

Juice Plus+

vs. Vitamin and Mineral Supplements

by Dr. Smokey Santillo

The purpose of this article is to explain the difference between whole food nutrition and vitamin and mineral supplementation. It will also answer some vital questions concerning the proper use of vitamins and minerals and how they relate to Juice Plus+.

Two of the most commonly asked questions about Juice Plus+ are : 1.) how does it compare to vitamin and mineral supplements? and 2.) how much of a certain vitamin (ex. vitamin C) is in Juice Plus+ ? To answer the first question, you cannot and should not compare Juice Plus+ to manmade synthetic supplements. I will explain reasons why later in this article.

As to the second question of how much of a specific nutrient is in Juice Plus+, rather, the question should be - are the nutrients in Juice Plus+ absorbable (bioavailable) and used by the body? Questions like these demonstrate a lack of public education of the true philosophy of nutrition. This is no one's fault; it is just time the lay person gets a better understanding and a sound philosophy of nutrition. It is not how much we put in the body, but how much the body can absorb over a long period of time.

Our bodies only absorb small amounts of nutrients at any single moment, not the huge amounts contained in most synthetic supplements, if the synthetics are absorbed at all. Normal amounts rather than mega-doses of bioavailable nutrients taken daily correlate with the laws of Nature. For example, when you look at the amounts of vitamin C contained in foods, it is relatively small compared to the amount in vitamin and mineral supplements. For instance, one orange has between 60-80 mg. of vitamin C. The body is designed to handle foods and should get most of its vitamins from foods. (1) Many people consume isolated (USP) United States Pharmacopoeia listed vitamins. USP vitamins are synthesized, standardized, isolated, and are not always from natural sources, and are not always bioavailable. In nature, vitamins and minerals are never isolated; they are always present in food in complex form (2-5), meaning synergistically connected to other nutrients and elements.

Synergy means that each element works with and is interconnected with each other. No nutrient stands alone in whole foods. Most of these synergists are unknown to scientists, but please keep in mind the identity of a nutrient is found *in connection with all other necessary food substances, not isolated by itself*. Each vitamin has a specific function and cannot be replaced by something else. The factors that influence the absorption of a nutrient relate not only to the nature of the nutrient itself, but also the interaction with other components

(synergists) in the food.(6) If you are deficient in one vitamin, the orchestra of nutrients in the body can be hindered in their metabolic function. This is not to say vitamin and mineral supplements do not work or are completely unnecessary. Vitamins are specific. Find out what you are deficient in and take them with whole foods. We must understand man can never duplicate nature perfectly, especially when all vitamins, minerals, phyto-chemicals and enzymes are not yet known to man. He does not know what they are, has not discovered them yet, their action in the body, and the effect they have in the body isolated or with its other thousands of synergistic substances. How can a scientist produce what he has not yet discovered? Nutrition should not be guess work. Man at his best will never be able to produce the synergy of nature. Put your trust in nature.

There are thousands of unknown elements in each food. Ten years ago we knew nothing about phyto-chemicals (phyto=plant, plant chemicals), but they were in whole foods, put there by nature, absorbed from the soil, and are absolutely necessary for normal metabolic activities. Without them we lay the foundation for a weak immune system and disease. Look at the list of phyto-chemicals that are in just one whole apple. (See list - What's in a Fresh Whole Clean Apple?) Does your multiple vitamin and mineral supplement have what is in this one apple? Can you even imagine how many unknown but necessary chemical nutrients there are in all the other fruits and vegetables? We will never know exactly what is necessary to make a vitamin or mineral bioavailable. There have been studies that have shown that natural food complexes (concentrated foods) are better absorbed than isolated mineral salts. Here is an example of research, taken from an article written by Robert Theil, Ph.D., N.D. (7-18):

Food Complex Mineral	Compared to Mineral Salt?
Calcium	8.79 times more absorbed into blood
Chromium	10-25 times more bioavailable
Copper	1.85 times more retained in the liver
Germanium	5.30 times more retained in the liver
Iron	1.77 times more absorbed into blood
Magnesium	2.20 times more absorbed into blood
Manganese	1.63 times more retained in the liver
Molybdenum	16.49 times more absorbed into blood
Selenium	17.60 times greater antioxidant effect
Zinc	6.46 times more absorbed into blood

In a beautifully written article by Judith DeCava called, "Biochemistry of Foods and Supplements," it is stated, "To isolate or separate a vitamin, mineral, amino acid or other component and call it a nutrient is just as impractical as isolating a steering wheel, battery, or carburetor and calling it an automobile. It won't work without the other parts." She also states that electron microscopy indicates that isolated USP vitamins appear larger and have a crystalline appearance compared to vitamins in a natural food complex which have more of a rounded and smaller appearance. Scientists know that particle size is an important factor determining its absorbability. (19)

Another very important factor which is very seldom if ever explained to us is a term called *selective absorption*. This simply means that the body must choose what it needs and when it needs a nutrient to keep itself metabolically sound. All the known and unknown nutrients must be present at any given time to be absorbed. Only whole foods can supply these.

Vitamins and mineral supplements are sometimes necessary, but they are not nearly as comprehensive and bioavailable as food is, and should only be used for specific needs. They are not for everybody, everyday. There are situations when mega-doses of vitamins and minerals may be necessary, particularly when used for athletes or people who are chronically ill. In these situations please consult a nutritional oriented physician.

Fruits and vegetables and other whole foods are absolutely, unequivocally necessary on a daily basis for all humans, adults and children. It is stated that we should eat 7-13 servings of fruits and vegetables daily. Do you? Of course not. I would like to add something to this. Three of these fruits and vegetables should be dense, nutritious choices like parsley, kale, spinach, broccoli, and beets. When we do eat these foods, they are usually cooked. Cooking can be detrimental because of nutrient losses, making the equation even more difficult.

This brings us to the most important question of all. How do you compare Juice Plus+ to vitamin and mineral supplements? You really cannot compare them. A whole food concentrate is not a man made supplement. When asked this question, do not try to compare the two. Bring the person's attention to why Juice Plus+ was developed. It was developed to support two major foods groups- fruits and vegetables. And here are the reasons why:

1. We do not eat enough fruits and vegetables.
2. We cannot always get seasonal, fresh produce.
3. The soil and our foods can be very nutrient deficient.
4. We do not eat the dense nutritious fruits and vegetables. If we do, we cook them and destroy a large part of the necessary enzymes, vitamins, and minerals. Keep in mind frozen, processed, and canned foods can be deficient, to

say nothing of foods that are shipped in from distant places that are losing their nutrient value.

5. We do not eat a variety of fruits and vegetables.
6. We know that Juice Plus+ is bioavailable. Do you know if the supplements you are taking are bioavailable?
7. Fruits and vegetables are necessary for everybody throughout their lifetime. Synthetic supplements may not be.
8. The known and unknown synergistic nutrients are in whole foods - fruits and vegetables. They are not in man made supplements.

Isn't it amusing that most folks believe that the foods they eat, particularly fruits and vegetables, are sustaining their bodies, building their immune system, and giving them all necessary nutrients? But, as soon as you take those same foods and concentrate the juice powders and fibers and put them into a capsule, these same people become suspicious. This is because :

1. It is a relatively new concept.
2. They are used to knowing exactly what is in a pill or capsule. This concept is supported by the drug industry.
3. They wonder how taking Juice Plus+ can be so healthy. It just seems too easy.
4. People wonder how we get fruits and vegetables in a capsule. Juice Plus+ is not dehydrated fruits and vegetables. It is the concentrated, fresh juice powders. If you remove all the water from a glass of orange juice, what would be left is the powder, which is the concentrate.

We know that the foods we are eating on a daily basis are not doing the job. It is a mistake to think that deficient soils and overcooked foods will support a healthy lifestyle and longevity. Plenty of studies have proven these statements otherwise. In some situations supplements are necessary. Your first priority is to eat wholesome foods. Second, choose concentrated food sources to support your diet. Third, choose your vitamin and mineral supplements according to your needs.

The research that we have provided that has been done on Juice Plus+ is extraordinary, to say the least. There is not enough room in this paper to describe the entirety of the research that has been done. I will review some of these:

One research paper done in June 1996 showed how absorbable Juice Plus+ is. This was published in *The Journal of Current Therapeutic Research* (vol. 57, June 6, 1996). It demonstrated that taking Juice Plus+ for only 28 days increased beta-carotene 510%, alpha-carotene 119%, and lutein increased 44%. Lycopene increased 2,046% and alpha-tocopherol (vitamin E) increased 58%. These were all blood studies. Blood was drawn before, during, and after the experiment. Another study at the University of Arizona measured the effects

Juice Plus+ has an effect on the immune system. The results showed that after taking Juice Plus+, T-cells were increased (they fight cancer and viruses), natural killer cells increased (these attack tumor cells and infections), and cytokines increased (hormone-like substances that stimulate the immune system).

A DNA study was done at the medical department at Brigham Young University. The average age of participants was 68 years. This study showed that the antioxidants contained within Juice Plus+ significantly reduced the level of DNA damage in the body. When the DNA gets damaged, cells begin to mutate into cancer cells and the immune system is weakened. These studies have proven beyond a shadow of a doubt that Juice Plus+ is not only absorbed through the digestive tract, but effects the interior cells of the body. The double edge research shows that nutrient contents of blood are affected plus the immune system is improved at all ages. *This also makes Juice Plus+ an anti-aging food supplement.* Please ask for copies of these studies from your local NSA distributor.

Often times we face statements like, "Well, I take spirulina, or blue green algae, kelp, or bee pollen. Why do I need Juice Plus+?" All these products are wonderful. I added spirulina and kelp to Juice Plus+ Complete because of some of the nutrients they contain, but they are *not* fruits and vegetables. An orange is an orange, an apple is an apple; each are totally different from any other food. Consider all the unknown elements in an orange. God made every food different in some factor, whether it's the color, flavor, minerals, enzymes content, etc. We know we need a variety of foods in order to be healthy and what is most important is that we eat a variety of fruits and vegetables. Spirulina, bee pollen, kelp, etc. are supplements to the diet - fruits and vegetables are a necessity. That's why we used 17 nutritionally dense fruits and vegetables in Juice Plus+.

With Juice Plus+ we have actually concentrated nature into a capsule. Here is how:

1. We use several concentrated juice powders.
2. We add back more enzymes, phytochemicals, and fibers.
3. We get our fruits and vegetables from a variety of soils.

Putting Juice Plus+ together in this way helps to overcome any deficiencies present in any one food. Plus, each nutrient represented in Juice Plus+ is in more than just one of the foods included in the formula. Example: calcium is not just in carrots, but is also in spinach and broccoli also. Potassium is in parsley and beets. I call this a "nutritional loop system" when single nutrients are contained in more than one of the foods included in the formula.

It is important to understand that it takes time for whole food supplements to work in conjunction with normal body functions. Most people do feel different after a few short months on Juice Plus+. But others that make statements that

they don't feel a difference are under the delusion that nutrients work like drugs and you should feel immediate effects. Nutrients have few immediate effects. We have to wait until nature gets rid of deficient and defective cells, and replaces them with new cells that grow and strengthen the body. *Renewal is slow and steady.* Your blood cells take three months for renewal, muscle cells and organs take six months, bones and teeth about a year. That is what good sound nutrition is all about. You have to wait until the nutrients are built into your structure to feel the difference and for it to show. It is similar to a houseplant that has been neglected - you start to fertilize the plant and the plant perks up. But it sometimes takes a few days or weeks to see the difference. Every year 97% of your body is replaced, reconstructed from the foods you eat. You have to make the choice. Are you going to depend on foods produced by nature or on man's supplements made in a laboratory? At Yale New Haven Hospital, researchers evaluated 257 vitamin products. (20). Some were made with wrong or cheap nutrients, some had improper ratios of nutrients, some were missing vitamins or minerals that were necessary. Only 49 were judged to be adequate. Choose your supplements carefully. Ask professionals or health food store owners to identify the best companies. Ask for a bioavailability study on the supplements you choose.

In summary, it is just a matter of understanding what true nutrition is and the role vitamin and mineral supplements play. Your priority is to eat healthy food, exercise and drink plenty of purified water. The supplements you choose are entirely up to you. Just make sure there is research to back up the bioavailability. Juice Plus+ has been proven to be bioavailable. The research has shown its effects reach down to the cellular structure of the body which is the ultimate goal of any formulated health product.

I hope this article has helped you in understanding the true philosophy of nutrition. Whole foods and whole food concentrates are necessary. Everybody at every age needs fruits and vegetables. This especially includes the athlete, the elderly, and growing children. Teach them to depend on nature, for the health and wealth of this country depend on it.

This article is not intended for treatment of disease, nor as a substitute for medical treatment, nor as an alternative to medical advice. It is a review of scientific evidence presented for information purposes. Any application of the advice herein is at the reader's discretion and sole risk and should not be adopted without a full review of the scientific references given and consultation with your health oriented practitioner.

Footnotes

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