Healing with Water-Soluble Vitamins

B-complex vitamins and vitamin C are helpful for stress, neurological disorders, fatigue, and more

When people first started eating refined foods (white flour, polished rice, refined sugar, and canned foods) as staples of their diet, they started experiencing new diseases. It was eventually discovered that important nutrients, which were later called vitamins, had been removed during processing. Without these vitamins the body could not convert calories into energy, produce important neurotransmitters, or maintain other normal body functions.

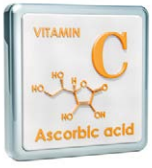
Water-soluble vitamins, which include the B vitamins and vitamin C are found naturally in many foods, but they are readily lost through heat, cooking, and other processing methods. Thus, they are destroyed when we refine grains and sugars, pasteurize milk and fruit juice, can and bottle foods, and even from storing them for long periods of time.

Following this discovery, companies began fortifying processed foods with some, but not all, of these vitamins. This has ended overt deficiency diseases such as beri beri (vitamin B1 deficiency) and scurvy (vitamin C deficiency), but this still doesn't provide adequate amounts to maintain optimal health for many people.

Lack of water-soluble vitamins can lead to many problems. They are required by mitochondria to efficiently convert food into energy and are necessary for the production of various neurotransmitters and hormones. Which means that over time even moderate deficiencies can lead to fatigue, weight gain, hormonal problems such as thyroid disorders, PMS, and adrenal fatigue, nervousness, mood disorders such as anxiety and depression, and even mental illness.

Unlike the fat-soluble vitamins, the body does not have large stores of most water-soluble vitamins, so they need to be regularly obtained in the diet. Because any excess is easily flushed out of the body in the urine, they're quite safe to take as supplements. Most of them are fairly benign even in large amounts, as long as you are getting a good supply of all of them, since they work together in many body processes.

In this issue of *Sunshine Sharing,* we will explore how vitamin C and the B vitamins can be used therapeutically to help people heal from a variety of diseases. We'll start with vitamin C and then discuss the importance of B-complex and the major single B vitamins.



Vitamin C (Ascorbic Acid)

The importance of vitamin C in the diet was first discovered by Dr. James Lind in 1750. He felt that sailors were developing scurvy because they were deprived of fruits and vegetables on long sea voyages. Lind tested his idea during a voyage by giving two oranges and a lemon to two sailors with scurvy and giving other popular remedies of the day to ten other sailors. The men who were given the fruit recovered in two days while the other men were still ill.

Most mammals produce their own vitamin C, but human beings need to get it regularly in their diet. Mammals who don't produce vitamin C, such as guinea pigs, monkeys, and certain bats, eat a lot of fresh fruits and/or vegetables. Humans can get adequate vitamin C this way, too. But even when fresh fruits and vegetables are readily available many people still don't eat enough of them. And the ones they do eat have lost some of their water-soluble vitamins due to the time spent in transportation and storage on the way to their local grocery store shelf.

Dr. Weston Price, while researching the health of Native peoples living in colder climates, discovered that they ate the raw adrenal glands of the animals they used as food to get adequate vitamin C in the winter months. They also made tea from rose hips, pine needles, and other herbs containing vitamin C. This was a way of naturally supplementing vitamin C in the wintertime.

The recommended daily allowance of vitamin C for adults is only 60 mg a day. This is enough to prevent scurvy, but not enough for optimal health. To equal the amount of vitamin C produced

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Important Notice

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in the bodies of animals that make their own vitamin C, the average adult would need to consume around 2,000 mg of vitamin C daily. The therapeutic doses used to treat disease can be as high as 10,000 mg daily. For most people 2,000 to 5,000 mg per day is a good therapeutic dose. For health maintenance, a dose of 500 to 2,000 mg is usually sufficient.

Too much vitamin C produces loose stools, so if you start to get diarrhea, you're taking too much. Also, vitamin C works better when taken with bioflavonoids, so for optimal results, look for a product that also contains bioflavonoids. Some people experience canker sores or other problems from the acidity of vitamin C. Buffering it will help. Try taking vitamin C with calcium and magnesium, or mix powdered vitamin C with baking soda to create sodium ascorbate. Here are some of the health problems that suggest people need to supplement with more vitamin C.

Vitamin C and Immunity

Vitamin C is found abundantly in white blood cells and is essential to proper immune function. There is a dispute over using vitamin C to aid recovery from colds and flu, but there is plenty of research suggesting it does aid the body in fighting infections. It works better when you also have adequate levels of vitamin D3 and zinc. There is research suggesting that adequate intake of vitamin C helps prevent cancer and high doses of intravenous vitamin C have also been used in natural protocols for treating cancer. Being an important antioxidant nutrient, it helps inhibit the inflammatory processes involved in acute infections and even chronic diseases.

Healing Injuries and Structural Health

Vitamin C helps to form collagen, a substance that binds tissues together; therefore aiding the healing of wounds and other injuries. Elderly people who have wounds or skin ulcerations typically need to supplement with vitamin C and zinc. It can also aid patients recovering from surgery. Taking therapeutic doses of vitamin C helps to prevent and speed healing from sunburn.

Veins and Circulation

Iron can only be absorbed into the tissues with the help of Vitamin C, so people who are anemic should supplement with vitamin C, as well as B_9 and B_{12}, in addition to iron. Vitamin C is also essential to keeping capillaries strong. People who have varicose veins, spider veins, nosebleeds, or who bruise easily usually need to increase their intake of vitamin C and bioflavonoids. Vitamin C also helps maintain normal blood pressure, protects the arterial linings from atherosclerosis, and reduces the overall risk of cardiovascular disease.

Stress, and Mental Illness

Vitamin C is necessary for the production of epinephrine and norepinephrine, which are produced by the adrenal glands and the sympathetic nervous system. The adrenal glands contain the largest stores of vitamin C in the body, and long term stress depletes these glands. Vitamin C along with the B-complex vitamins, helps you cope with stress. Deficiencies of these vitamins can make you feel run-down, exhausted, and unable to cope with life.

As for mental illness, Russian scientists found that schizophrenics may be vitamin C deficient, and that adding vitamin C to their diets may improve their condition. Researchers from the American Psychiatric Association Task Force have found that giving vitamin C with an antipsychotic drug enhances the drug's affect, making it possible to give patients fewer drugs, leaving them with fewer side effects.

Adequate vitamin C may help prevent the formation of cataracts and it has also proven beneficial for people with asthma. It may also aid male fertility. Smokers also need extra vitamin C as smoking depletes this vitamin.

The B Vitamins

The B vitamins generally work best when taken together. Which is why, if you're going to supplement with an individual B-vitamin it is usually good to take it along with a B-complex vitamin supplement.

As a group, the B-complex vitamins are essential for the formation of red blood cells, metabolism, nervous system function, normal growth, and metabolism of nutrients and proteins. They also reduce blood levels of homocysteine, a pro-inflammatory compound which contributes to cardiovascular disease. When dealing with periods of high stress consider a B-complex supplement that includes vitamin C. B-vitamins are also important during pregnancy, metabolic disease, cardiovascular disease, or any nervous system disorder. Here are some of the uses for major single B-vitamins.

Vitamin B_1 (Thiamine)

Thiamine is used in every cell of the body to make ATP. It is also important in the nervous system because it is involved in the production of acetylcholine (which is necessary for muscle movement and memory) and GABA (the neurotransmitter that helps the brain stay calm and focused). It is also necessary to maintain and repair myelin sheaths which keep nerve signals clear. Severe deficiencies cause beri beri, which results in peripheral nerve damage, depression, and paralysis.

Refined carbohydrates deplete thiamine in the body, and although it is added to enriched white flour, it is not added to other simple carbohydrates like sugary foods and white rice. Many drugs also deplete thiamine, including long term use of diuretics. Thiamine deficiency can also occur in alcoholism. Supplementing with thiamine can improve mood, memory, peripheral neuropathy, congestive heart failure, and multiple sclerosis.

The RDA for thiamine in adult men is 1.2 mg per day; adult women, 1.1 mg; pregnant women, 1.4. Many people only get about half the recommended amount in their diet. When taking thiamine to heal disease, the therapeutic range is 10-200 mg As with all B vitamins, higher doses should be taken along with a B-complex. Here are some of the conditions that may be helped by supplementation with thiamine.

Nervous System Problems

Thiamine plays an important role in learning. Some mentally handicapped children were able to learn to speak and read when thiamine was added to their diets. People who are starting to have problems with remembering things or concentrating should consider supplementing with thiamine.

When thiamine is deficient in human diets, people may also experience nervous and mood disorders. Teens are especially prone to thiamine deficiencies because they often have a high intake of

junk food and sweets, which deplete their levels of thiamine. Teens low in thiamine can become aggressive and irritable. It can also cause them to experience headaches, stomachaches, and sleeping problems. If you have teens who aren't eating healthy, at least get them to supplement with thiamine and B-complex.

Adults low in thiamine became uncooperative and even suicidal. People with mental illness may be deficient in thiamine if they have been on a diet high in refined carbohydrates. Thiamine deficiency can also result in problems with balance, staggered walking, loss of coordination, and muscle control.

Other Conditions Suggesting Thiamine

Low levels of thiamine can also cause problems with the circulatory system. These include edema, especially in the legs, congestive heart disease, and heart palpitations. Leg pain and swelling, prickly sensations (pins-and-needles), or burning sensations in the hands and feet suggest thiamine should be used as part of the person's supplement program.

Vitamin B_2 (Riboflavin)

Like thiamine, riboflavin is involved in creating energy in the cells. It is also critical to healthy skin. Deficiencies of riboflavin are not as common as deficiencies of thiamine, but signs of deficiency include cracked lips, roughness at the sides of the mouth, painful inflammation of the tongue and mouth, sore throat, puffy eyelids, dry skin, numb legs, intolerance to bright light, and iron deficient anemia.

The RDA for riboflavin is 1.3 mg for men and 1.1 mg for women. When taking riboflavin for therapeutic uses the range is from 10-50 mg. Therapeutic doses should be taken along with a B-complex.

Those with anemia, elevated homocysteine levels, migraines, cataracts, and carpal tunnel syndrome should consider supplementing with extra B_2. Riboflavin may also be helpful in clearing up skin conditions like acne, dermatitis, eczema, or skin ulcerations, and rheumatoid arthritis.

Vitamin B3 (Niacin)

Niacin was first discovered as a cure for a disease called pellagra. People who lived on a diet mainly of corn were developing pellagra, a disease that progressed from dermatitis and diarrhea to dementia and death. While pellagra is not widespread there are health issues where supplementation with extra niacin may be beneficial.

RDA for niacin is 16 mg for men and 14 mg for women. The therapeutic range is between 50-200 mg to three times daily. Niacin is nontoxic, but can produce some unpleasant side effects in large doses. The most common effect is a flushing (reddening) of the skin, something called a niacin flush, which passes quickly. Niacinamide is a form of niacin that does not cause this flushing, but too much of it can cause nausea, heartburn, vomiting, flatulence, and diarrhea. Avoid high amounts if you have gout, peptic ulcer, glaucoma, liver disease, or diabetes, or if you are pregnant. Specific therapeutic uses for niacin include the following.

Circulatory Problems

Niacin helps improve circulation, as evidenced by the red flushing of the skin from capillaries dilating when a big dose of niacin is taken. It also helps lower cholesterol and is even used in medicine for its cholesterol-lowering effects. For circulatory issues or high cholesterol, start with 50 mg of niacin three times a day. Once a week increase your dose by 50 mg three times daily until you reach 200 mg three times daily.

Mental Disorders

Because severe deficiency causes dementia, researchers have investigated using niacin for mental problems. Psychiatric journals from the 1940's showed many people with schizophrenia being cured when their food was fortified with niacin. High doses of niacinamide have proven helpful in the early stages of schizophrenia, but not in later stages. So, niacin should be considered, along with other B-vitamins in schizophrenia and possibly other mental illness.

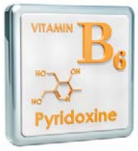
Other Possible Uses

Niacinamide helps prevent pancreas cell damage from type 1 diabetes. It also can help improve joint function in people with arthritis. Niacinamide also helps with skin disorders, the metabolism of nutrients, and the production of hydrochloric acid.

Vitamin B_5 (Pantothenic Acid)

Vitamin B_5 is essential for the production of coenzyme A, an enzyme responsible for cellular energy production and liver detoxification. It also plays a role in the formation of antibodies for immune function and the production of adrenal hormones.

The RDA for pantothenic acid is 1.5 mg for adult women and 1.7 mg for adult men. Deficiency in pantothenic acid is rare because it is found in a wide variety of foods including meats, vegetables, and fruits. However supplemental pantothenic acid has been shown to help with stress, adrenal weakness, chronic fatigue, acne, arthritis, and Parkinson's disease. The therapeutic dose is 50-100 mg.



Vitamin B_6 (Pyridoxine)

Pyridoxine activates at least 50 enzymes and is, therefore, involved in many of the body processes. The RDA for pyridoxine is 1.5 mg for adult women and 1.7 mg for adult men. The therapeutic dose range is 50-100 mg Higher doses can be toxic. Taking doses as high as 500 mg can cause loss of the sense of touch, temperature, pain, and position. Pyridoxine tends to dry up breast milk, so nursing mothers should avoid supplementing with it. The metabolically active and most safe form of vitamin B_6 is pyridoxal-5-phosphate (P5P). Some therapeutic uses for pyridoxine as follows.

Mental and Nervous Disorders

Vitamin B_6 may be helpful for anxiety disorders, including OCD. Pyridoxine is involved in the production of serotonin, so

Additional Help and Information

For more information about how to use water-soluble vitamins to help heal disease, contact the person who gave you this newsletter. You can also consult the following resources:

Strategies for Health by Steven Horne
Quick Access Professional Guide to Conditions, Herbs, and Supplements
The Supplement Handbook by Mark Moyad
PDR for Nutritional Supplements by Sheldon Saul Hendler
The Complete Handbook of Nutrition by Gary and Steve Null
Diet and Nutrition by Rudolph Ballentine
The Natural Health Book by Dorothy Hall

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low levels may be involved in depression. Pyridoxine may also be helpful for seizures in children. It may also be helpful in some cases of schizophrenia.

PMS and Female Hormones

Many women find that supplementing with vitamin B_6 and magnesium helps to alleviate various forms of PMS. It may be helpful for breast swelling and tenderness, menstrual cramps, and anemia. It may also help with morning sickness. Birth control pills can deplete levels, so women taking birth control should consider a supplement with B_6.

Other Health Issues Vitamin B_6 May Help

Supplemental B_6 may also help improve carpal tunnel syndrome, elevated homocysteine levels, over methylation, hemochromatosis (along with zinc), and psoriasis. The elderly, alcoholics, and people that have liver disease, rheumatoid arthritis, type 1 diabetes, and HIV are most prone to a B_6 deficiency.

Vitamin B_9 (Folate or Folic Acid)

There are two basic forms of vitamin B_9. Folate is the naturally occurring tetrahydrofolate derivatives found in food. And folic acid refers to the synthetic compound used in dietary supplements. Avoid supplementing with folic acid because it must undergo reduction and methylation in the liver for use. For better results supplement with methylfolate, also known as 5-MTHF.

Vitamin B_9 has been found to be an important nutrient for pregnant women. If a pregnant woman's diet is lacking in B9, it slows the baby's growth. A severe deficiency can even lead to birth defects such as cleft palate. So, pregnant women are highly encouraged to take folate.

Folate also reduces homocysteine levels, decreasing cardiovascular risk, and improves age-related cognitive decline. B9 deficiency is also thought to be related to psychiatric problems. In a study of 75 psychiatric patients, almost half were found to have B9 deficiencies. This seems to be even stronger in elderly patients. In one study, 80% of the elderly in a psychiatric hospital had low levels.

The RDA for adults is 0.4 mg or 400 mcg. B_9 is readily available in green leafy vegetables and organ meats, particularly liver. However, folate is easily lost in foods by overheating. Even storing food at room temperatures causes loss. Women trying to become pregnant, and pregnant women should supplement with 800–1,000 mcg of 5-MTHF daily. Dosage to reduce homocysteine levels range from 2–5 mg daily. Supplementing with folate might mask an underlying B_{12} deficiency. It is advisable to supplement with B_{12} and folate together.

Vitamin B_{12} (Cobalamin)

Vitamin B_{12} is essential for the normal formation of red blood cells, metabolism, DNA synthesis, and the production of neurotransmitters. B_{12} is not found in plant foods, so vegetarians and vegans are more prone to B_{12} deficiency. However, a healthy gut flora does provide some B_{12}, even in vegan diets. This means that intestinal dysbiosis and gut inflammation can lead to B_{12} deficiency. Excessive alcohol consumption and medications that suppress stomach acid can also cause deficiency.

The most common form of B_{12} on the market is cyanocobalamin, but the better form is methylcobalamin. A therapeutic dose is 5,000 mcg once a day. A liquid form, taken under the tongue is more efficiently absorbed. For severe deficiency, B_{12} shots containing methylcobalamin work even better.

You can get your B_{12} levels checked to see if you are deficient. However, the current accepted blood level range for B_{12} in the US is 200–900 ng/ml. Many experts think this is far too low, and standard ranges in most of Europe and Japan are 550–1800 ng/ml. Based on these standards about 40% of Americans are deficient.

If you have memory loss, fatigue upon waking, tingling or numbness in the fingers or toes, cardiovascular disease, depression, migraines, infertility, cancer, or any autoimmune disease, you may benefit from supplementing with methylcobalamin. It's also a good idea for people who eat little or no animal foods and/or have low hydrochloric acid levels to supplement with B_{12}.