

Body Code System™

Nutritional Chart

	Column A	Column B
Row 1	Vitamin A Carotenoids Vitamin D Vitamin E Vitamin K	Calcium Chromium Copper Iodine Iron
Row 2	Thiamin B ₁ Riboflavin B ₂ Niacin B ₃ Pantothenic Acid B ₅ Pyridoxine B ₆	Magnesium Manganese Molybdenum Phosphorus Selenium
Row 3	Biotin B ₇ Folate B ₉ Cobalamin B ₁₂ Choline Vitamin C	Zinc Potassium Sodium Chloride Sulfur
Row 4	Omega 3 Omega 6 Co-Enzyme Q ₁₀ Probiotics/ Prebiotics Carnitine	Flavonoids Boron Cobalt Lecithin Oxygen
Row 5	Antioxidants Protein Saturated Fatty Acids Carbohydrates Fiber	Cholesterol Lutein / Zeaxanthin Monounsaturated FA Polyunsaturated FA Lycopene
Row 6	Histidine Lysine Leucine Isoleucine Valine	Enzymes Methionine Phenylalanine Threonine Tryptophan

Body Code System™

Nutritional Chart

Vitamins: The name vitamin was proposed in the 20th century, it was originally called vitamins from “vital amines” from an organic functional group in chemistry. The name was later shorted to vitamin as we see it today.

Vitamins can be classified into two different groups: water soluble and fat soluble. Vitamins A, D, E, and K are fat soluble and the rest are water soluble.

The recommendations listed here are from the DRI or Dietary Recommended Intake. These should be used only as a guide as the dosage may exceed the “recommended” amount. Dr. Weston Price found in his studies of traditional cultures that the diet of the primitives contained three to ten times the amount of the recommended dosages. Hypervitaminosis refers to a state in the body where the vitamin levels are high and can constitute a toxic or poisonous state. This state is not achievable when the vitamins are procured from food, as is recommended. It is possible to achieve this state though, by very high dosages of “supplement” vitamins; so caution is advised.

Vitamin A:

Rx:

Infants: 400-500 mcg/ day (mcg=microgram. 1 microgram= 0.001 milligrams)

Children: 300-400 mcg /day

Adults: 600-900 mcg / day

Pregnant/ lactating: 700-1300 mcg/ day

General Purpose:

Vitamin A is an important vitamin that acts as a catalyst on which innumerable biochemical processes depend. It is also an important anti-oxidant in the body.

Food Sources:

Best source is animal products because it is preformed Vitamin A (Retinol). In other words an active form that the body can use immediately without processing.

Animal: Liver, Eggs, Milk, Cod liver oil, Fish, Butter (real butter), Cheese, beef.

Plant (See carotenoids): Sweet potatoes, carrots, pumpkin, squash, kale, spinach, broccoli, or dark leafy vegetables.

*when using plant sources it is important to eat that source with a high quality fat, like butter. Because vitamin A is fat soluble it will not be absorbed in the small intestine without the presence of fats and bile. Similarly the conversion of plant carotenes into Vitamin A is best achieved in the presence of vitamin A, so for people who are deficient a high quality animal source is recommended.

Body Code System™

Nutritional Chart

Carotenoids:

Rx:

No recommend dosages.

General Purpose:

Carotenoids are basically the inactive form of Vitamin A. The body can use carotenoids to make vitamin A, but it must be in the presence of a high quality fat to be absorbed and converted. Carotenoids are also a great source of anti-oxidants.

Food Sources:

Sweet potatoes, carrots, pumpkin, squash, kale, spinach, broccoli, or dark leafy vegetables.

Vitamin D:

Rx:

Infants: 25 mg/ day

Children: 25 mg / day

Adults: 50 mg/ day

Pregnant / lactating: 50 mg/ day

General Purpose:

Needed for calcium and phosphorus absorption and thus essential to bone health, strong teeth, and normal growth.

Food Sources:

Animal: Fish, Milk, Eggs, liver, Cod liver oil. Important that these are fatty sources otherwise there is no fat carrier for absorption.

Skin synthesis: Vitamin D can be received through skin synthesis. Essentially a cholesterol molecules is converted to Vitamin D by UV radiation (cholesterol levels must be sufficient to support this). Important to note that sunscreens, clothing, and seasons of the year will affect and block this reaction from occurring. Recommendation: 10-15 minutes of sunshine/ day without the sunscreens (may need to build up safely) (from spring to fall)

Body Code System™

Nutritional Chart

Vitamin E:

Rx:

Infants: 4-5 mg/ day

Children: 6-7 mg/ day

Adults: 11-15 mg/ day

Pregnant/ lactating: 15-19 mg/ day

General Purpose:

Needed for circulation, tissue repair, and healing. Also a powerful anti-oxidant. Helps with sterility problems, PMS, and muscular dystrophy.

Food Sources: (Alpha- tocopherol most active form)

Wheat germ, almonds, hazelnuts, peanuts, spinach, broccoli, tomatoes, avocados, asparagus, olives, corn, unrefined vegetable oils, butter, and organ meats.

Vitamin K: (two forms: Phylloquinones K-1, plant sources; and Menaquinones K-2, animal sources.)

Rx:

Infants: 2-3 mcg/ day

Children: 30-50 mcg/ day

Adults: 60-120 mcg/ day

Pregnant/ lactating: 75-90 mcg/ day

General Purpose:

Needed for blood clotting and plays an important role in bone health and formation.

Food Sources:

Milk, Eggs, liver, Butter, grains, dark green vegetables

Thiamin:

Rx:

Infants: 0.2-0.3 mg/ day

Children: 0.5-0.6 mg/ day

Adults: 0.9-1.2 mg/ day

Pregnant/ lactating: ~1.4mg/ day

Body Code System™

Nutritional Chart

General Purpose:

All the water soluble B vitamins work as a team to promote healthy nerves, skin, eyes, hair, liver, muscle tone, and cardiovascular function. They protect us from mental disorders, depression, and anxiety. Sugar consumption depletes B vitamins. Thiamin is needed for hydrochloric acid production, and is used to treat constipation, fatigue, herpes, and multiple sclerosis.

Food Sources:

Grains, Mushrooms, spinach, flaxseeds, tuna, green peas, brussel sprouts, broccoli, Black, pinto, and lima beans, sesame and sunflower seeds, and the germ layer of grains.

Riboflavin:

Rx:

Infants: 0.3-0.4 mg/ day

Children: 0.5-0.5 mg/ day

Adults: 0.9-1.3 mg/ day

Pregnant/ Lactating: 1.4-1.6 mg/ day

General Purpose:

Related to the conversion of nutrients into energy, making other vitamins and minerals available to the body, and acts as an anti-oxidant.

Food Sources:

Grains, liver, venison, yogurt, milk, mushrooms, spinach, eggs, almonds.

Niacin:

Rx:

Infants: 2-4 mg/ day

Children: 6-8 mg/ day

Adults: 12-16 mg/ day

Pregnant/ Lactating: 17-18 mg/ day

General Purpose:

Deficiency results in pellagra, characterized by dermatitis, tremors, dementia and diarrhea. Niacin helps in the conversion of food to energy and aids in the digestive system, skin and nerve function.

Food Sources:

Grains, meat and organs meats, mushrooms and asparagus are also great sources.

Body Code System™

Nutritional Chart

Pantothenic Acid:

Rx:

Infant: 1.7-1.8 mg/ day

Children: 2-3 mg/ day

Adults: 4-5 mg/ day

Pregnant/ Lactating: 6-7 mg/ day

General Purpose:

Essential for adrenal gland function. Plays an important role in cell metabolism and cholesterol production and aids in the body's ability to withstand stress. Deficiency signs are fatigue, listlessness, weakness, and numbness and tingling.

Food Sources:

Found in organ meats, egg yolks, whole grains, avocados, mushrooms, and cauliflower.

Pyridoxine:

Rx:

Infants: 0.1-0.3 mg/day

Children: 0.5-0.6 mg/ day

Adults: 1.0-1.7 mg/day

Pregnant/ Lactating: 1.9-2.0 mg/day

General Purpose:

Contributes to enzyme functionality, required for the synthesis of neurotransmitters like serotonin, norepinephrine and myelin formation. Deficiencies linked to diabetes, nervous disorders, and coronary heart disease.

Food Sources:

Mostly animal products, also grains, legumes, carrots and spinach.

Biotin:

Rx:

Infants: 5-6 mcg/day

Children: 8-12 mcg/ day

Adults: 20 - 30 mcg/ day

Pregnant/ Lactating: 30-35 mcg/ day

General Purpose:

Helps in energy formation from food and is necessary for body to process sugars and fats.

Body Code System™

Nutritional Chart

Food Sources:

Grains, and animal products

Folate

Rx:

Infants: 65-80 mcg/ day

Children: 150-200 mcg/ day

Adults: 300-400 mcg/ day

Pregnant/ Lactating: 500-600 mcg/ day

General Purpose:

Necessary for DNA and RNA creation and strengthening the chromosomes, plays critical role in developing healthy red blood cells, it also protects DNA from damage. Deficiency during pregnancy can result in spinal bifida.

Cobalamin B12:

Rx:

Infants: 0.4-05 mcg/ day

Children: 0.9-1.2 mcg/ day

Adults: 1.8-2.4 mcg/ day

Pregnant/ Lactating: 2.6-2.8 mcg/ day

General Purpose:

Plays important role in the metabolism of all cells, especially those in the GI tract, bone marrow, and nervous tissue. Often related to fatigue.

Food Sources:

Liver, Kidney, milk, eggs, fish, cheese and meat. Only found in animal products.

Choline

Rx:

Infant: 125- 150 mg/ day

Children: 200-250 mg/ day

Adults: 375-550 mg/ day

Pregnant/ Lactating: 450-550 mg/ day

General Purpose:

An essential component of structural tissue, a promoter of lipid transport and an important component of neurotransmitters. It also functions as an emulsifier in bile and thus aiding with digestion and absorption of fats.

Food Sources:

Eggs, butter, meat, flax seeds, sesame seeds, and cauliflower.

Body Code System™

Nutritional Chart

Vitamin C:

Rx:

Infants: 40-50 mg/ day

Children: 15-25 mg/ day

Adults: 45-90 mg/ day

Pregnant/ Lactating: 80-120 mg/ day

General Purpose:

Serves as an anti-oxidant, aids the adrenal glands in steroid synthesis, promotes resistance to infections through involvement with leukocytes and interferons. Also helps to maintain lung function.

Food Sources:

Fruits, vegetables, and organ meats.

Omega 3's

Omega 3 also refers to EPA and DHA. Omega 3 fatty acids cannot be synthesized by the body and thus must be obtained in the diet. There are some conversions of other fatty acids in the diet to the needed omega 3's, but because of the lack of overall good nutrition in most people it is recommended that they take a supplement for this. The omega 3 is a long chain fatty acid and thus acts as an important component of cell membranes and precursors to cellular communication via prostaglandins, thromboxanes, leukotrienes, paracrine and other hormonal signals. They can modify the process of inflammation and are important in brain functions.

In regards to Omega 6's and Omega 3's it is important to maintain a proper ratio between the two. Recommended is 2:1 (6 to 3).

Rx:

Children: No rx,

Adults: 650mg-2000mg/ day

Pregnant/ lactating: No Rx

Sources: Flaxseeds and oils, marine sources: Krill, Cod liver, Mackerel, and Salmon.

Body Code System™

Nutritional Chart

Omega 6

Note: This will rarely show up as a nutritional need, but more of an indication that someone is getting too much. In which case it is best to recommend they increase their omega 3 dosage!

Omega 6 fatty acids help the body with skin issues and proper function of cellular metabolism. Most people get more than enough omega 6 in their diet. Elevated levels of omega 6 actually do harm. You want to maintain a ratio between Omega 6 and 3 about 2:1.

Rx:

Children: 4.4 to 4.6g/ day

Adults: 10-12g/ day

Pregnant/ Lactating: No rx

Sources: Vegetable oils

Co-Enzyme Q10

Also known as Ubiquinones this enzyme has 10 side chains, (Co-Enzyme Q10). The ubiquinones are essential components of the mitochondrial electron transport chain (The process of making ATP or energy in the body) and can be needed by people with low energy. It also acts as an anti-oxidant in the body!

Rx:

Adults: 3-6mg/ day

Source: Meat and animal products

Probiotics/ Prebiotics

No Rx:

Probiotics - microbial foods or supplements that can be used to change or reestablish and promote the growth of beneficial intestinal flora (bacteria).

Prebiotics - nondigestible foods products that stimulate the growth of bacteria already present in the colon; improves gastrointestinal health.

Prebiotic sources: Whole grains (especially oatmeal), flax and barley; greens; berries, bananas, and other fruits; legumes; onions, garlic, honey, leeks.

Body Code System™

Nutritional Chart

Probiotic food sources: Live culture products such as: Yogurt, kefir, buttermilk and other fermented dairy products; fermented vegetables such as kim chi and sauerkraut, fermented soy products such as miso and tempeh.

Carnitine

No Rx:

Used in the body to transport long chain fatty acids (LCFAs) across the mitochondrial membrane for oxidation (energy utilization). The human body has limited ability to synthesize this enzyme. Plant foods are generally very low sources for obtaining carnitine, so meat and dairy products are recommended!

Antioxidants

No Rx: (See vitamins A, C and E)

Antioxidant - molecules such as some vitamins (Vitamin C and E) that inhibit action of activated oxygen molecules (free radicals) that can damage cells.

Protein

Protein, a class of the macro nutrients, is a large biological molecule consisting of one or more amino acids. Proteins perform a vast array of functions in the body

Rx:

Children: 13-34g/ day

Adults: 46-56g/ day

Pregnant/ lactating: 46-56g/day

All complete proteins (contains all essential amino acids) come from animal sources. Plant sources are great too, but must be combined properly to ensure all essential amino acids are present!

Saturated Fatty Acids

Rx: 20-40% of daily calories

Body Code System™

Nutritional Chart

Another class of the macro nutrients fats, saturated fatty acids are more important than for just energy needs. Saturated fatty acids help to improve bone, heart, liver, lungs and brain health. They are also important for proper nerve signaling and for a strong immune system. Saturated fatty acids usually carry with them the essential fat soluble vitamins (vitamin A, D, E, and K).

Carbohydrates

Rx: 40-60% of daily calories

The third class of macro nutrients, carbohydrates are manufactured by plants and are a major source of energy in the diet. Carbohydrates are composed of carbon, hydrogen and oxygen in a ratio of C:O:H₂.

Fiber

No Rx:

Fiber - nondigestible carbohydrates that have been extracted or manufactured from plants that have a beneficial physiologic effect in humans.

The role of fiber in the GI tract is complex and varies based on the solubility of the fiber. Insoluble fiber generally increases the fecal volume and decreases the transit time in the GI tract. On the other hand, soluble fibers can form gels resulting in slowed GI transit time and slowed or decreased nutrient absorption.

Histidine

Rx:

Infants: 28mg/kg/day

Children: No Rx

Adults 8-12 mg/ kg/ day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtained in the diet.

Sources: All animal products

Body Code System™

Nutritional Chart

Lysine

Rx:

Infants: 103mg/kg/day

Children: 44-64mg/kg/day

Adults: 12mg/kg/day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtain in the diet.

Sources: All animal products

Leucine

Rx:

Infants: 161mg/kg/day

Children: 44-74mg/kg/day

Adults: 14 mg/kg/day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtain in the diet.

Sources: All animal products

Isoleucine

Rx:

Infants: 70mg/kg/day

Children: 44-73mg/kg/day

Adults:10mg/kg/day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtain in the diet.

Sources: All animal products

Body Code System™

Nutritional Chart

Valine

Rx:

Infants: 93mg/kg/day

Children: 25-38mg/kg/day

Adults: 10mg/kg/day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtained in the diet.

Sources: All animal products

Calcium

Rx:

Infants: 210-270mg/ day

Children: 500-800mg/ day

Adults: 1000mg-1300mg/ day

Pregnant/ Lactating: 1000-1300mg/ day

Calcium is the most abundant mineral in the body, makes up about 1.5% to 2% of the body weight and 39% of total body minerals. Approximately 99% of the calcium exists in the bones and teeth. The remaining 1% of calcium is in the blood and extracellular fluid and within the cells of all tissues, where it regulates many important metabolic functions.

Food sources: Dairy products are the most concentrated sources of calcium and where the highest level of absorption is achieved. Dark green leafy vegetables such as kale, collards, turnip greens, mustard greens, and broccoli; organ meats such as adrenals and liver are great sources as well.

In supplements there are a few common forms: Calcium carbonate, calcium citrate, calcium gluconate, calcium lactate, calcium phosphate, etc. The most common is calcium carbonate which is relatively insoluble and is not absorbed as well as calcium citrate. Calcium phosphate is the form found in milk and has a high bioavailability, but not in supplement form. Calcium citrate or lactate is recommended for supplement purposes.

Chromium

Rx:

Infants: 0.2-5.5 mcg/ day

Body Code System™

Nutritional Chart

Children: 11-15 mcg/ day
Adults: 20-30 mcg/ day
Pregnant/ lactating: 20-45 mcg/ day

Chromium is considered an ultratrace mineral because of the low amounts needed. It aids in glucose metabolism by potentiating insulin action and therefore influences carbohydrate, lipid, and protein metabolism.

Sources: Brewer's yeast, oysters, liver, and potatoes have high chromium concentrations; seafood, whole grains, cheeses, and meats have medium concentrations.

Chromium is removed in processed foods.

Copper

Rx:
Infants: 200-220 mcg/ day
Children: 340-440 mcg/ day
Adults: 700-900 mcg/ day
Pregnant/ Lactating: 1000-1300 mcg/ day

Copper, a normal constituent of blood, is another established essential micronutrient. Concentrations of copper are highest in the liver, brain, heart, and kidney. Muscle contains a low level of copper, but, because of its large mass, skeletal muscle contains almost 40% of all copper in the body.

Copper is a component of many enzymes, and symptoms of copper deficiency are attributable to enzyme failures.

Sources: Copper is distributed widely in foods. Food high in copper are shellfish, oysters, organ meats, muscle meats, chocolate, nuts, grains, and legumes.

Iodine

Rx:
Infants: 110-130mcg/ day
Children: 90 mcg/ day
Adults: 120-150 mcg/ day
Pregnant/ Lactating: 220-290mcg/ day

Body Code System™

Nutritional Chart

Iodine is stored in the thyroid gland, where it is used in the synthesis of triiodothyronine (T3) and thyroxine (T4).

Sources: Seafoods such as clams, lobsters, oysters, sardines, and other saltwater fish is the richest source of iodine. Fresh water fish contain less but are still great sources of iodine.

Iron

Rx:

Infants: 0.27-11 mg/ day

Children: 7-10 mg/ day

Adults: 8-18 mg/ day

Pregnant/ Lactating: 9-27 mg/ day

The functions of iron relate to its ability to participate in oxidation and reduction reactions. Because of this redox property, iron has a role in the blood and respiratory transport of oxygen and carbon dioxide and in the electron transport chain and energy creation in the mitochondria.

Sources: Best sources are Liver, seafood, kidney, heart, lean meat, and poultry. Beans and vegetables are the best plant sources.

Magnesium

Rx:

Infants: 30-75mg/ day

Children: 80-130mg/ day

Adults: 240-420mg/ day

Pregnant/ Lactating: 310-420mg/ day

The major function of magnesium is to stabilize the structure of ATP in ATP dependent enzyme reactions. It is a cofactor for more than 300+ enzymes reactions. It is needed for the synthesis of proteins and fatty acids, and plays an important role in the glycolytic pathway. It also plays role in cell communication via second messengers (cAMP).

Sources: Pretty abundant in most foods, but good sources: seeds, nuts, legumes, grains, dark green vegetables, and dairy products and meat.

Manganese

Rx:

Body Code System™

Nutritional Chart

Infants: 0.003-0.6mg/ day
Children: 1.2-1.5mg/ day
Adults: 1.6-2.3mg/ day
Pregnant/ Lactating: 2.0-2.6mg/day

Symptoms of manganese deficiency include weight loss, dermatitis, change in hair color and growth, and occasionally nausea and vomiting. It can also affect the reproductive system, pancreatic function and several aspects of carbohydrate metabolism. Manganese plays an important role in enzyme activity, especially those of the mitochondria and the enzymes with anti-oxidant properties. In addition, manganese is used to activate many enzymes. It is used in the formation of connective and skeletal tissues, growth and reproduction, and carbohydrate and lipid metabolism.

Sources: Whole grains, legumes, nuts and tea. Fruit and vegetables are modest sources. Animal products contain less manganese are poor sources.

Molybdenum

Rx:
Infants: 2-3 mcg/ day
Children: 17-22 mcg/day
Adults: 34-45 mcg/ day
Pregnant/ Lactating: 50 mcg/ day

Molybdenum is important in oxidation-reduction (redox) reactions. It aids in the breakdown of key amino acids and in the formation of others.

Sources: Legumes, whole grains, dairy products, meat and dark leafy greens.

Phosphorus

Rx:
Infants: 100-275 mg/ day
Children: 460-500 mg/ day
Adults: 700-1250 mg/ day
Pregnant/ Lactating: 700-1250 mg/ day

Phosphorus ranks second to calcium in abundance in human tissues. It participates in numerous essential functions in the body. DNA and RNA are based on phosphate. The major form of energy, ATP, contains high energy phosphate bonds. It also acts in cellular communication via cAMP and other secondary messengers. It is used to form the

Body Code System™

Nutritional Chart

phospholipid membrane in every single cell. It is used in the buffer system of the body to control pH. Finally it forms with calcium to strengthen teeth and bones.

Sources: In general good sources of protein are good sources of phosphorus. Meat, poultry, fish, and eggs are excellent sources. Milk, legumes, and grains are other great sources.

Selenium

Rx:

Infants: 15-20 mcg/ day

Children: 20-30 mcg/ day

Adults: 40-55 mcg/ day

Pregnant/ Lactating: 60-70 mcg/ day

A rather narrow dietary intake range exists for selenium, below which deficiency occurs and above which toxicity can occur. Selenium is necessary for proper function of glutathione peroxidase, which protects against oxidative damage (free radicals). It aids in the conversion of T3 to T4 (thyroid).

Sources: Selenium content in foods is completely dependent on the selenium content of the soil. Supplementation is best with selenium.

Zinc

Rx:

Infants: 2-3 mg/ day

Children: 3-5 mg/ day

Adults: 8-11 mg/ day

Pregnant/ Lactating: 11-13 mg/ day

Zinc, primarily an intracellular ion, functions in association with more than 300 different enzymes. It participates in reactions involving either synthesis or degradation of carbohydrates, lipids, proteins and nucleic acids. It serves as a signaling agent in the brain.

Sources: The most abundant sources of zinc occur in animal flesh. Milk, seafood, whole grains, and legume are also fair sources.

Potassium

Body Code System™

Nutritional Chart

Rx:

Infants: 0.4-0.7 g/ day

Children: 3.0-3.8 g/ day

Adults: 4.5-4.7 g/ day

Pregnant/ Lactating: 4.7-5.1 g/ day

Potassium is responsible for maintaining normal water balance, osmotic equilibrium, and the acid-base balance. It is important in neuromuscular activity and promotes cell growth.

Sources: As a rule fruits, vegetables, fresh meats and dairy products are all great sources of potassium

Sodium

Rx:

Infants: 0.12 - 0.37 g/ day

Children: 1.0-1.2 g/ day

Adults: 1.2-1.5 g/ day

Pregnant/ Lactating: 1.5 g/ day

Sodium is important in maintaining acid-base balance, neuromuscular function, and plasma volume.

Sources: Sodium Chloride or Salt. Recommended Real Salt or Sea Salt.

Chloride

Rx:

Infants: 0.18- 0.57 g/ day

Children: 1.5-1.9 g/ day

Adults: 1.8-2.3 g/ day

Pregnant/ Lactating: 2.3 g/ day

Similar to sodium and potassium, chloride acts as an electrolyte and aids in acid-base balance, neuromuscular function and plasma volume.

Sources: Sodium Chloride or Salt. Recommended Real Salt or Sea Salt.

Sulfur

Body Code System™

Nutritional Chart

No Rx:

Although a mineral, sulfur mainly exists as a molecule in the body as a constituent of three amino acids: cystine, cysteine, and methionine. As such it exists as part of these molecules which aid in cellular reactions, connective tissue, redox reactions, etc.

Sources: Meat, poultry, fish, eggs, beans, broccoli, and cauliflower.

Flavonoids

No Rx:

Flavonoids - pigments that act as free radical scavengers in the plants, contribute to maintenance of heart health and boost anti-oxidant defenses.

Sources: Berries (especially dark colored), cherries, red grapes, green tea, cocoa, onions, and apples.

Boron

Rx:

Infants: no rx

Children: 2-6 mg/ day

Adults: 11-20 mg/ day

Pregnant/ Lactating: 17-20 mg/ day

Boron deficiencies affect to major organs: the brain and bone. Boron deficiency alters brain composition and function and reduces bone composition, structure, and strength.

Sources: Good sources include: noncitrous fruit, vegetables, nuts, and legumes.

Cobalt

Rx:

See Vitamin B12 recommendations:

Infants: 0.4-05 mcg/ day

Children: 0.9-1.2 mcg/ day

Adults: 1.8-2.4 mcg/ day

Pregnant/ Lactating: 2.6-2.8 mcg/ day

Body Code System™

Nutritional Chart

Most of the cobalt in the body exists with vitamin B12 stores in the liver. The essential role of cobalt is in vitamin b12. This vitamin is essential for the maturation of red blood cells and normal function of all cells. In addition to B12 the enzyme methionine aminopeptidase, an enzyme involved with DNA to RNA translation, is the only other known need for cobalt.

Sources: Cobalt exists in most food as an ultra trace mineral, but only microorganisms produce B12. Therefore animal organs or meat are recommended.

Lecithin

No Rx:

Lecithin (phosphatidylcholine) - a phospholipid containing choline; found in the membranes of biologic organisms. It is a part of bile, where emulsifies fats, and is part of lipoproteins, where it transports triglycerides and cholesterol.

Sources: Liver and egg yolks are rich sources. Soybeans, peanuts, legumes, spinach, and wheat germ are also good sources.

Cholesterol

No Rx:

Cholesterol is the basis for all steroid derivatives made in the body, including cortisone and aldosterone from the adrenal glands and testosterone and estrogens from the testes and ovaries, respectively, and bile acids made in the liver. Vitamin D hormone is made when ultraviolet rays cleave cholesterol. Cholesterol is also important in cell membranes where it aids in structural and fluidity.

Sources: Animal products.

Lutein / Zeaxanthin

No Rx:

Lutein and zeaxanthin are the two most abundant carotenoids. They have antioxidant properties and promote eye health.

Sources: Green vegetables such as kale, spinach, turnips, lettuce, broccoli, zucchini, etc.

Body Code System™

Nutritional Chart

Mono and Polyunsaturated Fatty Acids

No Rx:

Monounsaturated fatty acids (MFAs) contain only one double bond and polyunsaturated fatty acids (PUFAs) contain two or more double bonds. Because fatty acids with double bonds are easily oxidized human store lipids as saturated fats, mostly triglycerides.

Fats are energy rich and thus be an easy source of calories in the diet. In addition the fat soluble vitamins are usually present in high quality fat sources. They play a role in cell membranes, cellular communication and cell structure and protection

Sources: Animal products, nuts, seeds, and grains.

Lycopene

No Rx:

Lycopene - one of the carotenoid phytochemicals; appears to act as a free radical scavenger. Has high potential to reduce the risk for heart disease and prostate cancer in men.

Sources: Tomatoes, grapefruit, watermelon, and guava. Tomatoes should be eaten with a fat to increase bioavailability through absorption.

Enzymes (digestive)

No Rx:

There are many enzymes that participate in the digestive process; they can originate from the pancreas, stomach, and small intestine. Most of these enzymes are released in an inactive form that is activated by a low pH. (High pH in the stomach will lead to digestive problems). When the body is maxed out it may be beneficial to use digestive enzymes as a way to allow the body to heal.

Sources: Supplements!

Methionine

Body Code System™

Nutritional Chart

Rx:

Infants: 58 mg/ kg/ day

Children: 22-27 mg/ kg/ day

Adults: 13 mg/ kg/ day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtain in the diet.

Sources: All animal products

Phenylalanine

Rx:

Infants: 125mg/ kg/ day

Children: 22-69 mg/ kg/ day

Adults: 14 mg/ kg/ day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtain in the diet.

Sources: All animal products

Threonine

Rx:

Infants: 87mg/ kg/ day

Children: 28-37 mg/ kg/ day

Adults: 7 mg/ kg/ day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtain in the diet.

Sources: All animal products

Body Code System™

Nutritional Chart

Tryptophan

Rx:

Infants: 17 mg/ kg/ day

Children: 3.3 - 12.5 mg/ kg/ day

Adults: 3.5 mg/ kg/ day

Synthesis of proteins requires the presence of all necessary amino acids during the process. An essential amino acid is an amino acid that cannot be synthesized in the body and therefore must be obtained in the diet.

Sources: All animal products