

Most Powerful Antioxidants to Prevent Cancers: Prevention is Better than Cure

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ABSTRACT

Cancer is a state of disorders marked by out-of-control cell magnification. There are various types of cancer, and each is relegated by the type of cell that is initially concerned. Now a day's sundry treatment modalities for cancer is available, but at the last it is still a well verbally revealed that obviation is more preponderant than remedy. An anticancer nutritional therapy is an influential approach that one can use to subdue peril of cancer. Researches and numerous studies have significantly witnessed some of finest antioxidants which can be considered to obviate and even to remedy cancer at some extent. Researchers have shown that cancer is a deficiency disease provoked by lack of essential food compounds in modern's man diet. The intent of this is to explain that this human disaster can be stopped or impede existing on the basis of scientific knowledge.

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INTRODUCTION

Cancer is a dreaded condition that is afflicting numerous individuals in the last decade. We all are vigilant of someone who has cancer, but one can inhibit cancer with a salubrious diet, fitness and health mind. Diet is an imperative component of cancer prevention since what we eat has remained associated to the disease. Diet which contains particularly puissant antioxidants, implying

everybody can reduce a spontaneously befalling process in the body that engenders free radicals that can damage mundane cells and its divisions. Compounds in sundry diet may additionally avail keep cancers from growing or spreading. Remarkably, accumulate up a small quantity of wholesome diet which comprehends antioxidants as a component of anticancer diet.

Studies on diet and disease are questionable due to, inaccuracy in estimating nutrient intake, the proper comparisons between several nutrients in foods, and the probability that the community being studied may have little dissimilarity in intake of certain nutrients.¹ Fruits and veggies rich in colorful antioxidants are promptly scientifically endured as a method of countering cellular damage that can proceed to cancer.

Dietary risk factors have ranked higher than smoking and much higher than pollution or occupational hazards in their association with death due to cancer.²

Physicians promote nutrition that is moderate in fat and abundant in fresh fruits and vegetables and whole grains. The several antioxidants which can be consumed by one are as follows:

- Lycopene
- Vitamins
- Folic acid
- Curcumin
- Selenium
- Glutathione

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There is considerable epidemiologic evidence that suggests an association between the consumption of fruit and vegetables and reduced incidence of cancer.^{3,4} In particular, carotenoids have been implicated as cancer-preventive agents.⁵

β -carotene has received the most attention because of its prevalence in many foods. However, in more recent years other carotenoids, such as lycopene, the main tomato carotenoid, have become the subject of intense investigation.⁶

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Lycopene

Lycopene is a phytochemical, lipophilic (oil soluble) carotenoid pigment found in plant food and unlike other carotenoids lycopene cannot be converted into vitamin A and widely distributed in fruits and vegetables and has drawn significant consideration over the preceding few decades. Thinkable utilization of lycopene contains not solely those in conventional food and constituents but withal in novel subsidiary food preparation specially formulated to promote human health and in oral malignancies as well as use in pharmaceuticals products.

Unique property of lycopene is its powerful antioxidant that quench specific free radicals called as singlet oxygen. Overall outcomes of lycopene in the diet are not barely it quenches free radicals (less damage in lung), but it also inhibit the growth of existing cancer cells, stimulates the p53 tumor, suppressor gene to either fix DNA or kill the cell, improves immune cell function and also it boost immune systems.

Lycopene is major carotenoid in pigments found in tomatoes along with lesser amount in various forms. The best-known sources of lycopene are tomatoes, watermelon, guava and pink grapefruit.

Kirsh et al found that increased intake of lycopene was associated with a decreased risk of prostate cancer, but only in men with a family history of the disease.⁷

Vitamins

The four basic fat soluble vitamins are A, D, E and K and these deals with regulation of protein synthesis. Vit A and D interacts with DNA and control gene expression via several transcription factors. Trying to obtain the optimal level of antioxidants, such as vitamin A, C, E and β -carotene at the appropriate time through a balanced diet may be adequate for optimal protection against cancer.

The constant use of oxygen in body generates large amount of free radicals, which are very harmful chemicals and leads to oxidative process which is a chain reaction. Adequate amount of these micronutrients in diet can destroy such excessive amount of free radicals and also stimulate the immune system. They also regulate gene activity in cancer in a way that help curtails the growth of tumor cells. Thus, maintaining the adequate amount of antioxidants in body is vital to optimal health and disease protection.

Curcumin

Principal effective constituent of turmeric is an essential ingredient of Indian and Chinese conventional herbal remedy. It is assumed to be the rationale for the

difference in specific cancers occurring. It has many characteristics such as anti-inflammatory, antioxidant, chemopreventive and chemotherapeutic. It has remained acknowledged to be the prevalent prominent natural anti-inflammatory agent, with outcomes alike to drugs, such as hydrocortisone. It is a powerful immune modulatory agent. Furthermore, it has many anticancer features such as improving the body neutralize cancer cells and repressing cancer angiogenesis, metastasis and conception.

Selenium

Selenium is an essential trace element that is part of at least 25 different selenoproteins, such as glutathione peroxidase, an antioxidant enzyme that neutralizes free radicals. Selenium has been investigated as a potential anticarcinogenic agent since 1949,⁸ and estimated intake of dietary selenium has been correlated with mortality from several cancers.⁹ Selenium supplementation, in combination with other antioxidant nutrients, has been shown to reduce the risk of various types of cancer.¹⁰

CONCLUSION

The prevention of cancer by diet-derived aggregates has distinct benefits over drug-based interventions. Dietary consumption of carotenoids is inversely correlated with the chance of a variety of cancers in various tissues. Lycopene is allegedly a more powerful antioxidant than other of its carotenoid cousins which involve beta-carotene. Its potent antioxidant effects are sufficient in controlling the vitality, diameter and fluidity of cell membranes. Cell membranes are the guardians of cells. They are responsible for choosing that which moves in also out of cells. They admit good nutrients in and eliminate cellular trash and counteract venom from invading the cells. Strong healthy cell membranes are essential in the inhibition of many complications.

It is conceivable in order that amalgamated antioxidant supplements will produce more powerful protective effects against free radical damage in oral precancerous lesions than individual antioxidants.

The incrementing data from research of coalescences of antioxidants was heightened expectations that there results can be utilizable in the treatment of dental diseases.

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