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Clinical trial to investigate whether exercise reduces breast-cancer risk

DALLAS – Nov. 13, 2007 – UT Southwestern Medical Center researchers are recruiting breast-cancer survivors to determine whether a six-month aerobic exercise program reactivates genes that can help suppress breast cancer.

Women who have survived one breast cancer are at a particularly high lifetime risk for developing a second primary breast tumor. This study aims to understand the connection between genes that suppress breast cancer, estrogen, exercise and breast cancer.

“Since there is little to offer breast-cancer patients to reduce the risk of a recurrence once their primary therapy is completed, we’re investigating whether exercise could serve as an intervention,” said Dr. Yvonne Coyle, associate professor of internal medicine and the trial’s principal investigator.

Recent research has shown that the hormone estrogen can increase breast-cancer risk by deactivating genes in breast tissue that suppress breast-cancer development. When estrogen silences these so-called tumor-suppressor genes by a process called methylation, the risk for breast cancer increases.

Previous studies have shown that exercise reduces the level of estrogen. Dr. Coyle has found that the more a woman exercises, the less likely she is to have a particular cancer-suppressor gene methylated.

In this clinical study, about 30 participants first will be tested to see whether their tumor-suppressor genes have been methylated. Those with methylated genes then will be randomly assigned to either an aerobic exercise or stretching exercise program.

After six months, Dr. Coyle and her team will re-test the participants to determine whether the exercise regimen reduced estrogen levels and reduced or reversed the inactivation of tumor-suppressor genes in breast tissue.

To be eligible, participants must be between the ages of 25 and 65, have breast cancer in remission and have finished treatment for breast cancer for at least one year, including anti-estrogen therapy.

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The exercise program includes 150 minutes of exercise per week divided into five 30-minute sessions for the aerobic exercise portion and three 50-minute sessions for the stretching exercise. For those in the aerobic exercise program, two of the sessions will include 30 minutes of weight training. There is no cost to participate in the study.

For more information about the clinical trial, call 214-648-6449.

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