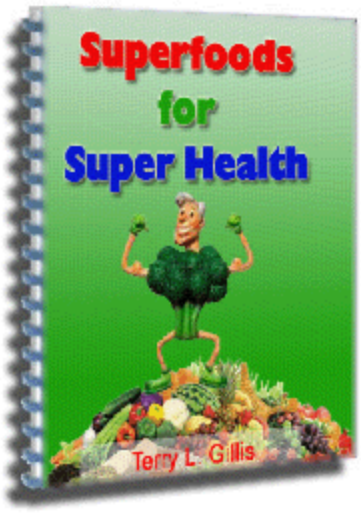

Superfoods for Super Health

As of late, dietary research has uncovered a variety of different nutrient-dense foods that time and again have been shown to promote good overall health. Coined “Superfoods,” these foods tend to have fewer calories, higher levels of vitamins and minerals, and many disease-fighting antioxidants[6].

Beans (legumes), berries (especially blueberries), broccoli, green tea, nuts (especially walnuts), oranges, pumpkin, salmon, spinach, tomatoes, turkey, whole grains, oats, and yogurt (to name just a few) can all help stop and even reverse diseases such as hypertension, diabetes, Alzheimer’s, and some forms of cancer. And where one might have an effect on a certain part of the body, it can also affect the health of other body functions and performance, since the whole body is connected. With these Superfoods as the base of a balanced diet, weight loss gimmicks, beauty aid scams and other fly-by-night programs can become a thing of the past in our lives.

On the other hand, the ill-effects of an unbalanced diet are several and varied. Low energy levels, mood swings, chronic tiredness, weight change and bodily discomfort are just a few signs that your diet is unbalanced. In addition to the aforementioned ailments, an unbalanced diet can also cause problems with the maintenance of body tissue, growth and development, brain and nervous system function, as well as problems with bone and muscle systems.

In today's fast-paced and chaotic world, we rarely eat well, let alone healthily. More often than not, we grab something that's quick and easy to make, or order take-out. Diets based on prepared and prepackaged convenience foods are

sorely lacking in many vitamins and minerals, which can affect our mental capacities as well as our physical, and cause irritability, confusion, and the overall feeling of lethargy and ambiguity all the time.

Superfoods can be the basis of a sound, healthy and nutritious solution to curing many of these ailments plus many more.

What is Superfood?
"Superfood" is a term now generally used to describe foods high in phytonutrient[60] content that many people believe grants us many health benefits. For example, blueberries are often considered a Superfood (or superfruit) because they contain significant amounts of antioxidants[6], anthocyanins[3], vitamin C[78], manganese[47] and dietary fibre[29a].

However, the term is not in general or common use amongst dieticians and nutritional scientists, many of whom still dispute the claims made that consuming particular foodstuffs can have a health benefit, even though more and more research is being conducted which demonstrate that there is indeed positive effects.

As more and more research is carried out into foods and the nutrients they contain, we are seeing that many of the foods we have been eating for generations, and some that are newer to us, are packed full of vitamins and minerals, and many other nutrients with promising health benefits.

The Most Common and Easily Accessible Superfoods

Do a search for "Superfoods" online and you'll find a number of different opinions as to how many Superfoods there actually are –anywhere from five to fifty. I chose the foods below because they contain the required nutrients to be classified as a Superfood such as having high levels of crucial nutrients like antioxidants, anthocyanins, vitamin C, manganese and dietary fibre, are low in calories and are easy to find.

Foods containing the nutrients mentioned above have been proven to help prevent and, in some cases, reverse the well-known effects of aging, including cardiovascular disease, type II diabetes, hypertension, certain cancers and more.

The following list is provided for your information and reference, however it must be remembered that everybody is unique and has individual nutritional needs. I strongly recommend you see a practitioner before making any significant changes to your diet. As well, please see a qualified health care provider if you

have any health issues. The health benefits listed below are not meant to replace treatment from a physician, but rather to accompany it.

Apples
Apples are a powerful source of antioxidants, including polyphenols[62], flavonoids[29], and vitamin C, as well as good source of fibre, and potassium[63]. Lucky for us, there are only 47 calories in an average sized apple. The secret behind the super antioxidant capacity of the apple is its skin. The apple skin alone provides two to six times the antioxidant activity of the apple flesh alone. Therefore it's important to eat the skin as well so you obtain the full health benefits.

There are a variety of apples, and each of these have their own unique skin colour. Along with these differences in skin colour come differences in the chemical make-up of the skin itself, as the phytonutrient content varies in concentration and types of polyphenols present. For instance, in the United States, Fuji apples have the highest total phenolic[57] and total flavonoid content of any apple. Thus, it's important to eat a variety of different apples to ensure that you maintain a healthy nutritional balance.

Along with being a tasty, low-calorie source of antioxidants, apples are also high in fibre. One large apple has 5.7 grams of fibre, which is 30 percent of the minimum amount of your daily fibre requirements. Diets that are high in fibre have been highly correlated with a reduction in the risk of developing heart disease. So, eating an apple a day not only keeps the doctor away, but also keeps your heart happy. Aside from its link to heart health, the apple has also been linked to the prevention of lung cancer, improved pulmonary (lung) function, and the prevention of type II diabetes.

Avocados
Recent research has demonstrated that avocados offer some surprising and powerful health benefits. One of the most nutrient-dense foods, avocados are high in fibre and, ounce for ounce, top the charts among all fruits for folate[30], potassium[63], vitamin E[79], and magnesium[45].

The delicious, healthy monounsaturated fat[48] in the avocado is one of its biggest Superfood health claims. The only other fruit with a comparable amount of monounsaturated fat is the olive. The monounsaturated fat in avocados is oleic acid[50], which helps lower cholesterol.

One study found that after seven days on a diet that included avocados, there were significant decreases in both total and LDL cholesterol[41] as well as an 11 percent increase in the "good" HDL cholesterol[34]. Half a California avocado has a really excellent overall nutrient profile. At 145 calories it contains approximately 2 grams of protein[65], 6 grams of fibre, and 13 grams of fat, most of which (8.5 grams) is monounsaturated fat.

Avocados are also rich in magnesium. Magnesium is an essential nutrient for healthy bones, the cardiovascular system (particularly in the regulation of blood pressure and cardiac rhythms), prevention of migraines, and prevention of type II diabetes. Ounce for ounce, avocados provide more magnesium than the twenty most commonly eaten fruits, with the banana, kiwi, and strawberry in second, third, and fourth place, respectively.

They're also rich in potassium which is a critical nutrient that, until now, hasn't received the attention it deserves. Potassium helps regulate blood pressure, and an adequate intake of this mineral can help prevent circulatory diseases, including high blood pressure, stroke, and heart disease.

This fruit is also a rich source of folate. One cup of avocado contains 23 percent of the daily requirement of folate. Various studies have shown a correlation between diets high in folate and a reduced risk of cardiovascular disease and stroke.

In addition to their other heart-healthy qualities, avocados are rich in beta-sitosterol[13], a so-called phytosterol[83]. Along with peanut butter, cashews, almonds, peas, and kidney beans, avocado is one of the best sources of beta-sitosterol from whole foods. A phytosterol is the plant equivalent of cholesterol in animals. Because beta-sitosterol is so similar to cholesterol, it competes for absorption with cholesterol and wins, thus lowering the amounts of cholesterol in our bloodstream. Beta-sitosterol also appears to inhibit excessive cell division, which may play a role in preventing cancer-cell growth. In both animal and laboratory studies, this phytonutrient helps reduce the risk for cancer.

Perhaps the most interesting research on avocados demonstrates that it's a powerful "nutrient booster." Avocados actually improve the body's ability to absorb nutrients from foods. It's important to remember that it's not just the presence of nutrients in foods that matter, it's also our body's ability to absorb these nutrients.

Beans

Beans provide a great alternative to meat, since they're a low-fat source of protein. One cup of lentils provides 17 grams of protein with only 0.75 grams of fat. In fact, the American Cancer Society recommended in their 1996 dietary guidelines that Americans should “choose beans as an alternative to meat.”

Aside from being a great source of protein, beans are a delicious source of fibre, B vitamins[11], iron[40], folate, potassium, magnesium, and many phytonutrients, and should be eaten on a regular basis to promote optimal health. It's recommended that you should eat four ½ cup servings of beans per week.

Beans are a superb heart healthy food. Eating beans frequently is associated with lower cholesterol levels. Beans, like all other plant-derived sources of

protein, don't contain any saturated fat, and therefore are also cholesterol free. Thus, if you limit your saturated fat intake by reducing the amount of meat you eat and substitute beans and other plant protein sources for meat in your regular diet, you'll be well on your way to reducing your blood cholesterol levels and improving your overall health.

Research studies have shown that folate plays a critical role in the reduction of homocysteine levels. Homocysteine is a compound that damages the blood vessel walls when it accumulates in the body. Folate helps to reduce this damaging effect by neutralizing the homocysteine molecules. Data show that between 20 to 40 percent of coronary artery disease patients have elevated levels of homocysteine in their bodies.

Beans deliver a potent combination of potassium, calcium[16], and magnesium. This combination of electrolytes is associated with reduced risk of heart disease and hypertension.

When it comes to controlling blood sugar, it's the plentiful amount of soluble fibre in beans that seems to be nutrient of note. If you have insulin resistance[39], hypoglycaemia[36], or diabetes, adding beans to your regular diet can be very helpful in controlling your blood sugar. The soluble fibre in beans provides a slow burning and long lasting source of energy, consisting of complex carbohydrates[15] and proteins for your body to use.

Since these macronutrients take longer for your body to break down, blood sugar levels remain stabilized. When blood sugar is stabilized your body doesn't need to release as much insulin to control the glucose in the blood. This is crucial for diabetic patients, as they, especially, need to control their blood glucose and insulin levels in order to maintain their health.

As previously noted, beans are a rich source of fibre. Fibre adds a great deal of bulk to foods without adding a lot of calories. This is because fibre can easily be digested by our digestive systems. The benefit of the above is that foods such as beans that are bulky in nature make you feel full without adding calories.

Scientific research suggests that beans may help to prevent certain types of cancer, including:

Pancreatic cancer
Colon cancer
Breast Cancer
Prostate Cancer

Beans contain both lignins[42] and phytates[84], which seem to be the major contributors to the cancer fighting effects of this Superfood. Phytoestrogens (which are lignins) are estrogen-like compounds that have been linked to a

reduction in the risk of developing breast cancer. And phytates are compounds that have been shown to reduce the risk of certain types of intestinal cancer.

Try to eat a variety of beans, as different bean colours means that different polyphenols are present. These phytonutrients have antioxidant properties and help to fight against free radicals[31].

Blueberries

For many years nutritionists and researchers ignored the tiny blueberry because of its relatively low vitamin C content. However, what these people didn't know was that the healthful benefits of blueberries stem mainly from their incredibly high levels of antioxidant phytonutrients.

Phytonutrients are non-vitamin, non-mineral components of food that have significant health benefits. There are literally thousands of different types of phytonutrients, and each phytonutrient is unique in both its physical characteristics and its function. Research has shown that phytonutrients help the body cells communicate with each other more efficiently, prevent mutations at the cellular level, prevent the proliferation of cancer cells, and there is still much more that we are learning about the powers of phytonutrients everyday.

Blueberries are so rich in phytonutrients that even though they aren't filled with the antioxidant vitamins C and E, they still provide as much antioxidant protection to the body as 1,733 IU of vitamin E and more than 1200 milligrams of vitamin C.

It is recommended that 1 to 2 cups of blueberries should be consumed daily to obtain the full health benefits of this amazing blue fruit.

The research that really put blueberries on the map brought exciting news that this fruit seemed to slow, and even reverse, many of the degenerative diseases that are associated with the aging of the brain, including dementia and Alzheimer’s disease. By helping our brain cells communicate more efficiently, blueberries are actually helping to halt the progression of the degenerative diseases that are associated with the aging of the brain.

The primary reason that humans develop age related degenerative brain diseases is because as we age our brain cells become less and less effective at communicating with each other. This is due to the fact that the signals that these cells send out to their neighbouring cells weaken over time. When these signals become too weak to allow effective communication between each other, neurological pathways are lost and brain function is diminished.

In the area of cancer, new and exciting research has now linked the consumption of blueberries (as part of a regular diet) with the prevention of cancer. Once

again it's the high phytonutrient content that's responsible for this benefit. In this case, the major phytonutrient responsible for producing this effect is ellagic acid[25]. Ellagic acid is also found in high quantities within other berries, including:

- Black and red raspberries
- Blackberries
- Marionberries
- Boysenberries

This phytonutrient tends to be located in the seeds of these berries, making the aforementioned berries three to nine times more potent sources of ellagic acid than other good sources, such as strawberries, walnuts, and pecans. Various studies on ellagic acid have shown that people who consume foods that are high in ellagic acid are three times less likely to develop cancer when compared to those who consume very little or no dietary ellagic acid.

Broccoli

In 1992 a researcher at Johns Hopkins University announced the discovery of a compound found in broccoli that not only prevented the development of tumors by 60 percent in the studied group, but it also reduced the size of tumors that did develop by 75 percent. Broccoli is now one of the best-selling vegetables in North America. And, as a bonus, there are only 30 calories in one cup of broccoli.

Indeed, broccoli and its cruciferous[24] sidekicks are among the most powerful weapons in our dietary arsenal against cancer. This alone is enough to elevate it to the status of a Superfood. But, additionally, broccoli also boosts the immune system, lowers the incidence of cataracts, supports cardiovascular health, builds bones, and fights birth defects.

Broccoli is one of the most nutrient-dense foods known at this time; it offers an incredibly high level of nutrition for a very low caloric cost. Of the ten most common vegetables eaten in the North America, broccoli is a clear winner in terms of total polyphenol content; it’s got more polyphenols than all other popular choices; only beets and red onions have more polyphenols per serving.

The development of cancer in the human body is a progressive illness that begins at the cellular level with an abnormality that typically only ten to twenty years later is diagnosed as cancer. While research continues at a furious pace to find ways to cure this deadly invader—after heart disease the greatest killer of Americans—most scientists have come to recognize that cancer might well be more easily prevented than cured.

Diet is the best tool we all have at hand to protect ourselves from developing cancer. We know that a typical Western diet plays a major role in the development of cancers and we know that at least 30 percent of all cancers are believed to have a dietary component. And this is good news.

Population studies first pointed to the role that broccoli and other cruciferous vegetables might play in cancer prevention. One ten-year study, published by the Harvard School of Public Health, of 47,909 men showed an inverse relationship between the consumption of cruciferous vegetables and the development of bladder cancer. Broccoli and cabbage seemed to provide the greatest protection. Countless studies have confirmed these findings. As long ago as 1982, the National Research Council on Diet, Nutrition, and Cancer found that “there is sufficient epidemiological evidence to suggest that consumption of cruciferous vegetables is associated with a reduction in cancer.”

A very recent meta-analysis, which reviewed the results of eighty-seven studies, confirmed once again that broccoli and other cruciferous vegetables lower the risk of cancer. As little as 10 grams a day (less than 1/8 cup of chopped raw cabbage or chopped raw broccoli) can have a significant effect on your risk for developing cancer. Indeed, eating broccoli or its relatives is like getting a natural dose of chemoprevention.

One study showed that eating about two servings a day of leafy green vegetables may result in as much as a 50 percent reduction in the risk for certain types of cancers. While all crucifers seem to be effective in fighting cancer, cabbage, broccoli, and brussels sprouts seem to be the most powerful. Just ½ a cup of broccoli a day will protect you from a number of cancers, particularly cancers of the lung, stomach, colon, and rectum. No wonder broccoli is number one on the National Cancer Institute’s list of nutrition superstars.

The particular compounds in broccoli that are so effective include the phytochemicals[58], sulforaphane[71], and the indoles[37]. Sulforaphane is a remarkably potent compound that fights cancer on a number of levels. It increases the enzymes[26] that help rid the body of carcinogens[17], and actually kills abnormal cells. It helps the body limit oxidation—the process that initiates many chronic diseases—at the cellular level. Indoles work to combat cancer through their effect on estrogen[28]. They block estrogen receptors in breast cancer cells, inhibiting the growth of estrogen-sensitive breast cancers. The most important indole in broccoli—indole-3-carbinol, or I3C—is thought to be an especially effective breast cancer prevention agent.

Researchers estimate that broccoli sprouts provide ten to one hundred times the power of mature broccoli to neutralize carcinogens. A sprinkling of broccoli sprouts in your salad or on your sandwich can do more than even a couple of broccoli spears. This is especially good news for those few people-particularly children-who refuse to eat broccoli. Check www.broccosprouts.com to learn more about this nutrition-packed veggie.

If broccoli did nothing but protect us from cancer, that would be enough, but this mighty vegetable works on other fronts as well.

Broccoli and its related crucifers are rich in folate, the B vitamin that is essential to preventing birth defects. Neural tube defects such as spina bifida have been linked to folic acid deficiency in pregnancy. A single cup of raw, chopped broccoli provides more than 50 milligrams of folate (the plant form of folic acid). Folate also is active in helping to remove homocysteine from the circulatory system; high levels of homocysteine are associated with cardiovascular disease. Folate also plays a role in cancer prevention. Interestingly, folic-acid deficiency may be the most common vitamin deficiency in the world.

We all know how common cataracts are in our aging population. Broccoli can help here too! Broccoli is rich in the powerful phytochemical carotenoid[18] antioxidants lutein and zeaxanthin[44] (as well as vitamin C). Both of these carotenoids are concentrated in the lens and retina of the eye. One study found that people who ate broccoli more than twice weekly had a 23 percent lower risk of cataracts when compared to those who ate broccoli less than once a month. Lutein/zeaxanthin and vitamin C also serve to protect the eyes from the free-radical damage done to the eyes by ultraviolet light.

Broccoli and cruciferous vegetables are also bone builders. One cup of raw broccoli provides 41 milligrams of calcium along with 79 milligrams of vitamin C, which promotes the absorption of calcium. Whole milk and other full-fat dairy products, long touted as the main sources of calcium, contain no vitamin C and are often loaded with saturated fat and many more calories than the 25 in 1 cup of raw, chopped broccoli. Broccoli also supplies a significant portion of vitamin K, which is important for blood clotting, and also contributes to bone health.

Broccoli is a great source of the flavonoids, carotenoids, vitamin C, folate, and potassium that help prevent heart disease. It also provides generous amounts of fibre, vitamin E, and vitamin B6, which promote cardiovascular health. Broccoli is one of the few vegetables, along with spinach, that are relatively high in coenzyme Q10 (CoQ10), a fat-soluble antioxidant that is a major contributor to the production of energy in our bodies. At least in people with diagnosed heart disease, CoQ10 may play a cardio-protective role.

About 25 percent of the population inherit an aversion to the bitter taste of cruciferous vegetables. If this describes you, add salt, it makes them taste sweeter. Use them in a stir-fry with low-sodium soy sauce or add them to casseroles and lasagnes.

Cinnamon

Cinnamon is actually more than a delicious addition to food. One of the oldest spices known and long used in traditional medicine, cinnamon is currently being studied for its beneficial effects on a variety of ailments. Indeed, recent findings on the power of cinnamon to promote health, in particular its benefits for people with type II diabetes, have elevated it to the status of a Super Spice.

Perhaps the most exciting discovery concerning cinnamon is its effect on blood glucose levels as well as on triglyceride[74] and cholesterol levels, all of which could benefit people suffering from type II diabetes. In one study of 60 patients with type II diabetes, it was found that after only forty days of taking about half a teaspoon of cinnamon daily, fasting serum glucose levels were lowered by 18 to 29 percent, triglycerides by 23 to 30 percent, low-density lipoproteins (LDL) by 7 to 27 percent, and total cholesterol by 12 to 26 percent.

It isn't clear yet whether less than a half a teaspoon a day would be effective. It's particularly interesting that the effects of the cinnamon lasted for twenty days following the end of the study, leading to speculation that you wouldn't have to eat cinnamon every day to enjoy its benefits. The cinnamon—and perhaps other spices and certainly many foods—that you're eating today is affecting your future health. Cinnamon by its insulin-enhancing properties is not the only spice to show a positive effect on blood glucose levels. Cloves, bay leaves, and turmeric also show beneficial effects.

In addition to being a glucose moderator, cinnamon is recognized as an antibacterial. The essential oils in cinnamon are able to stop the growth of bacteria as well as fungi, including the common yeast candida. In one interesting study, a few drops of cinnamon essential oil in about 3 ounces of carrot broth inhibited the growth of bacteria for at least sixty days. By contrast, bacteria flourished in the broth with no cinnamon oil. Cinnamon has also been shown to be effective in fighting the E. coli bacterium.

A recent fascinating study found that just smelling cinnamon increased the subjects' cognitive ability and actually functioned as a kind of "brain boost." Future testing will reveal whether this power of cinnamon can be harnessed to prevent cognitive decline or sharpen cognitive performance.

Dark Chocolate

Believe it or not, dark chocolate is a Superfood. For many of us, this is a dream come true. Interesting many people have reported that once they think of chocolate as a food that's beneficial to their health, even though they still love and enjoy it, because it's no longer "forbidden," for some reason they're less tempted to over-indulge.

Let's not forget that chocolate (dark or otherwise) even though it's a Superfood, is still high in calories and if you eat too much of it you risk gaining weight.

When you do indulge in chocolate and you're looking for a health benefit, choose dark chocolate. Milk chocolate or white chocolate (the latter isn't even real chocolate) won't do. While both contain some of the beneficial polyphenols[62] (though in lower amounts than dark chocolate), preliminary data suggest that the

presence of milk in the chocolate somehow mitigates the effectiveness of the polyphenols.

Dark chocolate seems to contribute to lowering blood pressure, increasing blood flow, and ultimately contributing to a healthy heart.

Chocolate is about 30 percent fat, 5 percent protein, 61 percent carbohydrate, and 3 percent moisture and minerals. The magic in the mix as far as health benefits are concerned is the polyphenols, specifically the flavonols.

Flavonols are plant compounds with potent antioxidant properties. Cocoa beans, along with red wine, tea, cranberries, and other fruits, contain large amounts of flavonols. Research is now suggesting that the flavonols in chocolate are responsible for the ability to maintain healthy blood pressure, promote blood flow, and promote heart health.

A physician and researcher at Brigham Women's Hospital and Harvard Medical School, Dr. Norman K. Hollenberg, observed that the Kuna Indians, the indigenous residents of the San Bias Islands of Panama, rarely develop high blood pressure even as they aged.

Studies indicated that neither their salt intake nor obesity was a factor in this seeming immunity. Moreover, when the islanders moved to the mainland, their incidence of hypertension soared to typical levels seen in non-natives, so their protection from hypertension was probably not due to genetics. Hollenberg noticed one aspect of native culture that might play a role: The San Bias Island Kuna routinely drank about five cups of locally grown, minimally processed, high-flavonol cocoa each day. He gave his study subjects cocoa with either high or low amounts of flavonol. Those who drank the high-flavonol cocoa had more nitric oxide[49] activity than those drinking the low-flavonol cocoa. The connection between the ability of the nitric oxide to relax the blood vessels and improve circulation and thus prevent hypertension seemed obvious.

Hollenberg is continuing his investigation. He recently completed a pilot study that found that subjects who drank a cup of high-flavonol cocoa had a resulting increased flow of blood to the brain that averaged 33 percent.

Research also suggests that atherosclerosis begins and progresses as a gradual inflammatory process. It normally involves years of chronic injury to the lining of the blood vessels. As the lining—or endothelial cells—is damaged, atherosclerotic plaques, or fatty deposits, are formed on the walls of the blood vessels. These plaques both impede the flow of blood and can rupture, leading to a blood clot which could precipitate a heart attack or stroke.

Chocolate seems to ward off such problems. The polyphenols in chocolate relax the smooth muscle of the blood vessels. In addition, it seems that these polyphenols also inhibit the clotting of the blood. In a 2001 study, volunteer subjects were given a commercial chocolate bar (Dove Dark) containing 148 mg of flavonol. The end result was that the volunteers showed reduced levels of inflammation and beneficial delays in blood clotting at two and six hours after ingesting the chocolate.

Ordinarily, foods that are high in fat would never make it to Superfood status. Chocolate is the rare exception for a variety of reasons. While chocolate is approximately 30 percent fat, the fat in it, known as cocoa butter, is approximately 35 percent oleic acid and 35 ,percent stearic acid. Oleic acid is a monounsaturated fat that has been shown to have a slight cholesterol-lowering effect. Stearic acid is a saturated fat, but it does not raise blood cholesterol levels.

At least two studies have shown that chocolate consumption doesn't raise blood cholesterol in humans. Indeed, in one three-week trial, forty-five healthy volunteers were given 75 grams of either white chocolate, dark chocolate, or dark chocolate enriched with polyphenols daily. As you might guess, since white chocolate has no chocolate liquor and isn’t real chocolate, it had no effect, but the dark chocolate increased HDL (”good” cholesterol) by 9 percent and the enriched chocolate increased HDL by 14 percent. As higher HDLs are known to decrease the risk of cardiovascular disease, the argument for including chocolate in your diet is strong.

Garlic

Recent findings on the power of garlic to fight cancer and cardiovascular disease, as well as its anti-inflammatory and antiviral properties, give garlic the bona fide characteristics to elevate it to Superfood status.

Throughout the history of civilization, the medicinal properties of garlic have been prized, and it's been used to treat an array of ailments, including atherosclerosis,

stroke, cancer, immune disorders, cerebral aging, arthritis, and cataract formation.

Garlic's power as a heath promoter comes from its rich variety of sulfur containing compounds. Of the nearly one hundred nutrients in garlic, the most important in terms of health benefits seems to be the sulfur compound allicin—an amino acid. Allicin is not present in fresh garlic. It's formed instantly when cloves are crushed, chewed, or cut. Allicin seems to be responsible for the super-biological activity of garlic as well as its odor.

In addition to allicin, a single clove of garlic offers a slew of compounds with potential health benefits, including saponins[67], phosphorus[85], potassium, zinc, selenium[68], polyphenols, and arginine[7]. In addition to these compounds, garlic is a good source of vitamin B6 and also of vitamin C. As with most whole foods, garlic's antioxidant and anti-inflammatory abilities are probably due to the sum of the whole rather than a single agent.

A number of studies have shown that garlic has an important impact on risk factors for cardiovascular disease. It has been demonstrated that those who make garlic a regular part of their diets enjoy lowered blood pressure and decreased platelet aggregation[61], as well as decreased triglycerides and LDL ("bad") cholesterol. Garlic also may increase HDL ("good") cholesterol. Consuming one half to one clove of garlic daily lowers LDL cholesterol levels by approximately 10 percent, partially by decreasing cholesterol absorption.

Garlic extracts have also been shown to decrease blood pressure. In one study, a 5.5 percent decrease in systolic blood pressure and a slight decrease in diastolic pressure were noticed. While these are modest decreases, they could still lead to a significant lessening of the risk for stroke and heart attack. The end result of all of these benefits is a lowered risk of atherosclerosis and heart disease as well as a reduced risk of heart attack and stroke. Garlic oil has been shown to decrease total and LDL cholesterol and triglyceride levels as well.

Garlic's primary positive effect on cardiovascular disease comes from its sulphur compounds, but the effects of vitamin C, B6, selenium, and manganese can't be ignored. Garlic's vitamin C—the body's primary antioxidant defender—protects LDL cholesterol from oxidation. It's the oxidation of LDL cholesterol that begins the process that damages blood vessel walls. Vitamin B lowers levels of homocysteine, a substance that can directly damage blood vessel walls. The selenium in garlic fights heart disease, while it also works to protect against cancer and heavy metal toxicity. Manganese works on a variety of antioxidant defences, and studies have found that adults deficient in manganese have lower levels of the "good," or HDL, cholesterol.

A number of studies have reported on garlic's ability to fight cancer, although further research is needed to clarify the precise role of garlic in this battle.

Several population studies have shown a link between garlic in the diet and a decrease in the risk for colorectal and gastric cancer, and one clove of garlic daily may decrease the risk of developing prostate cancer. Recent reviews of more than thirty-five studies report some protective effect against cancer in about 75 percent of the published articles.

Two recent studies have shown that garlic can be a potent antibiotic. Particularly impressive was that garlic was effective against strains of pathogens[54] that have become resistant to many drugs. One study demonstrated that garlic juice showed significant antibacterial activity against a host of pathogens, even including antibiotic-resistant strains such as ciprofloxacin-resistant staphylococci[70].

The second study, conducted on mice, found that garlic was able to inhibit a type of staph infection[69] that's become increasingly resistant to antibiotics and increasingly common in hospitals. This type of staph infection has become a potential danger for health care workers, as well as for people with weakened immune systems. Sixteen hours after the mice were infected with the pathogen, garlic extract was fed to them. After twenty-four hours, garlic was found to have provided protection against the pathogen and to have significantly decreased the infection.

Honey

Honey is much more than just a liquid sweetener. One of the oldest medicines known to man, honey has been used in the treatment of respiratory diseases, skin ulcers, wounds, urinary diseases, gastrointestinal diseases, eczema, psoriasis, and dandruff. Today, we know the validity of these timeless treatments, as research has demonstrated that honey can inhibit the growth of bacteria, yeast, fungi, and viruses.

The power of honey comes from the wide range of compounds present in the rich amber liquid. Honey contains at least 181 known substances, and its antioxidant activity stems from the phenolics[57], peptides[56], organic acids, and enzymes[26]. Honey also contains salicylic acid, minerals, alpha-tocopherol[2], and oligosaccharides[51]. Oligosaccharides increase the number of “good” bacteria in the colon, reduce levels of toxic metabolites in the intestine, help prevent constipation, and help lower cholesterol and blood pressure.

The key point to remember with honey is that its antioxidant ability can vary widely depending on the floral source of the honey and its processing. The phenolic content of the honey depends on the pollen that the bees have used as raw material. There’s a very simple way to determine the health benefits of any honey: its colour. In general, the darker the colour of the honey the higher the level of antioxidants.

There can be a twenty fold difference in honey's antioxidant activity, as one test revealed. For example, Illinois buckwheat honey, the darkest honey tested, had twenty times the antioxidant activity of California sage honey, one of the lightest-coloured honeys tested. Overall, colour predicted more than sixty percent of the variation in honey's antioxidant capacity.

Maintaining optimal blood sugar levels has a positive effect on overall health, and honey seems to contribute to this goal. In one recent study of thirty-nine male and female athletes, following a workout, the participants ate a protein supplement blended with a sweetener. Those who ate the supplement sweetened with honey, as opposed to sugar or maltodextrin[46], enjoyed the best results. They maintained optimal blood sugar levels for two hours following the workout and enjoyed better muscle recuperation.

There are more than three hundred kinds of honey in North America, such as clover, buckwheat, and orange blossom. Light-coloured honeys are generally mildly flavoured, while dark honeys are more robust.

Perhaps honey's most important health-promoting benefit is its antioxidant ability. We know that daily consumption of honey raises blood levels of protective antioxidants. In one study, each day participants were given about four tablespoons of buckwheat honey while eating their regular diets for twenty-nine days. A direct link was found between the subjects' honey consumption and the levels of protective polyphenolic antioxidants in their blood.

In another study, twenty-five healthy men drank plain water or water with buckwheat honey. Those consuming the honey enjoyed a 7 percent increase in their antioxidant capacity. As the U.S. Department of Agriculture estimates that the average U.S. citizen consumes about 68 kilograms of sweetener annually. Substituting honey for at least part of this amount would make an impressive contribution to our overall antioxidant status and would no doubt be a significant health promoter.

An important note: Never give honey to children younger than a year old. About 10 percent of honey contains dormant Clostridium botulinum spores,[22] which can cause botulism in infants.

Honey, long recognized as a wound healer, has been used for centuries as a topical antiseptic for treating burns, ulcers, and wounds. A study in India compared the effectiveness of honey with a conventional wound-healing treatment, silver sulfadiazine, on patients suffering from first-degree burns. Amazingly, in the honey-dressed wounds, early subsidence of acute inflammatory changes, better control of infection, and quicker wound healing were observed. Some researchers attribute this effect to the nutrients in honey that promote skin growth and to the antibacterial substances present in honey. While I'm not recommending that you consider using honey topically, its power in

this role is further evidence of its wide range of health benefits.

An additional benefit of honey is found in the oligosaccharides it contains. They increase the numbers of good bacteria in the colon, reduce levels of toxic metabolites in the intestine, help prevent constipation, and help reduce cholesterol and blood pressure.

Kiwi

The nouvelle cuisine movement of the 1970's did a great deal to popularize kiwis in the US and today California provides 95 percent of the US crop. Now kiwis, or kiwifruit, are popular the world over and deservedly so as their pale green and delicious flesh, reminiscent of strawberries to some and pineapple to others, offers a potent mix of nutrients that elevate it to the status of a Superfood.

While many fruits feature one or two nutrients in their profile, kiwi offers an unusual array of health-promoting substances. Extremely rich in vitamin C, kiwi also offers folate, potassium, fibre, carotenoids, polyphenols, chlorophyll,[20] glutathione[33] and pectin.[55] In addition, kiwi is an unusual source of Vitamin E because most sources of this important vitamin, like nuts and oils, are high in both fat and calories. Kiwi by contrast offers its rich nutritional bounty for only about 93 calories for 2 kiwis. In fact, on a calorie per nutrient basis, kiwis have only 3.8 calories per nutrient. Of 27 fruits tested, only cantaloupe (2.6), papaya (2.8), strawberry (2.5), and lemon (2.5) had fewer calories per nutrient.

Offering a rich bounty of Vitamin C – more than an equivalent amount of orange – kiwi can be relied upon to help neutralize the free radicals that damage cells, ultimately leading to inflammation and cancer. Vitamin C has such an important role in so many bodily functions, including the immune system, and is associated with preventing so many ailments, from asthma and atherosclerosis to osteoarthritis and colon cancer, that it's no wonder that high consumption of the foods containing the vitamin is associated with reduced risk of death from all causes including cancer, heart disease and stroke.

Kiwi fruit promotes heart health by lowering triglyceride levels and reducing platelet hyperactivity which in turn seems to play a role in the development and stability of atherosclerotic vascular plaques.

Kiwi can promote heart health by limiting the tendency of blood to form clots. The vitamin C and E in kiwi combined with the polyphenols and magnesium, potassium, B vitamins and copper all act to protect the cardiovascular system. In one study in Oslo, Norway people who ate 2 or 3 kiwi a day for 28 days reduced their platelet aggregation response – or potential for clot formation – by 18% compared to those eating no kiwi. Moreover, those kiwi eaters also enjoyed a triglyceride drop of 15% compared to the controls.

Four medium kiwi fruit supply about 1.4 mg of lutein/zeaxanthin. As a result, this fruit is a non-leafy green source of these two important nutrients which have been associated with a decreased risk for cataracts, muscular degeneration, and the development of atherosclerotic plaques.

Kiwi is reported to have a laxative effect which can be beneficial to all but especially older people who are troubled by constipation. One study of 38 people over the age of sixty found that regular consumption of kiwi led to bulkier, softer stools and more frequent stool production.

Oats

The humble oat made nutrition history in 1997 when the FDA allowed a label to be placed on oat products claiming an association between consumption of a diet high in oatmeal, oat bran, or oat flour and a reduced risk for coronary heart disease—the number one killer in the U.S. The overall conclusion from the FDA review was that oats could lower serum cholesterol levels, especially LDLs. The FDA stated that the main active ingredient that yielded this positive effect is the soluble fibre found in oats called "beta glucan.[12]" The press jumped all over this news and oats, particularly oat bran, became the magic bullet against cholesterol. Subsequent research showed that the cholesterol-lowering effect of oat bran was less dramatic than originally thought and the oat bran story faded away.

However, new discoveries, combined with what's been known about oats for years, have revealed that their health-promoting powers are truly impressive. Oats are low in calories and high in fibre and protein. They're a rich source of magnesium, potassium, zinc, copper, manganese, selenium, thiamine,[72] and pantothenic acid.[53] They also contain phytonutrients such as polyphenols, phytoestrogens, lignins, protease inhibitors, and vitamin R. They're an excellent source of tocotrienols[76] and multiple tocopherols[75] - important members of the vitamin E family.

The synergy of the nutrients in oats makes them an outstanding and formidable Superfood. The degree of protection against disease offered by oats and other whole grains is greater than that of any of their ingredients taken in isolation. In addition to their power to reduce disease and improve your health, oats are a flagship Superfood for practical reasons: they're inexpensive, readily available, and incredibly easy to incorporate into your life. Oatmeal is on virtually every menu of every restaurant serving breakfast, and if you could only remember to eat a bowl of oats regularly, you'd be on the road to better health.

It's the cholesterol-lowering power of oats that drew the most attention to this lowly grain. The specific fibre—beta glucan—in oats is the soluble fibre that seems to be responsible for this benefit. Study after study has shown that individuals with high cholesterol (above 220 mg/dl), consuming just 3 grams of

soluble oat fibre per day—or roughly the amount in a bowl of oatmeal—can lower total cholesterol by 8 to 23 percent. Given that each percentage drop in serum cholesterol translates to a 2 percent decrease in the risk of developing heart disease. That's a significant effect.

In addition to the power of oat fibre, researchers have been excited to learn more about the phytonutrients in grains and how they help to prevent disease. The germ and bran of oats contain a concentrated amount of phytonutrients, including caffeic acid and ferulic acid. Ferulic acid has been the focus of recent research (that shows promising evidence of its ability to prevent colon cancer in animals and other experimental models). Ferulic acid has been found to be a potent antioxidant that's able to consume free radicals and protect against oxidative damage. It also seems to be able to inhibit the formation of certain cancer-promoting compounds.

An unusual feature of oats is that they have two “Super Cousins”: ground flaxseed and wheat germ. These "cousins" really belong in a very special category because they’re so nutrient dense. Both offer super benefits in very small amounts. If you add just 2 tablespoons of ground flaxseed and 2 tablespoons of wheat germ to your cereal each morning, you'll have taken a step toward a healthier life.

Flaxseed

Flaxseeds aren't really a Superfood but rather a Superfood's Superkin that deserve special attention because these seeds are the best plant source of omega-3 fatty acids. They’re a quick, easy way to get this important nutrient into your diet. Flaxseeds are also a powerful source of fibre, protein, magnesium, iron, and potassium: an all-around wealth of nutrients. Flaxseeds are also the leading source of a class of compounds called “lignins,[42]” which are phytoestrogens,[59] or plant estrogens. Lignins influence the balance of estrogen in the body and help protect against breast cancer.

Flaxseeds are slightly larger than sesame seeds, darker in colour—they range from dark red to brown—and very slimy. You can buy them in the form of flaxseed meal, or you can buy them in seed form and grind them yourself in a coffee grinder or mini food processor. The seeds must be ground, as the nutrients are difficult to absorb from the whole seed. Since the oil in flaxseeds spoils quickly, ideally it’s best to grind them as you go. Some people use a grinder, dedicated to flaxseeds, and grind them in small amounts, keeping the ground portion in the fridge in a small glass jar. Keep flaxmeal—already ground flaxseed, which you can buy in health food stores - in a plastic container in the fridge. Sprinkle 2 tablespoons of ground flaxseed a day on oatmeal, cereal, and yogurt, or use it in smoothies, pancakes, muffins, and quick breads. All you need is one to two tablespoons of ground flaxseed a day. This gives you more than the Institute of Medicine’s total daily recommendation for alpha linolenic acid (ALA, or

plant-derived omega-3 laity acids). Two tablespoons of ground flaxseed is a safe amount, geared to providing optimal nutrition, and there are no data suggesting that this amount of flaxseed/ALA has any deleterious effect.

Wheat

Wheat is one of our oldest harvested grains, first cultivated over five thousand years ago. Wheat germ is the embryo of the wheat berry (a wheat kernel that hasn't been heated, milled, or polished), and it's loaded with nutrition. Two tablespoons, at only 52 calories, have 4 grams of protein, 2 grams of fibre, 41 micrograms of folate, a third of the RDA (recommended daily allowance) of vitamin E, along with high levels of thiamine, manganese, selenium, vitamin B6, and potassium together with reasonable levels of iron and zinc. Wheat germ, like flaxseed, is also one of the few sources of plant-derived omega-3 fatty acids. Just 2 tablespoons—the serving size of wheat germ - of Kretschmer toasted wheat germ have 100 milligrams of beneficial omega-3 fatty acids

Wheat germ contains phytosterols that play a role in reducing cholesterol absorption. A recent clinical trial reported that slightly less than 6 tablespoons of wheat germ per day caused a 42.8 percent reduction in cholesterol absorption among the human volunteers in the study.

Sprinkle wheat germ on yogurt, cold cereal or hot oatmeal. Add it to pancake and muffin mix and into quick breads. When you think that only 2 tablespoons of wheat germ can significantly boost your day's nutrition, why not keep a jar of it in the fridge.

Few issues in the diet and nutrition wars are more confusing than carbohydrates. Low-carb diets have increased the confusion: they've drawn attention to carbohydrates, but unfortunately have oversimplified the issue of protein versus carbs. Many people have come to believe that carbs equal weight gain and are bad. Foods are now being labelled with banners that claim "no-carb" or "carb-free." Consumers trying to lose weight are being told that eating carbs will destroy any hope of weight loss. What's been lost in this battle, at least for many consumers, is the fact that, like fats and proteins, not all carbs are created equal.

Carbohydrates are found in a large number of foods, from table sugar to vegetables, to beans, and whole grains. A teaspoon of sugar is a carb. So is a slice of whole grain bread. You can guess which is better for you, but you may not know why.

A whole grain, whether it's oats, barley, wheat, bulgur, or a host of others, contains every part of the grain. The three parts include:

- The bran: a health-promoting, fibre-rich outer layer that contains B vitamins, minerals, protein, and other phytochemicals.

• The endosperm: the middle layer that contains carbohydrates, proteins, and a small amount of B vitamins.

• The germ: the nutrient-packed inner layer that contains B vitamins, vitamin E, and other phytochemicals.

It's the synergy of these three components that makes whole grains life enhancing. The refined carbs described earlier have been stripped of their health-promoting parts. When grains are "refined" to make white flour or white rice, for example, the bran and the germ, and all their powerful nutrients, antioxidants, and phytonutrients are stripped away, leaving a starchy substance that is to whole grain what soda is to 100 percent fruit juice. They can make it into bread, but they can't make it healthy!

Whole grains are essential to health. They provide fibre, vitamins, minerals, phytonutrients, and other nutrients that are simply not available in any other effectively synergistic package. All healthy diets rely on them. Despite the fact that whole grains form the basis of most food pyramids, indicating that they should be a significant part of our diet, many North Americans fail to eat even one whole grain serving a day! Men and women who eat whole grains have a reduced risk of twenty types of cancer, according to a 1998 review of forty observational studies, published in the journal Nutrition and Cancer.

Whole grains also benefit the heart, according to an analysis of data from the Iowa Women's Health Study, a nine-year study of more than 34,000 postmenopausal women. When all other factors were considered, it was found that women who ate a serving or more of whole grain foods each day had a 14 to 19 percent lower overall mortality rate than those who rarely or never ate whole grains. It really is a tragedy that we consume so few whole grains and so much refined grains. If we could shift that balance, we would all be much healthier. We've already seen how oats can lower cholesterol levels and stabilize blood sugar.

The complete list of the health-promoting abilities of whole grains is quite long. Vitamin E intake from food, not supplements, has been inversely related to the risk of stroke. Whole grains and nuts are the two major sources of whole food vitamin E.

Whole grain consumption has been linked to a reduction in the risk of strokes. In the Nurses' Health Study, among the group that never smoked, a median intake of 2.7 servings of whole grains a day was associated with a 50 percent reduction in the risk of ischemic stroke. Given that less than 8 percent of adults in the U.S. consume more than three servings of whole grains a day, it's clear we are missing a major health opportunity.

One study in the Journal of the American Medical Association studied young adults and found those with the highest fibre intake had the lowest diastolic blood pressure readings. Hypertension is consistently the most important risk factor for stroke. Researchers estimated that a 2-millimeter decrease in diastolic blood pressure would result in a 17 percent decrease in the prevalence of hypertension and a 15 percent reduction in risk for stroke. Whole grains form an important part of the DASH diet (Dietary Approaches to Stop Hypertension; see website http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/) that has repeatedly been found to lower blood pressure.

Whole grains are also helpful in preventing coronary artery disease. In the same Nurses' Health Study mentioned earlier, women who consumed a median of 2% whole grain servings a day experienced more than a 30 percent lowered risk of coronary artery disease.

Whole grains contain folate, which helps to lower serum levels of homocysteine - an independent risk factor for stroke and cardiovascular disease.

Onions

While onion's health promoting abilities have long been recognized, it's only recently that their considerable curative abilities have been conclusively demonstrated and thus their elevation to Superfood status.

Onions are a major source of two phytonutrients that play a significant role in health promotion: flavonoids and the mixture of over fifty sulfur-containing compounds. The two flavonoid subgroups found in onions are the anthocyanins[3] that impart a red/purple colour to some varieties, and the flavanols such as quercetin[66] and its derivatives that are responsible for the yellow flesh and brown skins of many varieties of onions. The flavonols are concentrated in the skin of most onions where they contribute to the colour of the vegetable.

We now know that the health promoting compounds in onion, like those in garlic, are separated by cell walls. Slicing an onion ruptures these walls and releases the compounds which then combine to form a powerful new compound: thiopropanal sulfoxide.[73] In addition to mitigating various diseases, this substance also gives cut onions their pungent aroma and their ability to make us cry.

To get the most health benefits from onions, let them sit for five to ten minutes after cutting and before cooking. Heat will deactivate the thiopropanal sulfoxide and you want to give it time to fully develop and concentrate before heating.

While chopping onions may make you cry, their considerable cardiovascular benefits should bring a smile beneath your tears. Like garlic, onion consumption

has been shown to lower high cholesterol levels and high blood pressure. Onions, along with tea, apples and broccoli --the richest dietary sources of flavonoids– have been shown to reduce the risk of heart disease by 20% in a recent meta-analysis that reviewed the dietary patterns and health of over 100,000 individuals.

From a health promotion standpoint, the most pungent onions pack the biggest wallop. In one test of the flavonoid content of onions, shallots had six times the amount found in Vidalia onions, the onion with the lowest phenolic content. Shallots also had the most antioxidant activity. Western Yellow onions had the most flavonoids – 11 times the amount found in Western White, the type with the lowest flavonoids content. All types of onions are good additions to your diet but try to choose the stronger tasting ones when appropriate to your recipe.

Regular consumption of onions has also been associated with a reduced risk of colon cancer. It's believed that the flavonoid quercetin in onions is the protective factor as it's been shown to stop the growth of tumours in animals, and to protect colon cells from the negative effects of some cancer-promoting substances. There’s also evidence that onions may lower the risk of cancer of the brain, oesophagus, lung and stomach.

Oranges

Long recognized as a potent source of vitamin C, oranges are considered by most to be tasty, juicy, and unspectacular. No one gets excited about an orange in their lunchbox—but they should. The discoveries that are being made about the power of oranges to support heart health and prevent cancer, stroke, diabetes, and a host of chronic ailments should bring oranges and other citrus fruits back to center stage as crucial components in a health promoting and preventative diet.

Humans (and guinea pigs) can’t manufacture vitamin C. It’s water soluble and not retained in the body, so we need a constant replenishment from dietary sources to maintain adequate cellular and blood levels. Alarmingly, a high percentage of children consume minimal amounts of vitamin C. The recommended daily allowance (RDA) for North Americans is 90 milligrams a day for adult males and 75 milligrams a day for adult females.

It’s fairly shocking that, given today’s abundance of food, so many of us are deficient in a vitamin that’s crucial to good health. While we might not be seeing cases of scurvy anymore, we’re certainly seeing epidemic numbers of heart disease, hypertension, and cancer. The vitamin C in citrus, along with the other valuable nutrients, can play a major role in reducing these high levels of chronic disease.

Flavonoids are a class of polyphenols found in fruits, vegetables, legumes, nuts, seeds, grains, tea, and wine. There are over five thousand flavonoids that have been identified and described in scientific literature, and we're learning more about them every day.

Citrus flavonoids, which are found in the fruit's flesh, juice, pulp, and skin, are one of the reasons for the health-promoting attributes of citrus fruits and the reason that the whole fruit is so much more healthful than just the juice. Two of the flavonoids in citrus—naringin in grapefruit and hesperidin in oranges— occur only rarely in other plants and are thus essentially unique to citrus. The power of citrus flavonoids is dazzling. They're antioxidant and antimutagenic. The latter refers to their ability to prevent cells from mutating and initiating one of the first steps in the development of cancer and other chronic diseases. This is accomplished by their apparent ability to absorb ultraviolet light, protect DNA, and interact with carcinogens. Citrus flavonoids have been shown to inhibit cancer cell growth, strengthen capillaries, act as an anti-inflammatory, and they're antiallergenic and antimicrobial. Flavonoid intake is inversely associated with the incidence of heart attack and stroke as well as a host of other ailments.

We're certain that an orange a day promotes cardiovascular health. The Framingham Nurses' Health Study found that drinking one daily glass of orange juice reduced the risk of stroke by 25 percent. Countless other studies have confirmed similar benefits from regular consumption of citrus. We're beginning to understand that, as with so many Superfoods, it's the synergy of multiple foods and the variety of nutrients they contain that combine to amplify and intensify individual benefits.

For example, oranges are rich in vitamin C. They are also rich in flavonoids, such as hesperidin, that work to revive vitamin C after it has quash free radicals. In other words, the hesperidin strengthens and amplifies the effect of vitamin C in your body. In an interesting human clinical trial, orange juice was shown to elevate HDL cholesterol (good") cholesterol while lowering LDL (so-called bad) cholesterol.

The fibre in oranges is another major contributor to heart health. Citrus fruit (especially tangerines) are one of the richest sources of high-quality pectin—a type of dietary fibre. Pectin is a major component of the kind of fibre that's known to lower cholesterol. Pectin is also helpful in stabilizing blood sugar. A single orange provides 3 grams of fibre, and dietary fibre has been associated with a wide range of health benefits. About 35 percent of North Americans consume their fruit only in juice form. In most cases, their health would benefit if they would just add whole fruit whenever possible.

Recent news from researchers has demonstrated that oranges can play a significant role in preventing cancer. We know, for example, that the Mediterranean diet, which includes a considerable amount of citrus, is associated

with low incidences of cancers of the breast, lung, pancreas, colon, rectum, and cervix. Indeed, citrus fruits have been found to contain numerous known anticancer agents—possibly more than any other food. The National Cancer Institute calls oranges a complete package of every natural anticancer inhibitor known.

One particular phytonutrient has attracted attention lately as a health-promoting agent. Amazingly, we routinely throw out this most potent part of the orange. In the oil of the peel of citrus fruits is a phytonutrient known as limonene. Oranges, mandarins, lemons, and limes contain significant amounts of limonene in the peel and smaller quantities in the pulp. Limonene stimulates our antioxidant detoxification enzyme system, thus helping to stop cancer before it can even begin. (It's reassuring to know that a natural chemopreventive phytonutrient can work to prevent the process of carcinogenesis at the earliest stages). Limonene also reduces the activity of proteins that can trigger abnormal cell growth. Limonene has blocking and suppressing actions that, at least in animals, actually cause regression of tumors. One study of people in Arizona found that those who used citrus peels in cooking reduced their risk of squamous cell carcinoma by 50 percent.

We've long known that Mediterranean people suffer lower rates of certain cancers than others, and researchers now believe this can partly be ascribed to their regular consumption of citrus peel. Orange juice does contain some limonene but not nearly as much as the peel. Fresh-squeezed juice has the most limonene, along with other nutrients, and orange juice pulp has 8 to 10 percent more limonene than juice with no pulp.

Vitamin C, abundantly available in oranges, also plays a role in fighting cancer. In fact, there's a relatively consistent inverse association of vitamin C with cancer of the stomach, oral cancer, and cancer of the oesophagus. This makes sense, as vitamin C protects against nitrosamines, cancer-causing agents found in foods that are thought to be responsible for instigating cancers of the mouth, stomach, and colon. One study of Swiss men found that those who died of any type of cancer had vitamin C concentrations about 10 percent lower than those who died from other causes.

Citrus seems to have a protective ability against stroke. In the Men's Health Professionals Follow-Up Study, citrus and citrus juice were major contributors to the stroke-risk reduction from fruits and vegetables. It has been estimated that drinking one glass of orange juice daily may lower the risk of stroke in healthy men by 25 percent while the risk is reduced only ii percent from other fruits.

It's very interesting that consumption of vitamin C in supplement form does not appear to have the same benefits as the whole fruit when it comes to stroke prevention. This suggests that there must be some other protective substance(s) in citrus juices to account for their power to protect from strokes. The current

assumption at this point is that it's the power of the polyphenols that make the difference. Another reason to rely on whole foods for optimal nutrition! On the other hand, more than 350 to 400 milligrams a day of supplemental vitamin C for a period of at least ten years seems to be an effective means of lowering your risk of developing cataracts. (This is one instance where supplements do work.)

Pomegranates

Pomegranates have been around since ancient times and their health benefits have been recognized. Pomegranates can range from yellow-orange to red to deep purple. Rich in potassium, vitamin C, polyphenols and vitamin B6[77], pomegranates are real phytochemical[58] powerhouses. Pomegranate juice may have two to three times the antioxidant power of equal amounts of green tea or red wine.

In one study published in the American Journal of Clinical Nutrition, pomegranate juice was a potent fighter in the battle against atherosclerosis. As little as a ¼ cup of pomegranate juice daily may improve cardiovascular health by reducing oxidation of LDL cholesterol. In addition, animal studies suggest that pomegranates may cause regression of atherosclerotic lesions. It's unfortunate that many of us avoid pomegranates because it takes some work to get to the seeds.

Pomegranates possess potent anti-inflammatory phytochemicals, and consumption of pomegranate juice has been shown to lower blood pressure in hypertensive volunteers. Studies of several fruit juices and wines have reported the highest polyphenols concentration in pomegranate juice followed by red wine and cranberry juice.

If you've never tried a pomegranate, autumn is the perfect time. Select a pomegranate by weight: the seeds represent about half the weight of the fruit and so the heavier the fruit the better. The skin should be shiny without any cracks. You can store your pomegranate in a cool place for about a month but it will keep in the fridge for up to two months.

Pumpkin

Many of us rarely think of pumpkin as a food. We buy a pumpkin to carve at Halloween, then toss it in the trash once the trick-or-treaters go home. We only eat it once a year, if at all, in a Thanksgiving pie. Most people think of pumpkin as a decorative gourd rather than a highly nutritious and desirable food.

This is unfortunate because the squash known as a pumpkin is one of the most nutritionally valuable foods known to humanity. (By the way, the pumpkin is not a vegetable; it's a fruit. Like melons, it's a member of the gourd family.) Moreover, it's inexpensive, available year round in canned form, incredibly easy to

incorporate into recipes, high in fibre, and low in calories. All in all, pumpkin is a real nutrition superstar.

The nutrients in pumpkin are really amazing. Extremely high in fibre and low in calories, pumpkin packs an abundance of disease-fighting nutrients, including potassium, pantothenic acid,[53] magnesium, and vitamins C and E. The key nutrient that boosts pumpkin to the top of the Superfoods list is the synergistic combination of carotenoids. Pumpkin contains one of the richest supplies of bioavailable carotenoids known to man. Indeed, a half-cup serving of pumpkin gives you more than two times the recommended daily dietary intake of alpha-carotene.[1] When you realize the tremendous benefits of these nutrients, you'll see why pumpkin is such an extraordinary food.

Carotenoids are deep orange, yellow, or red-coloured, fat-soluble compounds that occur in a variety of plants. They protect the plants from sun damage while helping them attract birds and insects for pollination. So far, scientists have identified about six hundred carotenoids, and more than fifty of them commonly occur in our diet. Not all dietary carotenoids are efficiently absorbed however, and as a result, only thirty-four carotenoids have currently been found in our blood and breast milk.

Foods rich in carotenoids have been linked to a host of health- promoting and disease-fighting functions. They've been shown to decrease the risk of various cancers, including those of the lung, colon, bladder, cervix, breast, and skin. In the landmark Nurses' Health Study. women with the highest concentrations of carotenes in their diets had the lowest risk of breast cancer.

Carotenoids have also shown great promise in their ability to lower rates of heart disease. In one thirteen-year-long study, researchers found a strong correlation between lower carotenoid concentrations in the blood and a higher rate of heart disease. As has frequently been found, the correlation between increased carotenoid consumption and decreased risk of heart disease was higher when all carotenoids, not just beta-carotene, were considered.

Carotenoid consumption also decreases the risk of cataracts and macular degeneration.

The two carotenoids that are present in pumpkin—beta- and alpha- carotene—are particularly potent phytonutrients.

Beta-carotene, which first came to our attention in the 1980's, is one of the world's most studied antioxidants. The word "carotenoid"—derived from "carrot"—comes from the yellow-orange colour of these nutrients, which at first were linked primarily with carrots. Carrots (and sweet potatoes) also contain rich amounts of beta-carotene. It's abundant in fruits and vegetables, and we've long known that the beta-carotene in foods helps prevent many diseases, including

lung cancer. It was the connection between beta-carotene and lung-cancer prevention that led to some fascinating studies. These groundbreaking studies on beta-carotene were among the first indicators that supplements weren't the complete answer to preventing disease and, indeed, it's this finding that's at the heart of Superfoods: whole foods are part of the answer to disease prevention and health promotion.

Scientists reasoned that if the beta-carotene in foods helped to prevent lung cancer, it followed that a beta-carotene supplement would do the same. Unfortunately, and shockingly, two important studies showed that, to the contrary, smokers who took beta-carotene supplements showed an increase in lung cancer.

In 1996, a Finnish study on 29,000 male smokers, published in the New England Journal of Medicine, showed that those who smoked and took beta-carotene supplements were 18 percent more likely to develop lung cancer than those who had not taken supplements.

In the United States, the Carotene and Retinal Efficacy Trial (CARET) study, which was published in the Journal of the National Cancer Institute, was halted almost two years before expected completion because of the negative effects of the supplemental beta-carotene and vitamin A on smokers when compared with subjects taking a placebo.

When derived from whole foods like pumpkin, the carotenoids are major players in the fight against disease. Higher blood levels of beta-carotene and alpha-carotene are associated with lower levels of certain chronic diseases. In laboratory studies, beta-carotene has been shown to have very powerful antioxidant and anti-inflammatory properties. It prevents the oxidation of cholesterol in laboratory studies and, since oxidized cholesterol is the type that builds up in blood vessel walls and contributes to the risk of heart attack and stroke, getting extra beta-carotene in the diet may help to prevent the progression of atherosclerosis and heart disease.

Beta-carotene along with other carotenoids may also prove to be helpful in preventing the free radical-caused complications of long-term diabetes and the increased risk for cardiovascular disease associated with this common illness.

Studies have also shown that a good intake of beta-carotene can help to' reduce the risk of colon cancer, possibly by protecting colon cells from the damaging effects of cancer-causing chemicals.

While beta-carotene has long been linked with health promotion, it's the bounty of alpha-carotene in pumpkin that makes it a real nutritional hero. The exciting news about alpha-carotene is that its presence in the body along with other key nutrients is reportedly inversely related to biological aging. In other words, the

more alpha-carotene you eat, the slower your body shows signs of aging. Not only might alpha-carotene slow down the aging process, it also has been shown to protect against various cancers and cataracts. Moreover, the combination of carotenoids, potassium, magnesium, and folate found in pumpkin offers protection against cardiovascular disease.

Pumpkin is also a terrific source of fibre. Most people aren't aware of the fibre content of canned pumpkin because it seems so creamy. Just one full-cup serving provides 5 grams of fibre—more than you're getting from most supermarket cereals.

Spinach

Spinach seems to be able to lessen our risk for many of the most common diseases of the twenty first century. Overwhelming research has demonstrated an inverse relationship between spinach consumption and the following:

- Cardiovascular disease including stroke and coronary artery disease
- Cancer including colon, lung, skin, oral, stomach, ovarian, prostate and breast cancer
- Age related macular degeneration (AMD)
- Cataracts

In addition, preliminary research suggests that spinach may help prevent or delay age-related cognitive decline.

What makes spinach and its related veggies such powerful health promoters? The list of compounds that have been discovered in spinach is truly impressive. Spinach contains carotenoids, antioxidants, vitamin K, coenzyme Q10, B vitamins, minerals, chlorophyll, polyphenols, betaine[14] and, interestingly, plant-derived omega-3 fatty acids. This is a condensed list and it's hard to convey the powerful impact of these nutrients as they work synergistically to promote health.

Spinach and its related leafy greens, are important in the prevention of macular degeneration because of their rich supply of the carotenoids lutein/zeaxanthin and, coupled with dietary marine-based omega 3 fatty acids, can offer a powerful reduction in the risk of AMD. It's interesting to note that all of the lutein and a significant percentage of the zeaxanthin found in the macular come from the diet, thus reinforcing the prescription to eat the best sources of lutein – spinach and kale – regularly. For those who just can't do green veggies or fish, the DHA eggs, found in virtually every market, supply very bioavailable amounts of lutein, zeaxanthin and DHA.

It's not surprising that spinach is a powerful ally in the fight against cancer. A number of studies have shown an inverse relationship between spinach consumption and almost every type of cancer. Researchers believe that it's the

rich supply of vitamins, minerals, omega-3 fatty acids, antioxidants and phytonutrients that do the job. For example, spinach offers a rich supply of glutathione and alpha lipoic acid – two critical antioxidants. These substances are manufactured in the body but as we age our ability to produce them subsides. That's when spinach can make an important contribution with its ready-made supply of both glutathione and alpha lipoic acid. In addition to these two antioxidants, spinach supplies the carotenoids lutein/zeaxanthin and beta-carotene which play an important role in our body's anti-cancer defence systems.

As well as its significant contributions to the promotion of eye health and prevention of cancer, spinach (and other leafy green vegetables) also promotes cardiovascular heath. Vitamin C, beta-carotene, and other nutrients in spinach, work together to prevent oxidized cholesterol from building up in the blood vessel walls. We can't forget about the fabulous folate in spinach. Folate is an important contributor to heart health as it works, along with B6 and betaine, to lower serum levels of the dangerous amino acid homocysteine. We are learning more every day about the dangers of homocysteine and its association with heart disease, stroke, osteoporosis and age-related cognitive decline.

Finally, we can't forget the potassium and magnesium in spinach which also make significant contributions to heart health. Both work to lower blood pressure and the risk of cardiovascular disease and stroke.

Tea

There's solid evidence that tea consumption is associated with a lowered risk of heart disease and stroke. The connection was noticed when the arteries of Chinese-American tea drinkers were compared with the arteries of Caucasian coffee drinkers. The tea drinkers only had two-thirds as much coronary artery damage and only one-third as much cerebral artery damage upon autopsy compared with the coffee drinkers.

Another study found that in males, deaths from coronary artery disease were reduced by 40 percent among those who drank one or more cups of tea daily, and another study from Harvard showed that there was a 44 percent lower risk of heart attack in people who drank at least one cup of tea daily.

While some studies on tea and coronary artery disease have been inconclusive, in animal studies we know for certain that the catechins[19] lower cholesterol levels, especially the damaging LUL cholesterol. There's also a definite inverse relationship between tea consumption and homocysteine levels, which are, of course, associated with an elevated risk for heart disease. Tea also seems to play a role in keeping the lining of the blood vessels plaque free, which in turn lessens the risk of coronary artery disease. It seems that these positive benefits can be enjoyed if you drink between one and three cups daily, with greater protection conferred as the total consumption increases.

Interestingly, one study showed that tea consumption in the year before a heart attack is associated with lower mortality following the heart attack. In this study, moderate tea drinkers drank less than fourteen cups weekly, compared to those who drank none and those heavy tea drinkers who drank fourteen or more cups weekly. Both the moderate and the heavy tea drinkers had a lower death rate than those who abstained entirely.

The implication of multiple studies is that one doesn't need to consume tremendous amounts of tea to enjoy health benefits. As little as a cup a day can play a positive role in your health.

Preliminary data also suggests that tea may actually help you lose weight by increasing energy expenditure.

As well as all the benefits listed so far, tea also seems to have a positive effect on your oral health. Drinking tea lowers your risk of developing cavities and gum disease. One study found that tea may reduce cavity formation by up to 75 percent. The fluoride content of the tea inhibits cavities from developing. Tea also seems to inhibit bacteria from adhering to tooth surfaces, while it also inhibits the rate of acid production of oral bacteria.

Both men and women can improve bone health by drinking tea. Studies that focused on the risk of hip fracture, found that habitual tea consumption, especially when maintained for more than ten years, has been shown to aid in the maintenance of bone-mineral density. This seems to be due to the fact that some of the flavonoids in tea have phytoestrogen activity, which benefits bone health. Moreover, some tea extracts seem to inhibit bone resorption.

One recent study found that oolong tea is successful in treating atopic dermatitis; this is no doubt due in part to the anti-allergic properties of tea. This benefit was noticed after one or two weeks of drinking tea. In this study, a ½ ounce tea bag that steeped for five minutes in just over four cups of boiling water was consumed in three parts, one with each meal.

Tomatoes

The tomato was considered a poisonous food once upon a time. Fortunately for us it regained its popularity in the late nineteenth century.

Lycopene, a member of the carotenoid family and a pigment that contributes to the colour of tomatoes, is a major contributor to their health promoting power. Lycopene has demonstrated a range of unique and distinct biological properties that have intrigued scientists. Some researchers have come to believe that lycopene could be as powerful an antioxidant as beta-carotene. We do know that lycopene is the most efficient quencher of the free-radical singlet oxygen, a particularly deleterious form of oxygen, and lycopene is also capable of removing a large number of free radicals.

Lycopene is a nutrient whose time has come. It's been the subject of great interest lately as more and more researchers have focused on the particular power of this nutrient. The attention began in the 1980s when studies revealed that people who ate large amounts of tomatoes were far less likely to die from all forms of cancer compared to those who ate little or no tomatoes. Many other studies echoed these findings about the effect of eating tomatoes.

It's not only cancer that the lycopene in tomatoes helps mitigate. Lycopene is an important part of the antioxidant defense system in the skin. Dietary lycopene by itself or in combination with other nutrients can raise the sun protection factor (SPF) of the skin. In other words, by eating tomatoes (cooked or processed) you're enhancing your skin's ability to withstand the assault from the damaging rays of the sun. It acts like an internal sunblock!

A study conducted by Dr. David Snowdon, of the Sanders-Brown Center on Aging at the University of Kentucky, assessed eighty-eight Roman Catholic nuns ranging in age from 77 to 98. The nuns with the highest concentrations of lycopene in their blood were the most able to care for themselves and complete everyday tasks. Overall, those with the highest levels of lycopene were 3.6 times better able to function in their everyday lives than those with the lowest levels. Most interestingly, no similar relationship between vigor and the presence of other antioxidants (such as vitamin E and beta-carotene) was found.

Lycopene is rare in foods, and tomatoes are one of only a few that are rich in this powerful antioxidant. And ketchup, tomato juice, and pizza sauce account for more than 80 percent of the total lycopene intake of Americans.

While lycopene has received a lot of attention recently, tomatoes are rich in a wide variety of other nutrients as well. All nutrients in the tomato seem to work synergistically to promote health and vitality.

Low in calories, high in fibre, and high in potassium, tomatoes are not only a rich source of lycopene, they're also a source of beta-carotene, alpha-carotene, and various polyphenols. They contain small amounts of B vitamins (thiamine, pantothenic acid, vitamin B6, and niacin), as well as folate, vitamin E, magnesium, manganese, and zinc.

Some of the most exciting studies on tomatoes have focused on their ability to protect against cancer, especially prostate cancer. Dr. Edward Giovannucci, of the Harvard Medical School, has published two interesting studies that investigated the effects of foods, particularly tomatoes, on cancer risk. In his 1995 study, Dr. Giovannucci found that of the 48,000 men surveyed, those who ate ten or more servings of tomatoes a week reduced their risk of prostate cancer by 35 percent and their risk of aggressive prostate tumors by almost 50 percent. Indeed, it seemed the higher the tomato intake, the lower the cancer risk. Interestingly, lycopene is the most abundant carotenoid in the prostate gland.

Dr. Giovannucci's subsequent study in 1999 showed that, of all tomato products, tomato sauce consumption—at just two servings a week—was by far the most reliable indicator of reduced risk for prostate cancer.

Two important points emerged from these studies. The first is that processed tomatoes—sauce and paste—are more effective than raw tomatoes at reducing cancer risk. In the raw tomato, the lycopene is bound to the cell walls and fibre. Processing breaks down these cell walls and frees the lycopene to be absorbed by the body. Ounce for ounce, processed tomato products and cooked tomatoes contain two to eight times the available lycopene of raw tomatoes. While processing does diminish the levels of vitamin C in the tomatoes, it elevates the total antioxidant activity, thus you give up one nutrient, that is available in many other foods, to gain a nutrient that isn't.

The second important point, which Dr. Giovannucci mentions in his article, once again highlights the importance of whole foods. While he notes the association between tomato consumption and reduced cancer risk, particularly lung, stomach and prostate cancers, he makes it clear that "a direct benefit of lycopene has not been proven and other compounds in tomatoes alone or interacting with lycopene may be important." Given the rich array of nutrients in tomatoes it wouldn't be surprising if, once again, the synergy of those nutrients were the reason for the positive effects.

Prostate cancer isn't the only type of cancer that tomatoes seem to help protect against. A growing body of evidence suggests that lycopene provides some degree of protection against cancers of the breast, digestive tract, cervix, bladder, and lung.

In addition to being cancer-protective, there's ample evidence that tomatoes also play a role in reducing your risk for cardiovascular disease. The antioxidant function of lycopene, combined with the other powerful antioxidants in tomatoes such as vitamin C and beta-carotene, work in the body to neutralize free radicals that could otherwise damage cells and cell membranes. This preservation of cells and their membranes reduces the potential for inflammation and thereby the progression and severity of atherosclerosis.

In one study, German scientists compared the lycopene levels in the tissues of men who had suffered heart attacks with those of men who had not. The men who had suffered attacks had lower lycopene levels than those who hadn't. Interestingly, the men with the lowest levels of lycopene were twice as likely to suffer a heart attack as those with the highest levels.

In another large European study that compared carotenoid levels among patients from ten different countries, lycopene was found to be the most protective against heart attack.

Tomatoes are also a good source of potassium, niacin, vitamin B6, and folate—a great heart-healthy combination of nutrients. Potassium-rich foods play a positive role in cardiovascular health, being especially effective in helping to achieve optimal blood pressure. Niacin is commonly used to lower elevated blood cholesterol levels. The combination of vitamin B6 and folate effectively reduces levels of homocysteine in the blood. Elevated levels of homocysteine are associated with a higher risk of heart disease.

Turkey
Highly nutritious, low in fat, inexpensive, versatile, and always available, the turkey is a Superfood.

Skinless turkey breast is one of, if not the leanest meat protein sources on the planet. This alone could make it a Superfood: but turkey also offers a rich array of nutrients, particularly niacin, selenium, vitamins B6 and B12, and zinc. These nutrients are heart-healthy and are also valuable in helping to lower the risk for cancer.

Walnuts
It's true that nuts are high in calories, but they have extraordinary health benefits and are an important addition to your diet. Here's a simple fact: Eating a handful of nuts about five times a week will reduce your chances of having a heart attack by at least 15 percent and possibly as much as 51 percent. That’s how powerful nuts are.

Nutritionists are now rediscovering these little nutritional goldmines. I can safely say that nuts are going to play an important role in boosting our health levels during this century.

It’s a simple, if astounding, fact: people who eat nuts regularly can enjoy a significant reduction in their risk of developing coronary heart disease. They’ll also reduce their risk of diabetes, cancer, and a host of other chronic illnesses.

While walnuts are the flagship nuts in this Superfoods category, all nuts and seeds are significant contributors to your good health. It makes sense that nuts and seeds are rich sources of a wide variety of nutrients because they are, after all, nature’s nurseries. A nut or seed is basically a storage device that contains all the highly concentrated proteins, calories, and nutrients that a plant embryo will require to grow and flourish.

Walnuts are one of the few rich sources of plant-derived omega-3 fatty acids (called alpha linolenic acid, or ALA) along with canola oil, ground flaxseed, flaxseed oil, soybeans, soybean oil, wheat germ, spinach, and purslane. They are rich in plant sterols—plant sterols can play a significant role in lowering serum cholesterol levels—a good source of fibre and protein, and they also

provide magnesium, copper, folate, and vitamin E. Finally, they're the nut with the highest overall antioxidant activity.

To date, at least five large epidemiological studies have demonstrated that frequent consumption of nuts decreases the risk of coronary artery disease. Overall, people who eat nuts five or more times a week had a 15 to 51 percent reduction in coronary heart disease. And amazingly, even people who ate nuts just once a month had some reduction.

One of the main contributors to heart health in nuts, particularly in walnuts, is the omega-3 fatty acids. This particular component of fat works in various ways to help guarantee a healthy heart and circulatory system. Like aspirin, omega-3s "thin" the blood, helping it to flow freely and preventing clots from forming and adhering to the vessel walls. They also act as an anti-inflammatory, preventing the blood vessels from becoming inflamed—a condition that reduces blood flow. Walnuts are also rich in arginine,[7] which is an essential amino acid. Arginine helps to keep the inside of the blood vessels smooth while it also promotes the flexibility of the vessels, thus increasing blood flow, reducing blood pressure, and thereby alleviating hypertension.

It's interesting to note that while the beneficial fatty acid composition of nuts would account for some of their positive effects on blood lipids, and thus their benefits to heart health, that doesn't explain the whole picture. In other words, in addition to the known health-promoting factors in nuts, including the omega-3s, the B vitamins, magnesium, polyphenols, potassium, and vitamin E, there are other elements which have yet to be identified, that work to lower cholesterol levels and promote heart health.

Researchers from Harvard studied more than 83,000 women and found that those who reported eating a handful of nuts or two tablespoons of peanut butter at least five times a week were more than 20 percent less likely to develop adult onset (type II) diabetes than those who rarely or never ate nuts. Type II diabetes develops when the body cannot properly use insulin. The women had been followed for up to sixteen years. The speculation is that the results apply to men as well as women. It's not only the "good" fat in the nuts that work on heart health. The fibre and magnesium in nuts also help maintain balanced insulin and glucose levels.

While the evidence supporting nuts' contribution to heart health and diabetes prevention is impressive, we must remember that nuts, like every other Superfood, don't just target a few isolated systems in our bodies. Indeed, they're categorized as Superfoods because of their amazingly powerful effect on our overall health.

Fibre: Nuts are a rich source of dietary fibre. In one study, a lo-gram-a day increase in dietary fibre resulted in a 19 percent decrease in coronary heart disease risk. One ounce of peanuts or mixed nuts provides about 2½ grams of fibre—a good contribution to overall daily fibre consumption.

Vitamin E: Most of us don't get nearly enough vitamin E in our daily diets, and nuts and seeds are a rich source of this nutrient. One of the components of vitamin E—gamma Tocopherol—has powerful anti-inflammatory properties.

In 2002, the Journal of the American Medical Association published a report that found that a high dietary intake of vitamins C and E may lower risk of Alzheimer's disease. In another study, vitamin E consumption was linked to a 70 percent reduction in the risk of developing Alzheimer's over a four-year period. Nuts are one of the richest dietary sources of vitamin E.

Folic Acid: This nutrient has gotten some attention lately because of its ability to prevent birth defects, particularly neural tube defects such as spinal bifida. Nuts are rich in folic acid, whose benefits go beyond its critical role in birth-defect prevention. Folic acid also lowers homocysteine (an independent risk factor for cardiovascular disease) and helps prevent cancer and various causes of aging.

Copper: The copper in nuts is helpful in maintaining healthy levels of cholesterol. It also contributes to healthy blood pressure and helps prevent abnormal glucose metabolism.

Magnesium: This important nutrient shows up in impressive amounts in nuts. Magnesium decreases heart arrhythmias and helps prevent hypertension. It's also critical for normal muscle relaxation, nerve impulse transmission, carbohydrate metabolism, and maintaining healthy tooth enamel. Low magnesium intake is also a risk factor for migraine headaches. Almost half of patients who suffer from migraines have magnesium levels that are below normal.

Reversatrol: This flavonoid, which is found abundantly in grape skins as well as peanut skins, has anticancer properties. It is also an anti-inflammatory and has been associated with helping to maintain healthy cholesterol levels.

Ellagic Acid: This polyphenol is found in high concentrations in nuts, particularly walnuts. Animal research studies have demonstrated that ellagic acid is beneficial in the prevention of cancer by affecting both the activation and detoxification of potential carcinogens.

Wild Salmon
Over the past few years we've learned that we derive four basic types of fat from food:

- saturated fat
- trans-fat (partially hydrogenated oils)
- monounsaturated fat
- polyunsaturated fat.

Saturated fat—found primarily in red meat, full-fat dairy products, and some tropical oils—has well-established negative health effects, increasing your risk of diabetes, coronary heart disease, stroke, some cancers, and obesity.

One researcher, writing in the Journal of the American Dietetic Association, concluded that "reducing dietary intake of saturated fatty acids may prevent thousands of cases of coronary heart disease and save billions of dollars in related costs." There's little that's positive about saturated fat and it should make up no more than 7 percent of your fat calories per day.

Trans-fats—listed on food labels as "partially hydrogenated vegetable oil"—are also bad, probably even worse than saturated fat. Trans-fats were created by chemists seeking a fat that would store better than animal fats. They were attempting to lengthen the shelf life of foodstuffs.

Don't forget that I told you earlier that there are good fats. The good guys in the fat family are the monounsaturated fats—the kinds found in olive and canola oils. These fats not only protect your cardiovascular system, they also lower the risk of insulin resistance, a physiological state that can lead to diabetes and possibly cancer.

Finally, we come to polyunsaturated fatty acids. Both omega-6 /linoleic, or LA, fat and omega-3 (alpha linolenic, or ALA, fat) are so-called essential polyunsaturated fatty acids (EFAs). Our bodies cannot manufacture these two fats and therefore we must rely on dietary intake to avoid a deficiency in these essential (for life) fats. Omega-6 fatty acids are currently overabundant in the typical Western diet. They are present in corn, safflower, cottonseed, and sunflower oils. Virtually no one in North America is deficient in these ubiquitous fatty acids. If you look at almost any packaged food, you're going to see one of these oils as an ingredient.

William S. Harris, writing in the American Journal of Clinical Nutrition, said: "In terms of its potential impact on health in the Western world, the Omega 3 story may someday be viewed as one of the most important in the history of modern nutritional science." Dr. Evan Cameron, from the Linus Pauling Institute, has said: "Our epidemic of heart disease and cancer may be the result of a fish oil deficiency so enormous we fail to recognize it." The bottom line: it's not just okay

to include omega-3 fatty acids in your diet, it's imperative to do so if you want to restore a critical balance in your body that is most likely out of whack.

A solution to this problem: Salmon, wild salmon more specifically. Salmon is one of the richest, tastiest, readily available sources of marine-derived omega-3 fatty acids available to us. By including wild salmon in your diet two to four times a week you should achieve optimal protection against a multitude of diseases that have been associated with low intakes of these critical fats.

The key to EFAs—as with so many health issues—is balance. Your body can't function optimally without a balanced ratio of EFAs. The optimum balance of essential fatty acids is a balance of omega-6 to omega-3 that is somewhere between 1 to 1 and 4 to 1. Unfortunately, the typical Western diet contains fourteen to twenty-five times more omega-6 than omega-3 fatty acids. This imbalance determines a myriad of biochemical events that affect our health. For example, too much omega-6 (the oil that dominates our typical diet) promotes an inflammatory state, which in turn increases your risk for blood clots and narrowing of blood vessels.

We now also know that without a sufficient intake of omega-3 fatty acids, the body cannot adequately build an ideal cell membrane. Membranes that are poorly constructed are not capable of optimizing cellular health, which in turn increases your risk for a host of health problems, including stroke, heart attack, cardiac arrhythmias, some forms of cancer, insulin resistance—which can lead to diabetes—asthma, hypertension, age-related macular degeneration, chronic obstructive lung disease (COPE), autoimmune disorders, attention deficit hyperactivity disorder, and depression.

Research is just beginning to demonstrate that omega-3 fatty acids may play a role in preventing both breast and colon cancers.

In the Nurses' Health Study, those who ate fish four or more times a week had a lower risk of age-related macular degeneration than those who ate three or fewer fish meals per month. The most prevalent fatty acid in our retina is DHA, and the primary dietary source of this "good fat" is salmon and other so-called heart-healthy fish. DHA also seems to reduce some of the adverse effects of sunlight on retinal cells.

Researchers believe that the anti-inflammatory abilities of omega-3 fatty acids are what help reduce the symptoms of autoimmune diseases as well as prolong the survival of those who suffer from them. Multiple studies have substantiated these results.

Perhaps the most interesting research on omega-3 fatty acids involved their relationship to mental health ailments such as depression, attention deficit hyperactivity disorder, dementia, schizophrenia, bipolar disorder, and Alzheimer's

disease. Our brains are surprisingly fatty: over 60 percent of the brain is fat. Omega-3 fatty acids promote the brain's ability to regulate mood-related signals. They are a crucial constituent of brain-cell membranes and are needed for normal nervous system function, mood regulation, and attention and memory functions.

When it comes to omega-3 fatty acids, wild salmon is one simple answer. Add it to your diet. Wild salmon is delicious, high in protein, widely available in canned form, easy to prepare, and, more important, high in beneficial omega-3 fatty acids. If you eat wild salmon or other cold-water fish, like sardines or trout, two to four times a week, you'll 'rebalance' the ratio of fatty acids in your body and be on your way to vastly improving your cellular health. There's ample evidence that including cold-water fish like wild salmon in your diet will have a positive effect on your short and long-term health.

Yogurt (low fat)
One of the most important aspects of yogurt as a health benefit is the synergy of two health-promoting substances it provides: prebiotics and probiotics.

Prebiotics are non-digestible food ingredients that beneficially affect the gut by selectively stimulating the growth and/or activity of one or more beneficial bacteria in the colon, thus improving health. Fructooligosaccharides[32] (FOS) are one of the many classes of probiotics and they're found in legumes, vegetables, and cereals as well as yogurt. These non-absorbed fibres inhibit potentially pathogenic organisms as well as increase the absorption of minerals such as calcium, magnesium, iron, and zinc.[82]

Probiotics are defined as live micro-organisms that, when taken in adequate amounts, can be of benefit to our health. The evidence for the role of prebiotics and probiotics in promoting health and fighting disease is increasing on a monthly basis and is now supported by many double-blind, placebo-controlled human trials. What used to be folklore has become scientific fact. This mounting body of very recent news simply confirms ancient wisdom.

Like all of the Superfoods, yogurt works synergistically to promote health and fight disease: it provides a range of health benefits that include live active cultures, protein, calcium, and B vitamins, which work together in such a way that the sum is greater than the parts. Yogurt's primary benefit—as a probiotic—is something that at first glance runs counter to the trend in modern medicine. With the success of antibiotics beginning shortly after World War II, doctors and the public have come to view micro-organisms as evil disease-promoters, which must be relentlessly eradicated. In fact, however, the key to health is balance: the goal is not to eradicate all micro-organisms, but rather to promote the health of the beneficial ones. Yogurt plays a primary role in this promotion by encouraging the growth of "good" bacteria and limiting the proliferation of 'bad" ones.

Yogurt has multiple immune stimulating properties both inside and outside the gastrointestinal (GI) tract. An interesting study has shown that if you eat yogurt with live active cultures, you decrease the amount of a common pathogenic bacterium - Staphylococcus aureus - in the nasal passages. This is a clear sign that the yogurt is stimulating the immune system.

Our gastrointestinal tracts are home to over five hundred species of bacteria—some helpful and some harmful to our health. We rely on these beneficial microbial partners for a number of important functions, including carbohydrate metabolism, amino acid synthesis, vitamin K synthesis, and the processing of various nutrients. Yogurt is a source of beneficial bacteria, and the positive results that are ascribed to introducing this bacteria to our system are not relegated to the digestive tract.

While a host of beneficial health effects are linked to yogurt, those that have attracted the most attention include its anti-cancer properties, its ability to lower cholesterol, and its ability to inhibit unfriendly bacteria.

One of the great benefits of the probiotics in yogurt is its ability to strengthen the immune system and thereby help the body prevent infection. In an era of antibiotic-resistant pathogens and seemingly new infectious threats like SARS and West Nile virus, the value of boosting one's immune system becomes immeasurable.

There are three basic types of yogurt, depending on the milk used to make it: regular yogurt, low-fat yogurt, and non-fat yogurt. Yogurt made from whole milk has at least 3.25 percent milk fat. Low-fat yogurt is made from low-fat milk or part-skim milk and has between 0.5 and 2 percent milk fat. Non-fat yogurt is made from skim milk and contains less than 0.5 percent milk fat.

Ultimately, it's yogurt's activity in the gastrointestinal tract that argues most conclusively for its inclusion as a Superfood. The bottom line is that a healthy digestive system is critical to good health. Our ability to absorb nutrients from our food depends on our GI health. Even if we eat the most nutrient-dense foods in the world, if our digestive ability is impaired, we won't be able to benefit from those foods. As we age, our digestive ability is often diminished. All the more reason to rely on yogurt as a food that will promote and help preserve intestinal health.

The list of the health-promoting abilities of probiotics is quite long. Some benefits have been proven conclusively while others require more study. Here is a summary of the conditions where yogurt has efficacy:

Probiotics absorb mutagens that cause cancer, particularly colon cancer, though there's also evidence that they're effective on breast cancer. They stimulate the immune system, partly by promoting immunoglobulin production, and help lower

the risk for cancer by decreasing inflammation and inhibiting the growth of cancer-causing intestinal microflora.

Probiotics are helpful in alleviating atopic eczema and milk allergies. In relation to eczema, it’s important to remember that probiotics work to promote healthy skin as well as a healthy digestive tract. Indeed, probiotics affect all surfaces of the body that have interaction with the external world, including nasal passages, the gastrointestinal tract, the skin and so forth. There's some evidence that babies who are exposed to probiotics (after the age of three months) will have a better chance of avoiding some allergies later in life.

Some people cannot tolerate milk because they lack the enzyme to break down milk sugar (lactose). In fact, only about a quarter of the world’s adults can digest milk. This condition eliminates an important source calcium from the diet. Probiotics in yogurt digest the lactose for you, thus helping to relieve this condition. Yogurt is also a calcium- and vitamin-rich food that's easily digestible by those who suffer from lactose intolerance and is therefore an excellent addition to their diet.

Probiotics help regulate the body’s inflammatory response, which relieves the symptoms of Inflammatory Bowel Disease (IBD). The probiotics in yogurt have been accepted as a form of therapy that can actually help maintain remission in people suffering from IBD. A 2003 review of human studies on probiotics concluded that 'the use of probiotics in IBD clearly will not provide a magical cure, but it does offer hope as an adjunct form of therapy, specifically in maintaining a state of remission."

Irritable Bowel Syndrome (IBS): Probiotics alter both the populations and the activities of the microflora in our gastrointestinal systems, possibly relieving the symptoms of IBS, though probiotics may prove to be more effective in prevention than in effecting a cure.

For hypertension, probiotics stimulate the production of drug like substances that act in the body like pharmacological blood-pressure-lowering medicines.

Over thirty years ago, scientists were intrigued to find that the Masai tribesmen of Africa had low serum levels of cholesterol as well as low levels of coronary heart disease, despite a diet that was extremely high in meat. The distinguishing characteristic of their diets, aside from high meat consumption, was an extremely high intake of fermented milk (or yogurt)—up to 5 liters daily. Research has now confirmed that yogurt is beneficial to those trying to reduce cholesterol. The probiotics in yogurt reduce the bile acids, which in turn decrease the absorption of cholesterol from the gastrointestinal tract. This effect seems to be seen most reliably in people who already have elevated cholesterol.

Yogurt even helps with ulcers. Probiotics help to eliminate the pathogen Helicobacter pylori, a bacterium that is one of the main causes of ulcers and may also be a cause of gastric cancer.

Yogurt has potential benefit in relieving what, in many countries around the world, is a serious threat to the health of millions; Diarrhea. It fights diarrhea by stimulating the immune system, crowding out negative microflora in the intestines and stimulating the growth of beneficial bacteria. Probiotics in yogurt are also helpful in treating diarrhea associated with antibiotic use, and some doctors are amazed that yogurt is not routinely recommended to all patients who are being treated with antibiotics.

Most people are surprised to learn that in the United States, nine out of ten women and seven out of ten men don't meet their daily requirement for calcium. What's even more troubling is that nearly 90 percent of teenage girls and 70 percent of teenage boys don't meet their daily calcium requirement. For many, soda has replaced the old "milk at every meal" custom. This portends disastrous future health consequences for large numbers of people. A single 1-cup serving of nonfat plain yogurt supplies 414 milligrams of calcium—an amazing 40 percent of your daily calcium needs and at a cost of only 100 calories. This compares favorably with nonfat milk, which has only 300 milligrams of calcium. The rich amount of potassium in yogurt combined with the calcium also plays a role in normalizing your blood pressure.

Yogurt is also a better source of B vitamins (including foliate), phosphorus, and potassium than milk. Of course, the calcium in yogurt is of great benefit to pre and postmenopausal women and to men and women in their struggle against osteoporosis. A rich source of calcium to begin with, the milk sugar in yogurt actually aids in calcium absorption. Moreover, dairy foods are a source of IGF-I, a growth factor that promotes bone formation, which benefits women over and above the bone-preserving contribution of calcium.

Yogurt is a great source of readily digestible protein. In fact, yogurt supplies double the protein of milk because it's usually thickened with non-fat milk solids, increasing its protein content. Some people, particularly the elderly, just don't consume enough protein or calcium. Studies have shown there's a positive association between protein intake and bone-mineral density of older women and men when they're supplemented with calcium. The lesson: optimum bone health and prevention of osteoporosis depend not just on calcium supplementation, but on sufficient protein intake as well. Yogurt, with its easily digestible protein and calcium, is the answer.

For a list of more Superfoods, see Appendix A.

Conclusion

It's likely that you eat a number of Superfoods already, but just don't know you do. By consciously choosing to add more of these health promoting foods to your diet, you'll be improving your health now and as you age. If your physician told you that by simply eating an orange and apple a day you will never have a heart attack, would you do it? Of course you would. Well, there's no guarantee that by eating more Superfoods you'll never have a heart attack, but by adding these foods to your diet, you are less likely to have one.

Of course your health isn't solely based on what you eat, but it is a large part of it. However, if you smoke 3 packs of cigarettes a day, eat a pound of bacon and 3 eggs for breakfast, a steak for dinner, then drink a half a dozen beers while sitting on the couch watching TV, a few dietary changes won't be all that beneficial.

Today, we all have busy schedules and hectic lives, and very few of us eat properly. By making a few simple changes to what we eat, we can maintain or regain our health and possibly avoid a serious illness (or illnesses) in the future. It's not too difficult to add some fruits and vegetables to our diet. Keep them in the fridge and grab one or two in the morning on your way to work, as a snack between meals, and, of course, with your meals.

By making just a few easy-to-implement changes to your diet can have a huge positive affect on your health. Why not start now.

To your good health,

Notes:

1- alpha-carotene
2- alpha-tocopherol
3- anthocyanins
4- antibacterial
5- antimutagenic
6- antioxidants
7- arginine
8- atherosclerosis
9- atopic dermatitis
10- B12
11- B vitamins
12- beta glucan
13- beta-sitosterol
14- betaine
15- carbohydrates
16- calcium
17- carcinogens
18- carotenoids
19- catechins
20- chlorophyll
21- ciprofloxacin
22- clostridium botulinum spores
23- coenzyme Q10
24- cruciferous
25- ellagic acid
26- enzymes
27- epidemiological
28- estrogen
29a- fibre
29- flavonoids

30- folate
31- free radicals
32- fructooligosaccharides
33- glutathione
34- HDL cholesterol
35- homocysteine
36- hypoglycemia
37- indoles
38- insulin
39- insulin resistance
40- iron
41- LDL cholesterol
42- lignins
43- low-density lipoproteins
44- lutein/zeaxanthin
45- magnesium
46- maltodextrin
47- manganese
48- monounsaturated fat
49- nitric oxide
50- oleic acid
51- oligosaccharides
52- osteoarthritis
53- pantothenic acid
54- pathogen
55- pectin
56- peptides
57- phenolic
58- phytochemicals
59- phytoestrogens
60- phytonutrient

61- platelet aggregation
62- polyphenols
63- potassium
64- protease inhibitors
65- proteins
66- quercetin
67- saponins
68- selenium
69- staph infection
70- staphylococci
71- sulforaphane
72- thiamine
73- thiopropanal sulfoxide
74- triglyceride
75- tocopherols
76- tocotrienols
77- vitamin B6
78- vitamin C
79- vitamin E
80- vitamin K
81- vitamin R
82- zinc
83- phytosterol
84- phytates
85- phosphorus

Appendix A

Bananas
Wolfberries (aka Goji Berries0
Cacao
Raspberries
Bilberry
Coffee Berry
Cranberries
Bee Pollen
Açaí.
Aloe Vera
Noni Fruit
Yacon Root
Maca
Rose hips
Watercress
Papaya
Soy
Alfalfa sprouts
Blue/Green algae
Chlorella
Spirulina