

عنوان مقاله:

ω 3-fatty acid and fish oil consumption and breast cancer; A review of last studies

محل انتشار:

نهمین کنگره بین المللی سرطان پستان (سال: 1392)

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خلاصه مقاله:

Background: Beneficial effects of Omega-3 fatty acids are wonderful. Decreases of chronic disease include cardiovascular disease and now is breast cancer. The effect of omega-3 fatty acid in decreases of breast cancer was observed but the mechanism of this effect is unknown. The target of this review is investigated of beneficial effects of omega-3 fatty acids in prevention and treatment of breast cancer. Method: This review article is with investigated of last studies with searching in PUBMED search motor with keywords include OMEGA-3 FATTY ACIDS , EICOSAPENTAENOIC ACID , DOCOSAHEXAENOIC ACID and BREAST CANCER between 2004 to 2014. After filtration and separation, 37 articles are selected. Results: The omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), can reduce metastasis and induce improving in patients with breast cancer. The mechanisms of this effects are: Down-modulate CXCR4 expression and function in MDA-MB-231 breast cancer cells: in some of studies, were observed beneficial effect of omega-3 fatty acid with expression reduction in some of metastasis migration receptor (e.g CXCR4 that is a transmembrane G-protein-coupled receptor) Suppress expression of EZH2 in breast cancer cells: The polycomb group (PcG) protein, enhancer of zeste homologue 2 (EZH2), is overexpressed in several human malignancies including breast cancer. Aberrant expression of EZH2 has been associated with metastasis and poor prognosis in cancer patient. The mechanism of this effect is posttranslationally regulate the expression of EZH2 in breast cancer cells. Effect on progestin stimulation of invasive properties in breast cancer: an appropriate concentration of the omega-3 fatty acid inhibits progestin stimulation of invasive properties. Inhibition in MDA-MB-231 human breast cancer cells: Omega-3 fatty acids inhibited the growth of MDA-MB-231 cells, in addition, EPA and DHA induced apoptosis, as indicated by a loss of mitochondrial membrane potential. Discussion and Conclusion: Investigation of last studies show that consumption of Omega-3 fatty acid from supplements or food has beneficial effects in improve and control of breast cancer.

کلمات کلیدی:

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