

The Case for Soccer:
How Exercise, Diet May Cut
Girls' Later Breast-Cancer Risk
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Most women start worrying about breast cancer in their 40s, a time when doctors start to recommend regular mammograms.

But a growing body of evidence shows that a woman's risk for breast cancer may be determined far earlier in life. Cellular changes that can lead to cancer likely begin in childhood when breast tissue is just beginning to develop.

So while strategies like diet, exercise and -- for high-risk women -- prevention drugs like Tamoxifen may help stave off breast cancer in midlife, scientists are also beginning to look at prevention efforts for young girls. What's increasingly clear is that the health decisions parents make for their daughter in preschool, adolescence and the late teen years have the potential to dramatically alter her risk for breast cancer as she becomes a woman.

To understand why, it helps to know how breast tissue develops. During early childhood, breast tissue is mostly dormant until the pituitary gland and ovaries produce enough hormones, including estrogen, to accelerate breast growth. This happens when a girl starts menstruating and continues for several years. This stretch of rapid cell growth appears to be a particularly vulnerable one for the breast, and may be the time when the first cellular changes that can lead to breast cancer are most likely to occur. As a result, health behaviors at a young age may have a particularly big impact on a girl's lifetime risk, and girls with a high family risk for breast cancer may reap even greater benefits.

Here are some theories on what parents can do to lower their daughters' risk.

Encourage exercise at a young age. Exercise early in life appears to lower a girl's hormone levels, and potentially delay the onset of her first period. The average age of first period today is about 12, but some girls start periods as early as nine or 10. Girls who don't get their periods until the age of 13 or 14 have a lower lifetime risk for breast cancer.

Exercise before puberty lowers body fat and also damps down hormone production by the pituitary gland, keeping hormone levels low longer and thereby delaying menstruation. "It's important to start things young," says Anne McTiernan, director of the Prevention Center at the Fred Hutchinson Cancer Center in Seattle and author of the book "Breast Fitness." Dr. McTiernan suggests an hour of daily exercise for girls, including recess and gym class.

The benefit of exercise continues into the teen years even after a girl starts her period, possibly by lowering body fat, which produces estrogen. Some of the most compelling evidence that athleticism in the late teen years influences breast-cancer risk comes from

studies by Harvard researchers looking at breast-cancer risk among 5,400 former college athletes and nonathletes. The college athletes, the vast majority of whom also took part in high-school sports, had a dramatically lower risk for breast cancer. Among women of all ages, breast-cancer risk was 40% lower among former college athletes.

To help kids stay active, try signing them up for the same sports and lessons their friends are taking. A Purdue University study of sixth graders found that the most physically active kids were those who had a close friend taking part in the same activity. Parents who exercise are also more likely to have kids who exercise.

Limit Junk Food. Some research suggests that diet early in life and into adolescence can influence breast-cancer risk. In February, a Harvard study suggested a child's preschool diet could affect breast-cancer risk. Women who frequently ate french fries in preschool had a 27% higher risk for breast cancer as adults.

Modest reductions in fat intake during puberty can lower levels of hormones in a girl's body. Girls who eat diets higher in fiber appear to get their first period later. Some evidence suggests that increasing soy in the teen diet can also lower long-term breast cancer risk. Even though the data on adolescent diet and breast-cancer risk are mixed, it makes sense to encourage girls to eat fruits and vegetables and avoid unhealthy fats.

"It's not going to hurt girls to have these foods in their diet," says Sally Scroggs, senior health education specialist at University of Texas M.D. Anderson Cancer Center, Houston.

Talk about alcohol. It's already clear that women who drink more than one serving of alcohol a day have a higher risk for breast cancer. But some data suggest that the age at which a woman starts drinking influences risk. Teens and young women who consume high levels of alcohol before the age of 25 may be at higher risk for breast cancer. When talking to kids about drinking, parents should tell daughters that lower breast-cancer risk is among the many potential benefits of responsible drinking.

Discuss birth-control options. It's a controversial notion, but the use of birth-control pills during the teen years may also increase risk for breast cancer. An analysis of more than 150,000 women around the world showed women who started using oral contraceptives as teenagers were at higher risk for breast cancer than women who started the pill later in life. The increased risk is slight, so the tradeoff for preventing an unwanted teen pregnancy may be worth it to many parents. But teenagers also need to be concerned about sexually transmitted diseases, so for sexually active girls, condoms may be a better choice.

The bottom line is that it's never too early to start thinking about a girl's long-term breast health. To get a better sense of your overall risk for breast cancer, take the quiz at www.yourdiseaserisk.com2.