

Fact Sheet: The Lifestyle Connection



Body Size and Breast Cancer

- The role of body size in breast cancer risk is complex and not fully understood, and it changes throughout a woman's life.
- Girls with a higher body mass index (BMI) are more likely to have an early first period.
 - BMI is a number calculated from a child's height and weight. It provides a reliable indicator of body fatness for most children and teens and is often used to screen for overweight and obesity, which may lead to health problems. For children and teens, BMI is age- and sex-specific and is often referred to as "BMI-for-age."
 - Girls who begin puberty early may be at a greater risk for developing breast cancer later in life.¹
- Today, about one in three children in the United States is considered overweight or obese.²
 - Obesity rates have nearly tripled among youth over the past three decades.²
 - Studies have examined several factors predisposing children to increases in BMI, including increases in total calories and in consumption of fast foods, decreases in physical activity, and, a factor not totally independent of the first two, an increase in hours spent watching television.³

Diet and Breast Cancer

- 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.
 - Studies conducted in laboratory animal studies suggest that high fat diets may cause the animals to mature earlier than animals fed a standard diet.⁴⁻⁵
- Some studies in humans have indicated that breast cancer risk is lower among women whose dietary intake was higher in soy during puberty and adolescence.⁶⁻⁷

Living a Healthy Lifestyle

- 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.⁸
- Healthy eating guidelines include:⁹

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- Emphasizing fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products;
- Including lean meats, poultry, fish, beans (including soy), eggs, and nuts;
- Choosing foods that are low in animal fats, cholesterol, salt (sodium), and added sugars.
- Healthy foods come in a variety of forms and a range of prices that likely fit just about anyone's budget.¹⁰
- Regular physical activity can help people of all ages, shapes, sizes, and abilities stay healthy.¹¹
 - It is recommended that children from 6 to 17 engage in physical activity for periods of time that add up to about an hour each day.
 - People who have disabilities or special conditions (pregnancy, chronic medical conditions) should discuss with their healthcare provider what types and amounts of physical activities are appropriate for them.
- Parents are encouraged to lead a healthy lifestyle as an example for their children, by choosing healthy foods and being physically active themselves.

To learn more, visit www.info.bcerp.org

¹ Claudio, L. (2007). Centered on Breast Cancer. *Environmental Health Perspectives*, 115 (3), A132-133.

² Barlow, S. E., & The Expert Committee. (2007). Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. *Pediatrics*, 120 (Supplement 4), S164-S192.

³ Biro, F., Khoury, P., & Morrison, J. (2006). Influence of obesity on timing of puberty. *International Journal of Andrology*, 29 (1), 272-277.

⁴ Medvedovic, M., Gear, R., Freudenberg, J., Schneider, J., Bornschein, R., Yan, M., et al. (2009). Influence of fatty acid diets on gene expression in rat mammary epithelial cells. *Physiological Genomics*, 38, 80-88.

⁵ Olson L.K., Tan Y., Zhao Y., Aupperlee M.D., & Haslam S.Z. (2010) Pubertal exposure to high fat diet causes mouse strain-dependent alterations in mammary gland development and estrogen responsiveness. *International Journal of Obesity*, 34(9), 1415–1426. doi: 10.1038/ijo.2010.51

⁶ Lee, A., Shu X., Li, H., Yang, G., Cai, H., Wen, W., et al. (2009). Adolescent and adult soy food intake and breast cancer risk: results from the Shanghai Women's Health Study. *The American Journal of Clinical Nutrition*, 89(6), 1920-6.

⁷ Korde, L., Wu, H., Fears, T., et al. (2009). Childhood soy intake and breast cancer risk in Asian American women. *Cancer Epidemiol Biomarkers Prev*, 18: 1050-9

⁸ Kushi, L. H., Doyle, C., McCullough, M., Rock, C. L., Demark-Wahnefried, W., Bandera, E. V., et al. (2012). American Cancer Society guidelines on nutrition and physical activity for cancer prevention. *CA: A Cancer Journal for Clinicians*, 62 (1), 30–67. doi: 10.3322/caac.20140.

⁹ U.S. Department of Agriculture and U.S. Department of Health and Human Services. (2010). *Dietary Guidelines for Americans, 2010* (7th ed). U.S. Government Printing Office.

¹⁰ Lino, M. (2011, August 25). *USDA Blog: Nutrition Doesn't Have to be Expensive*. Retrieved September 21, 2012, from the United States Department of Agriculture Web site: <http://blogs.usda.gov/2011/08/25/nutrition-doesn%E2%80%99t-have-to-be-expensive/>

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¹¹ U.S. Department of Health and Human Services. (2008). *2008 Physical Activity Guidelines for Americans* (ODPHP Publication No. U0036 ed.).

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