

# A Healthy Vegetarian Diet and Lifestyle can Meet ALL our Nutritional Needs even without eggs or dairy products

VITAMINS	Food Sources	Functions	Toxicity	Remarks
<b>A</b> (Carotenoids)	Dark green, dark yellow and orange vegetables, Carrot, Sweet potato, Coloured fruits, Peach, Oranges, Apples.	Converted in the body to vitamin A, which is essential for good eyesight and night vision, for bone formation and normal body growth esp skin and tooth, assist pregnancy and lactation. Act as antioxidants, protect against cancer, heart disease, etc. Enhance immune system.	Non-toxic, even when consumed in large amounts over long periods of time, except that harmless temporary yellowing of skin occurs.	Vitamin A found in animal food is toxic in prolonged excessive intake, and can cause vomiting, nausea, joint pain, bone deformities, itching, hair loss, headaches, birth defects.
<b>B1</b> (Thiamin)	Wheatgerm, Nutritional yeast, Cooked beans and peas, Collard greens, Raisins, Oranges, Nuts, whole grains.	Normal functioning of all body cells, esp nerves. Improve reaction time and hand-eye coordination. Metabolism of carbohydrates, protein and fats for energy.	No known toxic levels.	Chicken and beef are poor sources. Vitamin B1 is lost when cooking water is discarded or when baking soda is added to cooked vegetables.
<b>B2</b> (Riboflavin)	Dark green leafy vegetables, Avocado, Wheatgerm, Whole grains.	Metabolism of carbohydrates, protein and fats for energy. Important for normal growth and development, hormonal production and regulation, formation of red blood cells.	No known toxic levels.	Easily destroyed by light.
<b>B3</b> (Niacin)	Cooked dried beans and peas, Nuts, whole wheat and grains, Potato, nutritional Yeast	Metabolism of carbohydrates, protein and fats for energy. Aids in synthesis of fats and certain hormones, formation of red blood cells and detoxification. Maintenance of all body cells.	Large doses (more than 3 grams) may cause liver damage	Relatively stable to heat and light; little is lost during cooking unless cooking water is discarded. Fruit, except for orange juice, is a poor source.
<b>B6</b> (Pyridoxine)	Cooked dried beans and peas, Nutritional Yeast, Wheatgerm, Nuts, Bananas, Avocados, Leafy greens, Cabbage, Cauliflower, Potatoes, Whole grains, Dried fruit.	Metabolism of carbohydrates, protein and fats for energy. Involved in production of red blood cells and many enzymes. Aids in formation and maintenance of the nervous system and immune system, regulation of mental processes and mood.	Toxic to the nervous system when taken in large doses	Significant losses during processing of flours, in frozen foods or when cooking water is discarded. 1 medium banana contain more vitamin B <sup>6</sup> than 3 ounces of beef or chicken.
<b>B7</b> (Biotin)	Oatmeal, Nutritional yeast, Legumes, Soybeans, Mushrooms, bananas, Nuts, Whole grains	Metabolism of carbohydrates, protein and fats for energy.	No known toxic levels.	Biotin deficiency is rare as significant amounts are produced by bacteria in the intestines.
<b>B12</b> (Cyanocobalamin)	Nutritional yeast, Fortified foods and beverages such as cereals, soymilk and orange juice.	Metabolism of carbohydrates, protein and fats for energy. Formation and maintenance of the nervous system. Essential for replacement and maintenance of all body cells.	No known toxic levels.	B12 present in sea vegetables, tempeh, and miso has been shown to be inactive B-12 analog. B12 requirements are very small, and it is both stored and recycled in the body to last a long time.
<b>Folate</b> (Folic Acid)	Dark green leafy vegetables, Nutritional Yeast, Beans, Avocados, Wheatgerm, various fruits like Banana, Orange, Whole grains	Synthesis of DNA. Essential for normal growth and maintenance of all cells. Involved in the production of neurotransmitters that regulate mood, sleep and appetite. Important in the creation of new fetal and maternal tissue during pregnancy. Prevent heart disease by reducing homocysteine levels in blood.	No known toxic effects. But large doses (4mg) could mask a B12 deficiency, causing nerve problems to progress undetected to irreversible stages.	Plant foods are our best source of folate. Folate is easily lost when foods are improperly stored for too long or at warm temperature, or in overcooking or reheating, or when cooking water is discarded.
<b>Pantothenic Acid</b>	Legumes, Soybeans, Avocados, Mushrooms, green vegetables, Bananas, Oranges, Whole grains, wheatgerm	Metabolism of carbohydrates, protein and fats for energy. Production of fats, cholesterol, bile, vitamin D, red blood cells, some hormones and neurotransmitters. Aids in building of body cells.	No serious toxic effects other than diarrhea.	Pantothenic acid is easily available in a wide variety of foods. Significant amounts are lost in refining of grains.
<b>C</b> (Ascorbic Acid)	Fresh fruits and vegetables, Green pepper, Broccoli, Citrus fruits, Tomatoes, Guava, Strawberries	Formation and maintenance of collagen, which helps prevent infections, strengthen connective tissues, promotes healing. Promote healthy teeth, gums and bones. Antioxidant. Strengthen immunity.	Megadoses (>1g) can cause nausea, diarrhea, and increased susceptibility to colds and infections	Enhances the absorption of iron when both are consumed in same meal. Easily lost by improper handling, overwashing, overcooking, reheating, slicing and chopping; freezing has little effect
<b>D</b>	Sunlight, Fortified foods and beverages	Regulate absorption and use of calcium and phosphorus. Aid in formation of normal bones and teeth. Aids in maintenance of healthy nerve and muscle system.	Toxic in large doses, esp for children and pregnant women.	Vitamin D is poorly supplied in all diets, unless fortified. 20 minutes of direct sunshine, 3 times per week, is enough for our vitamin D needs.
<b>E</b> (Tocopherol)	Vegetable oils, Seeds, Nuts, Wheatgerm, Spinach, Peaches, Avocados, Broccoli, Dried prunes, Whole wheat	Main function is as an antioxidant. Protect body cells and tissues from damage, regulate use and storage of vitamin A. Prevent premature aging, cancer, heart disease, etc. May alleviate symptoms of PMS.	Relatively non-toxic, those large doses might interfere with vitamin K activity	Most animal foods are poor sources of vitamin E. Easily lost when flours and oils are processed and bleached.
<b>K</b>	Green or leafy vegetables, Broccoli, Turnip greens, Cabbage, Cauliflowers, Avocados	Main function is to regulate blood normal clotting. Promotes growth and healthy bones.	Large doses can cause anemia and a severe form of jaundice in infants.	Meat is a poor source of vitamin K. Most of what we need come from our intestinal bacteria.

<b>MINERALS</b>	<b>Food Sources</b>	<b>Functions</b>	<b>Toxicity</b>	<b>Remarks</b>
<b>Calcium</b>	dark green leafy Vegetable, Broccoli, cooked dried Beans, Soy products, Nuts, Seeds, dried Fruits, Sea vegetables, Calcium fortified foods like tofu, orange juice and soymilk	Main function is development and maintenance of healthy bones and teeth. Aids in blood clotting. Essential in production and activity of numerous enzymes and hormones that regulate digestion, energy and fat metabolism, and in nerves transmission.	Excessive intake might increase risk for calcium deposition into soft tissues, reduce zinc and iron absorption, impair vitamin K metabolism.	Requires vitamin D for absorption. More than 50% of calcium in many vegetables is absorbed; while that for milk is only 32%. Calcium intake is only one of the many factors contributing to osteoporosis.
<b>Iron</b>	dark green leafy Vegetables, Legumes, Nuts and Seeds, Blackstrap molasses, Sea vegetables, dried Fruits, whole and enriched Grains	Manufacture of hemoglobin, transportation of oxygen in blood to all our body cells. Strengthen the immune system. Improve athletic performance.	Excess iron is accumulated and might catalyse the formation of free radicals, and thus increase the risk for cancer and heart disease	Nonheme iron (in plant food) is better regulated by our body needs. Vitamin C can increase absorption up to fourfold. Cooking in cast-iron cookware can increase iron content.
<b>Zinc</b>	Wheatgerm, Nuts, Almond nuts, Seeds, Pumpkin and Sunflower seeds, Beans, Mushrooms, whole Grain products	An essential component in numerous enzymes in the body. Prostate gland function. Metabolism of carbohydrates, protein and fats for energy. Proper functioning of insulin, maintenance of genetic code. Wound and burn healing.	Relatively nontoxic. Large doses might inhibit copper absorption and reduce iron absorption.	For man, sexual indulgence will drain our body's store of zinc. Plenty of zinc is found in the listed plant foods.
<b>Magnesium</b>	Nuts, Seeds, cooked dried Beans and Peas, Avocados, Bananas, dark green leafy Vegetables, whole Grains, Soybeans	Metabolism of carbohydrates, protein and fats for energy. Synthesis of genetic material. Functions in muscle relaxation and contraction, nerve transmission, prevention of tooth decay and heart problems. Similar functions as calcium.	Kidneys are efficient at excreting excess magnesium.	Meat is a very poor source of magnesium. Closely related to Potassium. Function together with calcium and phosphorus in bone formation, nerves
<b>Potassium</b>	Fruits, Vegetables, Grains, Potatoes, Avocados, Bananas, Oranges, cooked dried Beans and Peas, dried Fruits	Help maintain normal balance and distribution of fluids throughout the body. Help regulate nerve transmission and many cell membrane functions. Regulate normal blood pressure, proper calcium balance and heartbeat.	Uncommon to reach such high levels to cause problems.	Worked closely with sodium and chloride. Helps prevent and treat hypertension caused by excessive sodium.
<b>Phosphorous</b>	Legumes, Soybeans, Nuts and Seeds, Wheatgerm, rice Bran, wheat Bran.	Healthy bones and teeth. Growth and repair of cells. Nerve and muscle activity. Metabolism of carbohydrates, protein and fats for energy.	Osteoporosis, due to imbalance in ratio of calcium to phosphorus	Vitamin D increases phosphorus absorption. Closely related to and affected by calcium and magnesium.
<b>Boron</b>	fresh fruits and vegetables, nuts	Essential for normal calcium and bone metabolism.	Much is unknown; No RDA established.	Meat and fish are poor sources.
<b>Iodine</b>	Iodised Salt, nutritional Yeast, sea Vegetables, Almonds, Mushrooms	Function as a component of the thyroid hormones, which regulate the rate of metabolism, growth, reproduction, nerve and muscle. Healthy hair and skin	Greater than 25 times RDA can cause a hyperactive and enlarged goiter.	Meat is a poor source of iodine. Sea vegetables are excellent natural sources.
<b>Manganese</b>	Spinach, tea, whole grain Breads, Raisins, Blueberries, Pineapple, Legumes, Nuts, dark green leafy Vegetables, dried Fruits	Formation of connective tissues, fats, cholesterol, bones, blood clotting factors and proteins. Metabolism of carbohydrates.	Uncommon to reach such high levels as to interfere with iron absorption.	Meat is a poor source of manganese.
<b>Selenium</b>	all plant foods grown in selenium-rich soil	Antioxidant, protect against cancer and heart disease. Important for normal development of fetus during pregnancy.	Can be toxic if consumed in amounts greater than 600mcg to 750 mcg	Work closely with vitamin E as antioxidants. Selenium content of food depends on selenium content of soil.
<b>Copper</b>	found in wide variety of unprocessed foods, whole grains, dark green leafy Vegetables, legumes	Development and maintenance of the heart, arteries, blood vessels and skeletal system. Aids in nerve transmission, red blood cell production, normal hair and skin colour. Metabolism of carbohydrates, protein and fats for energy.	Rare	Balance of iron, zinc and copper is important in the their absorption and use. Excess calcium inhibits absorption of copper.
<b>Chromium</b>	nutritional Yeast, whole grain Breads, Spices and Herbs	Function mainly as a component of glucose tolerance factor, which maintains normal blood sugar levels by increasing and regulating insulin effectiveness. Stimulates synthesis of protein.	Excess intake can inhibit, instead of enhance, the effectiveness of insulin.	Refined and processed foods are low in chromium. Cooking acidic food in stainless steel cookware will increase chromium content.

<b>Essential Fatty Acids</b>	<b>Functions</b>	<b>Toxicity</b>	<b>Remarks</b>	
<b>Omega 3</b> (linoleic acid)	widely in nuts, seeds, vegetables, beans and fruits; vegetable oils such as canola, flaxseed, soybean, walnut, and wheat germ	Important in normal functioning of all body tissues; may prevent atherosclerosis, reduce incidence of heart disease and stroke, and bring relief from the symptoms associated with ulcerative colitis, menstrual pain, and joint pain	All fats, will increase free radical production and depress the immune system	Omega-3s in fish oils are highly unstable molecules that tend to decompose and, in the process, unleash dangerous free radicals.
<b>Omega 6</b> (linolenic acid)	nuts and seeds, esp sunflower seeds; vegetables oils such as black currant, borage, evening primrose, and hemp oils	Same as above.	Same as above.	Meat, except fish, is a poor source of these essential fatty acids.