



X ADN is composed of the following B-vitamins and procaine.

Procaine

Procaine is the generic name for Novocain, which was first synthesized in 1905. Procaine is well-known as a safe and nontoxic local anesthetic, however, its therapeutic value extends far beyond its local anesthetic effects. In the textbook "Manual of Neural Therapy", procaine is called king of medicines because of its amazing properties and ability to restore normal functioning to damaged tissue. In Mesotherapy Procaine is as an anesthetic, but it also helps enhance the absorption of other drugs that it is injected with.

Thiamine

Vitamin B1 - thiamine -

Thiamine may enhance circulation, helps with blood formation and the metabolism of carbohydrates. It is also required for the health of the nervous system and is used in the biosynthesis of a number of cell constituents, including the neurotransmitter acetylcholine and gamma-aminobutyric acid (GABA). It is used in the manufacture of hydrochloric acid, and therefore plays a part in digestion.

It is also great for the brain and may help with depression and assist with memory and learning. In children it is required for growth and has shown some indication to assist in arthritis, cataracts as well as infertility.

Deficiency of vitamin B1

A deficiency will result in beriberi, and minor deficiencies may be indicated with extreme fatigue, irritability, constipation, edema and an enlarged liver. Forgetfulness, gastrointestinal disturbances, heart changes, irritability, labored breathing and loss of appetite may also be experienced.

With too little thiamin around a person may also experience nervousness, numbness of the hands and feet, pain and sensitivity, poor coordination, tingling sensations, weak and sore muscles, general weakness and severe weight loss.

Dosage

Riboflavin

Vitamin B2 - riboflavin -

It is required by the body to use oxygen and the metabolism of amino acids, fatty acids, and carbohydrates. Riboflavin is further needed to activate vitamin B6 (pyridoxine), helps to create niacin and assists the adrenal gland. It may be used for red blood cell formation, antibody production, cell respiration, and growth.



It eases watery eye fatigue and may be helpful in the prevention and treatment of cataracts. Vitamin B2 is required for the health of the mucus membranes in the digestive tract and helps with the absorption of iron and vitamin B6.

Although it is needed for periods of rapid growth, it is also needed when protein intake is high, and is most beneficial to the skin, hair and nails.

Deficiency of vitamin B2

A shortage of this vitamin may manifest itself as cracks and sores at the corners of the mouth, eye disorders, inflammation of the mouth and tongue, and skin lesions.

Dermatitis, dizziness, hair loss, insomnia, light sensitivity, poor digestion, retarded growth, and slow mental responses have also been reported. Burning feet can also be indicative of a shortage.

Pyridoxine

Vitamin B6 - pyridoxine

Pyridoxine is required for the balancing of hormonal changes in women as well as assisting the immune system and the growth of new cells. It is also used in the processing and metabolism of proteins, fats and carbohydrates, while assisting with controlling your mood as well as your behavior. Pyridoxine might also be of benefit for children with learning difficulties, as well as assisting in the prevention of dandruff, eczema and psoriasis.

It assists in the balancing of sodium and potassium as well promotes red blood cell production. It is further involved in the nucleic acids RNA as well as DNA. It is further linked to cancer immunity and fights the formation of the toxic chemical homocysteine, which is detrimental to the heart muscle.

Women in particular may suffer from pre-menstrual fluid retention, severe period pains, emotional PMS symptoms, premenstrual acne and nausea in early pregnancy. Mood swings, depression as well as loss of sexual drive is sometimes noted when pyridoxine is in short supply and the person is on hormone replacement therapy or on birth control pills.

Deficiency of vitamin B6

Irritability, nervousness and insomnia as well as general weakness, skin changes such as dermatitis and acne as well as asthma and allergies might develop when pyridoxine is in short supply. Symptoms may include nails that are ridged, an inflamed tongue as well as changes to your bones - which can include osteoporosis and arthritis. Kidney stones may also appear.

Vitamin B6 deficiency symptoms will be very much like those of B2 and B3. Vitamin B6 is needed by the body to manufacture its own B3 vitamin.

Pantotenol (PANTOTHENIC ACID)

Vitamin B5 - pantothenic acid

Vitamin B5 plays an important role in the secretion of hormones, such as cortisone because of the role it plays in supporting the adrenal gland. These hormones assist the metabolism, help to fight allergies and are beneficial in the maintenance of healthy skin, muscles and nerves.

Pantothenic acid is also used in the release of energy as well as the metabolism of fat, protein and carbohydrates. It is used in the creation of lipids, neurotransmitters, steroid hormones and hemoglobin.

Some are of the opinion that pantothenic acid is also helpful to fight wrinkles as well as graying of the hair.

Deficiency of vitamin B5

With Vitamin B5 in short supply symptoms like fatigue, headaches, nausea, tingling in the hands, depression, personality changes and cardiac instability have been reported.

Frequent infection, fatigue, abdominal pains, sleep disturbances and neurological disorders including numbness, paresthesia (abnormal sensation such as "burning feet" syndrome), muscle weakness and cramps are also possible indications that this nutrient is in short supply.

Biochemical changes include increased insulin sensitivity, lowered blood cholesterol, decreased serum potassium, and failure of adrenocorticotropin to induce eosinopenia.

Nicotinamide

Vitamin B3 - niacin - is required for

Vitamin B3 is required for cell respiration, helps in the release of energy and metabolism of carbohydrates, fats, and proteins, proper circulation and healthy skin, functioning of the nervous system, and normal secretion of bile and stomach fluids. It is used in the synthesis of sex hormones, treating schizophrenia and other mental illnesses, and a memory-enhancer.

Nicotinic acid (but not nicotinamide) given in drug dosage improves the blood cholesterol profile, and has been used to clear the body of organic poisons, such as



certain insecticides. People report more mental alertness when this vitamin is in sufficient supply.

Deficiency of vitamin B3

A deficiency may cause pellagra, the classic niacin deficiency disease, and is characterized by bilateral dermatitis, diarrhea, and dementia.

A shortage of niacin may be indicated with symptoms such as canker sores, depression, diarrhea, dizziness, fatigue, halitosis, headaches, indigestion, insomnia, limb pains, loss of appetite, low blood sugar, muscular weakness, skin eruptions, and inflammation.