Breast Cancer risk were measured across both Exercise weight-loss program or a standard diet assigned to either a calorie-restricted and exercise program. Biomarkers for breast cancer risk for the women in the study who lost 5% or more of their body weight.

Lower Levels of Dense Breast Tissue Are Associated With Higher Physical Activity

Dense breast tissue is associated with an increased risk of breast cancer. Data from the Health, Eating, Activity, and Lifestyle Study indicate that lower amounts of dense breast tissue are associated with higher physical activity levels, suggesting a link between physical activity and breast cancer risk. Researchers from Yale University in New Haven, CT, examined data collected from 1,223 women on physical activity, diet, weight, hormones, breast density, and other factors that affect breast cancer prognosis among newly diagnosed patients with breast cancer. Physical activity and breast density data were obtained from information and mammograms from the year prior to diagnosis. The analysis demonstrated a statistically significant 17% difference in breast tissue density comparing the least active and most active premenopausal women with body mass index (BMI) scores less than 30. Postmenopausal women or those with BMI scores greater than 30 did not show this association. The authors concluded that this study provides evidence of the benefit of regular exercise and could be used to motivate women to be more physically active.

Lower Breast Cancer Risk Is Associated With Intake of Fruits and Vegetables

Researchers from the School of Medicine at Oregon Health and Science University in Portland presented results from a study that suggest that women who consume fruits and vegetables daily may have significantly lower breast cancer risk. In this study, the dietary habits of 378 women in Shanghai, China, who had been diagnosed with breast cancer were compared with those of 1,070 age-matched women who did not have breast cancer. An in-depth food frequency questionnaire that recorded factors such as food groups and caloric intake was used to assess dietary intake. The consumption of four or more servings of fruits and vegetables per day was associated with reduced breast cancer risk. No association existed between the intake of soy or soy products and breast cancer risk. The researchers concluded that this study reinforces the importance of fruits and vegetables for disease prevention.

Green Tea Polyphenols May Protect Against Liver Cancer in High-Risk Patients

DNA damage by oxygen free radicals is associated with tumor formation. Urinary 8-OHdG can be used as a measure of this damage. Green tea polyphenols (GTP) inhibit a variety of tumors in model systems, including liver tumors. Researchers from Texas Tech University in Lubbock investigated the effect of GTP on liver cancer biomarkers and urinary 8-OHdG. In their study, 124 people aged 20–55 with positive reactions for hepatitis-B surface antigen and aflatoxin, a poisonous substance produced by mold, were assigned randomly to three groups. Group 1 received low-dose GTP (500 mg, n = 42), group 2 received high-dose GTP (1,000 mg, n = 41), and group 3 served as the control, receiving a placebo (n = 41). Urine samples were collected at baseline, one month, and three months to assess urinary 8-OHdG and GTP biomarkers. Blood and urine samples were collected at baseline, one month, and three months to assess aflatoxin biomarkers. Baseline GTP biomarkers were similar in all three groups. At one and three months, urinary GTP biomarkers were elevated significantly in both treatment groups compared to the control group. In addition, urinary 8-OHdG and the aflatoxin biomarkers were greatly reduced in the GTP-treated groups at three months compared to the control group. The results suggest that GTP may play a role in liver cancer prevention.

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