Review on Ameliorative Role of Food Supplements Incancer

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Abstract: Cancer is a disease which occurs when cells grow uncontrollably.Viruses, infections exposure to the chemicals and radiations, Unhealthy dietary & hereditary factors, and hormones are alsoamong the causative agents of cancer. Eat to beat cancer! There are various foods and nutrients that can kill cancer.Food plays avital role in preventing some cancers, diet is an important way by which one can use to reduce the risk of cancer. It has been reported through various studies regarding the fact that around 50 percent of all cancers can be prevented through lifestyle and dietary modifications.Obesity, junk foods such as concentrated sugars and refined products that contribute disruption of glucose metabolism which causes diabetes, low fiber intake, and imbalance of omega 3 and omega 6 fats all leads to increase cancer risk. Intake of flax seed, and abundant amount of fruits and vegetables will decrease the cancer risk. Green leafy vegetables are especiallyvery beneficial. selenium, folic acid, vitamin B-12, vitamin D, chlorophyll, and antioxidants they acts as supplements in enhancing the health status of the body consumptions of many digestive enzymes and probiotics can decrease the risk of cancer.
Key words: - lifestyle modifications, supplements, probiotics, omega 3 fatty acids.

I.   INTRODUCTION

Cancer: - Cancer is diseases which is characterized by abnormal cell growth. In this cell divide and replicate uncontrollably & spread to various areas and form malignant tumors. Healthy diet means – Diet which have maximum amount of healthy foods such as fruits, vegetables and low-fat dairy products.

Role of nutrition in the cancer process is very vast. It is becoming clear as studies continues on role of nutrition in cancer. It has been stated through the   American Institute for Cancer Research that the 30–40 percent of all cancers can be prevented by appropriate diets, physical activity, and maintenance of appropriate body weight {1} studies are very informative in seeing the deep knowledge of the mechanisms of disease. This review will focus on those dietary food which has been shown to be contribute to decrease the risk of cancer and on those additional protective factors.

Type of cancer which can be prevented through dietary and lifestyle modifications
1)   Bladder cancer
2)   Cervix cancer
3)   Kidney cancer
4)   Lung cancer
5)   Uterine cancer
6)   Stomach cancer
7)   Ovarian cancer

Cancer is one of the biggest causes of death around the globe {1}

There are number of studieswhich stated and suggested that lifestyle changes, such as healthy diet, can prevent 30–50% of all cancers {2, 3}.Nutrition plays an important role in preventing and treating cancer. Some observational studies have shown that the high consumption of certain foods may acts as risk factor for developing cancer. Sugar and Refined Carbs Processed foods which are high in sugar content and low in fiber and some nutrients also as a risk factors of cancers. Diets that increases blood glucose levels & which can acts as a risk factor for cancers, like stomach, breast and colorectal cancers{4, 5, 6, 7}. Those who have high refined carbs diet were at twice risk of having colon cancer (8). Higher levels of blood glucose and insulin are major risk factors of cancer. Insulin stimulates cell division, supports growth and spread of cancer cells {9, 10, 11}. High amount of insulin and blood glucose can cause inflammation to the body which leads to the growth of abnormal cells {9}.People with diabetes — a condition characterized by high blood glucose and insulin levels — have an increased risk of certain types of cancer {12}. Risk of colorectal cancer is much higher if one have diabetes {13}.

Processed Meat have some carcinogen that can causes cancer {1}.processed meat means that meat has been treated to preserve flavor examples hot dogs.it has been shown that there is a positive association between consuming processed meat {16}.

Overcooked Food -Cooked foods at high temperatures such as grilling and barbequing, because it can produce harmful compounds like heterocyclic amines

Cancer can be minimized by avoiding having overcooked food

Dairy - Consumption of high dairy products may increase of risk of prostate cancer

Higher consumption of foods rich in sugar and refined carbs, and excessive use of processed and overcooked meat, can also acts risk factor for cancer. Overweight or high body mass index, smoking infection is associated with Cancer Risk

Obesity – excess body mass index can increase high insulin resistance. Obese people have high levels of inflammatory cytokines in their blood, and causes cells to divide .Fat cells increases estrogen levels, which increases the risk of breast and ovarian cancer in postmenopausal women. Obesity is one of the biggest risk factors for cancer.

Fruits and vegetables that prevent cancer

1) Vegetables- High consumption of vegetables containing antioxidants and phytochemicals with a lower risk of cancer .vegetables like broccoli, cauliflower cabbage Tomatoes and carrotsdecreases risk of prostate, stomach and lung cancer because antioxidants are those substances which protect the cells from the damage caused by unstable substances which may lead cancer and stabilizes the free radicals.

2) Fruit - it contain antioxidants and other phytochemicals mainly which help in preventing cancer. Citrus fruits per week reduced the risk of stomach cancer. Phytochemicals (isothiocyanates) and polyphenols (such as ellagic acid) protect cells from the damage and ultimately prevent cancer.

3) Flaxseeds - Flaxseeds have protective effects because it has essential fatty acids like omega 3 fatty acids which work prevent certain type of cancers and reduce the spread of cancer cells.

4) Spices – turmeric is the spice which contain active ingredients like curcuminwhich has strong anti-inflammatory and anti-oxidant properties. It reduces cancerous lesions.

5) Beans and Legumes – beans mainly red kidney beans have antioxidant properties and have high amount of fiber, higher intake of these nutrient may provide protection against colorectal cancer.

6) Nuts - Regular use of eating nuts may lower the risk of cancer.

7) consumption of olive oil also reduces the risk of cancer

8) Garlic – it contains allicin, which have cancer-fighting properties.

9) Fish- fish can help protect against cancer because of healthy fats that can reduce inflammation.

10) Ginger

Studies shows that a constituent in gingerhas greater efficacy in killing breast cancer stem cells. The component of ginger is known as 6-Shogaol, is produced from dried root of ginger.

11) Turmeric

Curcumin, is present in turmeric, can kill cancer stem cells without disrupting normal cells, according to various studies. It has its activity in targeting various cancer stem cells in breast cancer, head and neck cancer, pancreatic cancer, colorectal cancer and brain cancer.

12) Grapes

Compounds present in grapes have properties to kill colon cancer stem cells which is found in the skins and seeds of grapes can prevent colon cancer, which is one of the most common types of cancer.

13) Salmon

It is rich in omega-3s and astaxanthin. Itis an richest source of omega-3 fatty acids. It contains anti-cancer nutrient like astaxanthin.It is apowerful antioxidant that scavenge free radicals.

14) Mushrooms

Mushrooms can give great addition to anti-cancer diet. Shiitake mushrooms are the best sources of beta-glucans. According to studies, beta-glucans can help fight cancer — including skin, breast, gastric and lung cancer — by passing immune cells into the cancerous area and by destroying cancer cells.

15) Fish

Fish eggs are one of the best dietary sources of EPA and DHA which are types of omega-3 fatty acid.Fish eggs contain even more omega-3s than the fattiest fish. Salmon were the richest in terms of omega-3 fatty acids.Fish deliver even more omega-3 fatty acids.

16) Sweet Potatoes

Sweet potatoes, are highly nutritious and an excellent addition to any anti-cancer diet. Sweet potatoes contain vitamin C as well as unique root proteins which, have significant antioxidant properties.

17) Blueberries

Blueberries are great anti-cancer food. Blueberries have the highest Oxygen Radical Absorbance Capacity (ORAC) rating of more than 20 fruits and berries. Antioxidantnature of wild blueberries was very stronger than

that of other type of berries. The antioxidant and anti-cancer powers of blueberries can be attributed to a number of remarkable compounds they contain, including ellagic acid, anthocyanins, vitamin E, and vitamin C.

18)Brazil Nuts

Brazil nuts are best dietary source of selenium, several studies suggest that the risk of death from cancer, including, colorectal, lung, and prostate cancers, is lower among those people with a higher intake of the trace mineral selenium. Selenium is believed to reduce cancer risk in two ways: selenium is an important constituent of glutathione peroxidase, an enzyme with anti-oxidant properties which can help protect the body from damaging effects of free radicals. Second, selenium is believed to prevent tumor growth by boosting the immune system and inhibiting the development of blood vessels to the tumor.

19) Avocados

Avocados are highly effective at reducing the risk of cancer, particularly oral and prostate cancer.Avocados are brimming with a wealth of anti-cancer nutrients. Along with that asparagus are the best dietary sources of glutathione.Avocados are the richest source of vitamin E & vitamin C.

20) Carrots

Carrots are useful for eyesight, it also contain falcarinol — a compound that inhibit the development of cancer.Cancer fighting properties, carrots offer major health benefits.

21) Garlic

Garlic have allicin. It is responsible for typical aroma and taste, studies shows that people having high consumption of garlic (e.g. China, Japan, France) have low risk of various types of cancer, including stomach, colon, pancreatic, esophageal, and breast cancer.

22) Rosehips

Rosehips, the fruit of the rose plant, have cancer-fighting nutrients. Natural sources of proanthocyanidins have anti-cancer and anti-tumor activity. They also have beta-carotene and vitamin C along with that they are also good source of vitamin E. fine hairs they contain.

23)Broccoli

Broccoli fights cancer by killing carcinogens, reducing DNA mutation, inducing apoptosis, and preventing the spread of cancer.Health benefits of broccoli are well known and the chemical constituent sulforophane is responsible for cancer –fighting properties

24) Dark Chocolates

Moderate intake of dark chocolate helps in reducing the risk of cancer. cacao bean, which is the present in all of chocolate products, is one of the most important antioxidant rich plants. According to studies, it contains three times the amount constituent found in green tea. Dark chocolate. It is to be remembered chocolate stillhave a high-calorie, high-fat food, and therefore moderation in the use of chocolate is recommended

25) Tomatoes

Tomatoes possess properties for preventing cancer, particularly prostate cancer. It contain lycopene which is an antioxidant.Tomatoes arealso rich in vitamin C.

26) Watercress

Watercress is an anti-cancer food. Studies havefound that regular consumption of watercress can reduce blood cell DNA damage. Watercress contains phenethyl isothiocyanate (PEITC), a special type of mustard oil. Anti-cancer properties of watercress is due to the presence of high levels of vitamin C, beta-carotene, and lutein contained in leaves. Some studies have found out that consumption of watercress increased ' blood levels of lutein and beta-carotene.

Bladder cancer is caused mainly include smoking and tobacco use consuming water with high arsenic content and excess use of chemicals mainly it can be prevented through avoiding tobacco and alcohol consumption life style modifications. HavingFruits and vegetables in the high amount can lower the risk. Kidney cancer – it can be prevented by having maximum physical activity, cessation of smoking and alcohol and maintaining blood pressure. Lung cancer: - The most important things which can prevent lung cancer through quitting smoking. Pancreatic cancer – it is very aggressive type of cancer which can be prevented through having physical activity and having food which contain grains.

Table 1 list of foods that have cancer –fighting properties.

II. CONCLUSION

Cancer can be prevented by balanced diet that consists of plenty of lean protein, healthy fats, fruits, vegetables and whole grains. Good protein sources are lean meat, chicken, fish, eggs, beans, nuts, seeds and dairy products. High protein diet and calories help in reducing muscle atrophy. Foods Promotes health and help in reducing risk of disease. Dietary modifications are one of the important lifestyle factors that can prevent the risk of developing cancer. Food plays a vital important role in preventing cancers. If Person with cancer has excellent nutrition, it will surely help him to better cope with the illness and the effects medical treatment. Consumptions of vitamins or micronutrients can kill cancer. Nutrition boost the immune system to flight. Diets having high fat content and low fiber content increase the risk of cancers including bowel, lung prostate and uterine cancers. Diet should have: adequate, but notmuch calories, supplemented with oral enzymes, reduction in breast cancer rates.increased consumption of fruit and vegetable intake, balanced omega 3 and 6 fats, vitamin D, reduced sugar intake, probiotics, and enzymes – factors which are responsible for preventing cancer.

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