

Daily Essentials Ingredients

Vitamin A (100% beta-carotene): 1550 mcg RAE

Vitamin A is a fat-soluble vitamin that is part of a family of compounds including retinol, retinal and beta-carotene. Beta-carotene is also known as pro-vitamin A because it can be converted into vitamin A. The best sources of Vitamin A includes organ meats (such as liver and kidney) egg yolks, butter, carrot juice, squash, sweet potatoes, spinach, peaches, fortified dairy products (such as milk and some margarines) and cod liver oil. Vitamin A has exhibited anti-aging and antioxidant activities. Vitamin A helps to maintain vision. It promotes normal bone growth and also contributes to a healthy immune system. Vitamin A plays supports normal epithelial differentiation, growth, reproduction, pattern formation during embryogenesis, bone development, hematopoiesis and brain development. Children are particularly susceptible to the effects of vitamin A deficiency.*

Vitamin C (ascorbic acid): 179 mg

The best food sources of vitamin C include all citrus fruits (oranges, grapefruit, lemons and tangerines), strawberries, tomatoes, broccoli, brussel sprouts, peppers and cantaloupe. Vitamin C is a "fragile" vitamin and can be easily destroyed by cooking or exposure of food to oxygen. Vitamin C promotes a vitamin "sparing" effect, supporting your body's ability to utilize multiple vitamins and minerals such as thiamin, riboflavin, pantothenic acid, biotin, folic acid, B12, retinaldehyde and alpha-tocopherol and the mineral calcium. It's also a cofactor or supporter in the normal metabolism of folic acid, some amino acids and hormones. Being an effective antioxidant, it also supports iron absorption from the small intestine. Vitamin C supports vitamin E in cell membranes. It supports the normal synthesis of collagen. Vitamin C supports cardiovascular health, normal cholesterol levels and supports a healthy immune system. Vitamin C has become the world's most popular vitamin. One reason is its ability to support the immune system. The most convincing evidence suggesting the need for vitamin C supplementation is based on the fact that humans are incapable of producing vitamin C in their bodies. Low intakes of vitamin C are common in the United States. Stress may also account for reduced vitamin C levels in many Americans. Smoking and some drugs may also impair the body's ability to absorb vitamin C. Since it is water-soluble, vitamin C is flushed from the body each day. Since humans don't always eat foods containing an adequate amount of vitamin C, it often is beneficial to take a supplement.

Vitamin D3 (as cholecalciferol): 38 mcg

Vitamin D is a fat-soluble vitamin that is found in some foods and endogenously produced when sunlight strikes the skin and activates vitamin D synthesis. Vitamin D promotes the efficient intestinal absorption of calcium, primarily in the duodenum and jejunum by supporting the synthesis of calcium-binding proteins to promote normal calcium absorption and retention. Vitamin D also promotes the normal formation of bone and normal bone growth and bone remodeling by osteoblasts and osteoclasts. Vitamin D deficiency can be caused by factors such as lack of exposure to sunlight, reduced skin synthesis of vitamin D, lower dietary intake, impaired intestinal absorption, and reduced metabolism to active forms of vitamin D by the kidneys, all of which increase with aging. Deficiency has been linked to numerous health concerns, and insufficient levels of this vitamin are associated with weak bones and muscle weakness. In addition to promoting strong bones, vitamin D also has other roles in health

including supporting the body's normal modulation of neuromuscular function and immune function. Vitamin D has been shown to support immune-modulation, and it is thought that supplementation promotes immune health by promoting the body's normal regulation of T-cell function. In reference to cellular health, Vitamin D supports the modulation of many genes that are responsible for encoding proteins that regulate normal cell cycle activity. Vitamin D levels have been strongly correlated to healthy cells. Lastly, through its interaction with VDR (vitamin D receptor), vitamin D supports the healthy expression of the gene encoding renin, thus helping to maintain healthy blood pressure.*

Vitamin E (as d-alpha-tocopheryl succinate): 45 mg

The most valuable sources of dietary vitamin E include vegetable oils, margarine, nuts, seeds, avocados and wheat germ. Safflower oil contains large amounts of vitamin E (about two thirds of the RDA in ¼ cup) and there are trace amounts in corn oil and soybean oil. Vitamin E is actually a family of related compounds called tocopherols and tocotrienols. Vitamin E is available in a natural or synthetic form. In most cases, the natural and synthetic forms are identical except the natural form of vitamin E is better absorbed and retained in the body. The natural form of alpha-tocopherol is known as "d-alpha tocopherol," as found in Isotonix Multivitamin for Seniors.) The synthetic "dl-" form is the most common form found in dietary supplements. For those individuals watching their dietary fat consumption, which is relatively common in the world of dieting, vitamin E intake is likely to be low, due to a reduced intake of foods with high fat content.* The main health benefits of supplemental vitamin E come from its support of immune health and its antioxidant activity. It also supports normal healing and is known to promote cardiovascular health. Vitamin E is one of the most powerful fat-soluble antioxidants in the body. In turn, vitamin E protects cell membranes from free radicals.*

Thiamin (vitamin B1): 4.6 mg

Thiamin promotes normal carbohydrate metabolism and nerve function. Thiamin is required for a healthy nervous system, and supports the production of certain neurotransmitters which have an important role in muscle function. It supports the digestive process, increases energy and helps promote mental clarity.*

Riboflavin-5-Phosphate (vitamin B2): 7.9 mg

Vitamin B2 is found in liver, dairy products, dark green vegetables and some types of seafood. Vitamin B2 serves as a co-enzyme, working with other B vitamins. It promotes healthy red blood cell formation, supports the nervous system, respiration, antibody production and normal human growth. It supports healthy skin, nails, hair growth and promotes the normal regulation of thyroid activity. Vitamin B2 supports the normal process of turning food into energy as a part of the electron transport chain, driving cellular energy on the micro-level. Riboflavin can be useful for pregnant or lactating women as well as athletes due to their higher caloric needs. Vitamin B2 supports the normal breakdown of fats while promoting the normal activation of B6 and folic acid. Vitamin B2 is water-soluble and cannot be stored by the body except in insignificant amounts. It must be replenished daily. Under some conditions, vitamin B2 can act as an antioxidant. The riboflavin coenzymes also support the transformation of vitamin B6 and folic acid into their active forms and for the conversion of tryptophan into niacin.

Niacin (as niacinamide): 60 mg NE

Niacin is a water-soluble vitamin necessary for many aspects of health, growth and reproduction. Niacin supports the proper functioning of the digestive system, skin and nerves. It is also

important for the conversion of food to energy. Niacin is found in dairy products, poultry, fish, lean meats, nuts, eggs, legumes, and enriched breads and cereals.*

Vitamin B6 (as pyridoxine HCL, pyridoxal-5-phosphate): 10 mg

Poultry, fish, whole grains and bananas are the main dietary sources of vitamin B6. B6 is a co-factor required for protein and amino acid metabolism and helps maintain proper fluid balance. It also assists in the maintenance of healthy red and white blood cells which keeps our body healthy. Vitamin B6 is required for hemoglobin synthesis (hemoglobin is the protein portion of red blood cells which carries oxygen throughout the body). Because vitamin B6 is involved in the synthesis of neurotransmitters in the brain and nerve cells, it has been recommended as a nutrient to enhance mental function, specifically mood. Athletic supplements often include vitamin B6 because it promotes the conversion of glycogen to glucose for energy in muscle tissue. Vitamin B6, when taken with folic acid, has been shown to help maintain normal plasma levels of homocysteine, which promotes optimal cardiovascular health. Vitamin B6 should be administered as a part of a complex of other B-vitamins for best results.*

Folate [as (6S)-5-methyltetrahydrofolic acid, glucosamine salt, Quatrefolic®]: 650 mcg

Folic acid plays a key role by boosting the benefits of B12 supplementation. These two B vitamins join forces and work together in maintaining normal red blood cells. Folic acid assists in the normal utilization of amino acids and proteins, as well as supporting the construction of the material for DNA and RNA synthesis, which is necessary for all bodily functions. Scientific studies have found that when working in tandem with folic acid, B12 is capable of promoting normal homocysteine levels. This works toward supporting a healthy cardiovascular and nervous system.* Folic acid must go through conversion into 5-methyltetrahydrofolate (5-MTHF) – the active form of folate – before it becomes metabolically active for the body to use. The enzyme methylenetetrahydrofolate reductase (MTHFR) assists in that process. However, some people have a genetic variation where their bodies do not adequately produce MTHFR.* Quatrefolic® is the glucosamine salt of (6S)-5-methyltetrahydrofolate and is structurally analogous to the reduced and active form of folic acid. Because this form is naturally present in the body, it is much more bioavailable for its biological action without having to be metabolized in the body. This patented ingredient also provides greater stability and higher water solubility, perfect for Isotonix.*

Vitamin B12 (as cyanocobalamin, methylcobalamin): 200 mcg

Vitamin B12 (cobalamin) is a bacterial product naturally found in animal products, especially organ meats such as liver, with small amounts derived from peanuts and fermented soy products, such as miso and tempeh. It is essential that vegetarians consume a vitamin B12 supplement to maintain optimal health. Vitamin B12, when ingested, is stored in the liver and other tissues for later use. It supports the maintenance of cells, especially those of the nervous system, bone marrow and intestinal tract. Vitamin B12 is important in homocysteine metabolism (homocysteine is an amino acid that is formed within the body). Normal homocysteine levels are important for maintaining cardiovascular health. Deficiencies of the vitamins folic acid, pyridoxine (B6) or cobalamin (B12) can result in elevated levels of homocysteine). Folate and B12, in their active coenzyme form are both necessary cofactors for the conversion of homocysteine to methionine, thus helping to maintain healthy blood levels of homocysteine.* Methylcobalamin is one of the naturally occurring forms of vitamin B12 found in the human body. The liver must convert cyanocobalamin, the form of B12 most commonly used in supplements, into methylcobalamin before it can be properly utilized by the body; methylcobalamin is more

effective than non-active forms of vitamin B12. Methylcobalamin also assists in the formation of S-adenosylmethionine (SAMe), a nutrient that has powerful mood-elevating properties.*

Biotin: 600 mcg

Biotin can be found in food sources such as egg yolks, peanuts, beef liver, milk, cereals, almonds and Brewer's yeast. Biotin promotes healthy cell growth, the production of fatty acids, metabolism of fats and amino acids. It supports the citric acid cycle, which is the process in which energy is generated during exercise. Biotin is also helpful in maintaining steady blood sugar levels. Biotin is often recommended for strengthening hair and nails.* These 10 ingredients combined with the superior delivery of Isotonix® create a powerhouse B vitamin product superior to the rest on the market. Isotonix Activated B-Complex delivers all of the B vitamins along with select minerals and electrolytes to help boost energy, decrease stress, improve mood, and much more. The activated forms of select vitamins and ensure maximal utilization by the body for optimal results.*

Pantothenic acid (ad d-calcium pantothenate): 40 mg

Pantothenic acid (B5) promotes proper neurotransmitter activity in the brain. Pantothenic acid is also known as the anti-stress vitamin because it detoxifies brain tissue, helps relieve physical and emotional stress, and promotes the secretion of hormones essential for optimal health.*

Calcium (as lactate, carbonate, phosphate, sulfate, citrate): 444 mg

The highest concentration of calcium is found in milk. Other foods rich in calcium include vegetables such as collard greens, Chinese cabbage, mustard greens, broccoli, bok choy and tofu. Calcium is an essential mineral with a wide range of biological roles. Calcium exists in bone primarily in the form of hydroxyapatite ($\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$). Hydroxyapatite accounts for approximately 40% of bone weight. The skeleton has a structural requisite and acts as a storehouse for calcium. Apart from being a major component of bones and teeth, calcium supports normal muscle contraction, nerve health, heart rhythms, blood coagulation, glandular secretion, energy production and immune system function.* Sufficient daily calcium intake is necessary for maintaining optimal bone density, healthy bones and teeth and has been shown to ease the discomfort of PMS in women. When the body does not get enough calcium per day, it draws calcium from your bones. The amount of calcium in the blood is regulated by PTH (parathyroid hormone). High levels of calcium in the body correlate with normal cardiovascular health and normal cholesterol levels. In the American Dietetic Association Journal a study revealed that calcium helped middle-aged women to maintain healthy weight levels.*

Iodine (as potassium iodide): 150 mcg

Iodine is found in most seafood and in iodized salt. The trace element is also present in more than a hundred enzyme systems such as energy production, nerve function and hair and skin growth. One of iodine's main functions includes supporting the thyroid gland in producing thyroid hormones thyroxine and tri-iodothyronine, which helps regulate and maintain a properly functioning metabolism.*

Magnesium (as oxide, carbonate): 125 mg

Foods rich in magnesium include unpolished grains, nuts and green vegetables. Green leafy vegetables are potent sources of magnesium because of their chlorophyll content. Meats, starches, dairy products and refined and processed foods contain low amounts of magnesium. The average daily magnesium intake in the U.S. for males nine years and older is estimated to be about 323 milligrams; for females nine years and older, it is estimated to be around 228 milligrams. Recent research shows that our diets are magnesium deficient. Magnesium is a component of the mineralized part of bone and supports the normal metabolism of potassium and calcium in adults. It helps maintain normal levels of potassium, phosphorus, calcium, adrenaline and insulin. It also supports the normal transport of calcium inside the cell for utilization. Magnesium promotes the normal functioning of muscle and nervous tissue and the normal synthesis of all proteins, nucleic acids, nucleotides, cyclic adenosine monophosphate, lipids and carbohydrates. Magnesium helps combat oxidative stress and lipid peroxidation. Magnesium supports normal energy release, regulation of the body temperature, nerve function, adaptation to stress, and metabolism. Importantly, magnesium also supports the body's ability to build healthy bones and teeth and develop muscles. It works together with calcium and vitamin D to help keep bones strong. Magnesium, when combined with calcium, helps support the heart muscle, helps maintain a regular heartbeat and helps maintain normal blood pressure.

Zinc (as lactate): 8 mg

Zinc is largely found in fortified cereals, red meats, eggs, poultry and certain seafood including oysters. It is a component of multiple enzymes and proteins. It also supports the body's regulation of gene expression. Zinc is an essential trace mineral that has functions in approximately 300 different enzyme reactions. Thus, zinc plays a part in almost all biochemical pathways and physiological processes. More than 90 percent of the body's zinc is stored in the bones and muscles, but zinc is also found in virtually all body tissues. It has been claimed that zinc supports normal healing, supports the immune system and promotes a healthy prostate gland. Because zinc is involved in such a great number of enzymatic processes it has been found to support a large range of functions including digestion, energy production, growth, cellular repair, collagen synthesis, bone strength, cognitive function and carbohydrate metabolism.*

Selenium (as amino acid chelate): 55 mcg

The best dietary sources of selenium include nuts, unrefined grains, brown rice, wheat germ, and seafood. In the body, selenium functions as part of an antioxidant enzyme called glutathione peroxidase as well as promoting normal growth and proper usage of iodine in thyroid functioning. Selenium also supports the antioxidant effect of vitamin E and is often added to vitamin E supplements. As part of the antioxidant, glutathione peroxidase, selenium plays a direct role in the body's ability to protect cells from free radicals.*

Copper (as gluconate): 0.1 mg

The richest sources of dietary copper derive from organ meats, seafood, nuts, seeds, wheat bran cereal, whole grain products and cocoa products. Copper has antioxidant properties and acts as a component of enzymes in iron metabolism. It is an essential trace mineral. Copper is needed in normal infant development, red and white blood cell maturation, iron transport, bone strength, cholesterol metabolism, myocardial contractility, glucose metabolism, brain development and immune function.*

Manganese (as gluconate, sulfate): 2.5 mg

Manganese is a mineral found in large quantities in both plant and animal matter. The most valuable dietary sources of manganese include whole grains, nuts, leafy vegetables and teas. Manganese is concentrated in the bran of grains, which is often removed during processing. Only trace amounts of this element can be found in human tissue. Manganese is predominantly stored in the bones, liver, kidney and pancreas. It supports the normal formation of connective tissue, bones, blood-clotting factors and sex hormones. It supports normal fat and carbohydrate metabolism, calcium absorption and blood sugar regulation. Manganese also promotes normal brain and nerve function.

Manganese is a component of the antioxidant enzyme manganese superoxide dismutase (MnSOD). Antioxidants scavenge free radicals that can cause premature aging and oxidative stress to the body. These particles occur naturally in the body but can possibly contribute to the aging process. Antioxidants such as MnSOD can neutralize free radicals. Some experts estimate that as many as 37% of Americans do not get the recommended daily amounts of manganese in their diet. This may be due to the fact that whole grains are a major source of dietary manganese, and many Americans consume refined grains more often than whole grains. Refined grains provide half the amount of manganese as whole grains.

Chromium (as amino nicotinate): 120 mcg

Chromium is found naturally in some cereals, meats, poultry, brewer's yeast, broccoli, prunes mushrooms, fish and beer. Chromium is an essential trace mineral that helps to maintain normal blood sugar levels and blood levels of cholesterol and other fats. Chromium combines to form something in the body called glucose tolerance factor or GTF, which helps maintain normal blood sugar levels. *

Potassium (as bicarbonate): 410 mg

Foods rich in potassium include fresh vegetables and fruits such as bananas, oranges, cantaloupe, avocado, raw spinach, cabbage and celery. Potassium is an essential macromineral that helps to keep fluid balance. It also plays a role in a wide variety of biochemical and physiological processes. Among other things, it promotes the normal transmission of nerve impulses, the normal contraction of cardiac, skeletal and smooth muscle, the normal production of energy, the normal synthesis of nucleic acids, the maintenance of intracellular tonicity and the maintenance of normal blood pressure. Potassium promotes muscle relaxation, and supports normal insulin release. It also promotes normal glycogen and protein synthesis. Potassium is an electrolyte that promotes proper heartbeat, and it is important in supporting the normal release of energy from protein, fat, and carbohydrates during metabolism.*

Potassium also promotes the normal regulation of water balance. Potassium promotes the normal elimination of wastes and generally contributes to a sense of well-being. Potassium is stored in the muscles.* Some symptoms of potassium deficiency include poor circulation, swelling, sleep difficulty, intestinal discomfort, muscle weakness and water retention. Sodium and potassium are two of the most important ions in maintaining the homeostatic equilibrium of the body fluids. Sodium and potassium are two of the most important ions in helping the body maintain the homeostatic equilibrium of fluids.*

Grape Seed Extract: 25 mg

Grape seed extract is typically extracted from the seeds of red grapes (instead of white), which have a high content of compounds known as oligomeric proanthocyanidins (OPCs). Grape seed

extract is extremely rich in polyphenols, compounds with high antioxidant activity. Grape seed extract has been found to maintain healthy cholesterol levels.*

Red Wine Extract: 25 mg

Red wine extract is a potent antioxidant. This extract is found in grape vines, roots, seeds and stalks, with the highest concentration in the skins. The antioxidant properties of red wine extract contribute to maintaining healthy circulation by strengthening capillaries, arteries and veins, and promoting overall cardiovascular health.* In the late 1990s, scientists took note of a phenomenon among the French. There were very low rates of cardiovascular problems in the provinces where residents consistently ate high fat foods and drank red wine. Scientists concluded that the protective properties of red wine have helped the French maintain cardiovascular health for years and subsequent scientific studies have further shown that the OPCs found in red wine are particularly beneficial for protecting the heart and blood vessels.*

Pine Bark Extract: (Pycnogenol): 25 mg

Pycnogenol is a natural plant extract from the bark of the maritime pine tree, which grows exclusively along the coast of southwest France in Les Landes de Gascogne. This unspoiled and natural forest environment is the unique source of pine bark. Pycnogenol is one of the most researched ingredients in the natural product marketplace. Published findings have demonstrated Pycnogenol's wide array of beneficial effects on the body. Pine bark extract is an all natural combination of procyanidins, bioflavonoids and organic acids. The extract has three basic properties — it is a powerful antioxidant, selectively binds to collagen and elastin, and promotes the normal production of endothelial nitric oxide, which promotes the normal dilation of dilate blood vessels.* As one of the most potent natural scavenger of free radicals, Pycnogenol combats many aggressive free radicals before they cause oxidative stress to vital organs. Its super-antioxidant capabilities help support healthy blood platelet activity, support healthy blood glucose levels, reduce mild menstrual cramping and abdominal pain, maintain joint flexibility, promote cardiovascular health, promote healthy sperm quality, maintain healthy cholesterol levels and support a healthy complexion.*

Bilberry Extract: 25 mg

Bilberry extract is derived from the leaves and berry-like fruit of a common European shrub closely related to the blueberry. Extracts of the ripe berry are known to contain flavonoid pigments known as anthocyanins, which are powerful antioxidants. Scientific studies confirm that bilberry extract supports healthy vision and venous circulation. Bilberry extract helps maintain healthy circulation by strengthening capillaries, arteries and veins.*

Citrus Extract Bioflavonoid: 25 mg

Bioflavonoids are antioxidants found in certain plants that act as light filters, which protect delicate DNA chains and other important macromolecules by absorbing ultraviolet radiation. They have been found to promote cardiovascular health, help maintain healthy circulation by strengthening capillaries, arteries and veins, and demonstrate anti-inflammatory activity.*

Boron: .5 mg

Boron is a mineral found at high levels in plant foods such as dried fruits, nuts, dark green leafy vegetables, applesauce, grape juice and cooked dried beans and peas. Boron is found in most tissues, but mainly in the bone, spleen and thyroid. Boron supports normal bone and hormone metabolism.

Boron supports the body's ability to build and maintain healthy bones. It also helps retain adequate amounts of calcium and magnesium to promote proper bone mineralization. Boron is an essential cofactor for converting vitamin D to its active form. It enhances the maintenance of healthy cell membranes, proper mental functioning and alertness, and supports normal serum estrogen levels and ionized calcium.

Supplement Facts

Serving Size: 13.3 g
Servings Per Container: 30

	Amount Per Serving	% Daily Value		Amount Per Serving	% Daily Value
Calories	25		Calcium (as lactate, carbonate, phosphate, sulfate, citrate)	444 mg	34%
Total Carbohydrate	6 g	2%*	Iodine (as potassium iodide)	150 mcg	100%
Total Sugars	6 g	**	Magnesium (as oxide, carbonate)	125 mg	30%
Includes 5 grams Added Sugars		10%	Zinc (as lactate)	8 mg	73%
Vitamin A (100% as beta-carotene)	1,550 mcg RAE	172%	Selenium (as amino acid chelate)	55 mcg	100%
Vitamin C (ascorbic acid)	179 mg	199%	Copper (as gluconate)	0.1 mg	11%
Vitamin D3 (as cholecalciferol)	38 mcg	190%	Manganese (as gluconate, sulfate)	2.5 mg	109%
Vitamin E (as d-alpha-tocopheryl succinate)	45 mg	300%	Chromium (as amino nicotinate)	120 mcg	343%
Thiamin (vitamin B1)	4.6 mg	383%	Potassium (as bicarbonate)	410 mg	9%
Riboflavin-5-Phosphate (vitamin B2)	7.9 mg	608%			
Niacin (as niacinamide)	60 mg NE	375%	Grape Seed Extract	25 mg	**
Vitamin B6 (as pyridoxine HCl, pyridoxal-5-phosphate)	10 mg	588%	Red Wine Extract	25 mg	**
Folate (as (6S)-5-methyltetrahydrofolic acid, glucosamine salt, Quatrefolic®)	650 mcg DFE	163%	Pine Bark Extract (Pycnogenol®†)	25 mg	**
Vitamin B12 (as cyanocobalamin, methylcobalamin)	200 mcg	8333%	Bilberry Extract	25 mg	**
Biotin	600 mcg	2000%	Citrus Extract Bioflavonoid	25 mg	**
Pantothenic Acid (as d-calcium pantothenate)	40 mg	800%	Boron	0.5 mg	**

* Percent Daily Value is based on a 2,000 calorie diet.

** Daily Value not established.

Other ingredients: Fructose, citric acid, glucose, maltodextrin, orange juice powder, natural orange flavor, malic acid, natural mango flavor, silicon dioxide, natural passion fruit flavor, rebaudioside A (stevia leaf), orange flavor, Lo Han fruit extract, apple fiber, apple pectin, stearic acid, food starch (modified), natural French vanilla, lemon flavor and lime flavor.

Manufactured for and distributed by: Market America, Inc., 1302 Pleasant Ridge Road, Greensboro, NC 27409, USA

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