

1: TerraMin Review | Mega-Mineral Supplement For Detoxing

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Are your curls thirsty? Has harsh weather made your hair stiff? You might be overlooking a great natural ingredient that could be your saving grace. Aloe vera is known to promote shine and moisture in hair while also preventing hair loss and dandruff. Grab products with aloe vera or some all natural aloe vera gel to benefit from this amazing plant! So glad you asked. Many curly girls are extremely careful about the ingredients found in the products that they use on their curls. It consists of water, 20 minerals, 12 vitamins, 18 amino acids, and phytonutrients. These additions will necessarily change the impact of the aloe vera on your hair as well. So you can use any brand that sells pure aloe vera gel, but just be aware that most will contain additives.

Pre-Poo Use aloe vera gel as a pre-shampoo treatment to reduce buildup dandruff. Apply to your scalp as a treatment before your wash and give yourself a fresh start! Massage the gel into your scalp and leave it for ten minutes, then rinse before shampooing or co-washing as usual. You can also use aloe vera juice to the same end. For a lighter pre-shampoo treatment, mix aloe vera juice, coconut milk and wheat germ oil.

Shampoo Aloe vera gel can make a great moisturizing shampoo. Some shampoos even sulfate-free shampoos can leave your hair dry and stiff. Check those ingredients and try a shampoo containing aloe vera, or add some aloe vera gel to your current favorite! Its naturally moisturizing properties will leave your hair strong and moisturized.

Conditioner For women with tightly coiled strands, natural oils are trapped at the root. Products with amino acids promote moisture and condition our hair. Aloe vera has 20 amino acids! You can use a ready-made aloe vera conditioner or you can mix aloe vera gel with the conditioner that you already use.

DIY Conditioner Cut the aloe vera leaf from the stem upward. Use a spoon to remove all the gel. Apply it to damp hair, starting at the scalp and working your way down to the ends. Wrap your hair in a warm, damp towel and let the treatment sink in for at least 15 minutes. Wash your hair as usual after the treatment.

2: Vitamin | chemical compound | www.enganchecubano.com

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Dehalogenases Reactions in which a halogen atom is removed from an organic molecule. Enzymes in this class have not been identified in humans. In humans, two major coenzyme Bdependent enzyme families corresponding to the first two reaction types, are known. These are typified by the following two enzymes: This functionality is lost in vitamin B12 deficiency , and can be measured clinically as an increased methylmalonic acid MMA level. Unfortunately, an elevated MMA, though sensitive to B12 deficiency, is probably overly sensitive, and not all who have it actually have B12 deficiency. For this reason, assessment of MMA levels is not routinely recommended in the elderly. There is no "gold standard" test for B12 deficiency because as a B12 deficiency occurs, serum values may be maintained while tissue B12 stores become depleted. Therefore, serum B12 values above the cut-off point of deficiency do not necessarily indicate adequate B12 status. The MUT function is necessary for proper myelin synthesis and is not affected by folate supplementation. MTR , also known as methionine synthase, is a methyltransferase enzyme, which uses the MeB12 and reaction type 2 to transfer a methyl group from 5-methyltetrahydrofolate to homocysteine , thereby generating tetrahydrofolate THF and methionine. THF plays an important role in DNA synthesis so reduced availability of THF results in ineffective production of cells with rapid turnover, in particular red blood cells, and also intestinal wall cells which are responsible for absorption. Thus all of the DNA synthetic effects of B12 deficiency, including the megaloblastic anemia of pernicious anemia , resolve if sufficient dietary folate is present. Thus the best-known "function" of B12 that which is involved with DNA synthesis, cell-division, and anemia is actually a facultative function which is mediated by Bconservation of an active form of folate which is needed for efficient DNA production. Enzyme function[edit] If folate is present in quantity, then of the two absolutely vitamin Bdependent enzyme-family reactions in humans, the MUT -family reactions show the most direct and characteristic secondary effects, focusing on the nervous system see below. This is because the MTR methyltransferase-type reactions are involved in regenerating folate, and thus are less evident when folate is in good supply. Since the late s, folic acid has begun to be added to fortify flour in many countries, so folate deficiency is now more rare. At the same time, since DNA synthetic-sensitive tests for anemia and erythrocyte size are routinely done in even simple medical test clinics so that these folate-mediated biochemical effects are more often directly detected , the MTR -dependent effects of B12 deficiency are becoming apparent not as anemia due to DNA-synthetic problems as they were classically , but now mainly as a simple and less obvious elevation of homocysteine in the blood and urine homocysteinuria. This condition may result in long-term damage to arteries and in clotting stroke and heart attack , but this effect is difficult to separate from other common processes associated with atherosclerosis and aging. The specific myelin damage resulting from B12 deficiency, even in the presence of adequate folate and methionine, is more specifically and clearly a vitamin deficiency problem. It has been connected to B12 most directly by reactions related to MUT, which is absolutely required to convert methylmalonyl coenzyme A into succinyl coenzyme A. Failure of this second reaction to occur results in elevated levels of MMA, a myelin destabilizer. Excessive MMA will prevent normal fatty acid synthesis , or it will be incorporated into fatty acids itself rather than normal malonic acid. If this abnormal fatty acid subsequently is incorporated into myelin, the resulting myelin will be too fragile, and demyelination will occur. Although the precise mechanism or mechanisms are not known with certainty, the result is subacute combined degeneration of spinal cord. Vitamin Bdependent MTR reactions may also have neurological effects, through an indirect mechanism. Adequate methionine which, like folate, must otherwise be obtained in the diet, if it is not regenerated from homocysteine by a B12 dependent reaction is needed to make S-adenosyl methionine SAME , which is in turn necessary for methylation of myelin sheath phospholipids. Although production of SAME is not B12 dependent, help in recycling for provision of one adequate substrate for it the essential amino acid methionine is assisted by B In addition, SAME is involved in the manufacture of certain neurotransmitters ,

catecholamines and in brain metabolism. These neurotransmitters are important for maintaining mood, possibly explaining why depression is associated with B12 deficiency. Methylation of the myelin sheath phospholipids may also depend on adequate folate, which in turn is dependent on MTR recycling, unless ingested in relatively high amounts. Absorption[edit] Methyl-B12 is absorbed by two processes. The first is an intestinal mechanism using intrinsic factor through which 1â€”2 micrograms can be absorbed every few hours. Protein-bound vitamin B12 must be released from the proteins by the action of digestive proteases in both the stomach and small intestine. B12 taken in a low-solubility, non-chewable supplement pill form may bypass the mouth and stomach and not mix with gastric acids, but acids are not necessary for the absorption of free B12 not bound to protein; acid is necessary only to recover naturally-occurring vitamin B12 from foods. R-protein also known as haptocorrin and cobalophilin is a B12 binding protein that is produced in the salivary glands. It must wait to bind food-B12 until B12 has been freed from proteins in food by pepsin in the stomach. B12 then binds to the R-protein to avoid degradation of it in the acidic environment of the stomach. The next binding protein for B12 is intrinsic factor IF , a protein synthesized by gastric parietal cells that is secreted in response to histamine , gastrin and pentagastrin , as well as the presence of food. B12 must be attached to IF for it to be efficiently absorbed, as receptors on the enterocytes in the terminal ileum of the small bowel only recognize the BIF complex; in addition, intrinsic factor protects the vitamin from catabolism by intestinal bacteria. Absorption of food vitamin B12 thus requires an intact and functioning stomach , exocrine pancreas , intrinsic factor, and small bowel. Problems with any one of these organs makes a vitamin B12 deficiency possible. Individuals who lack intrinsic factor have a decreased ability to absorb B In pernicious anemia , there is a lack of IF due to autoimmune atrophic gastritis , in which antibodies form against parietal cells. Antibodies may alternately form against and bind to IF, inhibiting it from carrying out its B12 protective function. Due to the complexity of B12 absorption, geriatric patients, many of whom are hypoacidic due to reduced parietal cell function, have an increased risk of B12 deficiency. Hereditary defects in production of the transcobalamins and their receptors may produce functional deficiencies in B12 and infantile megaloblastic anemia , and abnormal B12 related biochemistry, even in some cases with normal blood B12 levels. The transcobalamin-II is degraded within a lysosome , and free B12 is finally released into the cytoplasm, where it may be transformed into the proper coenzyme, by certain cellular enzymes see above. Investigations into the intestinal absorption of B12 point out that the upper limit of absorption per single oral dose, under normal conditions, is about 1. In a similar study Swendseid et al. It is this last fact which allows pernicious anemia and certain other defects in B12 absorption to be treated with oral megadoses of B12, even without any correction of the underlying absorption defects. Bile is the main form of B12 excretion; most of the B12 secreted in the bile is recycled via enterohepatic circulation. How fast B12 levels change depends on the balance between how much B12 is obtained from the diet, how much is secreted and how much is absorbed. B12 deficiency may arise in a year if initial stores are low and genetic factors unfavourable, or may not appear for decades. In infants, B12 deficiency can appear much more quickly. Vitamin B12 deficiency Vitamin B12 deficiency can potentially cause severe and irreversible damage, especially to the brain and nervous system. Vitamin B12 is rare from plant sources, so vegetarians are more likely to suffer from vitamin B12 deficiency. Infants are at a higher risk of vitamin B12 deficiency if they were born to vegetarian mothers. The elderly who have diets with limited meat or animal products are vulnerable populations as well. Vegans can avoid this by eating B12 fortified foods like cereals, plant-based milks, and nutritional yeast as a regular part of their diet. Taking a B12 supplement could be beneficial to most people. Synthesis of the trimonoamine neurotransmitters can enhance the effects of a traditional antidepressant. Consequently, the plasma concentration of homocysteine falls as the intracellular concentration of vitamin B12 rises. The active metabolite of vitamin B12 is required for the methylation of homocysteine in the production of methionine, which is involved in a number of biochemical processes including the monoamine neurotransmitters metabolism. Thus, a deficiency in vitamin B12 may impact the production and function of those neurotransmitters. Preparations are usually bright red. Repletion of deficiency[edit] Severe vitamin B12 deficiency is corrected with frequent intramuscular injections of large doses of the vitamin, followed by maintenance doses at longer intervals. Tablets are sometimes used for repletion in mild deficiency; and for

maintenance regardless of severity. Vitamin B12 supplementation sometimes leads to acne development. In the United States, the Food and Drug Administration approved the use of hydroxocobalamin for acute treatment of cyanide poisoning. Reduced secretion of gastric acid and pepsin produced by H₂ blocker or proton-pump inhibitor PPI drugs can reduce absorption of protein-bound dietary vitamin B12, although not of supplemental vitamin B. H₂-receptor antagonist examples include cimetidine, famotidine, nizatidine, and ranitidine. PPIs examples include omeprazole, lansoprazole, rabeprazole, pantoprazole, and esomeprazole. Symptomatic vitamin deficiency is more likely if the person is rendered achlorhydric complete absence of gastric acid secretion, which occurs more frequently with proton pump inhibitors than H₂ blockers. If the deficiency is detected, metformin can be continued while the deficiency is corrected with B12 supplements. Like all tetrapyrroles, it is derived from uroporphyrinogen III. This porphyrinogen is methylated at two pyrrole rings to give dihydrosirohydrochlorin, which is oxidized to sirohydrochlorin, which undergoes further reactions, notably a ring contraction, to give the corrin ring. The complete laboratory synthesis of B12 was achieved by Robert Burns Woodward [87] and Albert Eschenmoser in [88] [89] and remains one of the classic feats of organic synthesis, requiring the effort of 91 postdoctoral fellows mostly at Harvard and 12 PhD students at ETH Zurich from 19 nations. The synthesis constitutes a formal total synthesis, since the research groups only prepared the known intermediate cobyrinic acid, whose chemical conversion to vitamin B12 was previously reported. Though it constitutes an intellectual achievement of the highest caliber, the Eschenmoser-Woodward synthesis of vitamin B12 is of no practical consequence due to its length, taking 72 chemical steps and giving an overall chemical yield well under 0. Bacterial or, perhaps archaeal fermentation remains the only industrially viable source of the vitamin for food production and medicine.

3: Vitamin B Complex - FDA prescribing information, side effects and uses

Aloe vera is used to heal first- and second-degree burns, protect against radiation damage, rev up the immune system, make bowels move, and fight viruses and bacteria. All this, thanks to the vitamins and minerals found in the plant.

TerraMin is a nutritional supplement that comes in the form of a tablet. The tablet contains a patented ionic mineral formula known as ION-MIN that promises to mineralize and detoxify your body naturally. At the same time, TerraMin contains cleansing compounds that help your body flush out heavy metals, toxins, and poisons from your body. The supplement is made by a California-based nutritional supplement company named TerraMin. That company sells a wide range of clay-based supplements, including clay detox teas, clay toothpastes, and even clay deodorants. How Does TerraMin Work? TerraMin, like most other Spirit Detox products, relies on the power of clay. TerraMin uses the silica found in clay to heal the body. Plants use those minerals to grow, and animals either consume those plants or other animals that consumed those plants. People consume the plants to incorporate many of those minerals into their own bodies. At this basic level, without clay and soil, life could not exist. Your body relies on these chemical reactions to heal itself. Additionally, many of the major organs in your body are made of silica, including your lungs, muscles, liver, kidneys, brain, cardiovascular, and reproductive systems. By taking a silica supplement, you can support overall health and wellness throughout your entire body. It works especially well with calcium. In fact, many people who take calcium supplements to support bone growth are also advised to take silica supplements to boost calcium absorption. Silica plays a critical role in your digestive system by facilitating nutrient absorption. Losing weight is easier when your body is clean and filled with nutrients. TerraMin reduces harmful bacteria throughout the body, which lets your body naturally balance pH levels. TerraMin contains the essential nutrients and vitamins your body needs to stay healthy on a daily basis. TerraMin claims to make your body more radiant by reducing breakouts and relieving skin rashes and hives. TerraMin cleanses your blood and boosts the health of your heart and major organs. TerraMin Ingredients TerraMin lists all of the following ingredients on its product packaging: Each package contains tablets. You take 4 to 6 tablets per day depending on your body weight see below for specific instructions. Or, you can call to order TerraMin over the phone. Payments can be made by all major credit cards. It is recommended that TerraMin Tablets be consumed in the dosage of one tablet per every 30 pounds of body weight. For example, a pound person should consume 4 TerraMin Tablets per day, while an pound individual would take 6 tablets. Today, the company sells a diverse range of products that all rely on the power of silica clay and the ION-MIN formula. Other popular supplements include clay detox teas, clay deodorants, clay hair care, organic fertilizers, and water distillation systems. Who Should Use TerraMin? TerraMin is a unique nutritional supplement that relies on the power of silica clay to cleanse your body of toxins. Virtually every organ in your body relies on silica. Although you get more than enough silica from the food and water you drink, some people still choose to take a silica supplement to enhance their health benefits.

4: Icon to launch live chat

From amino acids, vitamins, and minerals, the pure ingredients used in Ion Z are able to give users the boost they need to power through the most intense tasks. And because the ingredients used in Ion Z are pure, users don't have to worry about fillers or other questionable ingredients that could cause unwanted side effects.

This article has been cited by other articles in PMC. Abstract Aloe vera is a natural product that is now a day frequently used in the field of cosmetology. Though there are various indications for its use, controlled trials are needed to determine its real efficacy. The aloe vera plant, its properties, mechanism of action and clinical uses are briefly reviewed in this article. Aloe vera, health and beauty, skin Introduction The Aloe vera plant has been known and used for centuries for its health, beauty, medicinal and skin care properties. History Aloe vera has been used for medicinal purposes in several cultures for millennia: It belongs to Asphodelaceae Liliaceae family, and is a shrubby or arborescent, perennial, xerophytic, succulent, pea- green color plant. It grows mainly in the dry regions of Africa, Asia, Europe and America. Anatomy The plant has triangular, fleshy leaves with serrated edges, yellow tubular flowers and fruits that contain numerous seeds. Each leaf is composed of three layers: Inside the rind are vascular bundles responsible for transportation of substances such as water xylem and starch phloem. Aloe vera contains 75 potentially active constituents: It contains vitamins A beta-carotene , C and E, which are antioxidants. It also contains vitamin B12, folic acid, and choline. Antioxidant neutralizes free radicals. It contains 8 enzymes: Bradykinase helps to reduce excessive inflammation when applied to the skin topically, while others help in the breakdown of sugars and fats. It provides calcium, chromium, copper, selenium, magnesium, manganese, potassium, sodium and zinc. They are essential for the proper functioning of various enzyme systems in different metabolic pathways and few are antioxidants. It provides monosaccharides glucose and fructose and polysaccharides: These are derived from the mucilage layer of the plant and are known as mucopolysaccharides. The most prominent monosaccharide is mannosephosphate, and the most common polysaccharides are called glucomannans [beta-1,4 -acetylated mannan]. Acemannan, a prominent glucomannan has also been found. Recently, a glycoprotein with anti-allergic properties, called alprogen and novel anti-inflammatory compound, C-glucosyl chromone, has been isolated from Aloe vera gel. It provides 12 anthraquinones, which are phenolic compounds traditionally known as laxatives. Aloin and emodin act as analgesics, antibacterials and antivirals. All these have anti-inflammatory action and lupeol also possesses antiseptic and analgesic properties. Auxins and gibberellins that help in wound healing and have anti-inflammatory action. It provides 20 of the 22 human required amino acids and 7 of the 8 essential amino acids. It also contains salicylic acid that possesses anti-inflammatory and antibacterial properties. Lignin, an inert substance, when included in topical preparations, enhances penetrative effect of the other ingredients into the skin. Mechanism of actions Healing properties: Glucomannan, a mannose-rich polysaccharide, and gibberellin, a growth hormone, interacts with growth factor receptors on the fibroblast, thereby stimulating its activity and proliferation, which in turn significantly increases collagen synthesis after topical and oral Aloe vera. Due to this, it accelerated wound contraction and increased the breaking strength of resulting scar tissue. Aloe vera gel has been reported to have a protective effect against radiation damage to the skin. It reduces the production and release of skin keratinocyte-derived immunosuppressive cytokines such as interleukin IL and hence prevents UV-induced suppression of delayed type hypersensitivity. Aloe vera inhibits the cyclooxygenase pathway and reduces prostaglandin E2 production from arachidonic acid. Recently, the novel anti-inflammatory compound called C-glucosyl chromone was isolated from gel extracts. Alprogen inhibit calcium influx into mast cells, thereby inhibiting the antigen-antibody-mediated release of histamine and leukotriene from mast cells. Anthraquinones present in latex are a potent laxative. It increases intestinal water content, stimulates mucus secretion and increases intestinal peristalsis. These actions may be due to indirect or direct effects. Indirect effect is due to stimulation of the immune system and direct effect is due to anthraquinones. The anthraquinone aloin inactivates various enveloped viruses such as herpes simplex, varicella zoster and influenza. An induction of glutathione S-transferase and an inhibition of the tumor-promoting effects of phorbol myristic acetate has also

been reported which suggest a possible benefit of using aloe gel in cancer chemoprevention. Mucopolysaccharides help in binding moisture into the skin. Aloe stimulates fibroblast which produces the collagen and elastin fibers making the skin more elastic and less wrinkled. It also has cohesive effects on the superficial flaking epidermal cells by sticking them together, which softens the skin. The amino acids also soften hardened skin cells and zinc acts as an astringent to tighten pores. Its moisturizing effects has also been studied in treatment of dry skin associated with occupational exposure where aloe vera gel gloves improved the skin integrity, decreases appearance of fine wrinkle and decreases erythema. Aloe vera contains 6 antiseptic agents: Lupeol, salicylic acid, urea nitrogen, cinnamonic acid, phenols and sulfur. They all have inhibitory action on fungi, bacteria and viruses. The clinical use of aloe vera is supported mostly by anecdotal data. Though most of these uses are interesting, controlled trials are essential to determine its effectiveness in all the following diseases. Uses based on scientific evidence: These uses have been tested in humans or animals. Safety and effectiveness have not always been proven. Seborrheic dermatitis, 24 psoriasis vulgaris, 25 , 26 genital herpes, 27 , 28 skin burns, 5 , 29 diabetes type 2 , 30 HIV infection, 31 cancer prevention, 32 , 33 ulcerative colitis 34 wound healing results of aloe on wound healing are mixed with some studies reporting positive results 35 and others showing no benefit 36 or potential worsening 37 , 38 , pressure ulcers, 36 mucositis, 39 radiation dermatitis, 40 acne vulgaris, 41 lichen planus, 42 frostbite, 43 aphthous stomatitis, 44 and constipation. Uses based on tradition or theory: The below uses are based on tradition or scientific theories. They often have not been thoroughly tested in humans, and safety and effectiveness have not always been proven. Alopecia, bacterial and fungal skin infections, chronic leg wounds, parasitic infections, systemic lupus erythematosus, arthritis and tic douloureux. It may cause redness, burning, stinging sensation and rarely generalized dermatitis in sensitive individuals. Allergic reactions are mostly due to anthraquinones, such as aloin and barbaloin. It is best to apply it to a small area first to test for possible allergic reaction. Abdominal cramps, diarrhea, red urine, hepatitis, dependency or worsening of constipation. Prolonged use has been reported to increase the risk of colorectal cancer. Laxative effect may cause electrolyte imbalances low potassium levels. Contraindicated in cases of known allergy to plants in the Liliaceae family. Oral aloe is not recommended during pregnancy due to theoretical stimulation of uterine contractions, and in breastfeeding mothers, it may sometime causes gastrointestinal distress in the nursing infant. Application of aloe to skin may increase the absorption of steroid creams such as hydrocortisone. It reduces the effectiveness and may increases the adverse effects of digoxin and digitoxin, due to its potassium lowering effect. Combined use of Aloe vera and furosemide may increase the risk of potassium depletion. It decreases the blood sugar levels and thus may interact with oral hypoglycemic drugs and insulin. Thus, though Aloe vera has wide spectrum of the properties and uses, some of them could be myths and some of them could be real magic. In future, controlled studies are required to prove the effectiveness of Aloe vera under various conditions.

5: 6 Ways to Use Aloe Vera Gel for Hair | www.enganchecubano.com

I purchased 3 aloe Vera leaves at an international grocery store and some lemon juice all under \$ Aloe vera promotes moisturizer ion, has high vitamins A and B. it increase hair growth and the.

Biological significance of vitamins Discovery and original designation Some of the first evidence for the existence of vitamins emerged in the late 19th century with the work of Dutch physician and pathologist Christiaan Eijkman. In a nerve disease polyneuritis broke out among his laboratory chickens. He noticed that the disease was similar to the polyneuritis associated with the nutritional disorder beriberi. In he demonstrated that polyneuritis was caused by feeding the chickens a diet of polished white rice but that it disappeared when the animals were fed unpolished rice. In 1907 British biochemist Sir Frederick Gowland Hopkins observed that animals cannot synthesize certain amino acids and concluded that macronutrients and salts could not by themselves support growth. Funk believed that some human diseases, particularly beriberi, scurvy , and pellagra , also were caused by deficiencies of factors of the same chemical type. In American researcher Elmer McCollum divided vitamins into two groups: Later it was realized that the water-soluble growth factor , vitamin B, was not a single entity but at least two—only one of which prevented polyneuritis in pigeons. The factor required by pigeons was called vitamin B1, and the other factor, essential for rats, was designated vitamin B2. As chemical structures of the vitamins became known, they were also given chemical names, e. Regulatory role The vitamins regulate reactions that occur in metabolism , in contrast to other dietary components known as macronutrients e. Absence of a vitamin blocks one or more specific metabolic reactions in a cell and eventually may disrupt the metabolic balance within a cell and in the entire organism as well. With the exception of vitamin C ascorbic acid , all of the water-soluble vitamins have a catalytic function; i. The metabolic importance of the water-soluble vitamins is reflected by their presence in most plant and animal tissues involved in metabolism. Some of the fat-soluble vitamins form part of the structure of biological membranes or assist in maintaining the integrity and therefore, indirectly, the function of membranes. Some fat-soluble vitamins also may function at the genetic level by controlling the synthesis of certain enzymes. Unlike the water-soluble ones, fat-soluble vitamins are necessary for specific functions in highly differentiated and specialized tissues; therefore, their distribution in nature tends to be more selective than that of the water-soluble vitamins. Sources Vitamins, which are found in all living organisms either because they are synthesized in the organism or are acquired from the environment , are not distributed equally throughout nature. Some are absent from certain tissues or species; for example, beta-carotene , which can be converted to vitamin A , is synthesized in plant tissues but not in animal tissues. On the other hand, vitamins A and D3 cholecalciferol occur only in animal tissues. Both plants and animals are important natural vitamin sources for human beings. Since vitamins are not distributed equally in foodstuffs, the more restricted the diet of an individual, the more likely it is that he will lack adequate amounts of one or more vitamins. Food sources of vitamin D are limited, but it can be synthesized in the skin through ultraviolet radiation from the Sun ; therefore, with adequate exposure to sunlight , the dietary intake of vitamin D is of little significance. All vitamins can be either synthesized or produced commercially from food sources and are available for human consumption in pharmaceutical preparations. Commercial processing of food e. In most such instances, however, the vitamins are replaced by chemical methods. Some foods are fortified with vitamins not normally present in them e. Loss of vitamins may also occur when food is cooked; for instance, heat destroys vitamin A, and water-soluble vitamins may be extracted from food to water and lost. Although there is not uniform agreement concerning the human requirements of vitamins, recommended daily vitamin intakes are sufficiently high to account for individual variation and normal environmental stresses. A number of interrelationships exist among vitamins and between vitamins and other dietary constituents. The interactions may be synergistic i. Results of deficiencies Inadequate intake of a specific vitamin results in a characteristic deficiency disease hypovitaminosis , the severity of which depends upon the degree of vitamin deprivation. Symptoms may be specific e. All symptoms for a specific deficiency disease may not appear; in addition, the nature of the symptoms may vary with the species. Some effects of vitamin deficiencies cannot be reversed by

adding the vitamin to the diet, especially if damage to nonregenerative tissue e. A vitamin deficiency may be primary or dietary , in which case the dietary intake is lower than the normal requirement of the vitamin. A secondary or conditioned deficiency may occur even though the dietary intake is adequate if a preexisting disease or state of stress is present e. More details on vitamin deficiencies in humans may be found in nutritional disease. Evolution of vitamin-dependent organisms Evolution of metabolic processes in primitive forms of life required the development of enzyme systems to catalyze the complex sequences of chemical reactions involved in metabolism. In the beginning, the environment presumably could supply all the necessary compounds including the vitamin coenzymes ; eventually, these compounds were synthesized within an organism. As higher forms of life evolved, however, the ability to synthesize certain of these vitamin coenzymes was gradually lost. Since higher plants show no requirements for vitamins or other growth factors, it is assumed that they retain the ability to synthesize them. Among insects , however, niacin, thiamin, riboflavin , vitamin B 6, vitamin C, and pantothenic acid are required by a few groups. All vertebrates , including humans, require dietary sources of vitamin A, vitamin D, thiamin, riboflavin, vitamin B6, and pantothenic acid ; some vertebrates, particularly the more highly evolved ones, have additional requirements for other vitamins. The water-soluble vitamins Basic properties Although the vitamins included in this classification are all water-soluble, the degree to which they dissolve in water is variable. This property influences the route of absorption, their excretion, and their degree of tissue storage and distinguishes them from fat-soluble vitamins, which are handled and stored differently by the body. The active forms and the accepted nomenclature of individual vitamins in each vitamin group are given in the table. The water-soluble vitamins are vitamin C ascorbic acid and the B vitamins , which include thiamin vitamin B1 , riboflavin vitamin B2 , vitamin B6 , niacin nicotinic acid , vitamin B12 , folic acid , pantothenic acid , and biotin. These relatively simple molecules contain the elements carbon, hydrogen, and oxygen; some also contain nitrogen, sulfur , or cobalt. The water-soluble vitamins, inactive in their so-called free states, must be activated to their coenzyme forms; addition of phosphate groups occurs in the activation of thiamin, riboflavin, and vitamin B6; a shift in structure activates biotin, and formation of a complex between the free vitamin and parts of other molecules is involved in the activation of niacin, pantothenic acid, folic acid, and vitamin B After an active coenzyme is formed, it must combine with the proper protein component called an apoenzyme before enzyme-catalyzed reactions can occur. Functions The B-vitamin coenzymes function in enzyme systems that transfer certain groups between molecules; as a result, specific proteins, fats, and carbohydrates are formed and may be utilized to produce body tissues or to store or release energy. The pantothenic acid coenzyme functions in the tricarboxylic acid cycle also called the Krebs, or citric acid , cycle , which interconnects carbohydrate , fat , and protein metabolism; this coenzyme coenzyme A acts at the hub of these reactions and thus is an important molecule in controlling the interconversion of fats, proteins, and carbohydrates and their conversion into metabolic energy. Thiamin and vitamin B6 coenzymes control the conversion of carbohydrates and proteins respectively into metabolic energy during the citric acid cycle. Niacin and riboflavin coenzymes facilitate the transfer of hydrogen ions or electrons negatively charged particles , which occurs during the reactions of the tricarboxylic acid cycle. All of these coenzymes also function in transfer reactions that are involved in the synthesis of structural compounds; these reactions are not part of the tricarboxylic acid cycle. Functions of B-vitamin coenzymes in metabolism. Although vitamin C participates in some enzyme-catalyzed reactions, it has not yet been established that the vitamin is a coenzyme. Its function probably is related to its properties as a strong reducing agent i. Metabolism The water-soluble vitamins are absorbed in the animal intestine, pass directly to the blood, and are carried to the tissues in which they will be utilized. Vitamin B12 requires a substance known as intrinsic factor in order to be absorbed. Some of the B vitamins can occur in forms that cannot be used by an animal. Most of the niacin in some cereal grains wheat, corn, rice, barley, bran , for example, is bound to another substance, forming a complex called niacytin that cannot be absorbed in the animal intestine. Biotin can be bound by the protein avidin, which is found in raw egg white; this complex also cannot be absorbed or broken down by digestive-tract enzymes, and thus the biotin cannot be utilized. In animal products e. The B vitamins are distributed in most metabolizing tissues of plants and animals. Water-soluble vitamins usually are excreted in the urine of humans. Thiamin, riboflavin,

vitamin B6, vitamin C, pantothenic acid, and biotin appear in urine as free vitamins rather than as coenzymes ; however, little free niacin is excreted in the urine. Products also called metabolites that are formed during the metabolism of thiamin, niacin, and vitamin B6 also appear in the urine. Urinary metabolites of biotin, riboflavin, and pantothenic acid also are formed. Excretion of these vitamins or their metabolites is low when intake is sufficient for proper body function. If intake begins to exceed minimal requirements, excess vitamins are stored in the tissues. Tissue storage capacity is limited, however, and, as the tissues become saturated, the rate of excretion increases sharply. Unlike the other water-soluble vitamins, however, vitamin B12 is excreted solely in the feces. Some folic acid and biotin also are normally excreted in this way. Although fecal excretion of water-soluble vitamins other than vitamin B12, folic acid, and biotin occurs, their source probably is the intestinal bacteria that synthesize the vitamins, rather than vitamins that have been eaten and utilized by the animal. The water-soluble vitamins generally are not considered toxic if taken in excessive amounts. There is, however, one exception in humans: Thiamin given to animals in amounts times the requirement i. Therapeutic doses of mg of thiamin have no known toxic effects in humans except rare instances of anaphylactic shock in sensitive individuals. There is no known toxicity for any other B vitamins. The fat-soluble vitamins The four fat-soluble vitamin groups are A, D, E, and K; they are related structurally in that all have as a basic structural unit of the molecule a five-carbon isoprene segment, which is Each of the fat-soluble vitamin groups contains several related compounds that have biological activity. The potency of the active forms in each vitamin group varies, and not all of the active forms now known are available from dietary sources; i. The characteristics of each fat-soluble vitamin group are discussed below. Chemical properties The chemical properties of fat-soluble vitamins determine their biological activities, functions, metabolism, and excretion. However, while the substances in each group of fat-soluble vitamins are related in structure, indicating that they share similar chemical properties, they do have important differences. These differences impart to the vitamins unique qualities, chemical and biological, that affect attributes ranging from the manner in which the vitamins are stored to the species in which they are active. Vitamin A group Ten carotenes , coloured molecules synthesized only in plants, show vitamin A activity; however, only the alpha- and beta-carotenes and cryptoxanthin are important to humans, and beta-carotene is the most active. Retinol vitamin A alcohol is considered the primary active form of the vitamin, although retinal , or vitamin A aldehyde , is the form involved in the visual process in the retina of the eye. A metabolite of retinol with high biological activity may be an even more direct active form than retinol. The ester form of retinol is the storage form of vitamin A; presumably, it must be converted to retinol before it is utilized. Retinoic acid is a short-lived product of retinol; only retinoic acid of the vitamin A group is not supplied by the diet. Vitamin D group Although about 10 compounds have vitamin D activity, the two most important ones are ergocalciferol vitamin D2 and cholecalciferol vitamin D3. Vitamin D3 represents the dietary source, while vitamin D2 occurs in yeasts and fungi. Both can be formed from their respective provitamins by ultraviolet irradiation; in humans and other animals the provitamin 7-dehydrocholesterol , which is found in skin, can be converted by sunlight to vitamin D3 and thus is an important source of the vitamin. Both vitamin D2 and vitamin D3 can be utilized by rats and humans; however, chicks cannot use vitamin D2 effectively. The form of the vitamin probably active in humans is calcitriol. The active tocopherols are named in order of their potency; i. Some metabolites of alpha-tocopherol such as alpha-tocopherolquinone and alphatocopheronolactone have activity in some mammals e.

6: Vitamin B12 - Wikipedia

FAB Forever Active Boostâ„¢ Energy Drink. FAB is a quick, refreshing way to stay energized and alert all day long FAB's "boost" is different from other energy drinks because it gives you both immediate and long-term energy.

StumbleUpon Supplements have become a staple in modern day society. Whether people need to increase certain vitamin levels in their bodies or support their overall health with a multi-vitamin supplement, the need for these capsules, pills, and powders has grown exponentially in recent years. And, as more and more people praise the benefits of supplements, the need for more diverse and better quality supplements is increasing. The need for supplements is heavily influenced by the decrease in healthy, fresh food consumption. Over the years, more and more food manufacturers have started filling their canned and frozen foods with preservatives so that they can be sold for longer periods of time, increasing profit for stores and manufacturers. The problem with this increase in preservatives is that in order to make space for these chemicals, important nutrients are removed from foods. So, for those who eat a lot of frozen or canned foods, the probability of them getting their daily recommended amounts of vitamins, minerals, and other nutrients is very low. In order to fill the gap that modern foods are causing in the health and wellness of people, supplement companies have started creating quality ways for providing the body with everything it needs to thrive. Because the deficits of nutrients often has the biggest effect on the physical health of people, the majority of these supplements focus on providing users with the support they need for their physical health. While this approach to supplements is great, it does leave a gap in the industry. Physical health is extremely important. However, just as important is mental health. The supplement is an advanced brain formula that works to provide the brain with all the nutrients it needs to thrive and function at its best. With Ion Z , users will be able to reach better cognitive potential than ever before. What Is Ion Z? Ion Z is a supplement that was specifically designed to help boost the cognitive functions of those who take it. Just like many other supplements on the market today, Ion Z is made up of natural ingredients that have been proven to provide the body with specific enhancements. Just like the body needs extra support to be healthy and thrive, the brain also needs a certain amount of nutritional support. And this is why Ion Z is so important. The success of Ion Z is based on its formulation, which has been backed by years of intense research and clinical trials. The formulation process used in Ion Z is made up of two distinct parts. The first is actually picking the ingredients that were going to be used in the supplement. These ingredients are all completely pure and supported by the best and most respected research in the industry. While many supplement companies would be happy using the best ingredients, Ion Z took it a step further. Not only did the company pick the best of the best when it came to ingredients, but it also developed a very precise blending process. Using specific, exact measurements of each ingredient has enabled Ion Z to provide users with better results in less time. As mentioned above, Ion Z was designed to give the mind the same boost that many supplements give the body. This means that every ingredients used in Ion Z was added for the very specific benefits they give the brain. From amino acids, vitamins, and minerals, the pure ingredients used in Ion Z are able to give users the boost they need to power through the most intense tasks. For people who are struggling to function on a daily basis, whether it be from lack of drive, energy, or focus, Ion Z is the perfect solution. Giving the brain exactly what it needs to get closer to its true potential, Ion Z is able to improve cognitive functions, so users no longer feel like their struggling to keep up in this hectic, fast world. Because the ingredients used in the supplement are so pure and have been so expertly blended, the formulation used in Ion Z begins working quickly. In fact, while most users of Ion Z will notice a difference in a few minutes, many have said they noticed a change in a few seconds of taking the supplement. By using its superior formulation to work so quickly, Ion Z is able to provide users with the cognitive support they need as soon as they need it, without any wait time. In some circles, supplements are getting a bad reputation. However, Ion Z wanted to go above and beyond expectations with its formulation, which is why the company spent so much time and money making sure the supplement was proven to work. In one of the largest clinical trials ever conducted, Ion Z was found to not only aid in the boosting of cognitive function, but to do so faster than most other brain enhancing supplements on the market. The dedication Ion Z has shown to exceeding

industry standards is part of the reason it has become so popular so quickly. Ion Z was designed to give users a boost in their brain function, helping them get through difficult tasks and deadlines. However, not only does Ion Z improve drive and focus, it is also able to improve overall memory. One of the worst things that can happen to a worker or student is to freeze up over a piece of information that has slipped the mind. With Ion Z, these occurrences will greatly decrease, allowing users to grasp information quickly when they need it the most. In addition to the points described above, Ion Z has several other benefits. A list of these additional benefits can be found below.

7: Ion Z Review - Advanced Nootropic Brain Formula For Cognitive Energy?

WebMD provides information on popular vitamins and supplements including side effects, drug interactions, user ratings and reviews, medication over dose, warnings, and uses.

8: ALOE VERA: A SHORT REVIEW

The Aloe Vera Miracle I'm truly excited to be bringing you this information today about the miraculous healing abilities of aloe vera. First off, in case you don't know, let me emphasize that I don't sell aloe vera products of any kind.

9: Vitamins, Minerals & Supplements | Nature Made®

A preliminary study involving 18 people found that aloe vera increased the absorption of vitamins C and E. Supplements haven't been tested for safety and due to the fact that dietary supplements are largely unregulated, the content of some products may differ from what is specified on the product label.

Dealing with bias in treatment effects estimated from non-experimental data Anything is possible! Emotions and reason The goddess inheritance Absolute beginners guide to memory management Rating raising indoor plants Appendix B: Film adaptations of Hardy, 1967-2000 Top Tax Saving Ideas for Todays Small Business: A Fresh Look After Tax Reform Legislation Guy debord report on the construction of situations knabb The World Market for Retort Carbon and Coke or Semi-Coke of Coal, Lignite, and Peat George Villiers, Second Duke Of Buckingham; The Rehearsal Microsoft Windows Sharepoint services inside out Cross Fertilization: The Human Spirit As Place (Contemporary Anthology Series : No. 3) Coming home from home The 2008 Olympics in China should not be boycotted Timothy Rutten Attack from the Sea Partnerships in the control of infectious diseases The weekend estate planning kit The culture of cyberspace and everyday life General aviation marketing and management Secret places of the Burren Plate 1. A Bizarre Landscape The Light of Early Italian Painting Wests essentials of Quattro Pro 5.0 for Windows International Wildlife Law Rumpelstiltskin with Benjy and Bubbles Boma by Theodore J. Waldeck Americas Best Graduate Schools 2004 A comparison of factors coaches and players consider important in basketball recruiting Knowledge and the impasse in left politics : towards a new democratic imaginary? Greatest shortstops of all time The merry men, and other tales and fables Myths of the Underworld Journey Putting it all together : answering critical-thinking questions. Researching and writing a documentary proposal Making Praise a Priority Working with lexis in speech Big bim little bim Uncle Rubes net. Treasure of Atocha