EAT TO DEFEAT CANCER

10 Superfoods That Nourish Every Cell

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There’s one sentence that’s probably more feared than any other: “You’ve got cancer.” In 2012, there were over 14 million new cases of cancer worldwide and the World Health Organization expects the number of new cases to rise by nearly 70% over the next 20 years.\[1\]

This year alone, a total of 1,735,350 new cancer cases are projected to occur in the U.S. That’s 4,700 new diagnoses per day. According to the American Cancer Society, the lifetime probability of being diagnosed with cancer is 39.7% for men and 37.6% for women, which is a little more than 1 in 3 people.\[2\]

What’s causing so many people to get cancer?

Is it just that we’re living longer, and human cells malfunction with age? Are we prone to some genetic defect that causes cells to go rogue and threaten the organism that brought them into being? Are we suffering from a deficiency of some as-yet non-invented drug that will eventually protect or cure us? Or is cancer actually being caused, in some way, by the way we’re living?

In 2008, researchers at the University of Texas MD Anderson Cancer Center set out to understand what was driving the global cancer epidemic, and what could be done about it. They conducted a meta-analysis of studies in peer-reviewed journals and then published their own summary report in *Pharmaceutical Research*. The researchers concluded that only 5-10% of all cancers have their roots in genetic defects. The other 90-95% are caused by a combination of diet, lifestyle and environmental factors. They found, not surprisingly, that of all cancer deaths, 25-30% are caused by tobacco consumption. But there was another factor which the researchers determined was even more significant than smoking.\[3\]

**Diet.**

In fact, the researchers reported, diet causes 30-35% of all cancer cases worldwide—totaling more than two million deaths per year.\[4\]

**So how do you avoid becoming another cancer statistic?**

A growing and convincing body of research has found that a healthy diet filled with a large variety of plant foods, including fresh vegetables, fruits, seeds, nuts, mushrooms, and legumes, can help prevent or even reverse cancer.\[5\]

We’ve put together a list of ten superfoods that research has shown to have cancer-fighting capabilities and improve overall cell health.

While no single food or diet alone can protect against cancer, these foods can make the biggest difference to the greatest number of people because they offer critical minerals, vitamins, antioxidants, flavonoids, polyphenols, and a host of other important phytonutrients that help prevent and fight cancer — and that can power up your immune system and help you lose weight and gain vitality in the bargain.
1) **Mushrooms**  Frequent consumption of mushrooms (approximately one button mushroom per day) has been linked to a 64 percent decrease in the risk of breast cancer. Mushrooms are thought to protect against breast and other hormone-related cancers particularly because they inhibit an enzyme called aromatase, which produces estrogen. Mushrooms also contain specialized lectins that recognize cancer cells and have been found to prevent these cells from growing and dividing. Mushrooms also contain bioactive compounds as well as phytochemicals that have anti-angiogenic (stop cancerous blood vessel growth), anti-proliferative (stop cancerous cells from spreading), and other anti-cancer effects, which have been studied in relation to stomach, colorectal, breast, and prostate cancers.

2) **Garlic**  Researchers studied 41,387 Iowa women, tracking their consumption of 127 foods over a five-year period. The food found to be most highly associated with a statistically significant decrease in colon cancer was garlic. In the study, women with the highest amounts of garlic in their diets had a 50% lower risk of certain colon cancers than women who ate the least. Another study of 5,000 men and women, conducted in China over a five-year period, found that taking a garlic extract was linked to 52% reduction in stomach cancer rates, when compared to a placebo.

   Laboratory research has shown that one garlic component, diallyl disulfide, has potent preventive power against cancers of the skin, colon, and lung. Recently, this compound also proved able to kill leukemia cells in the lab.

3) **Berries**  Berries are among the world’s top foods for fighting cancer. Most berries contain ellagic acid, which has been found to inhibit tumor growth. According to research by the American Institute for Cancer Research, ellagic acid seems to utilize several different cancer-fighting methods at once: it acts as an antioxidant, it helps the body deactivate specific carcinogens, and it helps slow the reproduction of cancer cells. Berries also contain a powerful collection of other antioxidants, which protect the body from cell damage that could lead to skin cancer, as well as cancers of the bladder, lung, breast, and esophagus.
4) Turmeric  This orange-colored spice, a staple in Indian curries, contains a polyphenol called curcumin that has been found to be useful in reducing cancer risk. A number of laboratory studies have shown that curcumin seems to be able to kill cancer cells and prevent more from growing.\(^7\) It has the best effects on breast cancer, bowel cancer, stomach cancer, and skin cancer cells. Studies also indicate that curcumin may be able to destroy cancer and cancer stem cells that have developed resistance to chemotherapy drugs, also known as multidrug resistance, and protect against radiation-induced damage.\(^8\) \(^9\) \(^{10}\)

5) Cabbage & Crucifers  Cabbage and members of the crucifer family such as broccoli, Brussels sprouts, arugula, cauliflower, kale, turnips and collards appear to be particularly helpful in protecting you from cancer. Studies have linked increased consumption of these cruciferous vegetables with a decrease in rates of breast, lung, colorectal, and prostate cancers.\(^{21}\)

Crucifers also contain glucosinolates and, in a different area of the cell, an enzyme called myrosinase. When combined through blending, chopping, or chewing, we break up the plant cells, allowing myrosinase to come into contact with glucosinolates, initiating a chemical reaction that produces isothiocyanates (ITCs) – which are powerful anti-cancer compounds. In fact, ITCs have been shown to detoxify and remove carcinogens, kill cancer cells, and prevent tumors from growing.\(^{22}\) According to lab studies, glucosinolates can decrease inflammation, inhibit enzymes that activate carcinogens, and stimulate enzymes that deactivate carcinogens. Studies suggest that they “turn on” genes that suppress tumors, slowing cancer cell growth and stimulating a process called apoptosis in which cancer cells self-destruct.\(^{23}\)

Cruciferous vegetables are also excellent sources of vitamin C (which protects cells as an antioxidant and by supporting the immune system). And most are good sources of manganese, folate, potassium, dietary fiber, and carotenoids, such as beta-carotene, which promotes cell communication and helps to control abnormal cells.\(^{24}\)
6) **Leafy, Dark Green Vegetables** Leafy, dark green vegetables such as kale, collards, spinach, chard, certain kinds of lettuce, bok choy, and mustard greens are among the most powerful plants on the planet. These vegetables contain, among other health-promoting goodies, lutein and zeaxanthin — two powerful antioxidants that can block early cancer development.\(^{25}\) The carotenoids that give leafy greens their dark green pigment (and that make carrots, sweet potatoes, and squash orange and yellow) are also linked to a reduction in rates of breast cancer, skin cancer, stomach cancer — and to reduced rates of cancer of the mouth, pharynx, and larynx.\(^{26}\)\(^{27}\)

7) **Legumes** Legumes such as beans, peas, lentils, peanuts, and soybeans, are potent cancer fighters. They’re great sources of phytochemicals, including triterpenoids, flavonoids, inositol, protease inhibitors, and sterols.\(^{28}\) In one study, eating beans and lentils was correlated with a decreased risk of cancers of the entire digestive tract — including mouth, stomach, colon, and rectal cancers — as well as cancer of the kidney.\(^{29}\) Legumes also contain other health-promoting substances that may protect against cancer, including folate, lignans, and saponins. Legumes are also packed with fiber, which has been linked in some studies to reduced rates of breast cancer, colorectal cancer, and prostate cancer.\(^{30}\)\(^{31}\)

8) **Red Grapes** Red grapes contain many phytonutrients, including anthocyanins (disease-fighting flavonoids), proanthocyanidins (powerful flavonoid antioxidants), and flavonoids, which may be able to inhibit the growth of cancer-causing agents.\(^{32}\) The skin of red grapes is also a rich source of an antioxidant called resveratrol.\(^{33}\) In a series of studies, resveratrol was found to block the development of skin, breast, and 12 leukemia cancers at all three stages of the disease (initiation, promotion, and progression).\(^{34}\)
9) **Walnuts**  Walnuts contain a number of potent nutrients that can help fight cancer and boost overall health. These include ellagic acid, a phytochemical antioxidant, and gamma-tocopherol, a type of vitamin E – both of which have strong anti-inflammatory and cancer-protective effects. Multiple studies have found that walnuts appear to be particularly protective against breast and prostate cancers.

10) **Celery**  Even though celery is around 95% water, this mighty green stalk contains two anti-cancer compounds: apigenin and luteolin. Both compounds are bioactive flavonoids, which work as antioxidants and combat free radicals in the body. Apigenin also contains anti-tumor properties. It’s been found effective at causing apoptosis (cell suicide) in numerous types of cancer cells. And it’s also a powerful anti-inflammatory that rivals commercial anti-inflammatory drugs. Researchers have found luteolin to have the capacity to short-circuit the replication cycle of cancer cells. Specifically, a study published in the BioMed Central Gastroenterology journal discovered that luteolin is able to block the signal pathways (IGF and PI3K), which are necessary for the growth of colorectal cancer cells. Eating only two medium stalks of celery 2 to 3 times a week could reduce the risk of getting lung cancer by 60%, according to research from China. Other studies have found celery to be potentially extremely effective at killing ovarian, pancreatic, prostate, breast, liver, and lung cancer cells.
Cancer-Fighting Superfoods Checklist

✅ **Mushrooms**
- Inhibit aromatase enzymes that produce estrogen and protect against breast and hormone-related cancers.
- Prevent cancer cells from growing and dividing thanks to specialized lectins.
- Bioactive compounds and phytochemicals have anti-angiogenic, anti-proliferative, and other anti-cancer effects.

**Protects Against:** Breast, Stomach, Colorectal, and Prostate Cancers

✅ **Garlic**
- Shown to reduce cancer rates of the stomach and colon.
- Diallyl disulfide has potent preventive power against cancers of the skin, colon, and lung.
- Diallyl disulfide also proved able to kill leukemia cells in the lab.

**Protects Against:** Skin, Colon, Lung, and Stomach Cancers

✅ **Berries**
- One of the world’s top foods for fighting cancer.
- Contain ellagic acid, which has been found to inhibit tumor growth.
- Ellagic acid utilizes several different cancer-fighting methods at once: it acts as an antioxidant, it helps the body deactivate specific carcinogens, and it helps slow the reproduction of cancer cells.
- Contain other antioxidants that protect the body from cell damage that could lead to cancer.

**Protects Against:** Skin, Bladder, Lung, Breast, and Esophageal Cancers

✅ **Turmeric**
- Contains the polyphenol curcumin, which has been found to be useful in reducing cancer risk.
- Curcumin seems to be able to kill cancer cells and prevent more from growing.
- Curcumin may be able to destroy multi-drug resistant cancer and cancer stem cells, and also protect against radiation-induced damage.

**Protects Against:** Breast, Bowel, Stomach, and Skin Cancers

✅ **Leafy, Dark Green Vegetables**
- Contain lutein and zeaxanthin — two powerful antioxidants that can block early cancer development.
- The carotenoids that give leafy greens their dark green pigment are also linked to a reduction in rates of certain cancers.

**Protects Against:** breast, skin, stomach, mouth, pharynx, and larynx cancers.

✅ **Legumes**
- Great sources of phytochemicals, including triterpenoids, flavonoids, inositol, protease inhibitors, and sterols.
- Eating legumes has been correlated with a decreased risk of cancers of the entire digestive tract.
- Contain other health-promoting substances that may protect against cancer, including folate, lignans, and saponins.
- Packed with fiber, which has been linked to reduced rates of certain cancers.

**Protects Against:** Mouth, Stomach, Colorectal, Breast, and Prostate Cancers

✅ **Red Grapes**
- Contain phytonutrients, including anthocyanins, pro-anthocyanidins, and flavonoids, which may be able to inhibit the growth of cancer-causing agents.
- The skin of red grapes is a rich source of the antioxidant resveratrol, which was found to block the development of skin, breast, and 12 leukemia cancers at all three stages of the disease (initiation, promotion, and progression).

**Protects Against:** Skin and Breast Cancers

✅ **Walnuts**
- Contain ellagic acid, a phytochemical antioxidant, and gamma-tocopherol, a type of vitamin E – both of which have strong anti-inflammatory and cancer-protective effects.

**Protects Against:** Breast and Prostate Cancers

✅ **Celery**
- Contains two anti-cancer compounds, apigenin and luteolin, which are bioactive flavonoids, and work as antioxidants and combat free radicals in the body.
- Apigenin contains anti-tumor properties and has been found effective at causing apoptosis (cell suicide) in numerous types of cancer cells.
- Luteolin has the capacity to short-circuit the replication cycle of cancer cells.

**Protects Against:** Ovarian, Pancreatic, Prostate, Breast, Liver, and Lung Cancers.
Top Cancer-Causing Foods

1) Red Meat  In October 2015, the World Health Organization’s International Agency for Research on Cancer (IARC) announced that the consumption of red meat is probably carcinogenic to humans. Through numerous studies, meat consumption has been found to increase the risk of colorectal cancer, breast cancer, and prostate cancer.

According to the World Health Organization, eating one burger a day or 3.5 oz of red meat raises the risk of colorectal cancer by 17% while eating 2 oz of processed meat, which is equivalent to 2 slices of bacon or 2 slices of deli meat, raises the risk by 18%. In fact, researchers at Harvard University found those who eat beef, lamb, and/or pork daily increase their colon cancer risk by three times compared to those who don’t consume them.

Harvard School of Public Health also found a link between meat consumption and breast cancer risk. Compared with women who had one serving of red meat a week, those who ate 1.5 servings a day appeared to have a 22% higher risk of breast cancer. And each additional daily serving of red meat seemed to increase the risk of breast cancer by another 13%.

Cooking meat at high temperatures creates potentially carcinogenic compounds, including polycyclic aromatic hydrocarbons (formed during the burning of organic substances) and heterocyclic amines (formed as meat is cooked at high temperatures). Even meat that is cooked under normal grilling, frying, or oven-broiling may contain significant quantities of these mutagens.

The WHO also declared the consumption of processed meats, or meats that have been preserved by smoking, salting, curing or adding other preservatives, as carcinogenic to humans. When eaten regularly, research has shown processed meats increase the risk of both stomach and colorectal cancers. Compounds used as preservatives in processed meats may lead to cancer-causing compounds in the body.

What about grass fed or pasture-raised beef? While it’s entirely possible that pasture-raised or grass fed beef would have different health effects than the grain-fed beef that’s the norm today, there have been no long-term studies done on humans who ate only meat produced in this way, so at this point any potential anti-cancer advantages to it are somewhat theoretical.
2) Dairy  The dairy industry has spent billions of dollars touting milk as “nature’s most perfect food.”[51] And it is, for baby cows. But dairy milk, as well as dairy products, also contains many things that don’t do a human body much “good”. Recent studies suggest dairy products may be linked to increased risk for prostate cancer, testicular cancer, and possibly also for ovarian and breast cancers.[52]

The danger of dairy product consumption, especially in relation to prostate and breast cancers, is most likely related to increases in insulin-like growth factor (IGF-1), which is found in cow’s milk.[53]

Estrogen metabolites are also considered risk factors for cancers of the reproductive system, including cancers of the breasts, ovaries, and prostate. These metabolites can affect cellular proliferation such that cells grow rapidly and aberrantly, which can lead to cancer growth.[54]

Eating dairy products may also contribute to development of ovarian cancer, which might be caused by the breakdown of the milk sugar lactose into galactose, a sugar which might be toxic to ovarian cells.[55]
3) Alcohol  Each year, approximately 389,000 cases of cancer (3.6% of all cancers worldwide) are derived from chronic alcohol consumption. Research indicates that the more alcohol a person drinks—particularly the more consumed regularly over time—the higher the risk of developing an alcohol-associated cancer such as breast, esophageal, liver, colorectal, stomach and mouth/pharynx/larynx cancer.

Researchers have identified multiple ways alcohol may contribute to cancer. Alcohol contains ethanol, which is a recognized carcinogen that may lead to DNA damage. Alcohol may also reduce folate absorption or help potential carcinogens enter cells. Alcoholic beverages may contain a variety of carcinogenic contaminants that are introduced during fermentation and production, such as nitrosamines, asbestos fibers, phenols, and hydrocarbons.

When combined with tobacco use, research shows that people who use both alcohol and tobacco have much greater risks of developing cancers of the oral cavity, pharynx (throat), larynx, and esophagus than people who use either alcohol or tobacco alone.

And what about those reports that say drinking a glass of red wine may reduce your risk of cancer? Researchers conducting studies using purified proteins, human cells, and laboratory animals have found that certain substances in red wine, such as resveratrol, have anticancer properties. However, few epidemiologic studies have looked specifically at the association between red wine consumption and cancer risk in humans.

For cancer prevention, the American Institute for Cancer Research recommends not drinking alcohol. If you do drink alcohol, AICR recommends limiting consumption to no more than two drinks a day for men and one drink a day for women.

And if you’re going to drink alcohol, then many scientists agree that red wine is the best choice because of the resveratrol it contains.
4) **Sugar**  From weight gain to fueling cardiovascular disease to hijacking our dopamine reward system like a drug, sugar has many effects on the body. But can it cause cancer?

While there isn’t a direct and proven link, the AIRC suggests there is an indirect one. All cells in your body — including cancer cells — need sugar (glucose) from your bloodstream for fuel. But eating a lot of high-sugar foods can lead to excess weight and body fat. It is excess body fat that increases risk of many common cancers.

What about artificial sweeteners? Unlike natural sweeteners like stevia or honey, artificial sweeteners such as acesulfame potassium, sucralose (Splenda®), aspartame, and sodium benzoate have all been linked to increased cancer risk.

5) **Soda**  In addition to damaging your teeth and increasing your risk for diabetes, soda is also linked to cancer. The artificial brown coloring in colas is not made from caramelized sugar. It is made by reacting sugars with ammonia and sulfites under high pressure and temperatures. These chemical reactions result in the formation of 2-methylimidazole (2-MI) and 4-methylimidazole (4-MI), which in government-conducted studies caused lung, liver, or thyroid cancer, or leukemia in laboratory mice and rats.

Sodas that contain both ascorbic acid (vitamin C) and potassium benzoate can form benzene, a known carcinogen. According to the FDA, when benzoate is exposed to light and heat in the presence of vitamin C, it can be converted into benzene. According to the American Cancer Society, benzene is considered a carcinogen.

Many sodas also contain artificial sweeteners. While many people opt for artificial sugar to lower caloric intake, the tradeoff for your health isn’t so sweet. Artificial sugars, such as aspartame, are linked to numerous illness and diseases, including cancer. Aspartame is made up of 40% aspartic acid, which functions as an excitotoxin, stimulating neurons and destroying nerve cells. Researchers have found that when cancer cells are subjected to aspartame, they directly increased in activity and mobility.
6) GMO Foods  A genetically modified organism, or GMO, is an organism whose genome has been altered by the techniques of genetic engineering so that its DNA contains one or more genes not normally found there. The most common GMO foods have been engineered to withstand being heavily sprayed with toxic herbicides.\[71\]

There are literally hundreds of food additives that many people may not recognize are GMOs when in fact they are.\[72\] If a product isn’t Certified Organic or Certified Non-GMO, and if it has more than five ingredients listed on the label, odds are high that it does, in fact, contain GMOs.

While there is no clear and direct link between GMO foods causing cancer, there are studies that suggest the toxic herbicides sprayed on crops does increase cancer risks—and most GMO crops have specifically been engineered to withstand these herbicides. In 2015, the World Health Organization’s International Agency for Research on Cancer announced findings that glyphosate, the main ingredient in Monsanto’s Roundup line of pesticides, is “probably carcinogenic to humans.”\[73\]

The research, published in *The Lancet Oncology*, relies on studies conducted on the chemical over the course of several decades.\[74\] Since the IARC report was released in March 2015 many countries have been looking at possible bans on glyphosate-based herbicides and Sri Lanka has already announced a complete ban.\[75\] Supermarkets across Europe have also removed glyphosate-based herbicides from their shelves.\[76\]

But it’s still being sprayed, in ever-growing volume, on corn, soy, canola, sugar beets, cotton, alfalfa, and other genetically engineered crops.
Endnotes

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Eat to Defeat Cancer: 10 Superfoods That Nourish Every Cell

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