodstream before birth or through breast milk. There is evidence that exposure to endocrine disruptors such as phthalates or BPA may change the timing of when a girl gets her first period.

The Lifestyle Connection

Obesity rates have nearly tripled among youth over the past three decades. Today, about one in three children in the United States is considered overweight or obese. The role of body size in breast cancer risk is complex and not fully understood, and it changes throughout a woman’s life. Studies have demonstrated, however, that a girl who is overweight or obese is more likely to develop breasts and get her period at an earlier age. Girls who get their first periods at an earlier age may be at a higher risk of developing breast cancer when they are adults.

Research in animal models has found a link between eating too many foods high in animal fat and changes in mammary gland development that may increase the risk of mammary gland tumors. This research suggests that not only weight but also the type of fats consumed may influence breast cancer risk.

Less physical activity, more consumption of sugary drinks, and diets low in fruits, vegetables, beans, and whole grain products are among the factors that may be associated with the rise in the number of overweight and obese children.

Both healthy eating and being active can help people maintain a healthy weight and body fat level, and may help to reduce the risk of developing breast cancer later in life.

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Things You Can Do Now

While it is too soon to say for sure that avoiding certain chemicals or foods lowers the risk of developing breast cancer, there are steps that the community, health professionals, parents, and their children can take now that may reduce the risk(s) of breast cancer later in life.

For the Community:

- Raise awareness among business leaders about the risks associated with using products that contain endocrine disrupting chemicals, such as phthalates and BPA, and the advantages of using products without these chemicals.
- Encourage healthy lifestyle choices, such as eating healthy and participating in physical activity, for all children.
- Help community leaders to:
 - Learn about the environmental risks associated with breast cancer and their current and potential impact on your community's health.
 - Understand why more scientific research is important and must be supported.
 - Promote awareness of precautionary steps that may lead to reduced breast cancer risk for women in your community, in the United States, and worldwide.

For Health Professionals:

- Communicate with parents and caregivers about the importance of adopting a healthy lifestyle for the entire family.
- Provide parents and caregivers with information about environmental exposures that may affect the risk of developing breast cancer later in life.

For Parents and Caregivers:

- Limit your family's exposure to BPA and phthalates before puberty.

- Help girls maintain a healthy lifestyle before puberty and throughout their lives.
- Talk to health professionals for suggestions to help a child grow up as healthy as possible.

For Pregnant and Breastfeeding Women:

- Limit your exposure to BPA and phthalates while you are pregnant. *(These chemicals may be passed on to your developing baby.)*
- Limit your exposure to BPA and phthalates, especially if you are breastfeeding. *(Some chemicals may be passed on to your child in breast milk.)*

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To learn more, visit:

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Breast cancer is an urgent public health priority. Breast cancer is the second leading cause of cancer deaths in American women.

This publication was made possible by the Breast Cancer and the Environment Research Program grants from the National Institute of Environmental Health Sciences (NIEHS) and the National Cancer Institute (NCI), which are part of the National Institutes of Health (NIH) in the U.S. Department of Health and Human Services (DHHS) and the American Recovery and Reinvestment Act contract #HHSN27320100007OU from NIEHS.

2013