

OBESITY FACTORS (PHYSICAL ACTIVITY AND USUAL DIETARY PATTERN) AND BREAST CANCER IN KOREA

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Abstract

Introduction. This study sought to evaluate the association between obesity factors (food consumption and physical activity) and breast cancer incidence in Korean women. **Material and methods.** The study included breast cancer patients (250 women) and normal participants undergoing medical checkups (250 women) who visited a specialized cancer research hospital between August 1, 2016 and February 15, 2017. Nutrient intake was assessed using a validated food frequency questionnaire (FFQ) covering 112 dishes and foods that Koreans often eat. Physical activity was assessed according to the International Physical Activity Questionnaire (IPAQ) guidelines and was quantified as metabolic equivalent (MET) scores. **Results.** The results for nutrient intake obtained using the FFQ showed that the control group had a higher consumption of dietary fiber ($p < 0.004$) and a lower intake of animal fat ($p < 0.02$) than the breast cancer group. Among breast cancer patients, pre-menopausal women consumed more animal fat ($18.6 \text{ g} \pm 11.9$ vs. $14.7 \text{ g} \pm 8.5$, $p < 0.03$) than post-menopausal ones. An analysis of the MET scores with logistic regression revealed that lower physical activity among cancer patients was associated with an increased risk of breast cancer, and this association was greater among post-menopausal (OR = 2.11, $p < 0.001$) than pre-menopausal women (OR = 0.85, $p < 0.02$). **Conclusion.** Having a high-fat diet and doing less exercise increases the risk of breast cancer, so it is important to prevent the accumulation of fat and maintain proper weight through regular physical activity to lower the incidence of breast cancer.

Key words: breast cancer, diet, FFQ, MET, obesity