



Whole Body  
Healthcare

# Vitamins

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Vitamin	Sources	Role in Health	Deficiency
<b>A (Retinol in animal foods, beta carotene in plant foods)</b>	animal sources: milk, butter; cheese, egg yolks, margarine, meats, poultry, fish, liver plant sources: carrots, apricots, squash, red peppers, broccoli, green leafy vegetables, mango and sweet potatoes	Essential for vision, bone growth and skin and tissue repair. Beta carotene acts as an antioxidant and protects the immune system.	Deficiency is characterized by poor night vision, dry skin and lower resistance to infection, especially respiratory disorders.
<b>B1 (Thiamin)</b>	Wholegrain cereals, brewer's yeast, potatoes, nuts, pulses, milk, chicken, liver, fish, pork, beef and lentils	Essential for energy production, the nervous system, muscles and heart. Promotes growth and boosts mental ability	Deficiency is characterized by depression, irritability, nervous disorders, loss of memory. Common among alcoholics.
<b>B2 (Riboflavin)</b>	Cheese, eggs, milk, yogurt, fortified breakfast cereals, yeast extract, almonds, pumpkin seeds, meat, fish and liver	Essential for energy production and for the function of vitamin <b>B6</b> and <b>niacin</b> as well as <b>tissue repair</b> .	Deficiency is characterized by lack of energy, dry cracked lips, numbness and itchy eyes.
<b>B3 (Niacin)</b>	Pulses, potatoes, fortified breakfast cereals, wheatgerm, peanuts, milk, cheese, eggs, peas, mushrooms, green leafy vegetables, figs, prunes, meat, fish, poultry and legumes	Essential for healthy digestive system, skin and circulation. It is also needed for the release of energy	Deficiency is unusual but characterized by lack of energy, depression and scaly skin.
<b>B5 (Pantothenic Acid)</b>	Fresh meat and vegetables	Essential for making hormones as well as cholesterol	Deficiency is characterized by acne, decrease in metabolism, fatty liver, dermatitis, gray hair, bleeding, fatigue, insomnia, depression, irritability, vomiting, stomach pain, burning feet, and upper respiratory infections
<b>B6 (Pyridoxine)</b>	Eggs, wholemeal bread, breakfast cereals, nuts, bananas and cruciferous vegetables, such as broccoli, cabbage, cauliflower, legumes, seeds, corn and green beans	Essential for assimilating protein and fat, to make red blood cells and a healthy immune system.	Deficiency is characterized by anaemia, dermatitis and depression.
<b>B7 (Biotin)</b>	Eggs, sardines, bananas, cauliflower, mushrooms and nuts	Essential for the metabolism of carbohydrates proteins and fats as well as a co-enzyme for major reactions in blood glucose utilization and synthesis of fatty acids	Deficiency is characterized by hair loss, dry scaly skin, cracking along the edges of the mouth, swollen tongue, dry eyes, decreased appetite, fatigue, insomnia, and depression
<b>B12 (Cyanocobalamin)</b>	Milk, eggs, fortified breakfast cereals, cheese, yeast extract, liver, meat, saltwater fish and oysters	Essential for formation of red blood cells, maintaining a healthy nervous system and increasing energy levels.	Deficiency is characterized by fatigue, increase risk of infection, anaemia.
<b>Folate (Folic Acid)</b>	Green leafy vegetables, fortified breakfast cereals, bread, nuts, pulses, bananas, yeast extract, liver, beef, dry beans and lentils	Essential for cell division; makes genetic material (DNA) for every cell. Extra is needed pre-conception and during pregnancy to protect foetus against neural tube defects	Deficiency characterized by anaemia and appetite loss. Linked with neural defects in babies
<b>C (Ascorbic Acid)</b>	Citrus fruit, melons, strawberries, tomatoes, broccoli, potatoes, peppers and green vegetables	Essential for the absorption of iron, healthy skin teeth and bones. An antioxidant that strengthens the immune system and helps fight infection.	Deficiency characterized by increased susceptibility to infection, fatigue, poor sleep and depression.
<b>D (Calciferol)</b>	Sunlight, margarine, vegetable oils, eggs, cereals, butter, fatty fish, beef liver and mushrooms	Essential for bone and teeth formation, helps the body to absorb calcium and phosphorus	Deficiency characterized by softening of the bones, muscle weakness and anaemia. Long-term shortage in children results in rickets.
<b>E (Tocopherol)</b>	Seeds, nuts, vegetable oils, eggs, wholemeal bread, green leafy vegetables, oats and cereals	Essential for healthy skin, circulation and maintaining cells - an antioxidant	Deficiency characterized by increased risk of heart attack, strokes and certain cancers.
<b>K</b>	Green leafy vegetables, fish, liver, eggs and Brussels sprouts	Essential for clotting	Deficiency is characterized by easy bruising and excessive bleeding

Sources: Never Eat Alone by Wendi Spanos; The Practical Encyclopedia of Whole Foods by Nicola Graimes



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# Minerals

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Mineral	Sources	Role in Health	Deficiency
<b>Calcium</b>	Milk, cheese, yogurt, green leafy vegetables, sesame seeds, broccoli, dried figs, pulese, almonds, spinach, watercress, salmon, sardines, chicken, navy beans, turnip greens, tofu	Essential for building and maintaining bones and teeth, muscle function and the nervous system	Deficiency characterized by soft and brittle bones, osteoporosis, fractures and muscle weakness
<b>Iron</b>	Egg yolks, fortified breakfast cereals, green leafy vegetables, dried apricots, prunes, pulses, wholegrains, tofu, meat, fish, poultry, organ meats, beans, molasses, red wine	Essential for healthy blood and muscles	Deficiency characterized by anaemia, fatigue and low resistance to infection
<b>Zinc</b>	Peanuts, cheese, whole grains, sunflower and pumpkin seeds, pulses, milk, hard cheese, yogurt, oysters, red meat, poultry	Essential for a healthy immune system, tissue formation, normal growth, wound healing and reproduction	Deficiency is characterized by impaired growth and development, slow wound healing and loss of taste and smell
<b>Sodium</b>	Most salt we eat comes from processed foods such as crisps, cheese and canned foods. It is also found naturally	Essential for nerve and muscle function and the regulation of body fluid	Deficiency is unlikely but can lead to dehydration, cramps and muscle weakness
<b>Potassium</b>	Bananas, milk, pulses, nuts, seeds, whole grains, potatoes, fruits and vegetables	Essential for water balance, normal blood pressure and nerve transmission	Deficiency is characterized by weakness, thirst, fatigue, mental confusion and raised blood pressure
<b>Magnesium</b>	Nuts, seeds, whole grains, pulses, tofu, dried figs and apricots, green vegetables, beans, avocados	Essential for healthy muscles, bones and teeth, normal growth and nerves	Deficiency is characterized by with lethargy, weak bones and muscles, depression and irritability
<b>Phosphorus</b>	Milk, cheese, yogurt, eggs, nuts, seeds, pulses, whole grains and meat	Essential for healthy bones and teeth, energy production and the assimilation of nutrients, particularly calcium	Deficiency is rare
<b>Selenium</b>	Avocados, lentils, milk, cheese, butter, Brazil nuts and seaweed	Essential for protecting against free radical damage and may protect against cancer – an antioxidant	Deficiency is characterized by reduced antioxidant protection
<b>Iodine</b>	Seaweed, iodized salt, meats, cheese, eggs, whole grains, broccoli, shellfish, saltwater fish, milk	Aids the production of hormones released by the thyroid gland	Deficiency can lead to the formation of a goitre and a sluggish metabolism and apathy as well as dry skin and hair
<b>Chloride</b>	Table salt in foods that contain table salt	Regulates and maintains the balance of fluids in the body	Deficiency is rare
<b>Manganese</b>	Nuts, whole grains, pulses, tofu and tea	Essential component of various enzymes that are involved in energy production	Deficiency is not characterized by any specific symptoms
<b>Carnitine</b>	Animal products – red meat, liver, lamb and beef	Essential cholesterol and energy production from fats as well as cleaning up toxins	Deficiency is characterized by muscle weakness as well as heart and liver issues
<b>Chromium</b>	Meats, cheeses, eggs, whole grains and broccoli	Essential in sugar metabolism as it enhances insulin as well as the utilization carbohydrates, proteins and fats	Deficiency is characterized by impaired insulin function, inhibition of protein synthesis and energy production, and to type 2 diabetes and heart disease

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