



LIPID INTAKE AND BREAST CANCER RISK: IS THERE A LINK? A NEW FOCUS AND META-ANALYSIS IN EUROPEAN JOURNAL OF BREAST HEALTH. 2022

Lodi, M ; Kiehl, A ; Qu, FL ; Gabriele, V ; Tomasetto, C ; Mathelin, C
European journal of breast health. 2022;18(2):108-126
With Expert Review from [Kirsty Baxter](#)

Incidence of breast cancer is the leading cause of cancer-related mortality, accounting for 15.5% of all cancer-related deaths. However, there is a lack of complete understanding of the effects of different types of dietary lipids on breast cancer development, such as saturated fatty acids (SFA), monounsaturated fatty acids (MUFA), dietary cholesterol, polyunsaturated fatty acids (PUFA), and unsaturated trans fatty acids (TFA). An evaluation of the effect of lipid consumption on breast cancer and the impact it has on menopausal status was conducted in this meta-analysis, which included forty-four studies. Increased saturated fatty acid intake was associated with an increased risk of breast cancer in postmenopausal women. However, breast cancer risk was not associated with increased consumption of total fat, SFA, MUFA, PUFA, and cholesterol in premenopausal women. The effects of estrogen and the release of proinflammatory cytokines by adipocytes should be evaluated, as well as other pathways that contribute to the development of breast cancer. Although the association between SFA and breast cancer is weak, healthcare professionals can use this study's findings to better understand the detrimental effect of SFA, despite the fact that there is a great deal of heterogeneity in the current analysis.

CONSUMPTION OF FLAVONOIDS AND RISK OF HORMONE-RELATED CANCERS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF OBSERVATIONAL STUDIES IN NUTRITION JOURNAL. 2022

Liu, F ; Peng, Y ; Qiao, Y ; Huang, Y ; Song, F ; Zhang, M ; Song, F
Nutrition journal. 2022;21(1):27
With Expert Review from [Miranda Harris](#)

A 2022 systematic review and meta-analysis of 51 mixed studies examined the association between flavonoid intake and hormone-related cancer risk. Diets rich in vegetables, fruits and tea are found to reduce the cancer risk, having the potential to exert chemo-preventive effects with the presence of anticarcinogenic phytochemicals. The aim of this study was to elucidate the association between flavonoids intake and HRCs risk. Results show that higher consumption of total flavonoids was only associated with an increased risk of men-specific cancers, mainly prostate cancer. Subclasses; flavanols, flavones, and isoflavones, and the three main individual compounds of isoflavones (daidzein, genistein and glycitein) may have protective effects on women-specific cancers, whereas flavones and flavanones have been found to cause potentially dangerous effects in thyroid cancer. There was no evidence in support of any role for anthocyanidins in HRCs. authors conclude that there is a small amount of evidence that total flavonoid intake may be associated with a lower or a higher risk of certain hormone related cancers.



ASSOCIATION BETWEEN ALLIUM VEGETABLES AND THE RISK OF NON-DIGESTIVE TRACT CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS OF COHORT AND CASE-CONTROL STUDIES.

Guo, L ; Yuan, X ; Yang, B ; Tang, G ; Liang, H ; Guo, F
Cancer treatment and research communications. 2022;32:100598
With Expert Review from [Clare Grundel](#)

Allium vegetables, such as garlic, onion, and leeks, are characterized by a high content of organosulfur compounds, flavonoids, glutathione, selenium compounds, and vitamins E and C. The aim of this study was to clarify the role of Allium vegetables in non-digestive tract cancer. This study is a systematic review and meta-analysis of 5 studies (11 cohort and 14 case-control studies) on Allium vegetables involving 18,070 patients. Results showed that Allium vegetable consumption could reduce the risk of non-digestive tract cancer demonstrating the protective role of Allium vegetables. Authors conclude that further randomized controlled trials or well-designed cohort studies with high quality are needed to further confirm the findings of this study.



ASSOCIATION OF RETINOL AND CAROTENOIDS CONTENT IN DIET AND SERUM WITH RISK FOR COLORECTAL CANCER: A META-ANALYSIS.

Han, X ; Zhao, R ; Zhang, G ; Jiao, Y ; Wang, Y ; Wang, D ; Cai, H
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With Expert Review from [Gail Brady](#)

The incident rate of malignant tumours has been increasing, and so has colo-rectal cancer (CRC), which is now the third most frequent cancer and the second most common cause of cancer death. CRC development is influenced by environmental and genetic factors. Diet, diabetes, obesity, lack of physical activity, age, family history and history of benign adenomatous polyps and inflammatory bowel disease are all known risk factors. Modulating diet is one way to modify cancer risk. Vitamin A (retinol) and carotenoids, which are precursors to Vitamin A, are indispensable in the human body and widely occur in a range of vegetables, fruits and animal-derived foods. In some studies high dietary intake of retinol and carotenoids had been linked to a decreased risk of CRC, however, this was not consistent in all findings. To get a better understanding of this matter, the authors of this meta-analysis analysed 22 clinical studies from the last 20 years. The authors found an inverse association with carotenoids in blood serum, so higher blood serum of carotenoids seemed to decrease CRC risk. In regards to dietary intake, total carotenoid intake did not increase CRC risk and in fact the carotenoids carotenes, lycopene, and β -cryptoxanthin reduced risk, which was particularly noticeable in men. In women, high dietary intake of retinol also showed to reduce CRC risk, but it appeared to increase the risk in men. This raised the idea of gender-specific differences. Of clinical relevance are that carotenoids can be an important dietary contributors in reducing CRC risk. However the protective role of retinol appears to be gender-specific and only seems to benefit women, with the opposite effect in men.

