



*Who knew kicking a soccer ball could decrease her risk of developing breast cancer?*

Helping your daughter maintain a healthy weight and stay physically active may lower her risk of breast cancer later in life.

## Who knew kicking a soccer ball could decrease her risk of developing breast cancer?

We all know that physical activity is important and has many health benefits. It can improve endurance and muscular fitness, affect body composition, improve bone health, and improve the cardiovascular system. However, what many of us don't know is that physical activity also reduces girls' future risk of developing breast cancer later in life. Read more to learn about how physical activity lowers girls' future risk of developing breast cancer later in life.

### How does exercise affect breast cancer risk?

Researchers believe that breast cancer risk is directly related to the total number of ovulatory cycles a woman experiences during her lifetime and anything that can reduce the number of ovulatory cycles may decrease a woman's risk for breast cancer. During adolescence, moderate physical activity may be one way to decrease breast cancer risk because it can reduce the frequency of ovulatory cycles in young girls.<sup>i</sup> Strenuous physical activity, however, can delay the onset of menstruation.<sup>ii</sup>

### What evidence is there for this theory?

In one study researchers monitored 168 high school girls for 6 months and found that as girls exercised more, they experienced more menstrual cycles without ovulation.<sup>iii</sup>

In another study, researchers compared women with breast cancer and those without it. The researchers found that the number of hours a woman was physically active per week from when she started menstruation until one year before a breast cancer diagnosis was strongly linked to reduced breast cancer risk even when controlling for other factors.<sup>iv</sup>

Other researchers interviewed women with breast cancer and those without breast cancer in a study published in 1995. These researchers found that women who reported any strenuous physical activity during ages 14 to 22 years old had a modest reduction in the risk of breast cancer but those who exercised vigorously at least once a day had a 50% reduction in breast cancer risk.<sup>v</sup>

More recently, a review of 19 research studies focused on physical activity and breast cancer risk in adolescence and young adulthood found a nearly 20% reduction in breast cancer risk between those who were the most active and those who were the least active. In addition, each one-hour increase of recreational physical activity per week during adolescence was associated with a 3% reduction in risk.<sup>vi</sup>

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breast cancer

## How active should my daughter be?

According to the guidelines set by the U.S. Department of Health and Human Services, children and adolescents (age 6 to 17) should get **1 hour or more of physical activity every day**. Most of the 1 hour or more a day of physical activity should be either moderate- or vigorous-intensity aerobic physical activity. As part of their daily physical activity, children and adolescents should do vigorous-intensity activity at least 3 days per week. They also should do muscle-strengthening and bone-strengthening activities on at least 3 days per week.

## What can I do to help my daughter become more active?

1. Sign her up for a sport or activity she enjoys. Soccer is just one example of a sport or activity in which your daughter can participate.
  - Walking, dancing, leisurely bicycling, ice and roller skating, horseback riding, canoeing, yoga, volleyball, golf, softball, badminton, doubles tennis and downhill skiing are considered moderate intensity physical activities.
  - Jogging or running, fast bicycling, circuit weight training, aerobic dance, martial arts, jumping rope, swimming, soccer, field or ice hockey, lacrosse, singles tennis, racquetball, basketball, and cross-country skiing are considered vigorous intensity physical activities.
2. Incorporate physical fitness into family and everyday activities. For example, try hiking with your family or next time you head to the library, walk there together.
3. Limit her screen time to two hours or less per day. Screen time includes time spent watching TV, on computers and playing video games.
4. Be a role model for your daughter by being physically active yourself.

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<sup>i</sup> Henderson BE, Ross RK, Judd HL, Krailo MD & Pike MC. (1985). Do regular ovulatory cycles increase breast cancer risk? *Cancer*, 56, 1206.

<sup>ii</sup> Warren, M.P. (1980). The effects of exercise on pubertal progression and reproductive function in girls. *Journal of Clinical Endocrinology Metabolism*, 51, 1150–1157.

<sup>iii</sup> Bernstein L, Ross RK, Lobo RA, Hanisch R, Krailo MD & Henderson BE. (1987). The effects of moderate physical activity on menstrual cycle patterns in adolescence: Implications for breast cancer prevention. *Br. J. Cancer*, 55, 681-685.

<sup>iv</sup> Bernstein L, Henderson BE, Hanisch R, Sullivan-Halley J, Ross RK. (1994). Physical exercise and reduced risk of breast cancer in young women. *J Natl Cancer Inst*, 86, 1403-1408.

<sup>v</sup> Mittendorf R, Longnecker MP, Newcomb PA, Dietz AT, Greenberg ER, Bogdan GF, Clapp RW & Willett WC. (1995). Strenuous physical activity in young adulthood and risk of breast cancer (United States). *Cancer Cases and Controls*, 6, 347-353.

<sup>vi</sup> Lagerros YT, Hsieh SF & Hsieh CC (2004). Physical activity in adolescence and young adulthood and breast cancer risk: a quantitative review. *European Journal of Cancer Prevention*, 13(1), 5-12.