

Green Tea

- Rich in polyphenols, including catechins (esp epigallocatechin gallate-3 or EGCG) which reduce the growth of new vessels needed for tumor growth and metastases.
- Powerful antioxidant and detoxifier; activates enzymes in liver to eliminate toxins from the body.
- Japanese green tea; sencha, gyokuro, matcha are richest in EGCG than other Chinese green teas.
- In *laboratory studies*, green tea has been shown to slow or completely prevent cancer development in colon, liver, breast and prostate cells.
- Other studies involving green tea have shown similar protective effects in tissues of the lung, skin and digestive tract.
- Must be steeped for at least 5 minutes, ideally ten minutes to release its catechins.
- Recommended consumption; Drink 2-3 cups a day. Do not store after steeping, it loses its beneficial polyphenols after 1-2 hours.

Olives & Olive Oil

- Are ideal health foods that contain high concentrations of phenolic antioxidants.
- Olive oil should be organic, cold-pressed, extra-virgin oil; this product will have higher concentrations of bio-active components versus refined olive oil.
- Recommended consumption; ½ - 1 tablespoon of olive oil daily; in salad dressings or lightly cooked vegetables and as an accompaniment to rice and quinoa.

Turmeric

- Powerful natural anti-inflammatory.
- Helps stimulate apoptosis in cancer cells and inhibit angiogenesis.
- Enhances effectiveness of chemotherapy and reduces tumor growth.
- To properly assimilate, turmeric must be mixed with black pepper and dissolved in olive or flax oil; mix ¼ teaspoon turmeric + ½ teaspoon olive oil + generous pinch of black pepper. (Add to vegetable soups and salad dressings).

Ginger

- A powerful anti-inflammatory and anti-oxidant which has protective effects; more effective than vitamin E.
- Helps reduce creation of new blood vessels for tumors.
- Relieves nausea from chemotherapy or radiotherapy.
- Grate or slice a small piece of ginger and steep in boiling water for fifteen minutes; can be drunk hot or cold.

Garlic, Onions, Leaks, Shallots, Chives

- These allium vegetables contain many substances now being studied for their anti-cancer effects, such as **quercetin**, **allixin** and a large group of **organosulfur compounds** that includes **allicin**, **alliin** and **allyl sulfides**.
- These sulfur compounds promote apoptosis (cell death) in leukemia, colon, breast, lung, and prostate cancers.
- In *laboratory studies*, components of garlic have shown the ability to slow or stop the growth of tumors in prostate, bladder, colon and stomach tissue.
- Laboratory research has also shown that one garlic component, called diallyl disulfide, exerts potent preventive effects against cancers of the skin, colon and lung. Recently, this compound proved able to kill leukemia cells in the laboratory. A compound derived from garlic called ajoene has displayed similar activity.
- In *animal studies*, components in Allium vegetables have slowed the development of cancer in several stages and at various body sites: stomach, breast, esophagus, colon and lung.
- In addition, these herbs help regulate blood sugar levels, which in turn reduces insulin secretion and IGF, and thus the growth of cancer cells.
- **The active molecules of garlic are released when a garlic clove is crushed and are much more easily assimilated if there are dissolved in a little (olive) oil.**

Cruciferous Vegetables

Brussels sprouts, bok choy, Chinese cabbage, broccoli, cauliflower, etc... Nearly all are excellent or good sources of vitamin C and some are good sources of manganese. All contain sulforaphane and indole-3-carbinols (I3Cs) which are powerful anti-cancer molecules.

- Glucosinolates are compounds found in all cruciferous vegetables; Glucosinolates form isothiocyanates and indoles.
- isothiocyanates and indoles prevent pre-cancerous cells from developing into malignant tumors.
- Broccoli, Brussels sprouts, cauliflower and rapini are all excellent sources of folate, a B vitamin.
- Broccoli is a good source of potassium.
- Broccoli and Brussels sprouts are good sources of dietary fiber and rich in magnesium.
- Broccoli, Brussels sprouts and rapini contain carotenoids such as beta-carotene.
- Red cabbage and radishes supply anthocyanins. Other cruciferous vegetables provide different polyphenols, such as hydroxycinnamic acids, kaempferol and quercetin.
- **Avoid boiling, this risks destroying sulforaphane and I3Cs.**
- **Cover and steam briefly or stir-fry rapidly in a wok with a little olive oil.**

Dark Green Leafy Vegetables

- Spinach, kale, romaine lettuce, leaf lettuce, mustard greens, collard greens, chicory and Swiss chard are excellent sources of **fiber**, **folate** and a wide range of **carotenoids** such as lutein and zeaxanthin, along with saponins and flavonoids. Dark greens are high in vitamin K.
- According to AICR's second expert report, *Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective*, foods containing carotenoids probably protect against cancers of the mouth, pharynx and larynx.
- Researchers believe that carotenoids seem to prevent cancer by acting as antioxidants – that is, scouring potentially dangerous “free radicals” from the body before they can do harm. Some *laboratory research* has found that the carotenoids in dark green leafy vegetables can inhibit the growth of certain types of breast cancer cells, skin cancer cells, lung cancer and stomach cancer.
- The Second Expert Report also noted probable evidence that foods containing folate decrease risk of pancreatic cancer and that foods containing dietary fiber probably reduce one’s chances of developing colorectal cancer.
- **When cooking Kale, Swiss Chard, and Collards; steam lightly for less than 3 minutes, top with olive oil, ground black pepper and grated nutmeg.**

Winter squash, including pumpkins, are rich in carotenoids, including:

- beta-carotene and alpha-carotene: these carotenoids can act as antioxidants. Also, our bodies convert these to vitamin A, a nutrient important for immune function and maintaining healthy cells among other roles.
- lutein and zeaxanthin: these yellow pigmented carotenoids help protect eye health by filtering high-energy ultraviolet rays that can damage our eyes’ lens and retina. They act as antioxidants here and possibly elsewhere in our bodies.
- Other vegetables rich in carotenoids include; carrots, yams, sweet potatoes, tomatoes, persimmons, apricots, beets and all brightly colored fruits and vegetables contain vitamin A and Lycopene which have the proven capacity to inhibit the growth of cells of several cancer lines, including brain gliomas.
- Lutein, lycopene, phytoene, and canthaxanthin stimulate the growth of immune cells and increase their capacity to attack tumor cells. They make NK cells more aggressive.
- Tomatoes contain a whole series of anti-cancer nutrients whose combine action is more effective than lycopene on its own.
- **Tomatoes must be cooked in order to release these nutrients; olive oil improves their assimilation.**

Mushrooms:

- Shiitake, maitake, enokidake, cremini, portobello, oyster and thistle oyster mushrooms - all contain polysaccharides and lentinan; a beta-glucan - an anti-tumor polysaccharide (D-glucose monomers linked by β -glycosidic bonds) from the shiitake (*Lentinula edodes*) mushroom.
- Often used in Japan as a complement to chemotherapy.
- Use in soups, vegetables, oven grilled or stir fry.

Herbs and Spices:

- Cooking with herbs such as rosemary, thyme, oregano, basil and mint are very rich in essential oils of the terpene family
- These herbs promote apoptosis in cancer cells and reduce their spread by blocking the enzymes needed to invade neighboring tissues.
- Carnosol in rosemary is also a powerful anti-oxidant and anti-inflammatory.
- Parsley and celery contains apigenin which is an anti-inflammatory that promotes apoptosis and blocks angiogenesis.

Seaweed:

- Contain molecules that slow cancer growth, especially that of breast, prostate, skin, and colon cancer.
- Fucoidan, found in kombu and wakame seaweed, helps provoke cell death by apoptosis and stimulate immune cells, including NK cells.
- Fucoxanthin, a carotenoid, is in certain varieties of seaweed that makes them brown and is more effective than its cousin lycopene in its capacity to inhibit cell growth in prostate cancer.
- The principal edible seaweeds are nori, kombu, wakame, arame, and dulse.
- Kombu is reputed to shorten the cooking time for legumes and to make them more digestible.

Berries:

- Strawberries, raspberries, blueberries, blackberries, and cranberries contain ellagic acid and a large number of polyphenols
- They stimulate mechanisms of elimination of carcinogenic substances and inhibit angiogenesis.
- Anthocyanidins and proanthocyanidins also promote apoptosis in cancer cells
- In winter, frozen berries can replace fresh ones.

Plums, Peaches, and Nectarines:

- Stone fruit contain as many anti-cancer agents as berries, especially plums.
- A study at the University of Texas observed that plum extracts had a powerful effect against the growth of breast cancer.

Citrus Fruit:

- Contain anti-inflammatory flavonoids.
- Stimulate detoxification of carcinogenics by the liver.
- Tangeritin and nobiletin, flavonoids in the skin of tangerines penetrate brain cancer cells and facilitate their death by apoptosis.
- Grated citrus fruit skins (organic only!) can be sprinkled over salad dressings or breakfast cereals.
- Skins can also be steeped in tea or hot water.

Pomegranate Juice:

- Contain anti-inflammatory and anti-oxidant properties.
- Has capacity to substantially reduce the development of prostate cancer, even in its most aggressive form.
- Daily consumption of pomegranate juice slows the spread of an established prostate cancer by 67 percent.
- Recommendations for use; 8 oz per day with/before breakfast.

Red Wine:

- Has many polyphenols, including resveratrol. Polyphenols are extracted by fermentation.
- Resveratrol acts on genes called sirtuins that are known to protect healthy cells against aging.
- Resveratrol can also slows the 3 stages of cancer; initiation, promotion, and progression.
- Pinot noir is particularly rich in resveratrol.
- Recommended serving; one glass of red wine per day.

Dark Chocolate (>70% cocoa):

- Contains anti-oxidants, proanthocyanidins, and many polyphenols.
- A square of dark chocolate contains 2x as many of these molecules as a glass of red wine and almost as many as a cup of green tea.
- These molecules slow the growth of cancer cells and limit angiogenesis.
- Mixing dairy products with chocolate cancels the beneficial effects of the molecules of cocoa; avoid milk chocolate.
- Recommended serving; a square of dark chocolate instead of dessert at the end of a meal with a cup of green tea.