

Press Release
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New Research Finds Girls are Starting Puberty Early

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Girls are starting puberty early, according to new research from the Breast Cancer and the Environment Research Centers (BCERCs). More girls are experiencing the onset of breast development at age 7 and 8, compared to those in a study conducted more than 10 years ago and another study conducted 30 years earlier. The change was especially notable for white girls.

The research published online in the Aug. 9, 2010, issue of *Pediatrics*, shows that 10% of white girls, 23% of black girls, 15% of Hispanics girls and 2% of Asian girls in the BCERC study had started breast development by age 7. Previous studies found that 5% of white girls and 15% of black girls had started breast development at age 7. The current study is one of the first to report on age of onset of puberty for Hispanic and Asian girls.

The age of onset of puberty in girls has fallen in the past two decades and it is continuing to fall in white but not black girls, although black girls still mature at younger ages than white girls. The researchers used well-established criteria of pubertal maturation, including the five stages of breast development known as the Tanner Breast Stages.

There were 1,239 girls between the ages of 6 and 8 from the San Francisco Bay Area, the Cincinnati area, and East Harlem, N.Y. who participated in the study. Some regional differences were found—the girls in the Bay Area were less likely to have experienced onset of puberty at age 7 or 8 years than the girls in Cincinnati or New York.

“This study is an initial description of maturation status of girls in the BCERC Epidemiology Studies, including the Bay Area's CYGNET Study that demonstrates that girls appear to be maturing earlier than previous studies have shown. These differences over time were most striking for white girls, whereas the proportion of African American girls who started puberty at age 8 years were similar to a survey conducted in the mid-1990's,” said Dr. Lawrence H. Kushi, Associate Director for Epidemiology at the Division of Research, Kaiser Permanente Northern California and a co-author of the study.

Dr. Louise C. Greenspan, a Pediatric Endocrinologist at Kaiser Permanente San Francisco and a co-author of the study said, “Pediatricians have been using age 8 as the minimum age for normal breast development. The data from this study suggest that there is a true trend to earlier puberty in girls. Obesity and ethnic differences are contributing, and further analysis of our longitudinal data will allow us to investigate the root causes, including differences in nutritional intake, built environment, and chemical exposures.”

Other research has established a clear link between an earlier age of menarche (first menstrual period) and an increased risk of breast cancer in adult life. “Understanding the role of environment in adult breast cancer may best come from these types of detailed studies of early development. Ultimately we hope that our increased understanding about the role of the environment in early development can be turned into methods for breast cancer prevention,” said Dr. Robert A. Hiatt, Director of the Bay Area Breast Cancer and the Environment Research Center and Deputy Director of the UCSF Helen Diller Family Comprehensive Cancer Center.

Biro FM, Galves M, Greenspan LC, Succop P, Vangeepuram N, Pinney S, Teitelbaum S, Windham G, Kushi L, Wolff MS. Pubertal assessment methodology and baseline characteristics in a mixed longitudinal study of girls. *Pediatrics* 126, Sept 2010.

The Breast Cancer and the Environment Research Centers are four centers nationwide that study how the chemical, physical, and social factors in the environment interact with genetic factors to affect mammary gland development during puberty and across the lifespan in ways

that can alter breast cancer risk in later life. The four Centers are located at the University of California San Francisco/Bay Area Center, the University of Cincinnati, Michigan State University, and the Fox Chase Cancer Center in Philadelphia. For more information visit www.bcerc.org

The Bay Area Breast Cancer and the Environment Research Center (BABCERC) is based at the University of California, San Francisco, under the leadership of Dr. Robert A. Hiatt, Deputy Director of the UCSF Helen Diller Family Comprehensive Cancer Center. The Center includes a basic science project, an epidemiology project, and the community outreach and translation core. It is a collaborative project involving the University of California, San Francisco, Kaiser Permanente, Northern California, California Department of Public Health and Zero Breast Cancer. More information about the BABCERC can be found on its Web site: <http://bayarea.bcerc.org>