

# Unlocking the Power of Foods

## Nutraceuticals – by Peter Brodhead CN

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There are an incredible array of compounds found in a large variety of foods that have effects on the body in preventing disease that go well beyond vitamins, minerals, proteins, fats, and carbohydrates. This is an overview of some of these compounds and what they do in protecting the body and what foods they are found in. A pharmacy found in the organic produce department of your natural foods market.

**Alpha Carotene** found in many of the same foods **Beta Carotene** is found in - protects against many forms of cancer: cervical, liver, lung, pancreas, skin, stomach, neuroblastoma, also protects against the development of cataracts. Found in Kiwi Fruit, Mango, Peach, Cantaloupe, Apricots, Carrots the richest source, Pumpkin second richest, Broccoli, Spinach, Kale, Brussels Sprouts, and Sweet Potato. Carotene supplements derived from Palm Oil are the richest supplemental sources of Alpha Carotene. If purchasing a Beta Carotene supplement make sure it is derived from either Palm Oil or D'Salina algae so that you get Alpha Carotene and other Carotenoids. Carotenes are absorbed better when fat is accompanied with it.

**Anthocyanidins** – Give the vivid colors of berries. Cherries, Blueberries and European Bilberry are one example, which benefit all functions of eye health. These compounds are found in virtually all berries, red cabbage and eggplant skins. They have been found to have diverse activity in the body. 1<sup>st</sup> they function as anti-oxidants and counteract inflammation in the body. They strengthen connective tissue in the body and reduce capillary fragility i.e. bruising and help prevent edema. Anthocyanidins can help prevent cancer from spreading by strengthening the connective tissue and resist tumor invasiveness. Anthocyanins may help lower blood sugar levels in people with diabetes – in a study with animal pancreatic cell insulin production was increased by 50%

**Calcium D'Glucarate** – Assists in the detoxification of excessive estrogenic activity in the body and has been considered an alternative to tamoxifen by nutritionists. It is found in Broccoli, Brussels sprouts, Oranges and Grapefruit, Cherries, apples, and spinach (these foods contain glucaric acid). It can inhibit the ability of tobacco smoking to cause lung cancer and has been shown to help prevent Bladder, Breast, Colon, Liver, Lung, Prostate and Skin Cancers.

**Catechin** - An antioxidant component of **Green Tea** protects against many types of cancers and protects the liver from alcohol damage and is useful in the treatment of hepatitis. **Theophiline** found in green tea is very helpful for people with asthma. **Green Tea** – protects against 4 major categories of carcinogens: 1- Indirect chemical carcinogens (i.e. benzopyrene in diesel fuel) 2- direct chemical carcinogens (Nitrates found in meats) 3 – Physical carcinogens (ultraviolet light). 4 – Tumor promoters (pesticides, DDT). It inhibits tumor initiation, helps with liver detoxification, protects DNA, and blocks abnormal cell growth. The caffeine in green tea possesses anticancer activity. Green Tea also has an amino acid in it called **Theanine** which is excellent for stress – it increases the alpha wave production in the brain (the brain waves associated with people in prayer or meditation – so it has a calming and centering effect on the brain)

**Curcumin** – Found primarily in Turmeric Root (the yellow color found in curry powder) is a potent antioxidant, liver detoxifier and protector, gallstone prevention and cholesterol-lowering compound. It suppresses the damage to liver cells caused by hepatitis C and stimulates glutathione (a potent anti-oxidant enzyme that prevents tumor growth and formation) by the liver. Anti-inflammatory it is equally effective as NSAIDS in the treatment of inflammation. **A potent cancer prevention** and cancer treatment – it stimulates apoptosis (cellular suicide) of cancer cells. Curcumin assists in stopping all stages of cancer formation: initiation, promotion and progression. Evidence also suggests that curcumin causes cancer to regress i.e. grow smaller. Curcumin in preliminary studies suggest that it is likely to inhibit prostate, breast,

skin, colon, stomach, and liver cancers and is suitable for use in conjunction with chemotherapy. It has also been demonstrated to be cytotoxic to both human chronic myeloid leukemia cells and Dalton's lymphoma cells, early stage cervical cancer. Turmeric has been shown to be extremely effective at inhibiting recurring melanoma in people at high risk. Combined with Green Tea has an inhibiting effect on the growth of squamous cell carcinoma. Test tube studies have also found it helpful for breast cancer. As a supplement it absorbs best with the pineapple enzyme bromelain. As a food Turmeric is better absorbed when taken with fat.

**Ellagic Acid** – Found in raspberries, pomegranates, cranberries, apples, grapes, cherries, and strawberry. Helps to prevent various types of cancers in rodents. Esophageal, Lung, Skin and helps stimulate the manufacture of glutathione. Ellagic Acid is also very cardiovascular protective.

**Indole-3-Carbinols, Sulphoraphane** – Found in Broccoli, Broccoli Sprouts are the highest, Cabbage, Brussels Sprouts, Kale and Califlower assist the production of glutathione by the liver cells and help in liver detoxification. Indole-3-Carbinols protects the body from Breast, Colon, Endometrial, and cancers initiated by the papilloma viruses (cervical cancer). **DIM** is created in the body by indole-3 carbinols and plays a very important role in preventing breast and prostate cancers. DIM also helps the liver detoxify aflatoxin. Glucoraphan also known as sulforaphane glucosinolate (SGS) is present in high levels in broccoli sprouts – has been found to lower the inflammatory response and improve cardiovascular health and help correct major dysfunctions such as hypertension and stroke. It boosts Phase 2 enzyme antioxidant defense systems and functions as a powerful indirect antioxidant detoxifying carcinogens before they can damage cells. **Organo-Sulfurs** found in garlic and onions are also highly protective substances that block chemical carcinogens from turning healthy cells into cancer cells. Garlic also suppresses cholesterol synthesis in the liver.

**Isoflavones** – There are over 600 isoflavanoids – Isoflavones are the best known, daidzein, genistein, formononetin and biochanin A are known for their estrogenic properties. Isoflavones have received a lot of attention in the last decade in their support for menopause and in supporting conditions of overexpression of estrogen as well as supporting and balancing lower levels of estrogen as these compounds can occupy estrogen receptor sites on the cells and assist in balancing estrogen from either direction. They also have been used by men in supporting prostate health. **Daidzein** – the known sources are: Soybeans, Runner Bean, Kudzu Root, Red Clover. **Genistein** – Soybeans, Licorice, Alfalfa, Runner Bean, Butter Bean, Pea Shoots, Kudzu Root and Leaf, Chickweed, Red Clover and Adzuki Bean.

**Kaempferol** – A bioflavanoid found in Green Tea, Black Tea, Garlic, Apples, Strawberries, Broccoli, Grapefruit, Lettuce, Basil, Parsley, Ginger, Thyme, Bee Propolis, Ginkgo Biloba and Passion Flower. Kaempferol inhibits 5-Lipoxygenase which stimulates the growth of prostate cancer cells. It also inhibits aromatase – which converts to estrogen and helps prevent breast cancer cell proliferation. It also inhibits cytomegalovirus (CMV) and helicobacter pylori – the bacteria that causes stomach ulcers and minimizes inflammation in the body.

**Lignans** – Found primarily in the outer husk of the Flaxseed. Lignans block estrogen receptors within the body, thereby inhibiting the toxic effects of excessive estrogens. They inhibit the development of breast cancer (British studies showed that women with breast cancer who had the highest level of lignans in their breast tissue had the lowest rate of the cancer growing, and metastasizing to other parts of the body, it basically put the brakes on any spreading of the breast cancer) and inhibit the development of colon cancer and prostate cancer as well as retard the further progression of prostate cancer. The easiest way to get plenty of lignans in the diet as well as the beneficial Omega 3 fat ALA (alpha linoleic acid) is to put flax seeds in your blender or coffee mill, grind them to a powder and add to your food – sprinkle on salads, put in orange juice or in your breakfast cereal, flaxmeal tastes decent.

**Limonene** – The highest concentrations are found in the spongy white inner parts of citrus fruit i.e. orange peel, lemon peel, kumquats and cranberry. Limonene can dissolve gallstones. It helps to prevent Breast Cancer and inhibits the progression of established breast cancer and in animal studies with rodents it prevented the development of pancreatic cancer and caused the regression of existing pancreatic cancer. In animal studies with breast cancer (rodents) it caused the complete regression of the majority of advanced

rat breast cancers. Limonoids seem to work against cancer three ways: prevent it from forming, slow the growth of existing cancer and kill cancer cells. Neuroblastomas a type of brain cancer which accounts for 10% of all cancers in children – in laboratory tests limonoids found in citrus killed neuroblastoma cells in 48 hours or less when exposed to relatively small amounts of concentrated limonoids. The newest research with limonene is it's use in treating problems with esophageal reflux and chronic acid indigestion it has the potential to put nexion ie. "the purple pill" out of business. Limonene has the potential to lower cholesterol more effectively than some prescription drugs, and without side effects, according to a study by U.S. and Canadian researchers.

**Lutein** – Protects the eyes against the development of Age-related Macular Degeneration, Cataracts, it is concentrated in the lens of the eyes and concentrates in the Macula (yellow spot on the back) of the retina of the eye. It has also been shown to help Retinitis Pigmentosa in blue eyed people. Helps prevent Breast, Colon, Lung Cancers and reduces the risk of Prostate Cancer (*when avocado extract was added to 2 lines of prostate cancer cells, cell growth was inhibited by up to 60%*). Best foods Spinach, Kale, Broccoli, Calendula Marigold (Best Source), Avocados are the richest fruit source. Egg yolk contains a significant amount of Lutein in it and the fat in the egg yolk enhances the bioavailability of it, 1 egg yolk contains 200mcgs of Lutein and it is 200% to 300% more bioavailable than vegetable sources - also Corn, Sweet Potato, Brussel Sprouts, Green Beans, Cayenne Pepper and Palm Oil. **Astaxanthin** a carotenoid derived from an algae, it is the same compound that makes salmon meat pink and flamingo feathers pink may be the most potent carotene for macular degeneration. Astaxanthin also has anti-inflammatory effects on nerve cells and has been shown to help carpal tunnel syndrome and problems with inflammation of the optic nerve. In a 1995 researchers reported in the journal, Carcinogenesis, that astaxanthin specifically acted as a preventive agent against bladder, colon, and oral cancers in animals. In other animal studies, astaxanthin was found to have a significant influence on the reduction and size of cancerous lesions on the liver.

**Lycopene** – Carotenoid found in red vegetables and fruits Tomatoes are the best source. Prostate and testicles are major storage areas for men. It is best known for protecting the body against prostate cancer in men but it protects against the formation of many other cancers including: Bladder, Breast, Cervical, Colon, Endometrial, Esophageal, Leukemia, Liver, Lung, Mouth, Pancreatic, Pharynx and Stomach. Cooked tomato products are the overwhelming best source also pink grapefruit, watermelon cayenne pepper, paprika, red grapes, the skin of red delicious apples, red papaya and apricots are good sources.

**Omega 3 Fatty Acids – EPA & DHA** the best food sources are Salmon & Sardines and also Albacore Tuna., Flax seed oil is the best plant source of these fatty acids. Omega 3's play a critical role in the brain and in cell membrane fluidity. They are potent controllers of the inflammatory processes in the body - anyone with an auto-immune problems and allergies or any inflammatory problems should include more omega 3 fatty acids in the diet. DHA which is stored in the brain and in the lens of the eye has been shown to be beneficial in the treatment of depression, attention deficit and learning disorders and in memory loss in the elderly. DHA is especially important in brain function as it is used to build nerve endings in some of the most vital brain regions. DHA is required by the areas of the brain that provide us with judgment and the ability to stay focused and complete tasks.

**Phytoestrogens** – Protect the body from the detrimental effects of excessive exposure to estrogens. Help to prevent breast cancer. They possibly can protect the body from the effects of endogenous estrogens in the environment such as pesticides and plastics that can mimic the action of estrogens. Soy products and red clover are two of the better known phytoestrogens. See the above information on Genistein and Diadzen.

**Quercetin** – Found in red onions, apples and the skins of russet potatoes - quercetin helps prevent cataracts and is especially beneficial for diabetics who accumulate higher levels of sorbitol in the lens of the eyes. It has significant antitumor activity against various form of cancer i.e. Brain, breast, colon, leukemia, lung, ovarian, squamous cell carcinoma and stomach. **It is currently one of the most powerful (along with Curcuma from Turmeric) nutritional weapons in both preventing and as a treatment during cancer.** Used during chemotherapy it prevents cancer from mutating around chemotherapy drugs and is a first choice for both Breast and Prostate Cancer. It stimulates apoptosis – cellular death in cancer cells. It's best

known for its anti-inflammatory, anti-allergy and for allergic asthma. It inhibits histamine release by basophil mast cells during allergic reaction. **It is the best single nutritional strategy for the treatment of any kind of allergy.** It appears to protect brain cells against oxidative stress, a tissue-damaging process associated with Alzheimer's and other neurodegenerative disorders (*based on a study carried out on rat brain cells*). It can prevent infections caused by viruses. Helps prevent destruction of the pancreas during pancreatitis. A potent antioxidant, anti-cancer, anti-inflammatory and anti-allergy flavanoid. Other foods containing quercetin are Red Wine, Green Tea, Black Tea, Apples, Grapes, Pears, Kiwi, Califlower, Spinach, Broccoli, Kale, Cabbage, Cayenne, Green Beans, Okra, Fennel and Squash.

**Resveratrol** – Found in Red Wine, dark especially the Pinot Noir variety, dark grape juice, dark muscadines, raisins and whole seeded dark grapes the skin and the seeds (contain the richest sources of resveratrol), cranberries, mulberries and peanuts help prevent atherosclerosis and inhibits abnormal blood clotting. Resveratrol lowers total serum cholesterol increasing HDL and prevents the oxidation of LDL cholesterol. **Resveratrol may be one of the most potent Cox-2 inhibiting anti-inflammatory substances found in nature.** It has major cancer inhibiting effects. In Breast Cancer research it interferes with Estradiol the most active form of estrogen and it binds to receptor sites for estrogen preventing cancer cell promotion. It also is important in helping fight Leukemia, Colon Cancer, Skin Cancer, Prostate Cancer, Melanoma and Thyroid Cancer where it stimulates apoptosis (cellular death of cancer cells). Finally it inhibits Herpes Simplex type I & II viruses. Resveratrol may help increase lifespan (heavy doses of resveratrol can prolong the life span of yeast 70%)

**Rosemary** – Rosemary, with its pleasant camphor-like scent possesses some of the most powerful antioxidant activities of any agent studied. Rosemary traditionally was used to increase overall vitality and to improve circulation and mental outlook. Rosemary is often referred to as the “Herb of Remembrance.” The antioxidant capability of rosemary is unique for a number of reasons. In rosemary there exists at least six phenolic diterpenoids with antioxidant activity. The most powerful of these diterpenoids appears to be carnosic acid. As a carnosic acid molecule does its job of quenching a free radical, it transforms into another antioxidant compound called carnosol. The transformation of one antioxidant to another repeats itself 3X. The cascade of antioxidant activity is quite uncommon and may explain its positive results in certain studies. Carnosic acid also supports T3 thyroid hormone. Rosemary also contains significant amounts of the phenolic acid, rosmarinic acid. Unlike carnosic acid, rosmarinic acid is a water-soluble antioxidant and extracts containing rosmarinic acid score extremely high on the ORAC (Oxygen Radical Scavenging Activity) analyses. Phenolic acids also delay vitamin E depletion. Some of rosemary's other known anti-oxidant compounds include carvacrol, carvone, cymene, cineole, fenchone, limonene, terpinene, and thymol. Many of these compounds have shown to inhibit aging of the brain, and act through a mechanism referred to as acetylcholinesterase inhibition. Rosemary inhibits the metabolic activation of procarcinogens catalyzed by the phase I cytochrome P450 enzymes, and the induction of phase II detoxification activation for these reasons it is considered to be excellent for enhancing liver detoxification. Rosemary also promotes normal mammary cell growth and prevents disruption of DNA caused by chemical carcinogens. Rosemary potentiates chemotherapy and helps prevent Multi Drug Resistance of chemotherapy to cancer cells. It has been shown to inhibit mammary tumors in mice. Carnosol and ursolic acid are the major constituents both of these inhibit tyrosine protein kinase(TPA), ornithine decarboxylase activity, and tumor promotion. A potent tea blend would be putting rosemary into green tea along with hibiscus.\*\*\*

**Rutin** – Helps strengthen blood vessels and prevent bruising it is useful in treating hemorrhoids (taken with horse chestnut extract and aortic glycans –sold by enzymatic therapy are a very potent and effective therapy for the elimination of even stubborn cases of hemorrhoids). It has been shown helpful for people with Glaucoma by strengthening the connective tissue of the eye and is useful for allergies and inflammation like quercetin though not as powerful. One study done on mice found that it strongly inhibited melanoma. Best food sources are Bee Pollen, Red Wine, Buckwheat, Yerba Mate, Garlic, Fennel and Hawthorne.

## Liver Detoxification –

The liver is our primary organ of detoxification and living in our polluted world we need to do everything we can to enhance it's ability to do its job correctly and to protect it so it can protect us. There are 2 major phases of detoxification that the liver does.

**Phase 1** – Liver does the initial processing and transforming of toxic compounds, bacteria, drugs, alcohol or pollutants ie. Cigarette smoke taken in by the blood stream. This phase becomes less active in old age.

Activators: Cabbage, Broccoli, Brussels Sprouts, Oranges & Tangerines note that Grapefruit shuts down phase 1 detoxification and must be used carefully especially when taking pharmaceutical drugs as the level of the drugs can build up to higher levels than needed – don't take prescription drugs with grapefruit juice. Curcumin from turmeric slows down phase 1 enzymes but simultaneously speeds up phase 2 and is safe, it may be the best thing that can be taken by cigarette smokers as it can render the carcinogens in tobacco smoke more harmless. (Maybe Phillip Morris should think about putting turmeric into cigarettes?) also B-Complex vitamins, Vit C rich foods ie. Peppers, cabbage and tomatoes activate phase 1. Many people have more active phase 1 systems than phase 2 when this happens – phase 1 enzymes temporarily make more carcinogenic and inflammatory substances faster than the phase 2 enzymes can carry them out of the body. When a persons phase 1 enzymes do this they can be much more sensitive to chemicals and have more chemical allergies. Garlic, Turmeric and Broccoli all help this process of speeding up phase 2 enzymes and slowing down phase 1 enzymes so the body can handle detoxifying chemicals more efficiently and harmoniously. 28% of white Americans, roughly 40% of African-Americans and Hispanics and nearly 70% of Japanese-Americans have a defect in the synchronicity of phase 1 and phase 2 enzymes.

**Phase 2** – Liver takes compounds converted by phase 1 enzymes and shuttles them out of the body. These foods assist in phase 2 detoxification: Asparagus, avocado, walnuts, cabbage family broccoli, broccoli sprouts & Brussels sprouts especially, orange peel oil, dill & caraway seeds, eggs & egg yolks, lecithin, green leafy vegetables, red peppers, garlic, onions, artichoke leaf, turmeric, pro-biotics i.e. acidophilus, yogurt & kefir, fresh sauerkraut, miso.

*Note: The chapter on detoxification in the Encyclopedia of Natural Medicine has an outstanding full explanation of phase 1 and phase 2 detoxification systems. I highly recommend that you read this.*

## Food Facts

New data using the ORAC analysis (oxygen radical absorbance capacity) is the new definitive measurement of a food's antioxidant capacity. This gives us much more accurate information about rating fruits and vegetables for anti-oxidant activity.

### Fruits:

Apples – Contain – Caffeic Acid, Ellagic Acid, Quercetin (*fresh apples have some of the highest levels of quercetin when compared to other fruits and vegetables*) and Chlorogenic Acid. Have been found to prevent Lung cancer. Anti-Viral effects especially the Polio Virus. Reduces total Cholesterol including raising HDL cholesterol due to the pectin content. Helps prevent Asthma due to the quercetin content. Alleviates Diarrhea, Helps normalize blood sugar levels and suppress the appetite. Apples are also high in calcium d' glucarate which helps the body get rid of excess estrogen.

Apricots – High in carotenes that offer some protection against cancers of the mouth, throat, esophagus, stomach, bladder and lung.

Avocado – Lowers cholesterol, increase the activity of glutathione-s- transgerase and important anti-oxidant system of the body. Alleviates dry skin. One of the best food sources of potassium and vitamin E.

Bananas – Strengthen & thicken gastric mucosa, unripe bananas can heal duodenal ulcers. Lowers blood pressure by inhibiting the activity of ACE – Angiotensin converting enzyme.

Blueberries – Now tops the list in anti-oxidant function of all berries. The small dark ones are the best such as the European Bilberry. Wild Blueberries have a total antioxidant capacity of 13,427 on the ORAC scale. Improve coordination, short term memory and a sense of balance, inhibit tooth decay, urinary tract infections, may retard the aging process, alleviate eyesight ailments, improve night vision and night blindness and restore eyesight after glare faster

- and help prevent certain forms of cancer. Blueberries can help fight aging and reduce some of the functional damage caused by brain injury. It prevents an age-related increase in a protein (NF-kappaB) that responds to oxidative stress, a probable cause of brain aging.
- Cantalope – Helps prevent abnormal blood clotting, alleviates angina.
- Cherries – Anthocyanidins are potent antioxidants like blueberries, excellent for gout and strengthening connective tissue in the body.
- Dates – High in the mineral Boron, which helps with osteoporosis and mental alertness, helpful for staying awake at night when driving.
- Figs – Can shrink tumors in various forms of cancer due to Benzaldehyde content.
- Guava – Lowers elevated Blood Sugar Levels in Diabetes Type 2 patients.
- Kiwi – High in protein digesting enzymes like pineapple, may alleviate heartburn, a good dessert fruit.
- Kumquats – The rind reduces blood pressure.
- Grapefruit – Helps prevent breast cancer, lung cancer, melanoma, pancreatic cancer, lowers cholesterol, helps obesity, promotes sleep when taken at night. ( note: one of the flavanoids in grapefruit slows down phase 1 detoxification so be careful taking prescription medicines with grapefruit juice because of this blood levels of the prescription drugs can go up to levels that can overdose a person especially heart medications ! )
- Lemons – Kills roundworms, helps dissolve gallstones, helps prevent cancer due to limonene
- Mangoes – Alleviate some cases of depression due to the anti-depressant properties of anacardic acid & anacardiol.
- Olives – Olive fruit pulp may have one of the most potent polyphenols that act as a redox anti-oxidant and recycle anti-oxidants over and over again.
- Oranges – helps prevent cancers, breast, colon, esophageal, pancreatic, stomach, squamous cell carcinoma, lowers cholesterol, inhibits the breakdown of acetylcholine so it can enhance learning and memory.
- Papaya – Enzymes help with protein digestion and increase glutathione like avocado's, lowers triglycerides, the seeds kill parasites.
- Pears – Enhance the function of the liver, lowers serum cholesterol due to pectin content.
- Pineapple – Bromelain the protein digesting enzyme found in the core acts as an anti-inflammatory, Anti-tumor, mucolytic.
- Prunes – Rated #3 on the ORAC scale of the top 100 foods for anti-oxidant capacity of 7,291. Loaded with potassium and fiber.
- Raspberries – Helps prevent cancer and fights cancer due to the ellagic acid content – especially known for lung cancer and skin cancer.
- Strawberries – Inhibits Nitrates and Nitrites to carcinogenic nitrosamines ( found in bacon and processed meats). Reduces cholesterol, the juice whitens teeth.
- Tangerines – Inhibits the growth of some types of leukemia, increases the effectiveness of tamoxifen, helps with detoxification of the liver – one of the best liver detoxification aids.
- Watermelon – Seeds are an excellent diuretic, lowers high blood pressure, helps eliminate toxins.

#### **Vegetable Facts:**

- Artichokes – Stimulate the flow of bile from the liver and gallbladder and are highly effective at lowering cholesterol levels in the body. In Europe they are sold as supplement for lowering cholesterol, improves diabetes mellitus.
- Asparagus – diuretic, enhances the function of the urinary tract, the juice alleviates neuropathy. Asparagine causes the odor of the urine to be strong
- Beets – Anemia - stimulates red blood cell production, benefits bladder and kidney function, high in betaine, beets are speculated to increase aerobic activity of cancer cells diminishing their activity. helps prevent lung cancer,
- Broccoli – Protects against X – rays, helps prevent the following cancers: Breast, Colon, Lung & Ovarian.  
Broccoli sprouts contain a much higher amount of sulforaphane (detoxification).  
Sulforaphane, found in broccoli, "is a potent bacteriostatic agent" even killing antibiotic-resistant H.pylori.
- Brussels sprouts – Breast & colon cancer protects against, kills' aflatoxin.
- Cabbage – Peptic Ulcers, duodenal ulcers, Cancer protection same as broccoli but also liver cancer,

- Protects against X rays, helps lower cholesterol.
- Carrots – Helps reduce the risk of Cancer: Bladder, Breast, Cervix, Lung, Mouth, Pharyngeal, and Stomach.  
Increases the # of white blood cells and improves the function of existing white blood cells. High consumption is associated with lower incidence of psoriasis. Carrot fiber is very effective at lowering cholesterol levels especially cooked carrots. The high fiber levels do not cause an increase in blood sugar levels as previously thought. They help prevent respiratory illnesses and they may supply a compound that stimulates the sexual appetite.
- Celery – Lowers blood pressure 14% - contains a compound called 3NB – eating the equivalent of 4 stalks a day lowers blood pressure, sedates the central nervous system, celery seed is excellent for gout..
- Cauliflower – Protects against breast, colon, lung, & stomach cancer, increases the body's excretion of Estrone.
- Chives – Protective against colon cancer, alleviates the common cold, kills some forms of detrimental Bacteria.
- Cilantro - Helps with the elimination of mercury from the body. Cilantro leaves contain a chemical that can kill salmonella and other pathogens – it is 2x as lethal to salmonella as the drug gentamicin, a common treatment for salmonella poisoning.
- Cucumber – Juice helps normalize blood pressure, reduces incidence of stomach cancer, increases urine Output, promotes hair growth, and prevents nails from splitting.
- Daikon Radish – Helps to dissolve hard fat deposits imbedded in body tissue. Contains carbohydrate Digesting enzymes.
- Eggplant – Prevents cancer by counteracting dietary carcinogens, prevents convulsions due to Scopoletin & Scarpaione.
- Fennel - Improves liver and spleen, suppresses appetite
- Garlic – There are thought to be more than 2,200 credible scientific papers on all aspects of garlic. It is known to enhance the immune system, support detoxification of the liver (s-allyl cysteine), lower cholesterol and triglycerides, lower high blood pressure, have anti-biotic properties, anti-fungal properties and numerous other benefits. Recently it has been found to prevent glycation (a “caramelizing” effect on the blood vessels and skin caused by chronic high sugar consumption and in diabetes). British scientist have recently found that a compound extracted from garlic is effective against even the most antibiotic-resistant strains of MRSA, the “hospital superbug” that now kills thousands of patients each year.
- Ginger – Ginger is in the same plant family as turmeric and galangal and shares many of the same therapeutic effects of those 2. It contains many potent anti-inflammatory compounds and inhibits COX-2 inflammation in the body. It is useful for arthritis pain, nausea and the ginger compounds may be effective chemopreventive and/or chemopreventive agents for colorectal cancers (mice studies).
- Green Peas – Have the ability to dissolve clumps of red blood cells destined to become blood clots. Helps prevent appendicitis.
- Jerusalem Artichokes – Stimulates Bifidobacteria in the colon because of high FOS. Helps diabetes II Due to Inulin. Very good for people with syndrome X.
- Kale – Helps prevent macular degeneration (eyes), Breast cancer prevention due to sulforaphane Content decreases risk of lung cancer.
- Kidney Beans – Benefits Diabetes II due to the lectin content, which influences insulin, levels.
- Leeks – Helps prevent stomach cancer.
- Lentils – helps control blood sugar levels.
- Lettuce – Enhances the health of the kidneys, alleviates acidosis, gout, insomnia
- Mustard Greens – Helps prevent age related macular degeneration.
- Okra – Stomach and intestinal ulcers the mucilage is very soothing and healing to the digestive tract, promotes regularity.
- Onions – Helps prevent athlerosclerosis, inhibits abnormal blood clotting, and reduces risk of heart Attack,  
Lowers blood pressure in persons with hypertension, stimulates the flow of bile, lowers Cholesterol, raises HDL \_ a raw onion a day raises HDL by 30%, significantly exerts blood Sugar lower in effects in type II diabetes due to allyl propyl disulfide, alleviates asthma,

Contains FOS and helps the body's level of beneficial bacteria in the intestines & colon  
The quercetin content in onions may cut the risk of prostate cancer. Swiss researchers have found a compound in white onions a peptide GPCS that appears to retard bone loss. The stronger the onion flavor the higher amounts of polyphenols found in them – studies found that stronger onions inhibited the growth of liver and colon cancer cells.

Parsnip – Facilitates elimination of kidney stones from the body.

Potato – Prevents cell mutations that lead to cancer (due to chlorogenic acid). Russet potatoes have an antioxidant capacity of 4,649. Potatoes are rich in fiber, potassium and vitamin C. The peel also contains an anticarcinogenic compound called chlorogenic acid, which helps the fiber in potatoes absorb the carcinogen benzo(a)pyrene, found in smoked foods like grilled hamburgers.

Radish – Facilitates the elimination of existing gallstones & kidney stones, reduces incidence of Stomach cancer, alleviates goiter, and alleviates cough. The juice alleviates the pain Associated with insect bites and stings.

Red Beans – Red Beans have come out on top of the ORAC ratings of 100 foods tested. Small red beans scored with an anti-oxidant capacity of 13,727 a serving per \_ cup. They contain 20 grams of protein, 6 grams of fiber along with folic acid, iron and magnesium.

Rutabaga – Lowers total serum cholesterol.

Soybeans – Preventative for Breast, Endometrial, Prostate, Uterine cancers. Lowers serum cholesterol LDL & triglycerides, helps prevent osteoporosis.

Spinach – Helps prevent macular degeneration and cataracts due to lutein & zeaxanthin (carotenenes). Alleviates diabetes due to its manganese content.

Tomatoes – Helps prevent appendicitis, protects against cancer due to its Lycopene content, Lung Cancer, prostrates cancer & stomach cancer. Tomato juice stimulates growth of liver tissue. High consumption of tomato is associated with a lowered incidence of Psoriasis.

Turnips – May help kill the cancer cells implicated in Lung Cancer.

#### **Grains:**

Barley – Helps prevent some forms of cancer due to protease inhibitors in the GI tract. Interferes with The manufacture of LDL Cholesterol. Alleviates constipation, helps prevent colon cancer.

Oats – Stabilizes insulin levels, helps with tobacco withdrawal, lowers hypertension, and total cholesterol, increases the production of acetic acid in the intestines which promotes healthy intestinal flora. The fiber in oats lowers the risk of obesity in children who eat oatmeal regularly 50% lower than children that don't. The study found that children and teens who consumed higher intakes of dietary fiber had lower Body Mass Index (BMI) levels or less body fat.

Rice – Can dramatically improve Psoriasis (when on a rice diet), helps prevent kidney stones.

Rye – may reduce the risk of prostate cancer.

**Honey** – Researchers at the Univ. of Ill. Found that people who ate 4.Tbs. Of honey 1X a week for 5 weeks had more antioxidant activity in their blood than people who did not. They also had less arterial damage that causes heart disease – dark honey works best the researchers used buckwheat honey..

#### **Nuts & Seed Facts:**

Almonds – Lowers cholesterol & LDL cholesterol. A handful a day \_ to \_ cup of raw almonds lowers lipoprotein (a) the dreaded genetic risk factor for coronary disease.

Brazil Nuts – Highest food in selenium, helps prevent cancer it also contains ellagic acid.

Caraway – Alleviates Gas

Cardamom – Stimulates saliva, helps halitosis, stimulates appetite

Celery seed – Lowers high blood pressure, is diuretic, helps alleviate gout, rheumatoid arthritis,

Coconut – Inhibits many types of detrimental bacteria & fungi & viruses and is good for the intestinal system, high in MCT's –medium train tryglycerides provides stable energy the fats are burned as fuel by the body. Excellent for people with cancer who are loosing weight, coconut milk can help stabilize weight loss.

Cumin – Alleviates intestinal cramps, helps prevent liver cancer, helps prevent squamous cell carcinoma

Dill – Helps enhance lactation, alleviates insomnia by sedating the CNS (central nervous system)

Fenugreek – Helps with lactation, helps constipation, alleviates gastric ulcers, improves health of the Eyes, lowers cholesterol, lowers elevated blood sugar levels in type II diabetics by Increasing plasma insulin, alleviates tinnitus, reduces inflammation in the lungs.

Flax – Helps prevent Breast Cancer due to high lignin level, helps prevent melanoma, constipation, high Cholesterol, excema.

- Mustard Seeds – increases the basal metabolic rate (weight loss)
- Peanuts – Are high in resveratrol and high consumption may prevent atherosclerosis. Recent research has found peanuts are very good for diabetics. Florida researcher found that peanuts contain high concentrations of polyphenols – particularly p-coumaric acid – and that roasting can increase the level of the compound, boosting overall antioxidant content by as much as 22%. Roasted peanuts are about as rich in antioxidants as blackberries or strawberries, and richer than apples, carrots or beets. Peanut butter and peanut eaters has increased levels of vitamin A, Vitamin E, folic acid, magnesium, zinc, iron and dietary fiber in their diets. Peanut eaters had leaner bodies as measured by body mass index (BMI) than non-peanut eaters.
- Pecans – Lowers total cholesterol due to Beta-Sitosterol content, rich in magnesium as are all nuts, zinc, manganese and potassium. Pecans rate higher than any other nuts on the ORAC list with a score of 5,095. Pecans contain 25% more Oleic acid than a serving of olive oil. Oleic acid has been found to be more resistant to oxidation than other oils.
- Poppy Seeds – Helps prevent various forms of cancer by increasing endogenous anti-cancer enzymes 78%, prevents squamous cell carcinoma.
- Pumpkin Seeds – Treats parasites, high zinc levels support prostate health in males.
- Sesame Seeds – Enhance the activity of Vitamin E contains a powerful antioxidant sesaminol.
- Sunflower Seeds – Reduce the craving for cigarettes they cause a release of adrenal hormones in a similar way to tobacco smoking.
- Walnuts – High in Omega-3 fatty acids (alpha linolenic like flax seeds 25% of the oil content). Walnuts lowers total cholesterol levels as well as LDL or “bad” cholesterol.

#### **References:**

- Hyperhealth Computer Program Vol 2 6/2002
- Total Wellness – Joseph Pizzorno, N.D.  
Prima Publishing ISBN 0-7615-1094-X
- Herbal Medicine Healing and Cancer – Donald R. Yance, Jr. C.N., M.H., A.H.G.  
ISBN 0-87983-968-6 1999 Keats Publishing.
- How to Prevent and Treat Cancer with Natural Medicine  
Dr. Michael Murray ND, 2002 ISBN 1-57322-222-4 Riverhead Books a member of Penguin Putnam Inc.
- The Doctors Book of Food Remedies – Selene Yeager and the Editors of Prevention 1998 Rodale Press
- Flavonoids and Phytotherapy – David Hoffmann, M.N.J.M.H. Medicines from the Earth – Official Proceedings 5/31 – 6/2 1997 Blue Ridge Assembly, Black Mountain, North Carolina
- Is Your child’s brain starving? – Dr. Michael R. Lyon, MD isbn 0-9685168-5-8, p.39, 2002
- Journal of Agricultural and Food Chemistry
- Newsweek Magazine – January 17, 2005 p.43-44
- Whole Foods Magazine 1/05 p. 40-43
- Nutra Ingredients .com USA & Europe – numerous articles from the web.
- Cholesterol, Statins, and the Truth about Cardiovascular Health and Disease – Donald Yance, CN, MH. AHG p.170 Medicines from the Earth 2005 Conference Notes 6/4<sup>th</sup> – 6/6/05 Black Mountain, N.C.