

Helping women to good health: breast cancer, omega-3/omega-6 lipids, and related lifestyle factors

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Abstract

In addition to genetic predisposition and sex hormone exposure, physical activity and a healthy diet play important roles in breast cancer (BC). Increased intake of omega-3 fatty acids (n-3) associated with decreased omega-6 (n-6), resulting in a higher n-3/n-6 ratio compared with the western diet, are inversely associated with BC risk, as shown by Yang *et al.* in their meta-analysis in *BMC Cancer*. High consumption of polyphenols and organic foods increase the n-3/n-6 ratio, and in turn may decrease BC risk. Intake of high fiber foods and foods with low glycemic index decreases insulin resistance and diabetes risk, and in turn may decrease BC risk. The modernized Mediterranean diet is an effective strategy for combining these recommendations, and this dietary pattern reduces overall cancer risk and specifically BC risk. High-risk women should also eliminate environmental endocrine disruptors, including those from foods. Drugs that decrease the n-3/n-6 ratio or that are suspected of increasing BC or diabetes risk should be used with great caution by high-risk women and women wishing to decrease their BC risk.

Please see related article: <http://www.biomedcentral.com/1471-2407/14/105/abstract>.

Keywords: Polyphenols, Organic foods, Endocrine disruptors, Insulin, Diabetes, Cholesterol, Hypertension, Mediterranean diet

Introduction

Breast cancer (BC) remains one of the commonest cancers – one in eight women will be diagnosed with BC in her lifetime [1] – and a leading cause of death from cancer. However, it remains a significant scientific and medical challenge. One of the crucial gaps identified is how to implement a sustainable preventive lifestyle strategy [2]. Both risk factors and protective factors must be considered. Some risk factors, such as genetic predisposition, cannot be modified, whereas others (unhealthy diet, sedentary lifestyle) can be avoided. Increasing protective factors may be crucial for women at high risk (as evaluated by the National Cancer Institute's (NCI's) BC Risk Assessment Tool [3]) and in preventing recurrence and improving survival after BC diagnosis. Decreasing the length of time a woman's breast tissue is exposed to estrogens may help prevent BC [1-3], although

the main ways of achieving this (first pregnancy before the age of 20 years, breast feeding, late menstruation and early menopause) are difficult to control.

There are strong links between environmental/lifestyle factors and BC, suggesting that modifying these factors may result in decreasing BC risk, although there has been no randomized trial that clearly demonstrated this. As changing these factors has been shown also to definitely reduce the risk of fatal diseases, notably cardiovascular diseases in randomized trials, it is reasonable to propose these changes to high-risk women and to women who wish to reduce their BC risk.

For instance, dietary fats have been extensively studied in the prevention of BC [4]. Neither animal fat nor a low-fat diet has been linked to BC risk, whereas marine omega-3 fatty acids (n-3) may be protective [4]. In a meta-analysis of 21 independent prospective cohort studies, Zeng *et al.* found a significant reduction of BC risk with marine n-3 [5]. However, this meta-analysis highlights the difficulties in assessing the effects of specific dietary fats on BC risk. In

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KEYWORDS. Women's health Lipids Dyslipidemia Hypertriglyceridemia. **KEY POINTS.** Understanding opportunities to reduce dyslipidemia before, during, and . Women's Health Network discusses how triglycerides and lipids such as LDL and HDL cholesterol can affect the body. Total Cholesterol Serum Lipid Exercise Group Menopausal Woman Moderate Exercise and is consistent with health recommendations for menopausal women. Canterbury Women's Health Care Contents Heart Health for Women through management of the blood lipids is to address the problem of high cholesterol. The Study of Women's Health Across the Nation (SWAN) provided the opportunity to examine longitudinal changes in serum lipids during the. Background: Lipid biomarkers, such as HDL-cholesterol The Women's Health Study was registered at affiliations-webmaster.com as NCT Learn more about Symptoms of Lipid Disorders at Brigham Center for Women's Health Main Page Risk Factors Symptoms. Eating good fats can tip the scale in your favour discover the healthy fats shopping list to feel great and lose weight on. In the fight against fat, it pays to know the difference. Learn what each type of body fat means for your health and weight loss efforts. Lipid biomarkers, such as HDL-cholesterol concentrations, have been shown to have positive, inverse, and null associations with total, breast, and colorectal. Dyslipoproteinemia is prevalent in women as well as in men. In both, its consequences premature atherosclerosis and CAD morbidity and mortality are more. Journal of Women's Health Vol. 3, No. 3 Full Access. Lipids in Postmenopausal Women: Baseline Findings of the Postmenopausal.

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