



Significant Role of Antioxidants in the Treatment of Breast Cancer

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Description

Breast cancer is the most common cancer and is the leading cause of death in women. Oxidative stress and the generation of Reactive Oxygen Species are associated with the progression of cancer. Compared with its normal counterparts, tumour cells exhibit high levels of ROS and strong regulation of redox homeostasis to maintain a low level of oxidative stress. Traditionally antioxidants have been extensively investigated to counteract breast carcinogenesis and tumour progression as anti-chemo agents; however, there is growing evidence showing their potential as adjuvants in the treatment of breast cancer. Increased intake of beta-carotene, vitamin C, vitamin E and zinc may prevent breast cancer in postmenopausal women. Antioxidants such as vitamin A and beta-carotene precursors, vitamins C and E, and selenium have attracted considerable attention as shown in experimental studies to reduce or capture active oxygen thus preventing potential damage causing disease such as cancer. Although there is ample evidence of an antioxidant anti-cancer effect from cell culture and animal studies, the results from observational studies and intervention trials are inconsistent. However, since the development of antioxidant, either by dietary supplementation or supplementation, is a preventative measure that can be easily implemented, additional studies to look at this organization have been confirmed.

Vegetables and fruits are rich sources of antioxidants. The American Cancer Society has long recommended that cancer survivors eat a variety of vegetables and fruits every day. Patients and survivors should check with their doctor before taking any vitamins or supplements. Taking antioxidants only before treatment or only during treatment did not affect the risk of recurrence or death.

Antioxidants are a compound found in fruits, vegetables, nuts, grains, and certain meats, poultry and fish. Antioxidants can help protect cells from free radicals. Free radi-

cals are produced when exposed to certain pollutants such as cigarette smoke. Your body also produces free radicals when it breaks down food. Free radicals can damage cells and can contribute to certain diseases, including cancer. Some studies have suggested that antioxidants may help reduce the risk of cancer, heart disease, and age-related changes in the body. However, it is not clear that taking antioxidant supplements at higher levels than recommended provides more benefits than getting the recommended amount of antioxidants in your diet. Taking certain supplements at higher levels than recommended may cause health problems.

More than 60% of women took at least one antioxidant supplement while taking adjuvant. 39% of women receiving chemotherapy take one or more antioxidant supplements during treatment 42% of women receiving radiation therapy take one or more antioxidant supplements during treatment 62% of women taking tamoxifen take the ingredient fighting one or more antioxidants during treatment. The majority of women (69%) who took antioxidant supplements during treatment took higher doses than recommended. Researchers have considered a higher-recommended dose to be more antioxidant than Centrum multivitamin.

Conclusion

Researchers have concluded that prolonged exposure to antioxidants in foods or supplements may protect women from breast cancer. Since they could not determine the exact amount of antioxidants from dietary supplements (different manufacturers, ages and collections), they could not determine the exact effect of the total dose or diet from both foods and dietary supplements. Antioxidants may have their long-term inhibitory effect which may be the reason why the supplement effect of 10 years or more is only seen.