

Wholefood supplementation

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Today, we are exposed to an overwhelming number of internal and external stress factors. Taking control of our health does not end with eating natural whole or organic foods. We also need to supplement with natural, quality wholefood-based supplements.

Many of the natural food components that we enjoyed when we 'lived off the land' are now missing from our diets. Due to incredible changes in our environment and eating habits (processed, mass-produced foods, little variety, petrochemical fertilisers, mineral-depleted soils, much more refined sugar and now genetically engineered foods) our diets lack nutrients that we are designed to have. Nutrient content analyses on fresh fruit and vegetables in 1991 compared with 1939 show on average a 22% decline in mineral content. The staggering variation in the nutrient content of fruit and vegetables is because of all the above-mentioned reasons, plus the length of time we store foods. An orange may provide from 180 mg to 0 mg vitamin C, the average being around 60 mg. Yes, some supermarket oranges contain no vitamin C!

Wholefood supplements

Wholefood supplements are all-natural whole foods and food concentrates. They are not off-the-shelf supplements that have more toxic additives in the form of fillers or binders than the nutrients they claim to provide. The body does not absorb isolated vitamins and minerals as readily as those contained in wholefoods. Studies show that the body treats these isolated and synthetic nutrients like xenobiotics (foreign substances). Just like refined food, refined synthetic and isolated nutrients have been robbed of all of the extra accessory nutrients that they naturally come with. I'm amazed at how many naturopaths and nutritionists focus on the importance of a wholefood diet as opposed to refined food, but send their patients home with a bag full of refined isolated supplements.

For an isolated nutrient to work properly in the body, it must also contain all the other parts that are naturally present in the food. If the parts are not all there from the start, the missing nutrients are taken from the body's stored supply. This is why isolated nutrients taken for longer than three months, often work for a little while, then seem to stop working. Once your body's store of extra nutrients is used up, the isolated nutrient you're taking doesn't work as well anymore. Worse still, a deficiency in these extra nutrients can be created in your body. When you take one or even several nutrients in extracted, fragmented form, such as calcium and magnesium tablets, synergy is lost and its effects are diminished or changed. Isolated supplementation is to replace only one dirty spark plug and expect your car to run smoothly.

There are of course, exceptions. For example, women who are trying to become pregnant and expectant mothers during the first 3 months of pregnancy are currently advised to take a daily 400 mcg folic acid supplement. During pregnancy folic acid deficiency in the diet can cause defects in the growth of the neural tube, which results in malformations such as spina bifida and anencephaly (baby without a brain). However, if isolated nutrients are taken at high levels for long periods of time, they can create numerous problems and imbalances in your body.

Synergy

The human body is a complex adaptive organism that has evolved in interaction with the environment and has adapted to make use of the hundreds of naturally occurring nutrients to sustain life. These nutrients work together within the human body and provided they are in the right balance, they have the power to potentiate each other's actions. For example, bioflavonoids, found in vitamin C-rich foods, potentiate the effects of vitamin C, making it 'longer lasting'. Many studies have now shown that the combination of vitamin C with bioflavonoids works much better than just giving vitamin C on its own. There are many other examples of synergy of nutrients. Despite this, most research carried out in nutrition has ignored this fact and has tested the effects of isolated nutrients. While the results have often shown some benefit, the really exciting results achieved through nutrition are those that have given a broad combination of nutrients, either using living foods or wholefood supplements.

Wholefood supplements, not isolated vitamins and minerals, hold the key to health and personal wellness. Growing up in our mechanistic society, we expect everything to work in a reductionistic way, e.g. this vitamin for this deficiency and that vitamin for that deficiency. We all fall for the 'vitamin of the month' theory. This has only limited application or influence. Wholefoods harbour a whole ratatouille of compounds that have never seen the inside of a vitamin bottle for the simple reason that scientists have not, until very recently, even known they existed, let alone brewed them into pills! Thousands of phytochemicals, fibres, vitamins (known and as yet undiscovered), minerals, antioxidants and enzymes found in wholefood have the greatest impact if they work together in synergy. Synergy means that the whole is greater than the sum of its parts.

It is extremely unlikely that any manufactured synthetic supplement will be able to reproduce the same unique combination of nutrients found in abundance in nature's foods. Does your diet or off-the-shelf vitamin pills contain the following vital active ingredients, which are found in wholefood supplements: antioxidants, enzymes, fibre, omega-3 and

omega-6 essential fatty acids, lignans, proxeronine, damnacanthol or vitamin B₁₇? There are numerous wholefood supplements available on the market, but some examples are kelp, chlorella, spirulina, wheat grass, barley grass, alfalfa, noni and aloe vera juice.

The nutrients found within wholefood supplements are not isolated. They are highly complex structures that combine a variety of enzymes, co-enzymes, antioxidants, trace elements, activators and many other unknown or undiscovered factors all working synergistically, to enable this nutrient complex to do its job effectively in your body. Thus, antioxidants and nutrients have multiple and synergistic interactions, and also exhibit compartmentalisation and tissue specific activity. Therefore, supplementation with large doses of a single antioxidant or nutrient might not produce the same beneficial effects as supplementation with lower doses of a broad spectrum of nutrients. We don't know yet if we should combine an indole with an isoflavone, or folic acid with selenium. Only nature knows best.

Absorption

Furthermore, it's not what you ingest that counts, rather it's what you absorb that really matters! Some people may not absorb more than 5 - 10% of a synthetic off-the-shelf supplement pill. To be absorbed, nutrients need to be in an ionic or organic state. Being in an organic state means that a nutrient contains a carbon atom in its molecular structure. It is therefore not necessarily the amount of a nutrient you ingest that is important, but its form and how much of it is bioavailable that counts the most.

Natural wholefood supplements have the greatest level of nutritional and bioavailable vitality! A scientific study measuring plasma antioxidant levels after the test subjects took dehydrated fruit and vegetable extract (Juice Plus+) supplementation for 28 days revealed the following significant increases: beta-carotene 510%, alpha-carotene 119%, lutein/zeaxanthin 44%, lycopene 2 046% and alpha-tocopherol 57%.¹ There is also no risk of over-supplementation with wholefood supplements, since they are formulated from food not synthetics.

How do you know when a supplement is a good choice?

Use the following characteristics as a guideline:

- The nutrients must be as close as possible to their natural form and free of any contaminants, e.g. pesticides or heavy metals in the case of blue-green algae.
- The utmost care should have been taken in all phases of its production, from growing its ingredients, to manufacturing, testing for potency and quality control.
- The supplement must be well priced. It might be cheaper growing and juicing your own wheat or barley grass!
- Supplements in liquid or powder form are better absorbed than capsules or tablets.
- Does it work? Still the best indicator is to evaluate what it does for you. It is also good to select from companies that have long track records of providing high-quality products that produce good clinical results.

Yet still, the most important part of health, healing and vitality are the basics of a balanced wholefood diet, exercise, detoxification, structural, emotional and spiritual wellbeing. No supplement will work on its own, if these foundations are not in place.

Reference

1. Wise JA, Morin R, Sanderson R, Blum K. Changes in plasma carotenoid, alpha-tocopherol and lipid peroxidase levels in response to supplementation with concentrated fruit and vegetable extracts: a pilot study. *Current Therapeutic Research* 1996; **57**: 445-461.