

## Every Vitamin Page (.pdf version)

### All Vitamins and Pseudo-Vitamins

<http://www.lifeinyouryears.net/everyvitamin.html>

Compiled by David Bennett

#### **Vitamin A**

Chemical Names- Retinol, Beta Carotene (pro-vitamin A)

Deficiency- Night blindness

RDA- 5,000 IU

Optimal intake- 2,000-5,000 IU

Good Sources- Liver, carrots, spinach

Discussion- Vitamin A is fat soluble, and therefore can be toxic in large amounts. Taking over 25,000 IU of Retinol a day can lead to toxic buildup. Beta-Carotene is an antioxidant, and non-toxic. Synthetic Beta-Carotene (the kind sold in supplement stores) has been shown ineffective in preventing cancer in humans, and seems to be harmful to smokers. Consuming over the RDA of Vitamin A is associated with a shorter lifespan.

#### **Vitamin B1**

Chemical Names- Thiamine

Deficiency- Beriberi

RDA- 1.5 mg

Optimal Intake- 5-15 mg

Good Sources- Brewer's yeast, peanuts, milk, rice

Discussion- Thiamine is relatively safe.

#### **Vitamin B2**

Chemical Names- Riboflavin

Deficiency- Lesions on mouth, lips, skin, etc.

RDA- 1.7 mg

Optimal Intake- 5-20 mg

Good Sources- Milk, cheese, leafy vegetables

Discussion- Riboflavin is a mild antioxidant. Its bright yellow color colors urine after it is taken. Also known as **Vitamin G**

#### **Vitamin B3**

Chemical Names- Niacin, Niacinamide, Nicotinic Acid

Deficiency- Pellagra

RDA- 20 mg

Optimal Intake- 50-500 mg

Good Sources- Lean meat, whole wheat, brewer's yeast

Discussion- Niacin in higher doses results in a "flush" reaction, while Niacinamide is flush-free. Niacinamide does not have anti-cholesterol properties though. Also known as **Vitamin PP** for "pellagra-preventative"

### **Vitamin B4\***

Chemical Names- Adenine

Deficiency- Muscular weakness (in rats and chicks)

Good Sources- Widespread in animal and plant tissues

Discussion- Adenine is a purine base of nucleic acids. Its status as a human vitamin is doubtful.

### **Vitamin B5**

Chemical Names- Pantothenic Acid, Panthenol, Pantethine, (Calcium) Pantothenate

Deficiency- Hypoglycemia, ulcers, skin disorders.

RDA- 10 mg

Optimal Intake- 15-500 mg

Good Sources- Meat, whole grains, leafy vegetables

Discussion- Studies with rats by Dr. Roger Williams showed that Pantothenic Acid may be highly beneficial in fighting the effects of stress.

### **Vitamin B6**

Chemical Names- Pyridoxine

Deficiency- Anemia, dermatitis, glossitis

RDA- 2 mg

Optimal Intake- 10-100 mg

Good Sources- Brewer's yeast, soy beans, wheat germ

Discussion- As a methylating agent, B6 has potential to reduce blood levels of homocysteine, possibly reducing the risk of heart disease. Amounts in excess of 200 mg/day might lead to toxicity, expressed in nerve problems.

### **Vitamin B7\***

Deficiency- Digestive disorders in pigeons.

Good Sources- Rice polish

Discussion- Also known as **Vitamin I**. See also **Biotin** which some have called "Vitamin B7."

### **Vitamin B8\***

Chemical Names- 5'-Adenylic Acid, Ergadenylic Acid, Adenosine Monophosphate

Deficiency- Decreases RNA, ADP, and ATP synthesis, inhibits breakdown of food into energy, reduces hormone function.

Good Sources- Yeast

Discussion- This nucleotide is still listed as a "Nutrient" by the Merck Index. Many sources now claim this substance is indeed an essential vitamin.

### **Vitamin B9\***

Chemical Names- Mixture of multiple B Vitamins

Discussion- See **Folic Acid**. Some later researchers used Vitamin B9 to classify Folic Acid

### **Vitamin B10\***

Chemical Names- Pteroylmonoglutamic acid mixed with other B vitamins

Deficiency- Depressed growth and feathering in chicks.

Discussion- Also known as **Vitamin R** and "Factor R."

### **Vitamin B11\***

Chemical Names- Pteryl-hepta-glutamic acid (?)

Deficiency- Depressed growth and feathering in chicks

Discussion- Also called **Vitamin S** and "Factor S."

### **Vitamin B12**

Chemical Names- Cobalamin, Cyanocobalamin, Methylcobalamin

Deficiency- Pernicious Anemia

RDA- 6 mcg

Optimal Intake- 100-1,000 mcg

Good Sources- Meat products, cheese

Discussion- B12 reduces homocysteine levels in the blood, thus it possibly has a role in heart disease prevention. B12 needs "intrinsic factor" to be absorbed, and some stomachs do not produce enough, hence the need for injections or sublingual absorption.

### **Vitamin B13\***

Chemical Names- Orotic Acid, Pyrimidinecarboxylic Acid

Deficiency- Possibly Multiple Sclerosis

Good Sources- Whey, root vegetables

Discussion- Orotic Acid, as a "mineral transporter" is available in the form of Calcium Orotate, Magnesium Orotate, etc. Its vitamin status is unlikely. By association, Aspartic Acid, and Colamine Phosphate (Calcium AEP) are in the same class of "mineral transporters," and might have some claim as "B13."

### **Vitamin B14\***

Deficiency- Anemia

Good Sources- Yeast, grains, legumes, organ meats, wine.

Discussion- Little is known about this; it might be similar to B10 and B11. Perhaps a substance isolated from wine that prevents cancer.

### **Vitamin B15 \***

Chemical Names- Pangamic Acid, Pangametin, Calcium Pangamate; Some B15 tablets contain either Dimethylglycine, diisopropylamine dichloroacetate, or other chemicals

Optimal Intake- 50-150 mg

Good Sources- Yeast, apricot seeds, corn

Discussion- The chemical identity of B15, Pangamic Acid, is disputed. It is believed to be Dimethylglycine (DMG) and Gluconic Acid, although other B15 mixtures vary. If DMG is responsible for the benefits often attributed to Pangamic Acid, then Trimethylglycine may be considered to have "B15" activity. Both DMG and TMG act as methylators and reduce homocysteine in the blood. Vitamin status is unlikely.

“Discovered” along with laetrile, by Ernst Krebs, Sr., MD and Ernst Krebs, Jr.

**Vitamin B16\***

Discussion- Perhaps studied in Russia, but vitamin status never fully developed.

**Vitamin B17\***

Chemical Names- Amygdalin, Prunasin (d-mandelonitrile glucoside), Dhurrin, Linamarin, Lotaustralin, Sambunigrin (l-mandelonitrile glucoside), Prulaurasin (dl-mandelonitrile glucoside), Triglochinin, Linustatin, Neolinustatin, Laetrile, oratrile.

Deficiency- Possible increased incidence of cancer

Optimal Intake- 25-100 mg

Good Sources- Apricot seeds, buckwheat, millet, lima beans, flax

Discussion- Supposed anti-cancer substances, Vitamin B17 is a group of cyanide producing sugars known as "cyanogenic glycosides" or "nitrilosides" that release cyanide when acted upon by the enzyme beta-glucosidase (emulsion). Often taken in concentrated form of amygdalin, one particular glycoside, but soon after mixed with water, the chemical is subject to ephemerization, so quality is poor when stored in water. Laetrile is a patented formula that contains amygdalin, and is no longer available commercially. Rodent research suggests anti-metastatic effect at high injectable doses. Is an unproven therapy for cancer. Vitamin status unlikely.

**Vitamin B22\***

Discussion- Listed in Linda Clark's "Know Your Nutrition." Otherwise, unknown. Aloe Vera is a possible source.

**Vitamin Bc-** See **Folic Acid**

**Vitamin Bh-** See **Inositol**

**Vitamin Bp-** See **Choline**

**Vitamin Bt\***

Chemical Names- L-Carnitine, Acetyl L-Carnitine

Optimal Intake- 500 mg

Good Sources- Chicken, red meats, fish

Discussion- L-Carnitine is an amino acid, and not essential as a protein or vitamin. It has been promoted as a treatment for heart disease. Its acetylated form has been promoted as good for brain health.

**Vitamin Bx-** See **PABA**

**Vitamin Bw-** See **Biotin**

### **Folic Acid**

Chemical Names- Folacin, Pteroylglutamic Acid, Folate, Folinic Acid

Deficiency- Nutritional macrocytic anemia

RDA- 400 mcg

Optimal Intake- 400-1,000 mcg

Good Sources- Green leafy vegetables, soy beans, oranges

Discussion- Folic Acid has potential to lower blood levels of homocysteine, perhaps having a role in reducing heart disease. Folic Acid is also a key factor in the prevention of many birth defects. Also known as **Vitamin M**

### **Biotin**

Deficiency- Eczema, improper fat metabolism

RDA- 300 mcg

Optimal Intake- 300-10,000 mcg

Good Sources- Brewer's yeast, soy beans, egg yolk

Discussion- A Biotin deficiency is rare. Unless raw egg whites are eaten often (they contain a substance that binds Biotin), we get ample Biotin. Recently high-dose Biotin has been found to benefit Diabetes. Also known as Coenzyme R, Factor W, Factor S, Factor H, Factor X, and **Vitamin H**

### **Choline\***

Deficiency- Liver problems

AI (Adequate Intake)- 425 to 550 mg

Optimal Intake - 100-1000 mg

Good Sources- Brewer's yeast, lecithin, wheat germ

Discussion- Choline is a vitamin, defined strictly, because it can be made by the human body. However, Choline is considered an essential nutrient because it is often needed in amounts greater than the body is able to synthesize. Choline does not have an RDA, but the Institute of Medicine established an "adequate intake" for it.

### **Inositol\***

Deficiency- possibly Eczema

Optimal Intake- 100-1,000 mg

Good Sources- Brewer's yeast, grapefruits, lecithin, peanuts

Discussion- Inositol is present in many B-Complex formulas, and is probably best thought of as a B-Complex "factor," appearing with the B vitamins in many foods and supplements, rather than an actual vitamin. It is a component of Lecithin with Choline.

### **PABA\***

Chemical Names- Para-Aminobenzoic Acid

Deficiency- Graying of hair, eczema in animals

Optimal Intake- 10-100 mg

Good Sources- Brewer's yeast, wheat germ, sunflower seeds

Discussion- PABA has been used topically as a sunscreen, although it is rarely used now. Like Choline and Inositol, it still appears in B-Complex formulas, despite not actually being essential for humans. It is an essential nutrient for some bacteria.

## **PQQ\***

Chemical Names- Pyrroloquinoline Quinone

Deficiency- fertility issues in mice

Optimal intake- unknown

Good Sources- Natto, parsley, green tea, green peppers, papaya, and kiwi

Discussion- Some Japanese researchers at the Institute of Physical and Chemical Research in Tokyo believe that PQQ (discovered in 1979) may actually be a vitamin, within the B-Complex. If so, it is the first new vitamin to be discovered in over 55 years!

## **Vitamin C**

Chemical Names- Ascorbic Acid, Ascorbyl Palmitate

Deficiency- Scurvy

RDA- 60 mg

Optimal Intake- 250-1,000 mg

Good Sources- Citrus fruits, strawberries, broccoli

Discussion- Vitamin C is an antioxidant, and it is claimed to have a positive effect against cancer, infections, and other health disorders. It is generally non-toxic.

## **Vitamin D**

Chemical Names- Ergocalciferol, Calciferol, Cholecalciferol

Deficiency- Rickets

RDA- 400 IU

Optimal Intake- 400-1000 IU

Good Sources- Milk, fatty fish, sunlight

Discussion- Vitamin D is essential for bone health, and shows promise in the prevention and treatment of cancer and multiple sclerosis. Taking amounts over the RDA may lead to calcium deposits in the brain; generally doses up to 10,000 IU per day are deemed safe.

## **Vitamin E**

Chemical Names-  $\alpha$ -tocopherol,  $\alpha$ -tocopheryl

Deficiency- possibly infertility

RDA- 30 IU

Optimal Intake- 100-300 IU

Good Sources- Sunflower seeds, wheat germ

Discussion- Vitamin E is an antioxidant;  $\alpha$ -tocopherol is a vitamin, although other tocopherols, e.g.  $\gamma$ -tocopherol exist in nature, and might be beneficial. Consuming 400 IU/day has been linked to increased mortality. Supplements sold with "d- $\alpha$ -tocopherol" contain the natural, more potent, form of vitamin E, while "dl- $\alpha$ -tocopherol," is synthetic.

## **Vitamin F\***

Chemical Names- Linoleic Acid, Linolenic Acid, Arachadonic Acid

Deficiency- Similar to those associated with lack of fat in diet

RDA- None established

Good Sources- Vegetable oils

Discussion- Vitamin F is a term for the macronutrients known as Essential Fatty Acids. They are essential, but not vitamins.

**Vitamin G** - See Vitamin B2

**Vitamin H** - See Biotin

**Vitamin I\***- See Vitamin B7

**Vitamin J\***

Chemical Names- Catechol, Flavin

Good Sources- Higher woody plants

Discussion- Catechol is a flavonoid. Vitamin J has also been applied to **Choline**

**Vitamin K**

Chemical Names- Menadione, Phytomenadione, Phylloquinone, Menaquinone

Deficiency- Hemorrhage

RDA- 80 mcg

Optimal Intake- 100-150 mcg

Good Sources- Green leafy vegetables, many cheeses

Discussion- Essential for blood clotting; is now recognized as a key factor in bone health.

**Vitamin L1\***

Chemical Names- Ortho-Aminobenzoic Acid, Anthranilic Acid

Good Sources- bovine liver

Deficiency- Lactation problems in animals. Anthranilic Acid is an amino acid.

**Vitamin L2\***

Chemical Names- Adenyl Thiomethylpentose

Good Sources- Yeast

Deficiency- Lactation problems in animals

**Vitamin M**- See Folic Acid

**Vitamin N\***

Chemical Names- Thioctic Acid,  $\alpha$ -lipoic acid

Deficiency- Lack of growth in protozoa and bacteria.

Optimal Intake- 50-100 mg

Discussion-  $\alpha$ -Lipoic Acid has been used to regulate blood sugar, and is a universal antioxidant, i.e. the chemical is fat and water soluble. It is not a vitamin, strictly defined.

**Vitamin P\***

Chemical Names- Rutin, Hesperidin, Quercetin, Citrus Bioflavonoids

Deficiency- Capillary fragility

Optimal Intake- 100-1,000 mg

Good Sources- Citrus fruits, onions, vegetables

Discussion- While not vitamins, Bioflavonoids are beneficial nutrients. Often associated with **Vitamin C**, many refer to Vitamin P as the "C-Complex." There are over 1000 chemicals that can be classified as Bioflavonoids.

**Vitamin PP** - see Vitamin B3

**Vitamin Q\***

Deficiency- Inability of blood to clot in patients with telangiectasia

Good Sources- Soybeans, clover, alfalfa

Discussion- Named after Dr. Armand James Quick, who believed he had found a substance in soybeans that could prevent bleeding in people with telangiectasia. According to Quick, Vitamin Q is only essential in patients with that rare blood disorder. Quick apparently references Vitamin Q in his book Bleeding, Drugs, Vitamins: Their Impact on History. Occasionally, Co-Enzyme Q10 is called "Vitamin Q."

**Vitamin R\*** Discussion- Old name for Vitamin B10. Also on "The Simpsons" the vitamin in the "malk" drink, the kids drank at lunch during a budget crisis!

**Vitamin S\***

Deficiency- Sterility

Good Sources- kelp

Discussion- I found one reference to this in a book a long time ago. Kelp is known for its many nutrients, so it's likely that this substance is some other vitamin or mineral.

**Vitamin B11** was also called Vitamin S for awhile.

**Vitamin T\***

Chemical Names- Tegotin, Termitin, Torutilin

Deficiency- Anemia, lack of growth

Good Sources- Yeast, termites, fungi, sesame seeds

Discussion- Vitamin T has been used as a name for growth-promoting substances in termites, yeast, and fungi. However, many sources list it as a blood health factor in sesame seeds. It is likely that these are two separate chemicals and the factor in termites is distinct from that in sesame seeds. This happens because different researchers discover nutrients and call them by the same name, not knowing another person has already used the designation.

**Vitamin U\***

Chemical Names- Methylmethioninesulfonium Chloride, Cabagin-U, S-Methylmethionine

Deficiency- Ulcers

Good Sources- Cabbage, alfalfa, green leafy vegetables, egg yolks

Discussion- Cabbage Juice often heals ulcers in a week or two, so Dr. Garnett Cheney of Stanford, whose research backed up this assertion, proposed it was a vitamin. However, while beneficial for treating ulcers, it is likely not a vitamin. It is possible that S-Methylmethionine, identified by Dr. Cheney, is not even the factor responsible for the "vitamin U" activity of cabbage. Another possible factor responsible might be Allantoin or possibly the amino acid Glutamine. Dr. Cheney believed that whatever factor was responsible, it was destroyed by cooking.



**Vitamin V\***

Chemical Names- Nicotinamide Adenine Dinucleotide, NAD

Deficiency- Developmental problems in chicks

Discussion- Vitamin V was also used of **PABA**

**Vitamin W\***

Discussion- Possibly **Biotin**

**Vitamin X\***

Deficiency- Aging

Good Sources- Hydrocotyle Asiatica Minor (an herb)

Discussion- A proposed vitamin by certain researchers, I read about in Worldwide Secrets For Staying Young by Paavo Airola. Ultimately "Vitamin X" is used to describe any unknown vitamin, including PABA before it was isolated.

**Vitamin Y\***

Discussion- Perhaps **Vitamin B6**.

\* (asterisk) – vitamin status unlikely