Daily Aspirin Reduces Hormone-Sensitive Breast Cancer Risk

New research backs the idea that aspirin protects against estrogen receptor-positive breast cancer, a hormone-sensitive malignancy that makes up 75% of all cases of the disease.

In this large-scale, long-term study, researchers from the National Cancer Institute evaluated questionnaire-based data on diet, demographics, and medication usage from over 127,000 women who were cancer-free at the start of the study. After seven-year follow-up, using cancer registry information, the researchers found that women who reported daily aspirin use had a 16% lower risk of estrogen-receptor positive breast cancer than women who did not use the drug.

The researchers also evaluated other types of non-aspirin anti-inflammatory drugs, which were found to have no significant association with breast cancer risk. Aspirin is a non-steroidal anti-inflammatory drug (NSAID), but unlike other drugs in this class, it irreversibly inhibits an enzyme called cyclooxygenase-2 (COX-2), which may interrupt the carcinogenic process by a number of pathways, including suppression of estrogen synthesis.

This study also supports other findings that aspirin reduces the risk of hormone-sensitive breast cancer.1

Coenzyme Q10 Relieves Muscle Damage in Athletes

Coenzyme Q10 (CoQ10) supplementation significantly reduces muscle injury and oxidative stress due to intensive exercise, a new study reveals.1

In this double-blind study, 18 elite athletes took 300 mg/day of CoQ10 or placebo for 20 days, during which time they exercised intensively for 5.5 hours daily for six days. Various blood markers of muscle wear and tear and oxidative stress were measured before, during, and after the study period.1

Myoglobin and creatine kinase, proteins that indicate muscle damage, increased in both groups, but the increase was significantly less in the CoQ10 group. Levels of lipid peroxide, a measure of oxidative stress, were also lower among subjects taking CoQ10 than among control subjects.1

These results complement recent findings that CoQ10 supplementation may reduce exercise-induced fatigue and improve physical performance.2,3

—Dale Kiefer


Anthocyanins Show Promise for Obesity

Anthocyanins, the colorful antioxidant pigments contained in many fruits and vegetables, help regulate adipocyte function and obesity in mice, according to a recent study.* Adipocyte (fat cell) dysfunction promotes obesity, which in turn is a major risk factor for metabolic syndrome and insulin resistance.

Four groups of mice (six each) were fed a control diet, control + anthocyanins, high-fat diet, or high-fat + anthocyanins. At 12 weeks, mice in the high-fat group weighed significantly more than all three other groups, suggesting that the anthocyanins prevented weight gain in the high-fat + anthocyanins group. Hypertrophy (size increase) of adipocytes occurred in the high-fat group, but not the high-fat + anthocyanins group. In a DNA analysis of human adipocytes, incubation with anthocyanins down-regulated the expression of inflammatory cytokines. The anthocyanins used in this study were derived from purple corn; berries are another rich source of anthocyanins.

According to the author, dietary anthocyanins have “a significant potency for anti-obesity.”

—Laura J. Ninger, ELS
