

Food and Cancer

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There are many studies that have tried to determine the ability of certain foods to increase or decrease the risk of cancer. Unfortunately, the results have been conflicting, so it is difficult to confirm the effect of foods or nutritional supplements on cancer. One of the most important problems facing such studies is that patients who eat certain foods and have lower rates of certain cancers, it is difficult to know how different they are in terms of other risk factors for cancer as well (such as environmental factors, genetics, daily habits, smoking, etc.). Although there are many controlled clinical trials conducted by physicians in which they administered beneficial foods or nutritional supplements at random to some patients, they did not show sufficient evidence. Therefore, many studies are still in progress.

Cancer prevention through nutrition:

Improper nutrition causes an increase in the spread of some types of cancer globally, as it was found that an increase in the incidence of digestive cancer may result from eating certain types of food. It was found that 30% of cancer cases are caused by food, and the rest are attributed to genetic, environmental and other factors. Food also affects the increase or speed of the spread of cancer cells, or vice versa. It was also found that cancer resulting from malnutrition of patients, makes them need a special diet during illness.

Cancers of the digestive system:

Cancer of the digestive system often results from the presence of carcinogens in food, especially when that food remains in some areas for a relatively long period, which makes food carcinogens in contact with them for a longer period. Among those areas; the esophagus, the area where the stomach and duodenum connect, and the area where the small intestine connects to the colon. After these factors

are absorbed by the intestines, they move to the liver, kidneys, and bladder, so those organs may also develop cancer due to the influence of carcinogens.

The most important carcinogenic factors in food to be avoided: they include:

- 1. Tobacco:** Smoking increases the incidence of cancer of the mouth, esophagus, lung, prostate and digestive system, especially pancreatic cancer.
- 2. Aflatoxin:** This substance is formed as a result of storing foodstuffs such as grains, seeds, legumes and some other foodstuffs for a long time in unhealthy conditions. It was found that a small amount of aflatoxin causes severe toxicity with rupture in liver cells, as giving 0.2 microgram/ day to a group of experimental mice caused 100% of liver cancer. It was also found that food contamination with aflatoxin led to an increase in the incidence of liver cancer in people in different parts of the world.
- 3. Nitrous amine:** Nitrate is found in some animal and vegetable foods. It turns into nitrite in the stomach and then reacts with secondary amino materials in food or in the stomach to form nitrous amine. When given to mice, it caused cancerous tumors in the digestive system. Nitrates and nitrites are used as preservatives against some dangerous bacteria such as Clostridium, which causes food poisoning in processed foods, especially canned and processed meats such as luncheon meat, hot dogs, and others. The World Health Organization has allowed the consumption of 125 mg/ kg of body weight/ day, because the consumption of a large amount of this substance may lead to cancer of the digestive system, such as cancer of the stomach and colon and rectum, so it is advised not to eat such types of meat at all by children under ten years old.
- 4. Processed meat:** This includes the meat exposed to very high temperatures, such as fried or grilled meat, in addition to smoked meat. These types of meat can contain some carcinogenic chemical compounds.
- 5. Alcohol:** Excessive consumption of alcohol causes cancer of the mouth, throat, esophagus, pancreas, liver, breast and rectum, and increases the incidence of

colon cancer in men. The risk of developing cancer increases in people who smoke and drink alcohol.

- 6. Artificial sweeteners:** Although there is preliminary data indicating an increased risk of bladder and brain cancer and lymphoma due to the intake of some artificial sweeteners through some studies conducted on animals, there is no such data in studies conducted on humans.
- 7. Bio-engineered food:** It results from the genetic modification of some plants or microorganisms to give them desirable characteristics such as increasing plant hardiness or resistance to pests or improving them in another way. There is currently no evidence that these foods have an effect on cancer.
- 8. Fats and ghee:** There is a strong relationship between eating a lot of fat and having cancer of the large intestine, because the increased intake of fats and ghee leads to an increase in the secretion of bile, which in turn forms secondary bile acids that are excreted from the body through the intestines. These have been scientifically proven to cause cancerous tumors when in contact with the intestinal wall for a long time. Also, the excessive intake of fat for women may lead to an increase or decrease in the secretion of some hormones, which leads to an increase in the incidence of breast cancer.
- 9. Food additives:** Food additives must obtain approval by the Food and Drug Administration before being added to foods after undergoing extensive testing. So far, there is no evidence that levels of food additives in food products, within the allowed daily intake recommendations by the FDA, increase the risk of cancer.
- 10. Obesity or being overweight:** It increases the risk of breast and endometrial cancer in postmenopausal women. Obesity also increases the risk of colon, rectal, esophageal, pancreatic, kidney, lymphoma, and other types of cancer.
- 11. Pesticides:** There is no evidence that pesticide residues found in small quantities on food increase the incidence of cancer. However, there are studies that indicate a correlation between them when exposure to such pesticides increases in food.

12. Salt: A diet that contains large amounts of food preserved by pickling or salting can increase the risk of throat and stomach cancer. But there is no similar danger from eating a small or medium amount of salt to give flavor.

13. Folate or folic acid: It helps prevent colon cancer, but recent studies have found that folic acid supplements may actually increase the risk of colorectal cancer, prostate cancer, and breast cancer. In general, the folate present in the diet is sufficient without the need to take it in supplement form.

Key words:

Food and cancer, Antioxidants, Digestive system cancer, Cancer prevention, Nitrous amine.