

Abstract

Dietary Fat Intake: Associations with Dietary Patterns and Postmenopausal Breast Cancer. A Case-Control Study [†]

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Abstract: Breast cancer is the most common cancer in females worldwide. Although fat has been hypothesized to be involved in breast cancer etiology, the results of available studies are inconclusive. The aim of this study was to assess the associations of the individual's percentage energy from dietary fat (Pfat) with dietary patterns (DPs), and occurrence of the peri- and postmenopausal breast cancer (BC). This case-control study obtained 420 women aged 40–79 years from north-eastern Poland, including 190 newly diagnosed BC cases. Dietary data were collected using a food frequency questionnaire (62-item FFQ-6[®]). The Quick Food Scan of the National Cancer Institute, and the Percentage Energy from Fat Screener scoring procedures were used to estimate Pfat. The odds of BC occurrence was three-times higher in the upper tertile of Pfat >32% (OR: 3.00; 95%CI: 1.66–5.41; $p < 0.001$; reference: bottom tertile < 30%). The odds of Pfat >32% was higher in the upper tertile of the 'Non-Healthy' DP (OR: 11.02; 95%CI: 5.17–23.50; $p < 0.001$; reference: bottom tertile). The odds of Pfat >32% was lower in the higher level of the Polish-aMED[®] score (5–8 points; OR: 0.19; 95%CI: 0.11–0.33; $p < 0.001$; reference: lower level 0–4 points), lower with a one-point increase of the 'Prudent' DP (OR: 0.80; 95%CI: 0.64–0.99; $p < 0.05$), and lower in the middle tertile of the 'Dressings and sweetened-low-fat dairy' DP (OR: 0.29; 95%CI: 0.15–0.55; $p < 0.001$; reference: bottom tertile). In conclusion, higher dietary fat intake may contribute to an increased occurrence of peri- and postmenopausal breast cancer. Given that dietary pattern characterized by the consumption of highly processed, high in sugar and animal fat foods was positively linked with dietary fat intake, it is important to avoid this unhealthy diet in breast cancer prevention. Instead, dietary patterns characterized by the frequent consumption of low-processed plant foods and fish, and moderate consumption of low-fat dairy should be recommended since this pro-healthy diet was inversely associated with dietary fat intake.

Keywords: breast cancer; fat intake; dietary pattern; Mediterranean diet; women