

Good advice by Dr. Harold

Are you on synthetic vitamins supplementing your nature's vitamins in food?

In addition to the macronutrients we consume in the form of carbs, fats and proteins, we need micronutrients like the vitamins, and minerals. These are essential parts of the food you eat. The question you should ask yourself is, "Should you take synthetic vitamin supplements when the natural ones are available sufficiently in the food you eat. If you eat a variety of foods from the 5 groups and have a balanced diet, you'll get all the vitamins and minerals you need. Healthy people don't need additional vitamin supplements and high doses of supplements have their own problems. Older people may need supplements because of poor absorption of natural food vitamins, low acidity in the stomach, and those having gastro-intestinal issues.



Individuals living below poverty line may need vitamin supplements in addition to the natural foods they consume which may be insufficient, but unfortunately, they may not have the means to purchase supplement vitamins.

On the contrary, the rich folk seems to gulp down many vitamins which they don't require as they can afford to purchase the best of nutrient foods.

The role of vitamins is that they participate in thousands of chemical reactions going on in each cell. Each cell processes the proteins, fats and carbs from the food you eat. And vitamins and minerals are essential parts of those chemical reactions, within each cell.

This article is all about whether you should purchase synthetic vitamins or go for the natural food vitamins.

There is no question that the best foods for an individual to consume are the ones in their natural state, and so are the vitamins. Synthetic vitamins are man-made like trans-fats (margarine)

Christine Rosenbloom, a professor of nutrition at Georgia State University and spokesperson for the American Dietetic Association, provides the following answer:

Vitamins and minerals in supplements are synthetic forms of the nutrients. The word "synthetic" doesn't necessarily mean inferior, however. Even those supplements that claim to have "natural" ingredients contain some synthetic ingredients. Indeed, if a pill contained only natural ingredients, it would be the size of a golf ball.

The synthetic forms appear to be absorbed from the gut just like the natural forms. One exception mentioned is vitamin E is that the natural form is better absorbed than the synthetic form. So, in most synthetic vitamin E contains more natural vitamin E for better absorption.

Let's discuss the natural form of vitamins found in our daily foods.

Vitamin A capsules supplements are available at the chemist. Daily dose for men is 900 micrograms and 700mcg for women aged 19-50.

Vitamin A is required for eye health and vision, including macular degeneration (AMD). It is a fat-soluble vitamin found as either preformed vitamin A or provitamin A carotenoids. Plays an important role in the growth and development of several systems in the body, including immune system. It acts as an antioxidant in cells and assists repair damage in the cells.

Being fat soluble, this vitamin may accumulate in the body taken in excess, cause toxicity. Hence, oral synthetic supplements are not recommended routinely, unless indicated.

If you need to avoid the synthetic form, eating liver, meat, fish and dairy products provide enough vitamin A requirement. Eggs, for example, are rich in a form of vitamin A called retinol.

Beta-carotene

Beta carotene is a precursor (inactive form) to vitamin A and is found as a pigment in fruits like cantaloupe, carrots, mangoes, sweet potatoes apricots, broccoli, grapefruit, Chinese cabbage, herbs and spices, peppers, plums, kale and so on.

This pigment is converted into vitamin A in the gut through enzyme activity. It is also an antioxidant.

There are veggies rich in vitamin A includes onions, carrots, peas, spinach and squash, If you eat a variety of above foods and fruits rich in vitamin A, do you need to take a synthetic form of the same vitamins?

There is evidence that smokers who take beta-carotene in high doses may have an increased risk of lung cancer.

Studies have revealed that an increased risk of lung cancer and heart disease of 20%, when beta-carotene consumption exceeded the recommended dose.

Studies have revealed that a significant increase in hip fracture risk in postmenopausal women taking vitamin A supplements and retinol fortified food. This is due to osteoporosis of bone due to long term taking of vitamin A supplements. This is what researchers from the Sahlgrenska Academy at the University of Gothenburg in Sweden have found in a recent study.

We advise that healthy people get enough vitamin A from the food and as such it is best to avoid vitamin A and carotenoid supplements.

Beta-carotene supplements seems to interact with certain drugs, including statins and minerals.

Even though we can derive enough vitamin A from food, some people choose to boost their levels of vitamin A by taking supplements.

BCO1 Genes and vitamin A

Beta-carotene needs genetic protein encoding called BCO1 the key enzyme to convert beta-carotene to vitamin A, in your gut.

Vegans seems to lack this genotype and may not have the optimum levels of vitamin A. They may need to take vitamin A supplement to fill the deficiency.

Vitamin B1 (Thiamine)

This vitamin is required as energy for metabolism and cell growth and development It is also required for the proper function of the brain. Pregnant or lactating women seem to require greater amounts of vitamin B1.

Alcoholics do have a lower levels of vitamin B1, including those who undergo weight reduction surgery (bariatric), and those having HIV.

Symptoms of vitamin B1 deficiency are weight loss, memory loss, muscle weakness, enlarged heart, and other mental symptoms.

The country town 'Beriberi' was named after Sri Lankan workers during the earlier century in Australia were found they were so weak to work. The Sinhalese word is really 'barry barry- implying can't work anymore.

Foods sources that have thiamine are: soybean sprouts cooked, green peas, lima beans, sunflower seeds, barley, lentils, oats, breakfast cereals (fortified with B1), meat, fish and other whole grains.

By consuming above foods, you can avoid taking thiamine supplements. It is included mostly in multivitamin capsules.

Vitamin B2 (riboflavin)

This vitamin promotes cell growth and assist in producing energy. It also metabolizes drugs and fats.

It is found in organ meats, eggs, milk, lean meats and vegetables. Healthy people need not take riboflavin supplements, but vegans may be deficient in B2 and may need to take supplements.

People who suffer from migraine needs to take riboflavin supplements as effective treatment.

When you take riboflavin, your urine will be bright yellow in color.

Vitamin B3 (Niacin)

This is an essential vitamin for energy, efficient functioning of nerves and promotes health of your skin. Deficiency of this vitamin causes a condition called pellagra.

Niacin in found in milk, eggs, canned tuna, rice, lean meats, peanuts, poultry, legumes and enriched cereals.

The symptoms are mental problems, dementia and digestive issues.

There is no necessity to take supplements of Niacin. Taking large doses of supplement may cause flushing due to dilatation of blood vessels, feeling hot, and generalized tingling.

Newer form of this vitamin is called nicotinic acid, which was prescribed for high blood pressure and high blood cholesterol.

Vitamin B6

This vitamin is important for proper brain function, for the manufacture of neurotransmitters (chemicals found between nerves for proper transmission of nerve impulses) and regulate mood. It is supposed to protect against cancer, memory loss and premenstrual syndrome in women.

You do not need to take this vitamin as supplements as it is present in most of the foods you consume: beef liver, lean meat, legumes, fish, leafy greens and potatoes and fruits (excluding citrus fruits).

Deficiency of this vitamin may cause muscle weakness, irritability, depression, nervousness, and loss of short-term memory.

It is advisable for older people to take supplements if they suffer from illnesses with poor absorption.

Vitamin B12

Another name for B12 is cobalamin. It helps digestion of food for energy, helps manufacture red cells in the bone marrow, and DNA. It helps neurological functions and to make a compound called SAME, material needing to make gene, proteins, hormones and fat.

Deficiency in this vitamin may result in weakness, constipation, weight loss, loss of appetite depression and memory problems and many others. You may have gastrointestinal disorders that affect nutrient absorption, includes celiac disease, pernicious anemia

Foods containing vitamin B12 are clams, liver, fortified cereals, fish, meat, dairy and eggs.

It is advisable, for those over sixty to take this supplement, in addition to consuming above foods. Absorption of this vitamin is poor in old people.

Vitamin C-Ascorbic acid)

This vitamin is required by the body for healthy bones, skin and muscles and an antioxidant.

Most people get their vitamin C from orange juice, kiwi, bell peppers, broccoli, strawberries and so on.

Deficiency in the past caused scurvy quite common among the sea travelers and sailors by boat. The gums get swollen and start bleeding, teeth become loose.

Today, if you eat fruits daily you don't have to take vitamin C supplements. Vitamin C in large doses were recommended when you are about to get a cold but being not effective is now not recommended. Instead zinc tablets are recommended.

Folic acid

Folic acid is a form of vitamin B-9 that dissolves in water like vitamin C. It is required to make nucleic acid that forms part of the genetic material. It is considered a complex B vitamin like vitamin B12 and is involved in the manufacture of red blood cells in the bone marrow, prevents hearing loss and preserves the brain health of infants.

This vitamin is especially important for pregnant women, which helps to prevent the fetus from developing major congenital deformities of the brain or the spine.

Folic acid is found in dark leafy greens, such as asparagus, broccoli, citrus fruits, beans mangoes, lettuce, sweet corn, and whole wheat bread.

The current daily requirement is about 400ug. It is advisable to take synthetic supplements of this vitamin (feful) as the folic acid in natural foods may not be enough especially for athletes and pregnant women

Vitamin D

Vitamin D is synthesized in our skin from cholesterol, when exposed to the UV rays of the sun, and present in foods. Foods that contain high levels of vitamin include oily fish, fortified milk, beef liver, egg yolks, mushrooms and fortified breakfast cereals.

Vitamin D helps to regulate the levels of calcium, strengthens bones and preventing osteoporosis.

Studies reveal that vitamin D might have protective benefits in heart failure, diabetes, cancer, respiratory tract infections, autoimmune disease, and even hair loss.

As it is found that large number of people lack enough vitamin D, it is advisable to take synthetic supplements.

Exposure to the sun about 20 minutes a day for the white skin people is all that is required to maintain vitamin D levels, and dark pigmented people may need to expose for longer periods. In addition, foods containing vitamin D may maintain adequate vitamin D levels.

Symptoms of vitamin D deficiency include- joint pains, and in muscles and bones: fatigue; breathing problems and low mood.

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Going back to synthetic supplements, it is better to avoid artificial, unnatural and synthetic chemicals that are available in the chemist outlets. The labels will not reveal that they are synthetics and may be misleading and confused when you read the labels.

We do not know how the synthetics react within the body and mostly may be ineffective in preventing diseases.

Sticking to natural foods to provide your vitamin quota stands to reason. Do not spend big money to purchase these synthetics but prefer to spend money on fresh fruits and veggies for your vitamin requirements.

Hope this article is value for the time spent in reading.

Some reference to Medicine.net

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