

Treating Cancer with Foods

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1. Introduction

Cancers are primarily an environmental disease with **90–95% of cases** attributed to **environmental factors** and **5–10% due to genetics**. *Environmental*, as used by cancer researchers, means any cause that is not inherited genetically, not merely pollution. Common environmental factors that contribute to cancer death include **tobacco (25–30%), diet and obesity (30–35%), infections (15–20%), radiation (both ionizing and non-ionizing, up to 10%)**, stress, lack of physical activity, and environmental pollutants.

There are more than 200 types of cancer. **About 35 percent of cancers are related to nutritional factors. Diet can influence some cancers. Cancers of the stomach, bowel, lung, prostate and uterus** are more likely to develop if your diet is high in fat and low in fruit, vegetables and fibre. Studies have linked consumption of red or processed meat to an increased risk of **breast cancer, colon cancer, and pancreatic cancer**, a phenomenon which could be due to the presence of carcinogens in foods cooked at high temperatures

The foods we eat can affect our risk of developing certain types of cancer. **High-energy and high-fat diets** can lead to obesity and are generally thought to increase the risk of some cancers. **Plant-based diets** high in fresh fruits, vegetables, legumes and wholegrain foods may help to prevent cancer.

Diet is just one of the lifestyle factors that influence the risk of developing cancer. **Smoking, obesity, alcohol, sun exposure** and physical activity levels are also important. It is nearly impossible to prove what caused a cancer in any individual, because most cancers have multiple possible causes. For example, if a person who uses tobacco heavily develops lung cancer, then it was probably caused by the tobacco use, but since everyone has a small chance of developing lung cancer as a result of air pollution or radiation, then there is a small chance that the cancer developed because of air pollution or radiation.

Diet, physical inactivity, and obesity are related to approximately 30–35% of cancer deaths. In the United States excess body weight is associated with the development of many types of cancer and is a factor in 14–20% of all cancer deaths. Physical inactivity is believed to contribute to cancer risk not only through its effect on body weight but also through negative

effects on **immune system** and **endocrine system**. More than half of the effect from diet is due to **overnutrition** rather than from eating too few healthful foods.

Diets that are very low in vegetables, fruits and whole grains, and high in **processed red meats** are linked with a number of cancers. A **high-salt diet** is linked to **gastric cancer**, **aflatoxin**, a frequent food contaminate, with **liver cancer**, and **Betel nut** chewing with **oral cancer**. This may partly explain differences in cancer incidence in different countries. For example, **gastric cancer** is more **common in Japan** due to its high-salt diet and **colon cancer** is more **common in the United States** due to its high-fat diet.

Thus dietary recommendations for cancer prevention typically include a **vegan diet**: "mainly vegetables, fruit, whole grains, nuts & legumes", while completely omitting an intake of red meat, milk-products, animal fat and refined sugar.

2. Worldwide cancer Mortality

An estimated 7.6 million people died from cancer worldwide in 2008. Because of the size of the populations, almost two-thirds of these deaths occur in the developing countries, and around 2% occur in the UK (Figure. 1).

Compared with incidence, the variations in cancer mortality across the world are much smaller, with less than a two-fold difference in rates between the regions. The highest mortality rates are seen in Southern Africa and the more developed regions of the world, such as the UK and the European Union, and the lowest rates are seen in the less developed regions, such as South-Central Asia and Africa. The UK mortality rate is slightly higher than the average in the more developed regions of the world, and more than 15% higher than the average in the less developed regions.

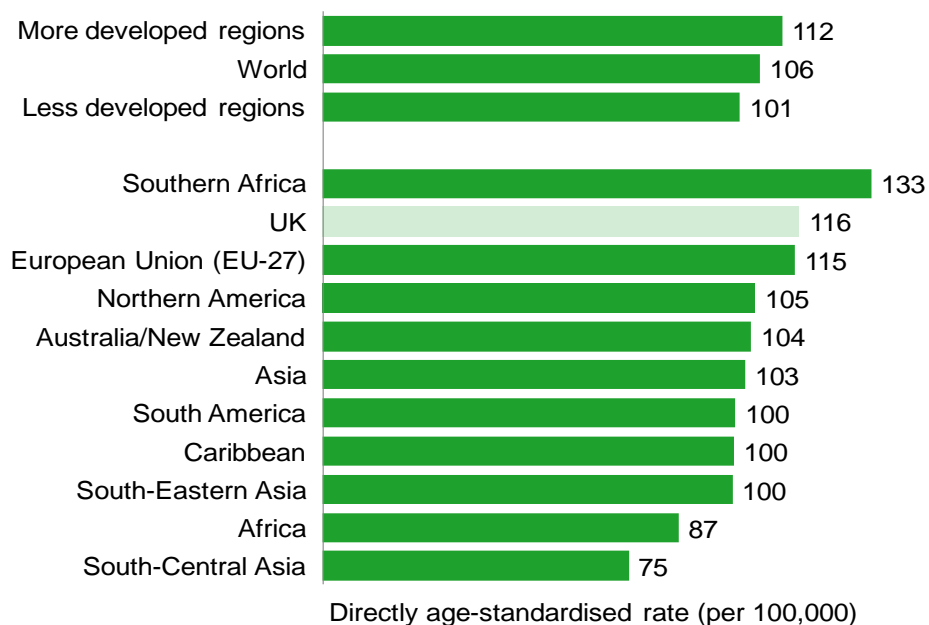
2.1. Mortality in males

An estimated 4.2 million men died from cancer worldwide in 2008. **Lung cancer** is by far the biggest killer, accounting for almost one in four (23%) cancer deaths in men (Figure 2).

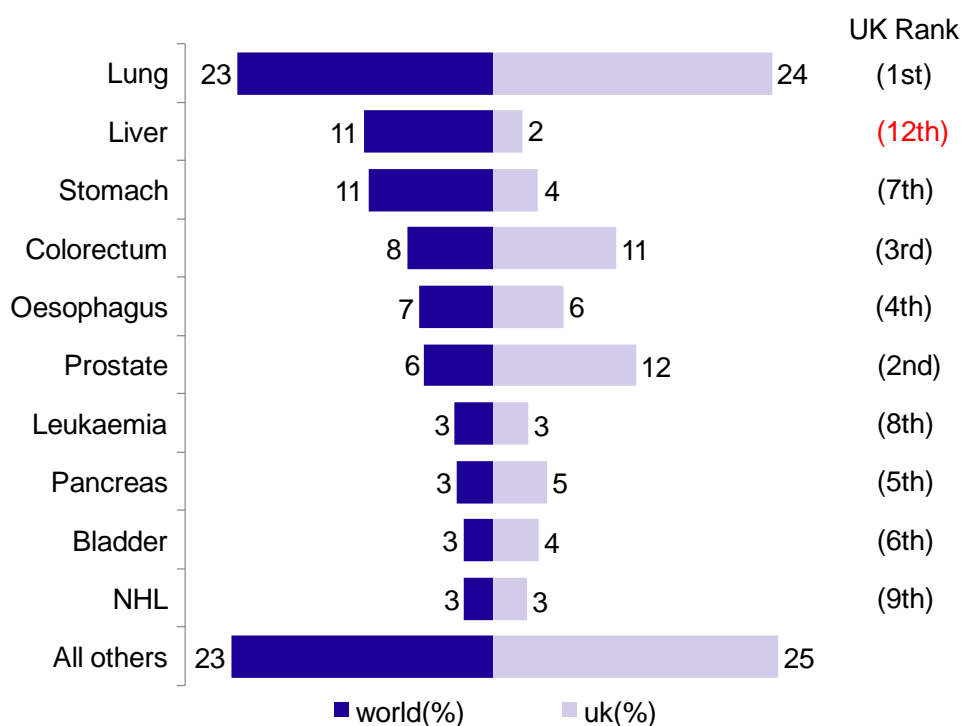
Liver and stomach cancers are also big cancer killers in men worldwide (11% each). The prognosis for liver cancer is generally poor and much of the variation in incidence and mortality across the world can be explained by the distribution of Hepatitis B and C infection. **Stomach cancer** incidence and mortality has declined in many developed nations due to improvements in food preservation and storage, and falls in the prevalence of *Helicobacter pylori* infection.

In the UK, **lung cancer** also accounts for around one in four (24%) cancer deaths in men. **Prostate cancer** is responsible for relatively more deaths in UK men than worldwide (12% vs. 6%), whereas deaths from **stomach** (4%) and **liver** (2%) cancers are relatively less common.

**Figure 1. Estimated worldwide cancer mortality 2008(with comparison to UK 2008)
(Cancer Research UK, 2012)**



**Figure 2. The ten most common cancer deaths in males worldwide 2008
(with comparison to UK 2008)
(Cancer Research UK, 2012)**

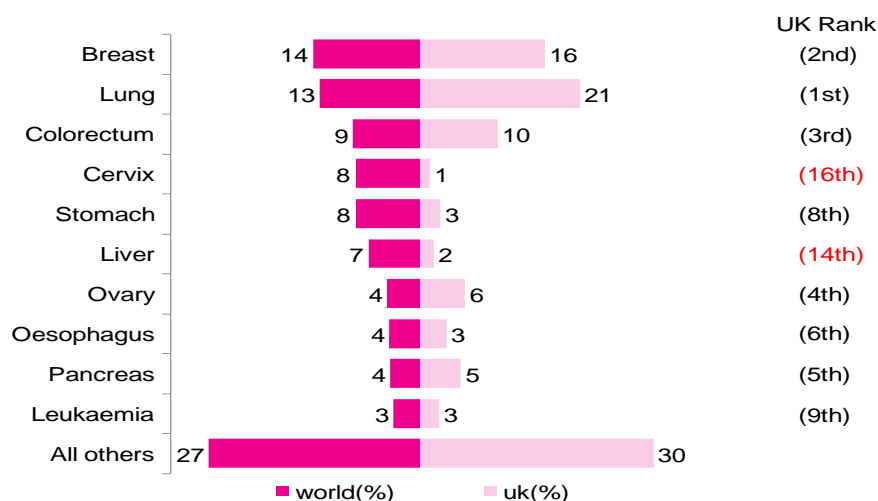


2.2.Mortality in females

An estimated 3.4 million women died from cancer worldwide in 2008. **Breast and lung cancers** are the most common killers, accounting for 14% and 13% of deaths, respectively. **Colorectal** (9%), **cervical** (8%), **stomach** (8%) and **liver** (7%) cancers are also big cancer killers in women worldwide (Figure 3).

In the UK, **lung cancer** accounts for around one in five (21%) cancer deaths in women. **Breast cancer** is the next biggest killer (16%). Deaths from **cervical** (1%), **stomach** (3%) and **liver** (2%) cancers are relatively less common in UK women compared to many countries worldwide.

Figure 3. The ten most common cancer deaths in females worldwide 2008 (with comparison to UK 2008)
(Cancer Research UK, 2012)



Common cancer types diagnosed with the greatest frequency are: Breast Cancer, Colon and Rectal Cancer, Cervical cancer, Lung Cancer, Stomach cancer, Uterus cancer, Liver cancer, Ovary cancer, Thyroid cancer, Kidney (Renal Cell) Cancer, Leukemia, Pancreatic Cancer and Prostate Cancer.

According to WHO Report (2008) cancer is a leading cause of death worldwide and accounted for 7.6 million deaths (around 13% of all deaths) in 2008. The main types of cancer are:

- lung (1.37 million deaths)
- stomach (736 000 deaths)
- liver (695 000 deaths)
- colorectal (608 000 deaths)
- breast (458 000 deaths)
- cervical cancer (275 000 deaths)

About 70% of all cancer deaths occurred in low- and middle-income countries and 30% of cancers could be prevented. A new report by the World Health Organization's International Agency for Cancer Research (IARC), (2011) suggests that the incidence of cancer worldwide will grow by 75% by the year 2030, nearly doubling in some of the developing countries. Deaths from cancer worldwide are projected to continue to rise to over 13.1 million in 2030.

2.3. World Health Rankings with respect to cancer mortality

According to World Health Rankings with respect to cancer mortality (WHO, 2011), out of 192 countries Myanmar stood rank number 66. Myanmar cancer world ranks in type are shown in Table 1.

Table 1. Myanmar Cancer Ranks by Type Per 100,000 Population.WHO data (2011)

No	Type	Rate	World Rank	No	Type	Rate	World Rank
1	Lung Cancers	18.31	72	10	Leukemia	4.31	67
2	Breast Cancer	13.47	126	11	Ovary Cancer	2.45	75
3	Liver Cancer	11.55	33	12	Bladder Cancer	2.09	99
4	Stomach Cancer	10.23	52	13	Prostate Cancer	1.86	170
5	Cervical Cancer	8.82	55	14	Pancreas Cancer	1.43	146
6	Colon-Rectum Cancers	8.41	81	15	Other Neoplasms	1.31	162
7	Oesophagus Cancer	7.82	29	16	Uterine Cancer	0.89	107
8	Oral Cancer	7.26	16	17	Skin Cancers	0.70	135
9	Lymphomas	5.49	88				

3. The top cancer-causing foods

While a high-energy, low-fibre diet may increase a person's risk of developing cancer, some individual foods have also been singled out as potentially causing cancer (carcinogenic). These include:

3.1.Red and processed meat.Bowel and stomach cancer are more common in people who eat lots of red and processed meat. Red meat includes all fresh, minced and frozen beef, pork, lamb or veal. Processed meats have been preserved in some way other than freezing and include bacon, ham, salami, sausages, spam, corned beef, black pudding, and tinned meat. There is now convincing scientific evidence that eating processed meat increases **bowel cancer** risk.

The World Cancer Research Fund (WCRF) has recently recommended people to avoid eating processed meat. Processed meats include any meat that has been preserved by curing, salting or smoking, or by adding chemical preservatives. These include hot dogs, ham, bacon and some sausages and burgers. Bacon and other cured or pickled meats contain a substance called nitrate, which has the potential to cause cancer.

3.2. Cured, pickled or salty foods. Bacon and other cured or pickled meats contain a substance called nitrate, which has the potential to cause cancer. To be on the safe side, it is best to limit the amount of cured meats in the diet because they are generally high in fat and salt. Foods that are high in salt or preserved using salt can increase your risk of **cancers of the stomach and nasopharynx** and should be consumed in limited amounts.

3.3. Burnt or barbecued foods. A group of carcinogenic substances called polycyclic aromatic hydrocarbons (PAHs) can be produced if foods are overheated or burnt. Charred or smoked foods may increase risk of cancer of the **bowel or gullet (oesophagus)**. However, when cooking, it's best to use relatively low temperature methods wherever possible and limit your intake of char-grilled meats and foods. Low temperature cooking methods include steaming, boiling, poaching, stewing, casseroles, braising, baking, stir-frying, microwaving or roasting. **Frying and baking meat at high temperatures** can also create chemicals called heterocyclic amines. These may increase risk of cancer of the **bowel or gullet (oesophagus)**.

3.4. Fat. Fat are a necessary part of our diet but high-fat diets can increase our risk of cancer, heart disease and other conditions. Vegetable foods are richer in monounsaturated or polyunsaturated fats, while meat is higher in saturated fats. There is evidence that eating too much saturated fat may increase your risk of **breast cancer**. Try not to eat too many fatty foods. In particular, try to cut down on saturated fats as contained in fatty meat, biscuits, crisps, cheese and butter. Choose lean cuts of meat and semi-skimmed or skimmed milk. Try to avoid frying food in lots of oil - try steaming, braising or lightly grilling instead. A high-fat diet may lead to obesity, which is a risk factor for several cancers including **cancer of the colon, breast, kidney, oesophagus, gallbladder and endometrium**. A **high-fat diet** that comprises mostly animal fat sources (such as dairy products, fatty meats and takeaway foods) may increase the risk of **Prostate cancer**.

3.5. Peanuts. Some laboratory animals can develop cancer after eating peanuts that are contaminated with toxin-producing moulds. A good example of this is a toxin called aflatoxin that comes from a mould. It grows on stored food in hot and humid countries, especially on peanuts. Aflatoxin is known to help cause **liver cancer** so **anything that stops the mould from getting into the nuts is helping to prevent cancer**.

3.6. French fries. Fries are made with hydrogenated oil and fried at high temperatures. They also contain cancer-causing acrylamides which occur during the frying process. Some chains even add sugar to their fry recipe to make them even more irresistible. Not only do they clog your arteries with saturated fat and trans fat, they also contain acrylamides. They should be called "**cancer fries**," not French fries.

3.7. Alcohol. Consuming alcohol increases the risk of cancers of the **mouth, pharynx, larynx, oesophagus, breast and liver**. Alcohol can increase risk of a number of cancers. A review in 2011 by Cancer Research UK suggests that around 4 out of 100 cancers (4%) are linked to alcohol. It increases **the risk of mouth cancer, liver cancer, breast cancer, bowel cancer, and throat cancer**, which includes **pharyngeal cancer, laryngeal cancer and cancer of the food pipe (oesophagus)**. 3.6% of all cancer cases and 3.5% of cancer deaths worldwide are attributable to consumption of alcohol. **Breast cancer** in women is linked with alcohol intake. Alcohol also increases the risk of cancers of the **mouth, esophagus, pharynx and larynx, colorectal cancer, liver cancer, stomach and ovaries**. The **International Agency for Research on Cancer** (Centre International de Recherchesur le Cancer) of the **World Health Organization** has classified alcohol as a **Group 1 carcinogen**.

3.8. Genetically-modified organisms (GMOs). It goes without saying that GMOs have no legitimate place in any cancer-free diet, especially now that both GMOs and the chemicals used to grow them have been shown to **cause rapid tumor growth**. But GMOs are everywhere, including in most food derivatives made from conventional corn, soybeans, and canola. However, you can avoid them by sticking with certified organic, certified non-GMO verified, and locally-grown foods that are produced naturally without biotechnology.

3.9. Microwave popcorn. They might be convenient, but those bags of microwave popcorn are lined with chemicals that are linked to causing **not only infertility but also liver, testicular, and pancreatic cancers**. The U.S. Environmental Protection Agency (EPA) recognizes the perfluorooctanoic acid (PFOA) in microwave popcorn bag linings as "likely" carcinogenic, and several independent studies have linked the chemical to causing tumors. Similarly, the diacetyl chemical used in the popcorn itself is linked to causing both **lung damage and cancer**.

3.10. Soda pop. Like processed meats, soda pop has been shown to cause cancer as well. Loaded with sugar, food chemicals, and colorings, soda pop acidifies the body and literally feeds cancer cells. Common soda pop chemicals like caramel color and its derivative 4-methylimidazole (**4-MI**) **have also specifically been linked to causing cancer**.

3.11. Conventional apples, grapes, and other 'dirty' fruits. Many people think they are eating healthy when they buy apples, grapes, or strawberries from the store. But unless these fruits are organic or verified to be pesticide-free, they could be a major cancer risk. The Environmental Working Group (EWG) found that up to 98 percent of all conventional produce, and particularly the type found on its "dirty" fruits list, is contaminated with cancer-causing pesticides.

4. The Anti-Cancer Diets

Whether you have a history of cancer in your family, or are currently battling the disease, lifestyle factors, including your diet, can make a huge difference in helping you fight off cancer. Some foods actually increase your risk of cancer, while others support your body and strengthen your immune system. By making smart food choices, you can protect your health, feel better, and boost your ability fight off cancer and other disease.

4.1. Cancer prevention diet-1: Focus on plant-based foods

The best diet for preventing or fighting cancer is a predominantly plant-based diet that includes a variety of vegetables, fruits, and whole grains. A plant-based diet means eating mostly foods that come from plants: vegetables, fruits, nuts, grains, and beans.

There are many ways to add plant-based foods to your diet. A nice visual reminder is to aim for a plate of food that is filled at least two-thirds with whole grains, vegetables, beans, or fruit. Dairy products, fish, and meat should take up no more than a third of the plate. Keep in mind that you don't need to go completely vegetarian. Just as important, try to minimize or reduce the amount of processed foods you eat. Eat an apple instead of drinking a glass of apple juice, for example.

4.2. Cancer prevention diet -2: Bulk up on fiber

Another benefit of eating plant-based foods is that it will also increase your fiber intake. Fiber is found in fruits, vegetables, and whole grains. In general, the more natural and unprocessed the food, the higher it is in fiber. There is no fiber in meat, dairy, sugar, or "white" foods like white bread, white rice, and pastries

Fiber plays a key role in keeping your digestive system clean and healthy. It helps keep food moving through your digestive tract, and it also moves cancer-causing compounds out before they can create harm.

4.2.1. Simple ways to add more fiber to your diet:

- Use brown rice instead of white rice
 - Substitute whole-grain bread for white bread
 - Choose a bran muffin over a croissant or pastry
 - Snack on popcorn instead of potato chips
 - Eat fresh fruit such as a pear, a banana, or an apple (with the skin)
 - Have a baked potato, including the skin, instead of mashed potatoes
- Enjoy fresh carrots and celery, instead of chips and a sour cream dip
- Use beans instead of ground meat in chili and casseroles

4.2.2. High-fiber, cancer fighting foods

Whole grain	whole-wheat pasta, raisin bran, barley, oatmeal, oat bran muffins, popcorn, brown rice, whole-grain or whole-wheat bread
Fruit	raspberries, apples, pears, strawberries, bananas, blackberries, blueberries, mango, apricots, citrus fruits, dried fruit, prunes, raisins
Legumes	lentils, black beans, split peas, lima beans, baked beans, kidney beans, pinto, chick peas, navy beans, black-eyed peas
Vegetables	broccoli, spinach, dark green leafy vegetables, peas, artichokes, corn, carrots, tomatoes, Brussels sprouts, potatoes

4.3.Cancer prevention diet - 3: Cut down on meat

Research shows that vegetarians are about fifty percent less likely to develop cancer than those who eat meat. High-fat diets have been linked to higher rates of cancer. And saturated fat is particularly dangerous. Depending on how it is prepared, meat can develop carcinogenic compounds.

4.3.1.Making better meat and protein choices

There is no need to cut out meat completely and become a vegetarian. But most people consume far more meat than is healthy. So it is needed to cut down your cancer risk substantially by reducing the amount of animal-based products and by choosing healthier meats.

- Keep meat to a minimum.** Try to keep the total amount of meat in diet to no more than fifteen percent of your total calories. Ten percent is even better.
- Eat red meat only occasionally.** Red meat is high in saturated fat, so eat it sparingly.
- Reduce the portion size of meat in each meal.** The portion should be able to fit in the palm of your hand.
- Use meat as a flavoring or a side, not the entrée.** You can use a little bit of meat to add flavor or texture to your food, rather than using it as the main element.
- Add beans** and other plant-based protein sources to your meals.
- Choose leaner meats**, such as fish, chicken, or turkey. If possible, buy organic.
- Avoid processed meats** such as hotdogs, sausage, deli meats, and salami.

4.4.Cancer prevention diet -4: Choose your fats wisely

A major benefit of cutting down on the amount of meat you eat is that you will automatically cut out a lot of unhealthy fat. Eating a diet high in fat increases your risk for many types of cancer. But cutting out fat entirely isn't the answer, either. In fact, some types of fat may actually protect against cancer. The trick is to choose your fats wisely and eat them in moderation.

-Fats that increase cancer risk – The two most damaging fats are saturated fats and trans fats. Saturated fats are found mainly in animal products such as red meat, whole milk dairy products, and eggs. Trans fats, also called partially hydrogenated oils, are created by adding hydrogen to liquid vegetable oils to make them more solid and less likely to spoil—which is very good for food manufacturers, and very bad for you.

-Fats that decrease cancer risk – The best fats are unsaturated fats, which come from plant sources and are liquid at room temperature. Primary sources include olive oil, canola oil, nuts, and avocados. Also focus on omega-3 fatty acids, which fight inflammation and support brain and heart health. Good sources include salmon, tuna, and flaxseeds.

4.4.1. Tips for choosing cancer-fighting fats and avoiding the bad

- Reduce your consumption of red meat, whole milk, butter, and eggs**, as these are the primary source of saturated fats.
- Cook with olive oil instead of regular vegetable oil.** Canola oil is another good choice, especially for baking.
- Trim the fat off of meat** when you do eat it, and avoid eating the skin of the chicken.
- Choose nonfat dairy products** and eggs that have been fortified with omega-3 fatty acids.
- Add nuts and seeds** to cereal, salads, soups, or other dishes. Good choices include walnuts, almonds, pumpkin seeds, hazelnuts, pecans, and sesame seeds.
- Limit fast food, fried foods, and packaged foods**, which tend to be high in trans fats. This includes foods like potato chips, cookies, crackers, French fries, and doughnuts.
- Eat fish once or twice a week.** Good choices include wild salmon, sardines, herring, and black cod. But be conscious of mercury, a contaminant found in many types of fish.

4.5. Cancer prevention diet -5: Choose cancer-fighting foods

Your immune system keeps you healthy by fighting off unwanted invaders in your system, including cancer cells. There are many things you can eat to maximize the strength of your immune system, as well as many cancer-fighting foods. But keep in mind that there is no single miracle food or ingredient that will protect you against cancer. Eating a colorful variety gives you the best protection.

- Boost your antioxidants.** Antioxidants are powerful vitamins that protect against cancer and help the cells in your body function optimally. Fruits and vegetables are the best sources of antioxidants such as beta-carotene, vitamin C, vitamin E and selenium.
- Eat a wide range of brightly colored fruits and vegetables.** Colorful fruits and vegetables are rich in phytochemicals, a potent disease-fighting and immune-boosting nutrient. The greater the variety of colors that you include, the more you will benefit, since different colors are rich in different phytochemicals.
- Flavor with immune-boosting spices and foods.** Garlic, ginger, and curry powder not only add flavor, but they add a cancer-fighting punch of valuable nutrients. Other good choices include turmeric, basil, rosemary, and coriander. Use them in soups, salads, casseroles, or any other dish.
- Drink plenty of water.** Water is essential to all bodily processes. It stimulates the immune system, removes waste and toxins, and transports nutrients to all of your organs.

4.6. Cancer prevention diet - 6: Prepare your food in healthy ways

Choosing healthy food is not the only important factor. It also matters how you prepare and store your food. The way you cook your food can either help or hurt your anti-cancer efforts.

4.6.1. Preserving the cancer-fighting benefits of vegetables

Here are a few tips that will help you get the most benefits from eating all those great cancer-fighting vegetables:

-Eat at least some raw fruits and vegetables. These have the highest amounts of vitamins and minerals, although cooking some vegetables can make the vitamins more available for our body to use.

-When cooking vegetables, steam until just tender using a small amount of water. This preserves more of the vitamins. Overcooking vegetables removes many of the vitamins and minerals. If you do boil vegetables, use the cooking water in a soup or another dish to ensure you're getting all the vitamins.

-Wash all fruits and vegetables. Use a vegetable brush for washing. Washing does not eliminate all pesticide residue, but will reduce it. Choose organic produce if possible, grown without the use of pesticides.

4.6.2. Cooking and carcinogens

Carcinogens are cancer-causing substances found in food. Carcinogens can form during the cooking or preserving process—mostly in relation to meat—and as foods start to spoil. Examples of foods that have carcinogens are cured, dried, and preserved meats (e.g. bacon, sausage, beef jerky); burned or charred meats; smoked foods; and foods that have become moldy. Here are some ways reduce your exposure to carcinogens:

-Do not cook oils on high heat. Low-heat cooking or baking (less than 240 degrees) prevents oils or fats from turning carcinogenic. Instead of deep-frying, pan-frying, and sautéing, opt for healthier methods such as baking, boiling, steaming, or broiling.

-Go easy on the barbecue. Burning or charring meats creates carcinogenic substances. If you do choose to barbecue, don't overcook the meat and be sure to cook at the proper temperature (not too hot).

-Store oils in a cool dark place in airtight containers, as they quickly become rancid when exposed to heat, light, and air.

-Choose fresh meats instead of cured, dried, preserved, or smoked meats.

-Avoid foods that look or smell moldy, as they likely contain aflatoxin, a strong carcinogen. Aflatoxin is most commonly found on moldy peanuts. Nuts will stay fresh longer if kept in the refrigerator or freezer.

-Be careful what you put in the microwave. Use waxed paper rather than plastic wrap to cover your food in the microwave. And always use microwave-safe containers.

5. Best Foods for Cancer Prevention

About 35 percent of cancers are related to nutritional factors. To help prevent cancer, eat a wide variety of foods rich in nutrients that protect your body's cells from damage.

5.1 Grapefruit. Vitamin C — an antioxidant found in many fruits and vegetables such as **grapefruit**, oranges, bell peppers, and broccoli — helps to prevent the formation of cancer-causing nitrogen compounds. Diets high in vitamin C have been linked to a **reduced risk of cancers of the stomach, colon, esophagus, bladder, breast, and cervix.**

5.2. Peanuts and peanut butter. Some research shows that eating a vitamin E-rich diet **reduces the risk of stomach, colon, lung, liver, and other cancers.** Adding vitamin E-rich foods like **peanuts, peanut butter**, almonds, almond butter, and sunflower seeds to your diet will help keep your cells' defenses strong.

5.3. Berries. Of all the fruits and vegetables studied, **berries** rank among the most likely to reduce cancer risk. Raspberries, blueberries, and cranberries in particular have shown very promising potential to help prevent cancer. An antioxidant called pterostilbene, found in high quantities in blueberries, has cancer-fighting properties. Laboratory animals fed black raspberries had a 60 percent reduction in **tumors of the esophagus and an 80 percent reduction in colon tumors.**

5.4. Sweet potatoes. Beta-carotene is a powerful antioxidant. Studies have shown that people who eat a diet high in beta-carotene — found primarily in orange vegetables and leafy greens — have a reduced risk of cancer, particularly of the **lung, colon, and stomach.** Among premenopausal women, one study found that eating a lot of vegetables that include beta-carotene, folate, vitamin C, and fiber — like **sweet potatoes** — reduced the risk of breast cancer by about half.

5.5. Wild salmon. Low vitamin D levels have been linked to several cancers, including colon and breast. Scientists theorize that vitamin D may help block the development of blood vessels that feed growing tumors and help stop the proliferation of cancerous and precancerous cells. It is recommended for eating plenty of vitamin D-rich foods, such as **wild salmon**, and choosing vitamin D-fortified dairy products, like milk and yogurt.

5.6. Ground flaxseed. Omega-3 fatty acids may help prevent cancer by inhibiting cancer cell proliferation and disrupting steps that are critical to tumor growth. **Omega-3 fatty acids** also help reduce inflammation, which means they could theoretically reduce the possibility of cellular mutations. But even if omega-3s don't directly reduce the risk of cancer, they certainly help keep our bodies strong and healthy. In addition to fatty fish and shellfish, mixing ground **flaxseed** into yogurt and smoothies is an excellent way to include more omega-3s in your diet.

5.7.Turmeric. Turmeric is the yellow-colored spice found in curry powder. Curcumin, the active ingredient in turmeric, functions as both an anti-inflammatory and an antioxidant, and it may help prevent cancer by interfering with aspects of cellular signaling. In laboratory animals, curcumin has been shown to help prevent **cancer of the breast, colon, stomach, liver, and lung.**

5.8.Tea. Tea contains compounds called catechins, compounds that scientists theorize may help stop the growth of cancer cells and prevent cellular mutations that contribute to cancer development. In Japan, where **tea** is the preferred beverage, green tea consumption has been linked to **reduced risk of stomach cancer** among women. In China, **green tea** drinkers were found to have a **lower risk of developing rectal and pancreatic cancers** compared with non-tea drinkers. **Regular tea drinkers have also been shown to be at reduced risk for colon, breast, ovarian, prostate, and lung cancers.**

5.9. Cruciferous vegetables. All plant foods — grains, fruits, and vegetables — contain small amounts of phytonutrients: naturally occurring chemical compounds that are just as important as vitamins and minerals are for maintaining health. There are thousands of known phytonutrients, many of which have demonstrated the potential to protect us against cancer. Cruciferous vegetables like **broccoli, cauliflower, and cabbage** contain phytonutrients known as glucosinolates, which may help inhibit the metabolism of some carcinogens and stimulate the body's production of detoxification enzymes.

5.10.Pomegranates. Pomegranates are chock full of ellagic acid. In laboratory and animal studies, ellagic acid has been shown to inhibit cancer cell growth and deactivate cancer-causing compounds. To take advantage of these health properties, incorporate pomegranate seeds into smoothies or use them to top off a bowl of yogurt or cereal. Other foods rich in ellagic acid include **raspberries, blackberries, strawberries, walnuts, pecans, cranberries, and grapes** (red, black, purple).

6. Conclusion

Foods to limit in your diet or eat less of include: Fatty processed red meats, highly processed foods that are low in fibre and heavily salted and pickled foods. Eat unprocessed foods and base your diet largely on plants. Consume foods that have omega-3 fats and other essential fatty acids. Eat lots of fruits and vegetables; many common ones have known cancer-fighting properties. Get regular vigorous exercise, since tumors cannot thrive in highly oxygenated environments. Keep your blood sugar stable to avoid being an all-you-can-eat buffet for cancer cells.

Eat foods high in natural vitamin C, a nutrient that deters the conversion of nitrite into nitrosamine and promotes healthy immune function. Make sure you get adequate amounts of cancer-fighting vitamin D through exposure to sunlight -- about 10 to 15 minutes each day if you have fair skin, or ten times as long if you have dark skin pigmentation. Buy organic foods which are grown without added pesticides or hormones. Avoid smoking and don't use conventional fragrance, cosmetics and personal care products - virtually all of them contain cancer-causing chemicals.

A potential cancer-causing compound called acrylamide forms as a result of the chemical changes that occur in foods when they're baked, fried, or roasted. Many foods with the greatest amounts of acrylamide are french fries and potato chips. French fries, potato chips, and baked sweets should be consumed in limited amounts.

Limit Your Alcohol Intake. Drinking excessive amounts of alcohol regularly increases your risk factor for many types of cancer. Studies suggest that men who consume 2 alcoholic drinks per day and women who have 1 alcoholic drink per day significantly increase their risk factors for certain types of cancer.

To help prevent cancer, eat a wide variety of foods such as: berries, grapefruit, cruciferous vegetables, turmeric and garlic. Garlic contains sulfur compounds that may stimulate the immune system's natural defenses against cancer, and may have the potential to reduce tumor growth. Studies suggest that garlic can reduce the incidence of stomach cancer.

Preventing cancer is actually quite straightforward. Even the World Health Organization says that 70 percent of all cancers can be prevented with simple changes in diet and lifestyle. The truth is that most people give themselves cancer through the foods, drinks and products they choose to consume.

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