Abortion, Miscarriage, and Breast Cancer Risk

Introduction

A woman's hormone levels normally change throughout her life for a variety of reasons, and these hormonal changes can lead to changes in her breasts. Many such hormonal changes occur during pregnancy, changes that may influence a woman's chances of developing breast cancer later in life. As a result, over several decades a considerable amount of research has been and continues to be conducted to determine whether having an induced abortion, or a miscarriage (also known as spontaneous abortion), influences a woman's chances of developing breast cancer later in life.

Current Knowledge

In February 2003, the National Cancer Institute (NCI) convened a workshop of over 100 of the world's leading experts who study pregnancy and breast cancer risk. Workshop participants reviewed existing population-based, clinical, and animal studies on the relationship between pregnancy and breast cancer risk, including studies of induced and spontaneous abortions. They concluded that having an abortion or miscarriage does not increase a woman's subsequent risk of developing breast cancer. A summary of their findings, titled *Summary Report: Early Reproductive Events and Breast Cancer Workshop,* can be found at http://www.cancer.gov/cancertopics/ere-workshop-report.

NCI regularly reviews and analyzes the scientific literature on many topics, including various risk factors for breast cancer. Considering the body of literature that has been published since 2003, when NCI held this extensive workshop on early reproductive events and cancer, the evidence overall still does not support early termination of pregnancy as a cause of breast cancer. To view regular updates on this topic, please go to http://www.cancer.gov/cancertopics/pdq/prevention/breast/HealthProfessional/page2#Section_280.

Background

The relationship between induced and spontaneous abortion and breast cancer risk has been the subject of extensive research beginning in the late 1950s. Until the mid-1990s, the evidence was inconsistent. Findings from some studies suggested there was no increase in risk of breast cancer among women who had had an abortion, while findings from other studies suggested there was an increased risk. Most of these studies, however, were flawed in a number of ways that can lead to unreliable results. Only a small number of women were included in many of these studies, and for most, the data were collected only after breast cancer had been diagnosed, and women's histories of miscarriage and abortion were based on their "self-report" rather than on their medical records. Since then, better-designed studies have been conducted. These newer studies examined large numbers of women, collected data before breast cancer was found, and gathered medical history information from medical records rather than simply from self-reports, thereby generating more reliable findings. The newer studies consistently showed no association between induced and spontaneous abortions and breast cancer risk.

Ongoing Research Supported by the National Cancer Institute

Basic, clinical, and population research will continue to be supported to investigate the relationship and the mechanisms of how hormones in general and during pregnancy influence the development of breast cancer.

Important Information About Breast Cancer Risk Factors

At present, the factors known to increase a woman's chances of developing breast cancer include age (a woman's chances of getting breast cancer increase as she gets older), a family history of breast cancer, an early age at first menstrual period, a late age at menopause, a late age at the time of birth of her first full-term baby, and certain breast conditions. Obesity is also a risk factor for breast cancer in postmenopausal women. More information about breast cancer risk factors is found in NCI's publication *What You Need To Know About™ Breast Cancer*.

Important Information About Identifying Breast Cancer

NCI recommends that, beginning in their 40s, women receive mammography screening every year or two. Women who have a higher than average risk of breast cancer (for example, women with a family history of breast cancer) should seek expert medical advice about whether they should be screened before age 40, and how frequently they should be screened.

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Related NCI materials and Web pages:

- *Reproductive History and Breast Cancer Risk* Fact Sheet (http://www.cancer.gov/cancertopics/factsheet/Risk/reproductive-history)
- *What You Need To Know About™ Breast Cancer* (http://www.cancer.gov/cancertopics/wyntk/breast)

How can we help?

We offer comprehensive research-based information for patients and their families, health professionals, cancer researchers, advocates, and the public.

- ***Call*** NCI's Cancer Information Service at 1–800–4–CANCER (1–800–422–6237)
- ***Visit*** us at http://www.cancer.gov or http://www.cancer.gov/espanol
- ***Chat*** using LiveHelp, NCI's instant messaging service, at http://www.cancer.gov/livehelp
- ***E-mail*** us at cancergovstaff@mail.nih.gov
- ***Order*** publications at http://www.cancer.gov/publications or by calling 1–800–4–CANCER
- ***Get help*** with quitting smoking at 1–877–44U–QUIT (1–877–448–7848)

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