

Background Information for Health Professionals

Public concern about breast cancer is widespread. While researchers have made great strides in understanding a woman's genetic susceptibility to breast cancer, what is not as well understood is the relationship that may exist between environmental factors, personal lifestyle choices, and the risk of developing the disease. Researchers are beginning to recognize that the risk of developing breast cancer may begin early in a girl's life, during times of rapid breast development. Therefore, knowledge of the possible risk factors that may predispose a girl for breast cancer later in life is important for all health professionals, especially those who work with children. While women who have been diagnosed with breast cancer tend to think of recent causes and exposures, accumulating evidence suggests that the origins of breast cancer may have begun many years ago during puberty or *in utero*.

Breast cancer is a complex disease. It is becoming clear that the risk for developing breast cancer could be the result of numerous environmental exposures across the lifespan, acting in concert with an individual's own genetics. Eliminating or reducing exposures may help to reduce risk, but given the complexity of breast cancer and the numerous possible causes for its development, eliminating one possible cause will not necessarily mean eliminating all risk of developing breast cancer.

The Breast Cancer and the Environment Research Program (BCERP) was created through the combined efforts of the National Institute of Environmental Health Sciences (NIEHS) and the National Cancer Institute (NCI) to further the study of how environmental factors during times of rapid breast development may influence breast cancer risk. In this toolkit, the term "environment" refers to a range of factors, including the air we breathe, the food we eat, the water we drink, and things we touch and put on our skin. The focus of the information provided in this toolkit is primarily on the pre-pubertal and pubertal periods, emphasizing key findings from human studies whenever possible, and citing laboratory-based findings when there is little or no human data available.

This toolkit provides family physicians, pediatricians, internists, health educators, nurse practitioners, and other health professionals with an overview of recent research from the BCERP and other scientists. Environmental exposures may have their greatest impact during periods of rapid breast development, such as puberty, and potentially affect breast cancer risk later in life. The NIEHS and NCI provide these materials so that health professionals will be able to better communicate with their patients, the parents of their patients, and other family members and caregivers about breast cancer risk and precautions that may ultimately decrease the risk of developing the disease later in life.

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