

The Secrets of Antioxidants

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Healing powers of antioxidant foods

Secrets of Antioxidants

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By

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The Secrets of Antioxidants

Scientists in the past decades have made some giant discoveries on Anti-Aging with the discovery of crucial compounds of unstable oxygen molecules called the FREE RADICALS (tiny little chemical terrorists). Simply speaking, FREE RADICALS attack molecules with a "missing electron." They are very unstable and are desperately searching to *steal electrons* from other normal molecules which make up your tissues, cells, and organs. This process is called OXIDATION (very much like rusting!) In fact, these **FREE RADICALS** are such rapid and efficient thieves that scientists estimate in just one second, over 50 million FREE RADICALS can steal electrons from your DNA or your mitochondria (small battery like structures within your cells.) This seriously damages your cells, your cells' batteries, **and you!** (Have you ever tried to start your car with a dead battery?)

Free radicals are cellular renegades; they wreak havoc by damaging DNA mitochondria, altering biochemical compounds, corroding cell membranes and killing cells outright. Such molecular mayhem, scientists increasingly believe, plays a major role in the development of ailments like cancer, heart or lung disease and cataracts. Many researchers are convinced that the cumulative effects of free radicals also underlie the gradual deterioration that is the hallmark of aging in all individuals, healthy as well as sick.

—TIME, April 6, 1992

Free radicals in aging. Dr. Denham Harman, MD, Ph.D. **University of Nebraska College of Medicine, Department of Medicine, Omaha, USA.** *The relationship between aging and disease involving free radical reactions seems to be a direct one. The growing number of 'free radical' diseases includes the two major causes of death, cancer and atherosclerosis. It is reasonable to expect that on the basis of present data that a judicious selection of diets and antioxidant supplements will increase the healthy. active life span by 5-10 or more years* Mol Cell Biochem 1988 Dec;84(2):155-61.

One of the more obvious characteristics of plants is their wide range of bright colors. If you admire how food is presented, it's hard to beat a plate of fruits and vegetables. The reds, greens, yellows, purples and oranges of plant foods are tempting and very healthy. This link between nicely colored vegetables and their exceptional health benefits has often been noted. It turns out that there is a beautiful, scientifically sound story behind this color-health link.

The colors of fruits and vegetables are derived from a variety of chemicals called antioxidants. These chemicals are almost exclusively found in plants. They are only present in animal-based foods to the extent that animals eat them and store a small amount in their own tissues. Living plants illustrate nature's beauty, both in color and in chemistry. They take the energy of the sun and transform it into life through the process of photosynthesis. In this process, the sun's energy is first turned into simple sugars, and then into more complex carbohydrates, fats and proteins.

This complex process amounts to some pretty high-powered activity within the plant, all of which is driven by the exchange of electrons between molecules. Electrons are the medium of

energy transfer. The site at which photosynthesis takes place is a bit like a nuclear reactor. The electrons zooming around in the plant that are changing the sunlight into chemical energy must be managed very carefully. If they stray from their rightful places in the process, they may create free radicals, which can wreak havoc in the plant. It would be like the core of a nuclear reactor leaking radioactive materials (free radicals) that can be very dangerous to the surrounding area.

So how does the plant manage these complex reactions and protect against errant electrons and free radicals? It puts up a shield around potentially dangerous reactions that sponges up these highly reactive substances. The shield is made up of antioxidants that intercept and scavenge electrons that might otherwise stray from their course. Antioxidants are usually colored because the same chemical property that sponges up excess electrons also creates visible colors. Some of these antioxidants are called carotenoids, of which there are hundreds. They vary in color from the yellow color of beta carotene (squash), to the red color of lycopene (tomatoes), to the orange color of the odd-sounding cryptoxanthins (oranges). Other antioxidants may be colorless and these include chemicals such as ascorbic acid (vitamin C) and vitamin E, which act as antioxidants in other parts of plants that need to be protected from the hazards of wayward electrons.

What makes this remarkable process relevant for us animals, however, is that we produce low levels of free radicals throughout our lifetime. Simply being exposed to the sun's rays, to certain industrial pollutants and to improperly balanced nutrient intakes creates a background of unwanted free radical damage. Free radicals are nasty. They can cause our tissues to become rigid and limited in their function. It is a bit like old age, when our bodies become creaky and stiff. To a great extent, this is what aging is. This uncontrolled free radical damage also is part of the processes that give rise to cataracts, to hardening of the arteries, to cancer, to emphysema, to arthritis and many other ailments that become more common with age.

But here's the kicker: we do not naturally build shields to protect ourselves against free radicals. As we are not plants, we do not carry out photosynthesis and therefore do not produce any of our own antioxidants. Fortunately the antioxidants in plants work in our bodies the same way they work in plants. It is a wonderful harmony. The plants make the antioxidant shields, and at the same time make them look incredibly appealing with beautiful, appetizing colors. Then we animals, in turn, are attracted to the plants and eat them and borrow their antioxidant shields for our own health. Whether you believe in God, evolution or just coincidence, you must admit that this is a beautiful, almost spiritual, example of nature's wisdom.

In the China Study, Dr. Campbell and his team assessed antioxidant status by recording the intakes of vitamin C and beta-carotene and measuring the blood levels of vitamin C, vitamin E and carotenoids. Among these antioxidant biomarkers, vitamin C provided the most impressive evidence.

The most significant vitamin C association with cancer was its relationship with the number of cancer-prone families in each area. When levels of vitamin C in the blood were low, these families were more likely to have a high incidence of cancer. Low vitamin C was prominently associated with higher risk for esophageal cancer, for leukemia and cancers of the nasopharynx, breast, stomach, liver, rectum, colon and lung. It was esophageal cancer that first attracted NOVA television program producers to report on cancer mortality in China. It was this television program that spurred our own survey to see what was behind this story. Vitamin C primarily comes from fruit, and eating fruit was also inversely associated with esophageal cancer.

“Cancer rates were five to eight times higher for areas where fruit intake was lowest. The same vitamin C effect existing for these cancers also existed for coronary heart disease, hypertensive heart disease and stroke. Vitamin C intake from fruits clearly showed a powerful protective effect against a variety of diseases. The other measures of antioxidants, blood levels of alpha and beta-carotene (a vitamin precursor) and alpha and gamma tocopherol (vitamin E) are poor indicators of the effects of antioxidants. These antioxidants are transported in the blood by lipoprotein, which is the carrier of "bad" cholesterol.

So anytime we measured these antioxidants, we were simultaneously measuring unhealthy biomarkers. This was an experimental compromise that diminished our ability to detect the beneficial effects of the carotenoids and the tocopherols, even when these benefits are known to exist. We did, however, find that stomach cancer was higher when the blood levels of beta-carotene were lower. Can we say that vitamin C, beta-carotene and dietary fiber are solely responsible for preventing these cancers? In other words, can a pill containing vitamin C and beta-carotene or a fiber supplement create these health effects? No. The triumph of health lies not in the individual nutrients, but in the whole foods that contain those nutrients: plant-based foods. In a bowl of spinach salad, for example, we have fiber, antioxidants and countless other nutrients that are orchestrating a wondrous symphony of health as they work in concert within our bodies.

The message could not be simpler: ***eat as many whole fruits, vegetables and whole grains as you can, and you will probably derive all of the benefits noted above as well as many others.*** – Dr. Campbell, *The China Study*

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Many other dramatic breakthroughs in overcoming disease are being published in some of the world's most prestigious Scientific journals as a result of the Hydration movement. Scientists and Medical Doctors around the world like F. Batmanghelidg, MD (also F. Batmanghelidj, MD), are evangelizing the popular prescription for health, "Don't over-medicate, HYDRATE!"

Science and Medicine has been seeking and studying miracle healing waters for decades. High elevation regions such as the Hunza in Pakistan, Villacabamba in Ecuador, Badenbaden in Germany, and others have been reputed to have healing waters for many generations. The fact is people who live in these regions and drink the water are known to live long, healthy, active lives well over 100 years of age. For ages, man has made pilgrimages to these remote regions in order to drink their "healing waters."

For over three decades, Dr. Patrick Flanagan has studied the remote regions of the world where people live healthy active lives past the age of 100 years. While the diets in these regions differed dramatically, Dr. Flanagan discovered the amazing fact that the drinking water in these regions was almost identical and came from frozen glaciers that had melted. This water, known in some circles as "glacial milk," displays some very distinct physical differences from the water that most of the civilized world is drinking.

The surface tension of glacial milk is much lower. This means that the water can be absorbed directly into the cells of the body with much greater ease facilitating hydration and nutrient uptake. It also means that waste materials can be removed from the cells more easily by

the same life-giving water. Glacial milk, or "life water," had very distinct physical properties of viscosity, heat, and energy potential. After decades of laboratory and field research and study, it was uncovered what may be the most important discovery about the true nature of hydration. The reason why the waters are so different and can hydrate the human cell so effectively where people of these remote regions live well past 100 years of age has been discovered.

For thousands of years, man has trekked to the mountains and the sea for physical, emotional, and spiritual replenishment. Dr. Flanagan discovered that the water from these regions contains massive quantities of negatively-charged hydrogen ions. Several decades ago, this fact was confirmed by other scientists. Negatively-charged ions have proven to be highly beneficial to the human organism.

Hydrogen is one of the primordial elements that fuels the development of all life on Earth. Provided by the Sun as rays of light, human beings cannot live without Hydrogen. While science refers to us as carbon-based life forms, man is actually a Silica-based and Hydrogen-based life form. All life on Earth is Hydrogen-based. When plants absorb sunlight, they store negatively-charged Hydrogen ions through the process of photosynthesis. When you eat unprocessed plants, your body's cells utilize the nutrients in those plants and, perhaps more importantly, the electrical charge of the Hydrogen ions in those plants. When your body burns Hydrogen and Oxygen, it generates the energy you need for every single process of life. As a matter of fact, nearly every life form on the planet utilizes Hydrogen and Oxygen to generate energy. The key is that without Hydrogen, Oxygen, and water, there is no life.

Hydrogen is the smallest known element in the Universe. All living things must have Hydrogen to sustain life. Hydrogen is the key to life, death, and aging. Without Hydrogen ions, there would be no life on Earth. As a result of Dr. Flanagan's discoveries, many Scientists now believe that the quantity of Hydrogen ions in plants and water is a qualitative indicator of its energy potential. Hydrogen ions are a key fuel and energy source for the human body. Negatively-charged Hydrogen ions can determine the overall health of every cell in the human body.

The human body must breathe to get Oxygen, and must eat and drink to get Hydrogen ions. Without breathing Oxygen, the body dies. Without eating or drinking sources of Hydrogen ions, the body has no source of energy and dies. The fact is that Human Cells need Hydrogen and Oxygen in order to generate the energy we call life. The primary source of Hydrogen ions for the human body are fresh uncooked plants, fruits, vegetables, and water.

Due in no small part to mass food production, mineral deficient soil, pesticides, chemical fertilizers, over-processing of foods, the addition of chemical preservatives, and drinking over-chlorinated and over-fluoridated water, millions of individuals are not getting enough Hydrogen ions daily. **Cell damage occurs when the body has insufficient Hydrogen ions and insufficient Oxygen.** The body's cells become oxidized like Oxygen rusts iron.

When certain chemicals in the body lose an electron, they become positively charged (and are called "free radicals" or "oxidants"). These chemicals roam freely through the rest of the body

stealing electrons from other cells. Free radicals damage cellular DNA. The majority of modern science has come to the conclusion that free radical damage in the human body is the cause of aging. Science has also discovered that aging is not a natural function of time passing. Aging is evidence of the damage to millions of the body's cells through oxidation. This oxidation is due to the lack of Hydrogen ions that are available to stop free radical damage.

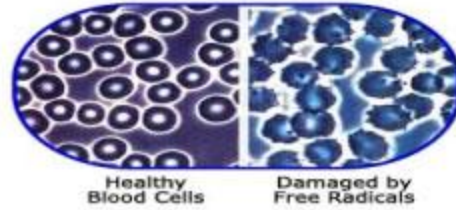
The human body is under siege by free radicals 24 hours a day, 7 days a week. Pollution, chemicals, fumes, toxins, caffeine, alcohol, smoking, meat, cooked food, and other poisonous materials only add to the damage that the body endures on a daily basis. The amount of free radical damage is equivalent to the amount you have aged. The best known antioxidants prior to the discovery of silica-hydride Hydrogen ions, were Vitamin E, Vitamin C, Green Tea Extract and Grape Seed Extract. Both Green Tea and Grape Seed Extracts have many times more antioxidant potential than either Vitamin E or Vitamin C. Scientific evidence proves that Silica Hydride is hundreds of times more powerful as an antioxidant than either Green Tea Extract or Grape Seed Extract. There is no known antioxidant more powerful than Silica Hydride.

The active ingredient is Silica Hydride. One very important characteristic of the antioxidant capacity of Silica Hydride is that it is the only antioxidant that does not turn into a free radical (i.e., oxidant) once it has neutralized a free radical by donating its electron. Negatively-charged hydrogen turns into benign gas and/or turns into water.

Two Hydrogen atoms and one Oxygen atom make water. Without water, there is no life. Dr. Flanagan stunned the scientific community with the discovery that the **configuration of the minerals within the water**, not just their existence, provides glacial milk with its unique hydration and life-giving properties. There is no other anti oxidant that delivers billions of negatively-charged Hydrogen ions to the cells of the body by simply taking it with water, unless of course you live near a virgin, untouched, mountain waterfall filled with negatively charged hydrogen ions.

Silica Hydride is a compound known to positively affect the "zeta potential" of blood cells. Zeta potential is the electric potential, or charge, that exists in a hydrated particle and the surrounding solution. Zeta potential is an important and useful indicator that this charge can be used to predict and control the stability of colloidal suspensions. The greater the zeta potential, the more likely the suspension will be stable because the charged particles repel one another and thus overcome the natural tendency to aggregate. Zeta potential is an electrical charge that describes how far apart cells are. Greater zeta potential indicates more space between cells.

Increased zeta potential has many positive health benefits. More zeta potential means more surface area for cells. Toxins, viral matter, fungi, and bacteria trapped between cells can be expunged more readily. More importantly, water enters cells more easily. Water is arguably the most vital component of anti-aging, life extension, and the removal of free radicals and waste.

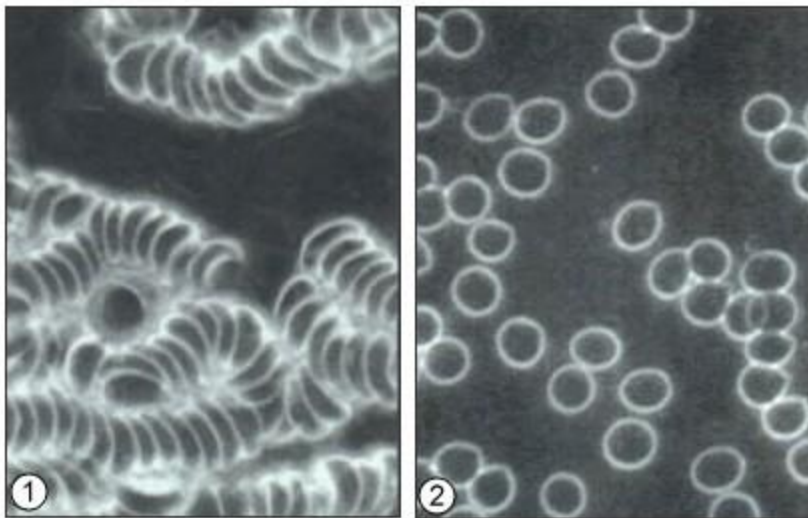


The following test has been performed and replicated by several groups of scientists with the same results. It provides yet more data indicating that Silica Hydride is a contributor to good health.

PHOTO 1 below shows a microscopic view of a blood sample from a subject with low zeta potential. The blood cells are clustered together and trap waste elements between them. Note the clustering effect may be a result of dehydration from caffeine, alcohol, meat, cooked food, pollutants, and stress: all commonly found in people today.

PHOTO 1
(before: clustered cells)

PHOTO 2
(after: evenly-dispersed cells)



The test subject was given 500 mg (or two 250 mg capsules) of Silica Hydride - mixed with 8 oz of water.

Twenty minutes later, another blood sample taken from the test subject was viewed under a microscope (as seen in PHOTO 2 below). The evenly-dispersed blood cells indicates high zeta potential. The blood cells appear pristine, as if the substances trapped between the cells have been cleansed. The surface area of the cells has increased allowing exponentially more nutrients into the cells and more toxins to be removed.

Nationwide Food Consumption Surveys have shown that a portion of the population may be dehydrated. Why do people lack hydration? This may be due to a poor thirst mechanism as we get

older, dissatisfaction with the taste of water, the consumption of caffeine and alcohol, climate controlled environments (both heated and air conditioned), and excessive exercise. With water loss at 2% of body weight, individuals experience impaired physiological and mental performance. Double blind placebo studies clearly demonstrate that the Silica Hydride dramatically increases total body water in just four weeks!

TRUE HYDRATION:

- Significant increases in Hydration at the cellular level as confirmed by laboratory testing
- Combats dehydration and its symptoms in adults, children, and pets

SUPER ANTIOXIDATION:

- Daily doses of Silica Hydride has more antioxidant power than hundreds of glasses of fresh vegetable and fruit juices, broccoli, brussel sprouts, leafy greens, and other foods rich in antioxidants to prevent free radical damage
- The anti-aging pill

NATURAL PAIN RELIEF:

- Silica Hydride provides natural pain relief from headaches, sore muscles, and inflammation of the joints. Studies show that it increases energy production (adenosine triphosphate or ATP) by up to 4 times. Customers with fibromyalgia and other conditions associated with energy production and hydration find substantial pain relief.

What is an Antioxidant?

Antioxidants defend human body cells by neutralizing the damaging effects of free radicals, a byproduct of cell metabolism. Free radicals form when oxygen is metabolized, or burned, by the body. Free radicals disrupt the structure of other molecules, causing cellular damage. This cell damage is believed to contribute to aging and various health problems. Some well-known antioxidants include compounds normally present in food such as Vitamin E, beta-carotene, the carotenoids, Vitamin C, zinc, and selenium. Antioxidants retard oxidation and are sometimes added to meat and poultry products to prevent or slow oxidative rancidity of fats that cause browning.

Antioxidants might help stem the damage by neutralizing free radicals. In effect they perform as cellular sheriffs, collaring the radicals and hauling them away.

—*TIME*, April 6, 1992

What Do Antioxidants Do?

Antioxidants prevent free radical damage to critical DNA in every cell of the human body. "By controlling free radicals, antioxidants can make the difference between life and death, as well as influence how fast and how well we age." Their role in the human body is nothing less than miraculous," says Lester Packer, Ph.D., in *The Antioxidant Miracle*. Dr. Packer is regarded as the world's foremost antioxidant research scientist. He is Director of Packer Lab at the University of California at Berkeley, and a senior scientist at the prestigious Lawrence Berkeley National Laboratory.

Why Are Antioxidants Important?

Antioxidants are key contributor to healthy and longevity. In his book, *The Super Anti-Oxidants*, James Balch, M.D., writes "The antioxidant network: Keeps your body youthful; Bolsters your natural defenses against cancer; Prevents and even reverses heart disease; Sharpens your mental edge... Long term use of antioxidants is recommended." This is not a "quick fix" but part of a lifestyle change: a commitment with a perseverant attitude toward safeguarding and enhancing your "system." James Balch, M.D., is co-author of more than four books and has sold over three million copies of the popular "Prescription for Nutritional Healing."

Where Do Antioxidants Come From?

The body normally gets antioxidants from **raw** foods and **pure water** sources. Processed foods, sugar, alcohol, smoking, meat, cooked food, pollution, stress, pesticides, and other factors in daily life help to create more free radicals than the body can handle and reduce the total available amount of antioxidants.

Other Very Powerful Antioxidants

ALPHA-LIPOIC ACID (ALA) is a potent antioxidant stronger than NAC with the versatility of both water and fat soluble antioxidant activity. This unique ability allows antioxidation rejuvenation of many different tissues in the body. Its role as a super anti-oxidant is well deserved because of its powerful ability to assist all other vitamins and antioxidants and to recharge itself after being spent and tired of fighting FREE RADICALS. In animals studies ALA supplementation showed an increase in antioxidant activity by 300%, suggesting also that energy was enhanced. It even increased levels of other antioxidants such as glutathione, vitamins C & E, helping to recycle other antioxidants to keep fighting and neutralizing more FREE RADICALS. REFERENCE: 1. Arivazhagan P, Panneerselvam C. *Pharmacol Res.* 2000 Sep;42(3):219-22. 2. Hagen TM, Ingersoll RT, Lykkesfeldt J, Liu J, Wehr CM, Vinarsky V, Bartholomew JC, Ames AB. *FASEB J.* 1999 Feb;13(2):411-8. 3. Nickander KK, McPhee BR, Low PA, Tritschler H. *Free Radic Biol Med.* 1996;21(5):631-9. 4. Packer L, Tritschler HJ, Wessel K. *Free Radic Biol Med.* 1997;22(1-2):359-78. 5. Packer L, Witt EH, Tritschler HJ. *Free Radic Biol Med.* 1995 Aug;19(2):227-50.

N-ACETYL CYSTEINE (NAC) is a protein Amino Acid extraordinary. It is a natural compound with two vital purposes.

(1) It is readily and quickly metabolized into INTRACELLULAR GLUTATHIONE, a natural super antioxidant.

(2) It Detoxifies chemicals and heavy metals into less harmful compounds so that our bodies can get rid of them easily. Double blind clinical trials has found NAC supplement to improve symptoms and prevent people with chronic bronchitis. it helps break up mucus, improve smoker's cough, lung fibrosis. NAC also has been used to prevent colon cancer and heart disease. REFERENCE: 1. Droge W. *Curr Opin Clin Nutr Metab Care*. 1999 May;2(3):227-3-33. 2. Faintuch J, Aguilar PB, Nadalin W. *Nutrition*. 1999 Feb;15(2):177-9. 3. Martinez M, Martinez N, Hernandez AI, Ferrandiz ML. *Life Sci*. 1999;64(15):1253-7. 4. Walsh TS, Lee A. *Med*. 1999 May;25(5):432-4.

SELENIUM is a trace mineral vital to proper tissue growth and proper utilization of iodine in thyroid function. Studies in China have shown that people living in areas where soil is depleted of Selenium have the highest rate of cancers. Additionally in one of the largest clinical studies Selenium was found to reduce the risk of several cancers; (66%) in prostate, (50%) colon, and (40%) lung. REFERENCE: 1. van den Brandt PA, Goldbohm RA, van 't Veer P, Bode P, Dorant E, Hermus RJ, Sturmans F. *Cancer Res*. 1993 Oct 15;53(20):4860-5. 2. Zhou B, Wang T, Sun G, Guan P, Wu JM. *Oncol Rep*. 1999 Jan-Feb;6(1):139-43. 3. Combs GF, Jr and Gray WP. *Pharmacol Ther* 1998;79:179-92. 4. Rannem T, Ladefoged K, Hylander E, Hegnhøj J, Jarnum S.. *Am J Clin Nutr* 1992;56:933-7. 5. Russo MW, Murray SC, Wurzelmann JI, Woosley JT, Sandler RS.. *Nutr Cancer* 1997;28:125-9. 6. Patterson BH and Levander OA. *Cancer Epidemiol Biomarkers Prev* 1997;6:63-9. 7. Fleet JC. *Nutr Rev* 1997;55:277-9. 8. Combs GF, Jr., Clark LC, Turnbull BW. *Biomed Environ Sci* 1997;10:227-34. 9. Neve J. *J Cardiovasc Risk* 1996;3:42-7.

L-CARNOSINE is one of the Superstar Antioxidants because it was found to REJUNVENATE the senile cells that have reached their maximum life span and won't divide anymore. L-Carnosine also assists in wound healing and anti-inflammations. Clinical research has shown very positive results in helping epilepsy, autism, cardiac myopathy, and hypertension. REFERENCE: 1. Deev LI, Goncharenko EN, Baizhumanov AA, Akhalaia Mia, Antonova SV, Shestakova SV. *Biull Eksp Biol Med*. 1997 Jul;124(7):50-2. 2. Gutierrez A, Anderstam B, Alvestrand A. *Eur J Clin Invest*. 1999 Nov;29(11):947-52. 3. Lee JW, Miyawaki H, Bobst EV, Hester JD, Ashraf M, Bobst AM. *J Mol Cell Cardiol*. 1999 Jan;31(1):113-21. 4. Mzhel'skaia TI, Boldyrev AA. *Zh Obschch Biol*. 1998 May-Jun;59(3):263-78. 5. Preedy VR, Patel VB, Reilly ME, Richardson PJ, Falkous G, Mantle D. *Front Biosci*. 1999 Aug 1;4:e58-66. 6. Quinn PJ, Boldyrev AA, Formazyuk VE. *Mol Aspects Med*. 1992;13(5):379-444. 7. Roberts PR, Zaloga GP. *Biochemistry (Mosc)*. 2000 Jul;65(7):856-61. 8. Stuerenburg HJ. *Biochemistry (Mosc)*. 2000 Jul;65(7):862-5. 9. Swearengin TA, Fitzgerald C, Seidler NW. *Arch Toxicol*. 1999 Aug;73(6):307-9. 10. Zaloga GP, Roberts PR, Black KW, Lin M, Zapata-Sudo G, Sudo RT, Nelson TE. *Am J Physiol*. 1997 Jan;272(1 Pt 2):H462-8.

GABA is a special amino acid that functions as a neurotransmitter in the brain. It is vital in the hypothalamus as well as pituitary gland, together they regulate all the important hormones including increase growth hormone, regulates sleep patterns, and even body temperature. Dr. Andie Leventhal, a neurobiologist, published a research showing that "Brain capacity for higher thoughts declines with age and so does GABA, which effects our vision, hearing, memory, and cognitive skills. To keep the brain sharp simply add GABA" *Newsweek* May 12, 2003. REFERENCE: 1. Cash CD. *Neurosci Biobehav Rev*. 1994 Summer;18(2):291-304. 2. Plantey F. GHB and GABA. *Am J Psychiatry*. 1977 Sep;134(9):1045-6. 3. Tunnicliff G. *Gen Pharmacol*. 1992 Nov;23(6):1027-34. 4. Vescovi PP, Di Gennaro C. *Neuropeptides*. 1997 Oct;31(5):459-62.

GINKGO BILOBA is an herb known as the "BRAIN SAVER". The active flavanoid ingredient is a powerful protector and antioxidant increasing blood flow and reducing vascular inflammation. A double blind human research shows that Ginkgo Biloba was safe and efficacious in treatments of Alzheimer and multi-infarct dementia also improved cognition, improves memory and mental sharpness. REFERENCE: 1. Allard M. *Presse Med*. 1986 Sep 25;15(31):1540-5. 2. Garg RK, Nag D, Agrawal A. *J Assoc Physicians India*. 1995 Nov;43(11):760-3. 3. Itil TM, Eralp E, Ahmed I, Kunitz A, Itil KZ. *Psychopharmacol Bull*. 1998;34(3):391-7. 4. Khalsa DS. *Altern Ther Health Med*. 1998 Nov;4(6):38-43. 5. Kidd PM. *Altern Med Rev*. 1999 Jun;4(3):144-61. 6. Massoni G, Piovella C, Fratti L. *G Gerontol*. 1972 May;20(5):444-50. 7. Raabe A, Raabe M, Ihm P. *Klin Monatsbl Augenheilkd*. 1991

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BILLBERRY contains the active pigments known as anthocyanins which is a very powerful antioxidant. It is famous for World War II English bomber pilots eating Bilberry jams to improve night vision. Well accepted in strengthening capillaries, reducing bruising and promoting wound healing, it helps improve visions, diabetic retinopathy and cataracts. REFERENCE: 1. Cantarelli G, Panelli M. Boll Chim Farm. 1968 Dec;107(12):792-6. 2. Fraisse D, Carnat A, Lamaison JL. Ann Pharm Fr. 1996;54(6):280-3. 3. Muth ER, Laurent JM, Jasper P. Altern Med Rev. 2000 Apr;5(2):164-73.

CHOLINE is an essential nutrient manufactured by the body but often at insufficient amounts for optimum health. Vital in brain development and for proper mental functioning neurotransmitter and memory function. Essential in promoting energy, delay fatigue, liver function, cardiovascular health, and cancer prevention. Supplements are useful to improve marathon performance, and cycling endurance. REFERENCE: 1. Bell JM, Lundberg PK. Dev Psychobiol. 1985 Jan;18(1):59-66 2. Growdon JH, Wurtman RJ. Nutr Rev. 1979 May;37(5):129-36. 3. Leathwood PD, Schlosser B. Phosphatidylcholine Int J Vitam Nutr Res Suppl. 1986;29:49-67. 4. Wurtman RJ. Sci Am. 1982 Apr;246(4):50-9. 5. Zeisel SH. Choline: J Am Coll Nutr. 1992 Oct;11(5):473-81.

ACETYL L-CARNITINE (ALC) is an amino acid. A Special Operations Antioxidant with an enemy target to destroy and neutralize FREE RADICALS inside the cells, specifically MITOCHONDRIA (cell batteries). The importance of this Special Operation lies in the energy generation capacity of the mitochondria and utilization of sugars and even fats as energy sources. Clinical studies showing strong heart protection reducing heart muscle damage, angina, and cardiac arrhythmias. ALC antiaging benefits also brain functions with improved memory, attention span, vitality and protection of senility and Alzheimer";s diseases. REFERENCE: 1. MK Shigenaga, TM Hagen, and BN Ames. Proc. Natl. Acad. Sci. USA 1994 Nov 8;91 (23):10771-10778. 2. Hagen TM, et al. . Proc Natl Acad Sci USA 2002 Feb 19;99(4):1870-5. 3. Chandra RK. J Nutr. 1992 Mar;122(3 Suppl):754-7. 4. Virmani MA, et al. Pharm Res 1995 Dec;32(6):383-9.

MELATONIN This potent antioxidant has a unique task and ability to protect the brain from a specially harsh FREE RADICAL attacker called the "Hydroxyl Radical". It is a highly effective scavenger that protects DNA and neuralizes fat tissues preventing the oxidative damage that causes senility, Alzheimer";s disease, Parkinson";s disease, seizures, strokes, and over all brain damage. No other antioxidant was made specially to defend the neural degenerative diseases, since melatonin is produced from the Pineal Gland which declines severely with increase of age, leaving the brain without protection from it";s principal and most important protector. According to Dr. Pieri published the research in LIFE SCIENCE 1994 that "melatonin has more than twice active than vitamin E as an effective fat soluble antioxidant". REFERENCE: 1. Mayo JC, et al. Biochim Biophys Acta 2003 Mar 17;1620(1-3):139-150. 2. Srinivasan V. Indian J Exp Biol 2002 Jun;40(6):668-79. 3. Chase JE, Gidal BE. Ann Pharmacother. 1997 Oct;31(10):1218-26.

GREEN TEA The active antioxidant called catechin is probably the most powerful and versatile of all antiaging compounds. Tea drinking is an ancient tradition of over 5000 years in China. Laboratory studies in animals shows catechin are able to prevent damage to cells before it occurs, reduced number and size of tumors, and inhibited growth of cancer cells. In one human clinical trial involving 18,000 humans, it was discovered that the green tea supplemented group had only half of stomach and esophageal cancer against the control group. Same protective improvements has been shown on other studies on liver, skin, and oral cancers. REFERENCE: 1. Dufresne CJ, Farnworth ER. J. Nutri Niochem 2001;12(7): 404-421. 2. Sun CL, et al.. Carcin 2002;23 (9): 1497-1503. 3. Goldbohm RA, et al. INCI 1996; 88 2): 93-100.

CLOVE OIL Stands alone with distinction as the strongest natural antioxidant known to man. According to scientists at Tufts University using the ORAC tests shows Clove Oil at over 10 million ORAC, which means that Antioxidant Specialist has the clove oil equivalent to 6 pounds of carrots, or 3 quarts of carrot juice, 3 pounds of beets, or 1 pint of beet juice, 4 cups of raspberry or 3 cups of blueberry! CAUTION: Clove oil should not be taken in raw form and unprotected. BEWARE of commercial companies attempting to sell you raw clove oil. We DO NOT ADVISE taking raw clove oil directly by mouth; it burns, irritates, and may hurt the sensitive mucosa lining of the mouth and throat. Antioxidant Specialist delivers clove oil that is fully protected in a slower and steady release of its power in your stomach and lower intestines where it can be absorbed without discomfort, and not on your tongue, mouth and throat. The active ingredient eugenol have shown in published research to increase more than 300% the insulin activity to stabilize glucose metabolism, a powerful and natural anticancer, detoxifying the liver and intestines, and protecting bone marrow. Dr. Sukumara reported in a published journal that clove oil inhibited 84% the number of tumors by cancer promoters proving the power to scavenge and neutralize Free Radical destruction, other researchers shown clove oil protected up to 90% neurotoxicity neural injury, and death. REFERENCE: 1.Zheng GO, et al. J Nat Prod 1992 Jul;55(7):999-1003. 2.Sukumaran K. Indian J Physiol Pharmacol 1994 Oct;38(4): 306-8. 3.Meekeer HG, Linke HA. Compendium 1988 Jan;9(1):32, 34-5, 38 passim. 4.Naidu KA. Prostaglandins Leukot Essent Fatty Acids 1995 Nov;53. 5.Jayashree T, Subramanyam C. Lett Appl Microbiol 1999 Mar;28(3): 179-83.

THYME has the distinction of being only the 2nd most powerful natural antioxidant known to MAN, not too bad in this crowded field of giants. Dr. Yondim reports in the British Journal of Nutrition 2000 that thyme oral supplement was able to maintain significantly higher total antioxidant in the brain metabolism, confirming the supplement benefits. Research has shown to protect the vital organs such as liver, brain, kidney and heart, even more effective and necessary as we age or under stress. REFERENCE: 1.Youdim KA, Deans SG. Mech Ageing Dev 1999 Sep 8; 109(3):163-75. 2. Zheng W. Wang SY. J Agric Food Chem 2001 Nov;49(11):5165-70. 3. Haraguchi H, Saito T, Ishikawa H, Date H, Kataoka S, Tamura Y, Mizutani K. Planta Med 1996 Jun;62(3):217-21 4.Hammer KA, Carson CF, Riley TV. J Appl Microbiol 1999 Jun;86(6):985-90.