Introduction

Vitamin B Complex is needed for the proper functioning of almost every process in the body and is comprised of the following:

- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B9
- Vitamin B12
- Biotin (B7)
- Choline
- Inositol

B Vitamins are water-soluble, which means that any excess will be naturally excreted through the urine. Moreover, B Vitamins need to be supplemented on a daily basis, as the only one that humans can store is Vitamin B12.

Taking Vitamin B Complex (50mg - 100mg) daily will turn the urine a bright fluorescent; however, this is perfectly safe and normal and indicates that B Vitamins are in sufficient quantity.

B Vitamins work in concert with one other and a deficiency in any one B Vitamin can lead to poor functioning of any or all of the others. Consequently, always take the B Vitamins in a Complex form and then add any other individual B Vitamins as needed.
Dosage

Vitamin B Complex, 100 mg daily

Healthy Nervous system (Stress, Anxiety, and Depression)

Vitamin B Complex is essential for the healthy functioning of the nervous system:

- Vitamin B5 is required for the correct functioning of the adrenal glands and the production of various hormones and nerve regulating substances
- Vitamin B1, B6 and B12 are required for the regulation and correct functioning of the entire nervous system including brain function
- Vitamin B9 is essential to prevent neural tube defects to the foetus during pregnancy

A deficiency in any of these (B1, B5, B6, B9, B12), can lead to feeling stressed, anxious, and depressed.

Vitamin B Complex has been noted to be very therapeutic in Alzheimer's disease.

Healthy Skin, Hair, and Nails

Vitamin B Complex is essential for correct DNA and RNA synthesis and cell reproduction. Because the Skin, Hair, and Nails are constantly growing and renewing, the individual needs the following B Vitamins to ensure the good functioning of these structures:

- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B9
- Vitamin B12
- Biotin (B7)
- Choline

Deficiencies of any of these (B1, B2, B3, B5, B9, B12, Biotin (B7), Choline) can lead to dry, grey skin, dermatitis, wrinkles, acne, rashes, falling hair, and weak, splitting nails.

Energy Production

Vitamin B1 is needed to convert the carbohydrates in our diet into glucose. The following B Vitamins are needed, at a cellular level, to convert the glucose into actual energy:

- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
Biotin (B7)

A deficiency of any of these (B2, B3, B5, B6, or Biotin (B7)) can lead to decreased energy production, lethargy, and fatigue.

Digestion

Vitamin B Complex is essential for correct digestion, production of Hydrochloric acid (HCl) and to assist in the breakdown of protein, fats, and carbohydrates. The B Vitamins essential for good digestion are:

- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B6

A deficiency of any of these (B1, B2, B3, B6) can lead to impaired digestion and deficiency of essential nutrients.

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Vitamin B Summary

- Vit B1 (Thiamine) - maintenance 2-25 mg
- Vit B1 - RDA 1.0-1.5 mg
- Vit B1 - toxic none
  - Vit B1 - whole grains, fish, meat, nuts, and poultry
  - Vit B1 - carbohydrate metabolism, and appetite control
  - Vit B1 - nervous system function
  - Vit B1 - is needed to convert glucose to energy or fat
  - Vit B1 - is needed for healthy nerves and muscles
  - Vit B1 - deficiency causes weakness, fatigue, and depression
  - Vit B1 - deficiency causes insomnia, and headaches
  - Vit B1 - deficiency causes aching, stiffness, and back pains
  - Vit B1 - deficiency causes indigestion and flatulence (wind)
  - Vit B1 - deficiency causes palpitations and shortness of breath

- Vit B2 (Riboflavin) - maintenance 2-25 mg
- Vit B2 - RDA 1.2-1.7 mg
- Vit B2 - toxic none
  - Vit B2 - milk, eggs, whole grains, mushrooms, dried peas and beans
  - Vit B2 - energy metabolism
  - Vit B2 - is needed for metabolism of carbohydrates, fats, and proteins
  - Vit B2 - deficiency causes sensitivity to light, sore and bloodshot eyes
  - Vit B2 - deficiency causes cheeks with many small blister marks
  - Vit B2 - deficiency causes dry peeling lips
  - Vit B2 - many alcoholics have this deficiency

- Vit B3 (Niacin, Niacinamide, Nicotinic Acid) - maintenance 20-100 mg
- Vit B3 - RDA 13-19 mg
- Vit B3 - toxic low, 3,000 mg. Diabetics and ulcer cases should consult their health professional
- Vit B3 - toxic low, 3,000 mg. Flush and itching can occur
  - Vit B3 - poultry, peanuts, and whole grains
  - Vit B3 - body can convert the amino acid tryptophan into B3 (niacin)
  - Vit B3 - works with Vitamin B1 and Vitamin B2 in energy metabolism
Vit B3 - is needed for most body processes
Vit B3 - is needed for metabolism of carbohydrates, fat, and proteins
Vit B3 - deficiency produces dermatitis, diarrhoea, and dementia
Vit B3 - deficiency may cause depression, tension, and insomnia
Vit B3 - deficiency may cause impaired memory

Vit B5 (Pantothenic Acid) - maintenance 2-25 mg
Vit B5 - RDA none established
Vit B5 - toxic none

Vit B5 - all plants and animals. Poultry, fish, and whole grains
Vit B5 - is needed for energy metabolism, and the formation of hormones
Vit B5 - is needed for the metabolism of energy from fat and carbohydrates
Vit B5 - deficiency stops the adrenal from working properly
Vit B5 - deficiency causes low blood pressure and blood sugar
Vit B5 - deficiency causes fatigue
Vit B5 - deficiency causes weakened muscle and joints, aches, and palpitations
Vit B5 - deficiency causes and depression

Vit B6 (Pyridoxine, Pyridoxal, Pyridoxamine) - maintenance 2-25 mg
Vit B6 - RDA 2.0-2.2 mg
Vit B6 - toxic none, but typically supplement less than 300 mg/day

Vit B6 - whole grains, fish, walnuts, and wheat germ
Vit B6 - acts as a coenzyme involved with metabolism
Vit B6 - is needed to process magnesium, zinc, and manganese
Vit B6 - is needed to process Essential Fatty Acids (EFAs)
Vit B6 - is needed to process many amino acids
Vit B6 - deficiency causes headache, irritability, and nervousness
Vit B6 - deficiency causes inability to concentrate, lethargy, and anorexia
Vit B6 - deficiency causes memory funk
Vit B6 - deficiency causes abdomen pains, nausea, and vomiting
Vit B6 - deficiency causes diarrhoea, and haemorrhoids (piles)
Vit B6 - deficiency causes cracked skin

Vit B7 Biotin - maintenance 2-5 mg
Vit B7 Biotin - RDA none established
Vit B7 Biotin - toxic none

Vit B7 - Biotin soybeans, brown rice, and dark green vegetables
Vit B7 - Biotin is made in the intestinal tract by microorganisms
Vit B7 - Biotin absorption is prevented by raw egg
Vit B7 - Biotin necessary for fat, carbohydrate, and protein metabolism
Vit B7 - Biotin deficiency causes depression, fatigue, and muscular pain
Vit B7 - Biotin deficiency causes panic attacks, and dry peeling skin
Vit B7 - Biotin deficiency causes hair loss

Vit B9 Folic Acid (Folacin) - maintenance 400 ug (mcg)
Vit B9 Folic Acid - toxic unknown (1,000 ug (mcg))

Vit B9 Folic Acid - is needed for cell division, metabolism of sugar and amino acids
Vit B9 Folic Acid - is needed for formation of blood and antibodies
Vit B9 Folic Acid - deficiency can cause pernicious anaemia, depression, and fatigue
Vit B9 Folic Acid - deficiency can cause a susceptibility to infection

Vit B12 (Cyanocobalamin, Cobalamins) - maintenance 5-25 ug (mcg)
Vit B12 - RDA 1-3 ug (mcg)
Vit B12 - toxic none

Vit B12 - milk, clams, oysters, fish, and meat
Vit B12 - fat and protein metabolism, production of red blood cells
Vit B12 - is needed to make and maintain cell membranes
Vit B12 - deficiency causes pernicious anaemia, and damage to nerves
Vit B12 - deficiency causes a sore mouth and tongue

Vit B-Complex contains:

- Vit B1 (Thiamine)
- Vit B2 (Riboflavin)
- Vit B3 (Niacin, Niacinamide, Nicotinic Acid)
- Vit B5 (Pantothenic Acid),
- Vit B6 (Pyridoxine, Pyridoxal, Pyridoxamine)
- Vit B7 (Biotin)
- Vit B9 (Folic Acid)
- Vit B12 (Cyanocobalamin, Cobalamins)
- Choline
- Inositol

PABA (Para-aminobenzoic acid) - is part of the vitamin B complex, also called Vit Bx
PABA (Para-aminobenzoic acid) - maintenance 25-50 mg
PABA (Para-aminobenzoic acid) - RDA none established
PABA (Para-aminobenzoic acid) - toxic none

PABA (Para-aminobenzoic acid) - whole grains, and wheat germ
PABA (Para-aminobenzoic acid) - function not fully established, but is a co-factor of B Vitamins
PABA (Para-aminobenzoic acid) - important in skin and hair growth. On skin as an effective sun-screen
PABA (Para-aminobenzoic acid) - is required for the formation of folic acids, and is widely used in sunscreens to absorb ultraviolet light

Choline - nutrient in the Vitamin B family
Choline - maintenance 100-200 mg
Choline - RDA none established
Choline - toxic none (3500 mg)

Choline - lecithin, and eggs
Choline - co-factor of the B Vitamins
Choline - metabolism of fats and cholesterol
Choline - probable brain functions and memory
Choline - is needed for formation of DNA and RNA
Choline - is needed for muscle function, nerve function, and memory
Choline - is needed for manganese metabolism
Choline - deficiency may cause headaches, dizziness, and high blood pressure
Choline - co-factor of the B complex

Inositol - nutrient in the Vitamin B family
Inositol - maintenance 100-200 mg
Inositol - RDA none established
Inositol - toxic none

Inositol - wheat germ, and lecithin
Inositol - co-factor of the B complex. Total function unknown

End

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