Vitamin B1 (Thiamine)

Overview:
Vitamin B-1, otherwise known as thiamine, is necessary for most every cellular reaction in the body as a participant in an enzyme system known as thiamin pyrophosphate. It is vital to normal functioning of the nervous system and metabolism. It can be found in meat, whole grains, fish, and nuts.

How This Vitamin Works in Your Body:
Maintains health of mucous membranes
Keeps normal workings of nervous system, heart, and muscles
Helps treat herpes zoster and beriberi
Supports normal growth and development
Restores deficiencies caused by alcoholism, cirrhosis, overactive thyroid, infection, breastfeeding, absorption diseases, pregnancy, prolonged diarrhea, and burns
Reduction of depression, fatigue, and motion sickness
Potential improvement in appetite and mental alertness

The Following May Benefit from this Vitamin:
Alcohol or other substance abusers by accelerating metabolism
Those with poor nutritional dietary intake
Age greater than 55 years old
Women who are breastfeeding or pregnant
Recent surgery patients
Those with liver disease, overactive thyroid, or prolonged diarrhea

Where This Vitamin is Found:
Baked Potato
Beef kidney/liver
Brewer's yeast
Flour; rye and whole grain
Garbanzo beans (chickpeas), dried
Ham
Kidney beans, dried
Navy beans, dried
Orange juice
Oranges
Oysters
Peanuts
Peas
Raisins
Rice, brown and raw
Wheat germ
Whole-grain products

How to Use:
Available as:

Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.

Tablets: available

Recommended Daily Intakes
Men: 1.2 mg
Women: 1.1 mg
Pregnancy: 1.4 mg
Lactation: 1.5 mg

Cautions:
Consult your doctor if you have:
Liver or kidney disease.

Over 55:
Not overly necessary.

Pregnancy:
Keep doses within DRI.

Breastfeeding:
Keep doses within DRI.

Storage:
Out of direct light and away from children in a cool, dry place. Heat/moisture may change effectiveness.

Symptoms of Deficiency:
Symptoms include fatigue, depression, decreased mental functioning, muscle cramps, nausea, heart enlargement, and eventually beriberi. Alcoholics are at increased risk of a deficiency.

Overdose:
Signs of Overdose:
Hypersensitive reactions resembling anaphylactic shock
Drowsiness

Side Effects:
Reaction or effect: What to do:
Skin rash/itch Discontinue. Consult doctor immediately.
Swelling of face Discontinue. Consult doctor immediately.
Wheezing Obtain emergency treatment immediately.

Interactions:
Interacts with: Combined effect:
Antibiotics: Decreases thiamine levels
Muscle relaxers during surgery: Excessive muscle relaxation.
Oral contraceptives: Decreases thiamine levels
Werknickes encephalopathy treatment: Before taking glucose, take thiamine

Vitamin B2 (Riboflavin)

Overview:
Vitamin B-2, otherwise known as riboflavin, is readily absorbed from foods, such as meat, dairy products, and fortified grains. This vitamin is essential to energy generation, nerve development, blood cell development, and the regulation of certain hormones.

How This Vitamin Works in Your Body:
Releasing food energy
Normal growth and development
Keeps healthy mucous membranes linings together with vitamin A
Keeps healthy brain and nervous system, skin, hair, and blood cells
Essential for iron, pyridoxine, and niacin functions
Could increase growth of body during development stages
Potential treatment for cheilitis

The following may benefit from this supplement:
People with needed nutritional supplements
Pregnant or breastfeeding women
Substance abusers
People with excess stress or who have undergone recent surgery
Hyperthyroidism sufferers
Participants in vigorous physical activity

Where This Vitamin is Found:
Bananas
Beef liver
Dairy products
Eggs
Enriched breads
Fortified cereals
Ham
Mixed vegetables
Pork
Tuna
Wheat germ

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.

Tablets: available

Recommended Daily Intakes
Men: 1.3 mg
Women: 1.1 mg

Pregnancy: 1.4 mg
Lactation: 1.6 mg

Cautions:
Consult your doctor if you have:
Are or planning to be pregnant.

Over 55:
Increased need for riboflavin.

Pregnancy:
Keep within DRI.

Breastfeeding:
Keep within DRI.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms include red, swollen, cracked mouth and tongue; fatigue; depression; anemia; and greasy, scaly skin. The formation of cataracts may be a result of this vitamin deficiency.

Overdose:
Signs of Overdose:
None expected in individuals with normal kidney functioning. However, in rare cases, symptoms may be itching, numbness, a burning sensation, or light sensitivity.

Side Effects:
Reaction or effect : What to do
Yellow urine (in large doses) : No needed action.

Interactions:
Interacts with : Combined effect
Antidepressants (tricyclic) : Reduces B-2 efficacy.
Phenothiazines : Reduces B-2 efficacy.
Probenecid : Reduces B-2 efficacy.
Alcohol/Tobacco products : Reduces B-2 efficacy.

Vitamin B3 (Niacin)

Overview:
Vitamin B-3, otherwise known as niacin, acts like other B vitamins to create enzymes that are essential to metabolic cell activity, synthesize hormones, repair genetic material, and maintain normal functioning of the nervous system. Great sources of this vitamin may be found in meat, fish, and whole grains.

How This Vitamin Works in Your Body:
May treat pellagra
Decreases cholesterol and triglycerides in blood
Large doses dilate blood vessels
Handles ear ringing and dizziness
Essential for genetic material repair
Potential reduction in heart attacks, depression, and migraine headaches
Poor digestion could be improved

The following may benefit from this supplement:
Anyone with poor dietary intake
Pregnant or breastfeeding women
Substance abusers
Severe burn or injury patients
Infants with congenital metabolic disorders

Where This Vitamin is Found:
Beef liver
Brewer's yeast
Chicken, white meat
Dried beans/peas
Fortified cereals
Halibut
Peanut butter
Peanuts
Pork/ham
Potatoes
Salmon
Soybeans
Swordfish
Tuna
Turkey

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.

Tablets: available

Recommended Daily Intakes
Men: 16 mg
Women: 14 mg
Pregnancy: 18 mg
Lactation: 17 mg

Cautions:
Consult your doctor if you have:
Diabetes
Gout
Gallbladder or liver disease
Arterial bleeding
Glaucoma

Over 55:
Individualized doses recommended.

Pregnancy:
Do not use. Fetus may be at risk.

Breastfeeding:
Always consult doctor during lactation. Keep within DRI.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms include dermatitis on the hands and face, weakness, loss of appetite, sore mouth, diarrhea, anxiety, depression, and dementia.

Overdose:
Signs of Overdose:
Signs of an overdose may include body flush, nausea, diarrhea, weakness, lightheadedness, headache, fainting, high blood sugar, high uric acid, heart-rhythm disturbances, and jaundice.

Side Effects:
Reaction or effect : What to do
Abdominal pain : Discontinue. Consult doctor immediately.
Urine Darkening : No action needed.
Diarrhea : Discontinue. Refer to your doctor soon.
Headache : Discontinue. Refer to your doctor soon.
Faintness : Discontinue. Refer to your doctor soon.
Feeling hot : No action needed.
Jaundice : Discontinue. Consult doctor immediately.
Dry Skin : Discontinue. Refer to your doctor soon.

Interactions:
Interacts with : Combined effect
Antidiabetics : Reduction in antidiabetic effect.

Beta-adrenergic blockers : Incredibly low blood pressures.
Chenodiol : Reduction in chenodiol effect.
Guanethidine : Raises guanethidine effect.
Isoniazid : Reduction in niacin effect.
Mecamylamine : Incredible reduction in blood pressure.
Pargyline : Incredible reduction in blood pressure.
Ursodiol : Reduction in ursodiol effect.
Tobacco : Reduction in niacin effect.
Alcohol : Incredible reduction in blood pressure.

Vitamin B5 (Pantothenic Acid)

Overview:
Vitamin B-5, otherwise known as pantothenic acid, is a coenzyme involved in energy metabolism of carbohydrates, protein, and fat. Great sources of this vitamin include eggs, nuts, and whole-wheat products.

How This Vitamin Works in Your Body:
Helps normal growth and development
Helps release food energy
Could hasten healing of wounds in animals
May relieve stress
May lessen fatigue

The following may benefit most from this supplement:
Those with increased nutritional needs
Pregnant or breastfeeding women
Substance abusers
Those under prolonged stress
Those having undergone recent surgery
People with vigorous physical activity levels

Where This Vitamin is Found:
Avocados
Bananas
Blue cheese
Broccoli
Chicken
Collard greens
Eggs
Lentils
Liver
Lobster
Meats, all kinds
Milk
Oranges
Peanut butter
Peanuts
Peas
Soybeans
Sunflower seeds
Wheat germ
Whole-grain products

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.

Tablets: available

Recommended Daily Intakes
Men: 5 mg
Women: 5 mg
Pregnancy: 5 mg
Lactation: 5 mg

Cautions:
Consult your doctor if you have:
Hemophilia

Over 55:
No problems should occur.

Pregnancy:
Keep within DRI. Always consult doctor during pregnancy.

Breastfeeding:
Keep within DRI. Always consult doctor during lactation.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms include excessive fatigue, sleep disturbances, loss of appetite, nausea or dermatitis. However, these symptoms are rare and if they occur, they may indicate other B vitamin deficiencies.

Side Effects:
Reaction or effect : What to do
Diarrhea : Decrease dose. Refer to your doctor soon.

Interactions:
Interacts with : Combined effect
Levodopa : Vitamin may reduce effect of medicine.
Tobacco : Absorbs less of vitamin.

Vitamin B6 (Pyridoxine Pyridoxal Phosphate)

Overview:
Vitamin B-6, otherwise known as pyridoxine, performs as a coenzyme to carry out metabolic processes that affect the body's use of protein, carbohydrates, and fat. It helps to convert tryptophan to niacin, and may be found in meat, fish, eggs, milk, and whole grain foods.

How This Vitamin Works in Your Body:
Promotes healthy cardiovascular, nervous, and immune systems
Supports healthy skin, hair, and normal red-blood-cell formation
Assists in production of food energy
Possible anemia treatment
Treatment of cycloserine and isoniazid poisoning
Keeps normal homocysteine levels
Functions as a tranquilizer
Important for Healthy nerve and muscle functioning
Blood cholesterol may decrease
Inflammation of arthritis and carpal-tunnel syndrome may be reduced
Reduction of PMS symptoms
May reduce asthma symptoms
Increases levels of serotonin to ease sleep

The following people may benefit from taking this supplement:
Those with increased nutritional needs
Pregnant or breastfeeding women
Substance abusers
Long periods of excess stress
Estrogen and oral contraceptive users
Hyperthyroidism sufferers
Those with high homocysteine levels

Where This Vitamin is Found:
Avocados
Bananas
Beef liver
Chicken
Fortified cereals
Ground beef
Ham
Hazelnuts (filberts)
Lentils
Potatoes
Salmon
Shrimp
Soybeans
Sunflower seeds
Tuna
Wheat germ

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.

Tablets: available

Recommended Daily Intakes
Men: 1.3 mg
Men (Over 50): 1.7 mg
Women: 1.3 mg
Women (Over 50): 1.5 mg
Pregnancy: 1.9 mg
Lactation: 2.0 mg

Cautions:
Consult your doctor if you have:
Stress resulting from illness, burns, accident, or recent surgery
Intestinal problems
Liver disease
Overactive thyroid
Sickle-cell disease

Over 55:
A marginal deficiency of this vitamin is more likely to occur.

Pregnancy:
Keep dosage within DRI.
Avoid large doses. May cause pyridoxine dependency syndrome in child.

Breastfeeding:
Large doses may cause dependency in child.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms include weakness, mental confusion, irritability, nervousness, inability to sleep, hyperactivity, anemia, skin lesions, tongue discoloration, and kidney stones.

Overdose:
Signs of Overdose:
Sustained periods of large doses may cause irreversible nerve damage. The excess of vitamin B-6 may also lead to kidney stone formation.

Side Effects:
Reaction or effect : What to do
Depression when taking with oral contraceptives : Stop use and consult your doctor.
Large doses may cause dependency : Keep doses within DRI.

Large doses for several months severe sensory neuropathy : Stop use and consult doctor immediately.

Interactions:
Interacts with : Combined effect
Estrogen or oral contraceptives : Reduces vitamin absorption rates.
Tobacco/alcohol : Reduces vitamin absorption rates.
Phenytoin : Large doses affect medicine absorption.
Levodopa : Keeps medicine from controlling Parkinson's symptoms.
Chloramphenicol, cycloserine, ethionamide, hydralazine, isoniazid, penicillamine, and immunosuppressants : Excretion of vitamin increased and may cause anemia or peripheral neuritis.

Vitamin B9 (Folic Acid Folate)

Overview:
Vitamin B-9, otherwise known as folic acid, serves as a coenzyme during the creation of DNA. This vitamin is also very important to the growth and reproduction of all body cells, including red blood cells. Great food sources of vitamin B-9 include liver and dark green leafy vegetables.

How This Vitamin Works in Your Body:
Formation of red blood cells
Creation of genetic material
Promotes a healthy pregnancy by regulating the nervous system development of the fetus
Helps treat anemic patients resulting from folic acid deficiency
Functions to metabolize proteins
Cervical dysplasia may be reduced

The Following People May Benefit from the Consumption of This Vitamin:
Those with increased nutritional needs
Pregnant or breastfeeding women or those planning to become pregnant
Oral contraceptive users
Substance abusers
Those who have undergone partial removal of the gastrointestinal tract

Where This Vitamin is Found:
Asparagus
Avocados
Bananas
Beans
Beets
Brewer's yeast
Brussels sprouts
Cabbage
Calf liver
Cantaloupe
Citrus fruits/juices
Endive
Fortified grain products
Garbanzo beans (chickpeas)
Green, leafy
vegetables
Lentils
Sprouts
Wheat germ

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.

Tablets: Available as tablet. Swallow whole with a full glass of liquid without chewing or crushing. Take with or 1 to 1-1/2 hours after meals unless otherwise directed by your doctor.

Recommended Daily Intakes
Men: 400 mg
Women: 400 mg
Pregnancy: 600 mg
Lactation: 500 mg

Cautions:
Consult your doctor if you have:
Anemia
Taking methotrexate

Over 55:
Not overly necessary.

Pregnancy:
Always consult doctor during pregnancy. Keep within DRI.

Breastfeeding:
Always consult doctor during lactation. Keep within DRI.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms include anemia, mood disorders and gastrointestinal disorders. Neural tube defects may occur when a deficiency occurs during pregnancy.

Overdose:
Signs of Overdose:
In large doses, the following may occur:
Loss of appetite
Nausea
Flatulence
Abdominal distension
May produce folacin crystals in kidney

Side Effects:
Reaction or effect : What to do
Urine is bright-yellow : No action necessary.
Diarrhea : Discontinue. Consult doctor immediately.
Fever : Discontinue. Refer to your doctor soon.
Shortness of breath resulting from anemia : Discontinue. Refer to your doctor soon.
Skin rash : Discontinue. Consult doctor soon.

Interactions:
Interacts with : Combined effect

Analgesics : Folic acid efficacy reduced.
Antacids : Folic acid efficacy reduced.
Antibiotics : Low false results for serum folic acid test may occur.
Anticonvulsants : Folic acid and anticonvulsant efficacy reduced.
Chloramphenicol : Folic-acid deficiency occurs.
Cortisone drugs : Folic acid efficacy reduced.
Epoetin : Folic acid efficacy reduced.
Methotrexate : Folic acid efficacy reduced.
Oral contraceptives : May need increased consumption of folic acid.
Phenytoin : Phenytoin effect reduced. Avoid taking folic acid if you are a patient taking phenytoin.
Pyrimethamine : Folic acid and pyrimethamine efficacy reduced. Keep away from combination.
Quinine : Folic acid efficacy reduced.
Sulfa drugs : Effect of folic acid decreased.
Triamterene : Effect of folic acid decreased.
Trimethoprim : Effect of folic acid decreased.

Vitamin C (Ascorbic Acid)

Overview:
Vitamin C is essential for the manufacturing of collagen, necessary for tissue repair. It is needed for metabolism of phenylalanine, tyrosine, folic acid, iron. Vitamin C is also vital for healthy immune and nervous systems because it strengthens blood vessels, as it is an antioxidant that participates in oxidation-reduction reactions. Also, it is required for utilizing carbohydrates and synthesizing fats and proteins.

How This Vitamin Works in Your Body:
Vitamin C is one of the most crucial vitamins in your body for the very fact that plays a large role in hundreds of the body's functions.

The most plentiful tissue in the body is collagen, which is a connective tissue. The primary role of Vitamin C is to help this connective tissue. Because collagen is the defense mechanism against disease and infection, and because Vitamin C helps build collagen, it makes sense that it is also a remedy for scurvy by contributes to hemoglobin production. It promotes the production of red-blood-cell in bone marrow. Ascorbic Acid also supports healthy capillaries, gums, teeth, and even helps heal wounds, burns, and broken tissues. It contributes to hemoglobin and red-blood-cell production in bone marrow while even preventing blood clots. The list goes on. It helps heal urinary-tract infections, and helps treat anemia.

Another large benefit of this vitamin is the fact that it plays a large role in the production of antibodies. When the immune system is being overworked, for example when a cold strikes or when your body is wounded, Vitamin C comes in to play by beefing up the white blood cell count and function. It also functions as a promoter of interferon, a compound that fights cancer. An example of this would be blocking production of nitrosamines which are thought to be carcinogenic

Other functions of Vitamin C include:
Tthe promotion of iron absorption and calcium absorption.
Aids adrenal gland function
Reduces free-radical production
May reduce cholesterol
Potential protection against heart disease
May prevent allergies
May reduce symptoms of arthritis, skin ulcers, allergic reactions
Possible relief of herpes infections of eyes and genitals
May prevent periodontal disease
May reduce toxic effect of alcohol and drugs
May promote healing of bed sores
May retard aging
May improve male fertility

Additional Vitamin C may be required for:
Anyone with inadequate caloric or nutritional dietary intake.

People receiving kidney dialysis.
People over 55 years of age.
Those with recent burns or injuries.
Users of alcohol or tobacco
Those with a chronic illness, such as hyperthyroidism, AIDS, cold exposure, acute illness with fever, or tuberculosis.
People with infection.
Those under prolonged periods of stress.
Post surgery patients.
Those who are continually exposed to toxins.

Where This Vitamin is Found:
Fruits
Grapefruit
Guava
Lemons
Mangos
Orange juice
Tomatoes
Strawberries
Vegetables
Black currants
Broccoli Oranges
Brussels sprouts
Cabbage Peppers, sweet and hot
Collards Potatoes
Green peppers
Kale
Papayas
Rose hips
Spinach
Tangerines
Watercress

How to Use:
Consume fresh fruits lightly cooked or raw.
Steaming vegetables may reduce Vitamin C concentration.
Leaving food exposed to light and air may decease concentration.

Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.
Tablets: taking 1.5 hours after a meal is generally recommended. Effervescent is also available.
Injectable forms are available from your doctor.

Cautions:
Consult your doctor if you have:
Gout
Kidney stones

Sickle-cell anemia
Iron storage disease

Over 55:
Intake of specific vitamins may decrease as you age, therefore extra supplementation may be necessary.
Side effects are more frequent.

Pregnancy:
Do not take doses greater than RDA.
Choose a prenatal multivitamin with Vitamin C because bone development, teeth, and tissue formation of the fetus are developing.
Megadoses during pregnancy may result in deficiency symptoms after birth.

Breastfeeding:
Continue prenatal vitamins.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Prolonged healing of wounds
Easy bruising
Frequent infections
Prolonged colds
Scurvy: weak muscles, fatigue, loss of teeth, bleeding gums, depression, bleeding beneath the skin
Swollen or painful joints
Nosebleeds
Anemia: tired, paleness

Overdose:
Signs of Overdose:
Overdose of oral forms: headache, increased urination, flushed face, nausea or vomiting, lower abdominal cramps, diarrhea. May feel like the flu or common cold.
Injectable forms may result in dizziness or fainting. : Discontinue vitamin and consult doctor immediately.
Dial 911 or 0 or Poison Control Center immediately.

Side Effects:
Reaction or effect : What to do
Anemia : Discontinue. Call doctor immediately.
Flushed face : Discontinue. Call doctor when convenient.
Headache : Discontinue. Call doctor when convenient.
Increased frequency of urination : Discontinue. Call doctor when convenient.
Lower abdominal cramps : Seek emergency treatment
Mild diarrhea : Decrease dose. Call doctor when convenient.
Nausea or vomiting : Seek emergency treatment.
Rebound scurvy-like symptoms : Call doctor when convenient If you decide to reduce dose,

do so
gradually to prevent deficiency symptoms.

Interactions:
Interacts with : Combined effect
Aminosalicylic acid (PAS for tuberculosis) : Increases chance of formation of drug crystals in urine.
Large doses of vitamin C must be taken to produce this effect.
Anticholinergics : Decreases anticholinergic effect.
Anticoagulants (oral) : Decreases anticoagulant effect
Aspirin : Decreases vitamin-C effect.
Barbiturates : Decreases vitamin-C effect. Increases barbiturate effect.
Calcium : Assists in absorption of calcium.
Copper : Decreases absorption of copper. Large doses of vitamin C must be taken to produce this effect.
Iron supplements : Increases iron effect.
Quinidine : Decreases quinidine effect.
Salicylates : Decreases vitamin-C effect
Sulfa drugs : Decreases vitamin-C effect. May cause kidney stones.
Tetracyclines : Decreases vitamin-C effect.
Tobacco/Alcohol : Decrease absorption of vitamin.

Vitamin D Cholecalciferol

Overview:
Vitamin D, otherwise known as the sunshine vitamin, is significant in normal body growth and development. In particularly, vitamin D is used to absorb calcium and phosphorus to create bone. Great sources of this supplement include fortified milk, oily fish, liver, and eggs.

How This Vitamin Works in Your Body:
Absorbs calcium and phosphorus to aid in the development of bones and teeth
Promotes normal cell growth and maturation
Prevents rickets
Maintains a healthy nervous and immune system
Treats low blood calcium with patients with kidney disease
Potential reduction in breast and colon cancer
Aging symptoms may be treated

The Following May Benefit from Taking Vitamin D:
Kids living in places with little sunshine
Those who need additional nutritional intake
People over 55 who receive little sunshine, such as those in nursing homes
Pregnant or breastfeeding women
Substance abusers
Those under prolonged stress
Those with partially removed intestinal tracts
Dark-skinned individuals
Babies who are breastfed
Vegan vegetarians
Cystic fibrosis patients

Where This Vitamin is Found:
Cod-liver oil
Egg substitutes
Halibut-liver oil
Herring
Mackerel
Salmon
Sardines
Sunlight
Tuna
Vitamin-D-fortified milk

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.
Tablets: available
Recommended Daily Intakes
Men: 200 IU

(over 50) 400 IU
(over 70) 600 IU
Women: 200 IU
(over 50) 400 IU
(over 70) 600 IU
Pregnancy: 200 IU
Lactation: 200 IU

Cautions:
Consult your doctor if you have:
Have planned pregnancy while taking vitamin D
Epilepsy
Heart or blood-vessel disease
Kidney, liver or pancreatic disease
Chronic diarrhea
Intestinal problems
Sarcoidosis

Over 55:
Higher potential for adverse reactions and side effects.

Pregnancy:
Always consult doctor during pregnancy. Abnormalities within the fetus may occur in too high of a dose. Remember to keep within the DRI.

Breastfeeding:
It is vital to normal growth and development of the child to get the correct intake of vitamin D. Always consult doctor during lactation. Remember to keep within the DRI.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms include bone pain and tenderness and muscle weakness. In children, rickets may occur, in which bones lose calcium and become soft and curved. Without proper intake, there is an increased risk of osteoporosis, arthritis, and cancer.

Overdose:
Signs of Overdose:
High blood pressure
Irregular heartbeat
Nausea
Weight loss
Seizures
Abdominal pain
Appetite loss
Mental-and physical-growth retardation
Premature hardening of arteries
Kidney damage

Side Effects:
Reaction or effect : What to do
Loss of appetite : Discontinue. Refer to your doctor soon.
Constipation : Discontinue. Refer to your doctor soon.
Diarrhea : Discontinue. Consult doctor immediately.
Dry mouth : Discontinue. Refer to your doctor soon.
Headache : Discontinue. Consult your doctor immediately.
Increased thirst : Discontinue. Refer to your doctor soon.
Mental contusion : Discontinue. Consult your doctor immediately.
Nausea or vomiting : Discontinue. Consult your doctor immediately.
Unusual tiredness : Discontinue. Refer to your doctor soon.

Interactions:
Interacts with : Combined effect
Antacids with aluminum : Absorption of vitamin D reduced.
Antacids with magnesium : People with kidney failure should be aware of possibly too much magnesium
in the blood.
Anticonvulsants : Vitamin efficacy may be reduced.
Barbiturates : Vitamin efficacy may be reduced.
Calcitonin : Calcitonin effect reduced when treating hypercalcemia.
Calcium (high doses) : Risk of hypercalcemia increased.
Cholestyramine : Vitamin absorption reduced.
Colestipol : Vitamin absorption reduced.
Cortisone : Vitamin absorption reduced.
Digitalis preparations : Heartbeat irregularities increased.
Diuretics, thiazide : Hypercalcemia risk increased.
Hydration : Vitamin efficacy may be reduced.
Mineral oil : Absorption of vitamin D increased.
Phosphorus- containing medicines : Risk increased of too much phosphorus in blood.
Primidone : Vitamin efficacy may be reduced.
Vitamin-D derivatives : Increased potential for toxicity due to additive effects.
Alcohol : Depletes storage of vitamin D in liver.

Vitamin E (Alpha Tocopherol)

Overview:
Vitamin E, otherwise known as alpha-tocopherol, serves as a cofactor in several enzyme systems. It keeps excessive oxidation from occurring that could cause harmful effects in the body. Great sources of vitamin E may be found in wheat germ, nuts and seeds, whole grain cereals, eggs, and leafy greens.

How This Vitamin Works in Your Body:
Protects fats, cell membranes, DNA, and enzymes against damage
Encourages normal growth and development
Helps prevent vitamin E deficiency in premature infants and those with low birth weights
Acts as an antioxidant to protect against heart disease and cancer
Anti-blood clotting agent
Helps protect against prostate cancer
Improves immune system
Reduces risk of first fatal heart attack in men

Where This Vitamin is Found:
Almonds
Asparagus
Avocados
Brazil nuts
Broccoli
Canola oil
Corn
Corn oil/margarine
Cottonseed oil
Fortified cereals
Hazelnuts (filberts)
Peanuts/Peanut oil
Safflower nuts/oil
Soybean oil
Spinach
Sunflower seeds
Walnuts
Wheat germ
Wheat germ oil

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.
Tablets: available

Recommended Daily Intakes
Men: 10 mg alpha TE (15 IU)
Women: 8 mg alpha TE (12 IU)

Pregnancy: 10 mg alpha TE (15 IU)
Lactation: 12 mg alpha TE (18 IU)

Cautions:
Consult your doctor if you have:
Iron-deficiency anemia
Bleeding or clotting problems
Cystic fibrosis
Intestinal problems
Liver disease
Overactive thyroid
Low-birth weight baby

Over 55:
Not problems should occur.

Pregnancy:
Always consult doctor during pregnancy. Keep dosage within DRI. Low-birth weight babies at risk for deficiency.

Breastfeeding:
No problems should occur.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms include in infants irritability, fluid retention and anemia. Adult symptoms may include lethargy, loss of balance and anemia. There may be increased risk of heart disease, cancer, and premature aging with marginal deficiencies.

Overdose:
Signs of Overdose:
Very high doses may cause:
Nausea
Flatulence
Headache
Fainting
Diarrhea
Tendency to bleed
Altered immunity
Impaired sex functions
Increased risk of blood clots
Altered metabolism of thyroid, pituitary and adrenal hormones

Side Effects:
Reaction or effect : What to Do
Abdominal pain : Discontinue. Consult doctor immediately.
Breast enlargement : Discontinue. Refer to your doctor soon.
Diarrhea : Discontinue. Consult doctor immediately.

Dizziness : Discontinue. Refer to your doctor soon.
Flu-like symptoms : Discontinue. Consult doctor immediately.
Headache : Discontinue. Refer to your doctor soon.
Nausea : Discontinue. Consult doctor immediately.
Tiredness or weakness : Discontinue. Refer to your doctor soon.
Vision blurred : Discontinue. Consult doctor immediately.

Interactions:
Interacts with : Combined effect
Antacids : Vitamin-E absorption reduced.
Anticoagulants, coumadin- or indandione-type : Spontaneous or hidden bleeding may result.
Aspirin (long-term use) : May reduce blood doffing to greater extent than desired to decrease cardiac
disease.
Cholestyramine : Absorption of vitamin E reduced.
Colestipol : Absorption of vitamin E reduced.
Iron supplements : Use of iron for with iron-deficiency anemia efficacy decreased. Vitamin-E effect
reduced in healthy people.
Mineral oil : Absorption of vitamin E reduced.
Sucralfate : Absorption of vitamin E reduced.
Vitamin A : Aids absorption storage and utilization of vitamin A. Possible toxicity of vitamin A reduced.

Vitamin H (Biotin)

Overview:
Vitamin H, otherwise known as biotin, is essential to normal growth and development and overall health. Bacteria in the intestines produce enough biotin for the body so that most people would not need an additional supplement of vitamin H. However, additional great sources of vitamin H are found in egg yolks, fish, nuts, oatmeal, and beans.

How This Vitamin Works in Your Body:
Essential for release of food energy
Reduces symptoms of zinc deficiency
Functions in protein metabolism
Helps in the formation of fatty acids
Could relieve muscle pain and depression
People who consume large amounts of raw eggs may benefit from this supplement

Where This Vitamin is Found:
Almonds
Bananas
Brewers yeast
Brown rice
Bulgur wheat
Butter
Calf liver
Cashew nuts
Cheese
Chicken
Clams
Eggs, cooked
Green peas
Lentils
Liver
Mackerel
Meats
Milk
Mushrooms
Oat bran
Oatmeal
Peanut Butter
Peanuts
Salmon
Soybeans
Split peas
Tuna
Walnuts

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid

as your first choice when supplementing your diet.
Tablets: available

Recommended Daily Intakes
Men: 30 mcg
Women: 30 mcg
Pregnancy: 30 mcg
Lactation: 35 mcg

Cautions:
Consult your doctor if you have:
No problems should occur.

Over 55:
No problems should occur.

Pregnancy:
No problems should occur. Keep within the DRI.

Breastfeeding:
No problems should occur. Keep within the DRI.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms are incredibly rare. However, if such a deficiency occurs, symptoms may include hair loss, dermatitis, anemia, muscle pain, loss of appetite, lethargy, depression, hallucinations, and lowered immunity.

Overdose:
Signs of Overdose:
Amounts in excess of the manufacturer's suggested dosage is nontoxic.

Side Effects:
No side effects should occur if taken within the daily recommended amount.

Interactions:
Interacts with : Combined effect
Long term antibiotics (broad spectrum) : May lead to significant biotin deficiency.
Sulfonamides : May lead to significant biotin deficiency.
Alcohol/Tobacco products : Absorption of biotin reduced.

Vitamin K (Phytonadione)
Overview:
Vitamin K, otherwise known as phytonadione, promotes production factors critical to normal blood clotting. When foods are processed or cooked, very little of vitamin K contained in foods is lost. Great sources of this vitamin include dark leafy greens, oils from green plants, and some dairy products.

How This Vitamin Works in Your Body:
Regulates normal blood clotting
Promotes normal growth and development
Essential for kidney functioning

Where This Vitamin is Found:
Alfalfa
Asparagus
Broccoli
Brussels sprouts
Cabbage
Cheddar cheese
Green, leafy lettuce
Liver
Seaweed
Spinach
Turnip greens

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.
Tablets: available

Recommended Daily Intakes
Men: 80 mcg
Women: 65 mcg
Pregnancy: 65 mcg
Lactation: 65 mcg

Cautions:
Consult your doctor if you have:
Cystic fibrosis
Prolonged diarrhea
Prolonged intestinal problems
Taken any other medicines
Plans for surgery in the near future

Over 55:
No problems should occur. Keep within DRI.

Pregnancy:
Keep dosage within DRI. Always consult doctor during pregnancy.

Breastfeeding:
Keep dosage within DRI. Always consult doctor during lactation.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
Symptoms include prolonged clotting time, easy bleeding, and bruising. This deficiency is rare in adults and normally limited to those with liver or food absorption disorders. However, it may occur in premature babies.

Overdose:
Signs of Overdose:
Infants may have brain damage and impaired liver function.

Side Effects:
Reaction or effect : What to do
Hemolytic anemia in infants : Emergency treatment should be immediate.
Hyperbilirubinemia (too much bilirubin in the blood) in newborns or infants given too much vitamin K,
marked by jaundice (yellow skin and eyes) : Emergency treatment should be immediate.
Allergic reactions, including:
Face flushing : Discontinue. Consult doctor immediately.
Gastrointestinal upset : Discontinue. Consult doctor immediately.
Rash : Discontinue. Consult doctor immediately.
Redness, pain or swelling at injection site : Discontinue. Consult doctor immediately.
Skin itching : Seek emergency treatment

Interactions:
Interacts with : Combined effect
Antacids (long-term use) : :Large amounts reduce vitamin efficacy.
Antibiotics, broad spectrum (long-term use) : Vitamin-K deficiency results.
Anticoagulants (oral) : Anticoagulant effect reduced.
Cholestyramine : Vitamin-K absorption reduced.
Colestipol : Vitamin-K absorption reduced.
Coumarin (isolated from sweet clover) : Decreases vitamin-K efficacy.
Dactinomycin : Decreases vitamin-K efficacy.
Hemolytics : Toxic side effects could result.
Mineral oil (long- term use) : Vitamin-K deficiency results.
Primaquine : Toxic side effects could result.
Quinidine : Vitamin-K deficiency results.
Salicylates : Vitamin K need increased.
Sucralfate : Decreases vitamin-K efficacy.
Sulfa drugs : Vitamin-K deficiency results.

Vitamin P (Bioflavinoids Phytochemicals)

Overview:
Vitamin P, otherwise known as flavinoids, enhances the use of vitamin C by improving absorption and protecting it from oxidation. Great sources of this vitamin are found in the edible pulp of fruits, green pepper, broccoli, and red wine.

How This Vitamin Works in Your Body:
Promotes blood vessel health, including improving capillary strength
Prevents accumulation of atherosclerotic plaque
Has anti-inflammatory properties acting against histamines
May help protect against infection and blood vessel disease
May lower blood pressure by relaxing smooth muscle of cardiovascular system
May inhibit tumor growth
May have estrogen-like activity
May prevent hemorrhoids, miscarriages, capillary fragility, nosebleed, retinal bleeding in people with diabetes and hypertension
May lower cholesterol levels

Where This Vitamin is Found:
Apricots
Bilberry
Blackcurrants
Broccoli
Buckwheat
Cherries
Citrus fruits
Ginkgo
Grapes
Green Pepper
Green tea
Hawthorn
Milk thistle
Onions
Red wine
Rose hips
Tomatoes
Yarrow

How to Use:
Available as:
Liquid: the best form due to its high bioavailability and fast absorption. Always choose liquid as your first choice when supplementing your diet.
Tablets: available

Recommended Daily Intakes
There are no daily recommended allowances for this vitamin.

Cautions:
Consult your doctor if you:
Medicate yourself
Take any of the following:
Aspirin
Laxatives
Cold and cough remedies
Antacids
Vitamins
Minerals
Amino acids
Supplements
Other prescription and OTC drugs

Pregnancy:
If you take supplements, tell your doctor.

Breastfeeding:
If you take supplements, tell your doctor.

Storage:
Heat and/or moisture may alter the vitamin. Refrigeration is recommended.

Symptoms of Deficiency:
No reports exist of this deficiency.

Overdose:
Signs of Overdose:
No overdose symptoms are expected.

Side Effects:
No overdose symptoms are expected.

Interactions:
No overdose symptoms are expected.