Girls, Young Women Can Cut Risk of Early Breast Cancer through Regular Exercise

ScienceDaily (May 14, 2008) – Mothers, here's another reason to encourage your daughters to be physically active: girls and young women who exercise regularly between the ages of 12 and 35 have a substantially lower risk of breast cancer before menopause compared to those who are less active, new research shows.

In the largest and most detailed analysis to date of the effects of exercise on premenopausal breast cancer, the study of nearly 65,000 women found that those who were physically active had a 23 percent lower risk of breast cancer before menopause. In particular, high levels of physical activity from ages 12 to 22 contributed most strongly to the lower breast cancer risk.

The study is by researchers at Washington University School of Medicine in St. Louis and Harvard University in Boston. "We don't have a lot of prevention strategies for premenopausal breast cancer, but our findings clearly show that physical activity during adolescence and young adulthood can pay off in the long run by reducing a woman's risk of early breast cancer," says lead investigator Graham Colditz, M.D., Dr. P.H., the Niess-Gain Professor and associate director of Prevention and Control at the Siteman Cancer Center at Washington University School of Medicine and Barnes-Jewish Hospital. "This is just one more reason to encourage young girls and women to exercise regularly."

One-fourth of all breast cancers are diagnosed in women before menopause. Numerous studies have shown that physical activity reduces the risk of postmenopausal breast cancer, but the few studies that have looked at the influence of exercise on breast cancer risk before menopause have produced conflicting results.

For the current analysis, researchers examined data on a subset of women enrolled in the Nurses' Health Study II, a prospective study of registered nurses ages 24 to 42. These 64,777 women had filled out detailed annual questionnaires about their levels of physical activity from age 12 on. After six years of follow-up, 550 women had been diagnosed with breast cancer.

The researchers found the age-adjusted incidence rates for invasive breast cancer dropped from 194 cases per 100,000 person-years in the least active women to 136 cases in the most active. The levels of physical activity reported by the most active women were the equivalent of running 3.25 hours a week or walking 13 hours a week. The benefit of exercise was not linked to a particular sport or intensity but related to total activity.

"You don't have to be a marathon runner to get the risk-reducing benefits of exercise," Colditz adds.

One leading theory to explain the lower risk of breast cancer among active young women is that exercise reduces their exposure to estrogens. Numerous studies have shown that the more estrogen a woman is exposed to, the greater her risk for breast cancer. Thus, women who begin menstruating later or enter menopause early have a lower risk of breast cancer. And young women who are physically active are more likely to start their periods later and less likely to have regular cycles when they begin their periods.

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Journal reference:

Maruit, S.S., Willett, W.C., Feskanich, D., Rosner, B., Colditz, G.A. A prospective study of age-specific physical activity and premenopausal breast cancer. Journal of the National Cancer Institute. May 13, 2008 (advance online publication).