

The Case for Whole Food Nutritional Supplements

by Dr. Jordan Rubin, NMD, PhD

As with any area of health and wellness, there are differing schools of thought and philosophies; nutritional supplementation is no different. Historically, the older school of thought on nutritional supplementations dates back to the 1930s, during which time there was emphasis on the utilization of whole food concentrates as a source of essential nutrients. Concentrated foods such as wheat and barley grass were considered our first multivitamins; these grasses and their juices are "mainstay" health drinks even today, and are seeing a resurgence of interest.

The "modern paradigm" of nutritional supplementation came as chemical scientists claimed they could replicate these natural-growing miracle foods' nutrients in their laboratories. This trend superceded the "old school" paradigm of nutritional supplementation. With the advent of scientific technology, individual nutrients such as beta-carotene, ascorbic acid, and alpha-tocopherol could not only be identified in the whole food matrix, but could also be scientifically crafted as simplified imitations of the "real thing" – created through synthetic means.

Such "breakthroughs" led to the modern multiple vitamin and mineral formulas that utilize, for the most part, isolated or synthetic vitamins and minerals created in the laboratory. These types of formulas rely on USP (United States Pharmacopoeia) nutrients. These are pulled or isolated from their natural cofactors and are often synthesized like pharmaceuticals. If sufficient cofactors are not supplied – such as other vitamins, minerals, and enzymes – then the body might not be able to use them. These nutrient isolates or USP vitamins and minerals are sometimes combined with food concentrates and herbs. This might

be an improvement, but still inferior to the "old school" ways.

Recent studies indicate that the "old school" ways are far superior to the "modern paradigm"; Nature's design should not be altered or "replicated." Irrefutably, nutrition is best gleaned from whole foods; however, when nutritional supplementation is needed, then whole food nutritional supplements offer the greatest nutritional integrity. Isolated or synthetic supplements are sub-optimal, many times ineffective, and can even be detrimental to health.

With nearly 70% of our population taking one or more supplements, mostly in the form of multivitamins, it is important to understand what these nutrients do in the body. Vitamins are extremely complex organic substances necessary for human life and metabolic processes – for growth, maintenance, and health. The body is not capable of producing these vitamins on its own; they must be obtained from foods and are integral parts of the nutritive compounds infused in the whole food. They are sometimes considered singular substances, but each vitamin is actually a "group of chemically related compounds." By separating the vitamin "group" into single, incomplete vitamin portions, the vitamin is then converted from "a physiological, biochemical, active micronutrient into a disabled, debilitated chemical of little or no value to living cells."

For example, the body can selectively choose to absorb and assimilate exactly what it needs from whole foods/whole food concentrates containing whole nutritional complexes, and excrete the rest. The antithesis of this "selective absorption" mechanism occurs when the body is given fractionated, isolated, or synthetic vitamins; the

body is coerced to manage the influx of vitamins and the results can be chemical imbalances or toxic overdose. Most vitamins in foods are directly or indirectly products of plants; exceptions include vitamin D – produced in adequate amounts by the body when utilizing ultraviolet light from the sun (in measured quantities). They are also found in organ meats and dairy fat from grass-fed animals, and vitamin B12 – produced by fungi, soil microorganisms, and some bacteria, as well as animal foods including meats, dairy, and eggs. Normally, intestinal bacteria produce a needed portion of vitamin K, and other B complex factors – if the healthy intestinal bacteria are functioning properly.

Whole Foods Defined

Properly grown and prepared whole foods are still the primary sources of virtually all vitamins; however, whole food nutritional supplements – derived from whole foods – organically grown, nutrient-dense, minimally processed at low temperatures, and made "body ready" for quick "selective" absorption and assimilation – rank second. Whole foods are real foods complete with all natural nutrients and other important compounds, and have not been highly processed, synthesized, or irradiated.

The word "whole" is a derivation of the Greek root "holon," meaning "a single organism" and "the entire universe"; these can "stand alone," or perform a dual role by becoming synergistic entities woven together, forming the whole. The word "food" is derived from the Old English word "fode," meaning "to foster, to nourish, and to encourage growth." Therefore, "whole foods" denotes that their roots are founded in an integrated universe whose foods contain the spectrum of

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essential, synergistic nutrients that, when consumed, foster a balanced, complete nutrition.

Our society, however, "processes" its whole foods much like it has fractionated its nutritional supplements – leaving them void of essential nutrients. It has refined whole grains so that the germ, bran, and other vitamin-rich portions are removed. Food preparation and "sterilization" processes such as pasteurization destroys many of the vitamins in the foods; adulteration of foods comes with additives, chlorine, fluoride, etc. Farming methodologies detract from nutritional wholeness of foods; chemical fertilizers, pesticides, crop limitation, overuse of fields – make the soil incapable of producing nutritious, vitamin-laden foods. Add air pollution, water pollution, and our

stress-filled lifestyles – all depletors of vitamins and minerals and it is clear that our society cannot be receiving optimal nutrition.

To clarify the difference between whole foods and processed foods, and whole food nutritional supplements versus the average, adulterated, isolated, synthetic supplements, let's "dissect" whole, unrefined grains. Whole, unrefined grains contain three main parts: the *germ* – or sprouting part of the grain; the *endosperm* – containing starch to support the young sprout during its early stages; and the *bran* – the protective layer encasing the sprout and its endosperm. In a "whole grain food," all three parts of the grain must be resident; in a processed/refined food, the germ and the bran are removed, leaving only the starchy

endosperm. This is merely a fraction of the intended natural benefit of whole grains.

Each part of the whole grain serves a different purpose and adds a different completing nutrient. The germ is rich in micronutrients to support the young sprout and contains high levels of vitamin E, as well as the majority of the B-vitamins and other nutrients. The protective bran contains multiple micronutrients intended to protect the young sprout from environmental damage, and these same molecules protect the consumer of whole grains. Additionally, the bran contains over 60% of the minerals in grains, and is high in fiber. The endosperm – the primary component of white bread – contains some vitamins and minerals, but is comprised primarily of starch – contributing calories and little nutritional value to consumers.

The problem with processed foods is similar to the problem with synthetic, isolated supplements – they lack "wholeness" and cannot reach the potency level of whole foods or whole food nutritional supplements. They simply are not intrinsically equipped to do so.

Whole Food Nutritional Supplements versus Synthetic Supplements

A vitamin is a complex mechanism of biological, functional, interrelated, interdependent components. It consists of not only the organic nutrients identified as the vitamin, but also enzymes, coenzymes, antioxidants, and trace element activators. Since enzymes are proteins, they must contain amino acids and trace minerals. Enzyme activators may include trace elements such as manganese, cobalt, zinc, copper, molybdenum, selenium, vanadium, etc. These components are effective *only* when left in the proper organic state.

Nutritional supplements, then, should not be individual chemicals or combined chemicals. Supplements must be food concentrates – intact, integrated, with their vitamin complexes incorporated – in order to



"YOUR CADILLAC IS BLOCKING MY DRIVEWAY."

retain their functional and nutritional integrity. Altering the natural state of food concentrates will literally take the "life" out of them – leaving them "dead" – as a synthetic, isolated, adulterated supplement.

Live, natural complexes usually exist as enzymes or coenzymes; they contain live vitamins, organic minerals, and other vital, functional, elements organized by the sun, rain, water, soil's nutrients, and living bacteria. Heat, pasteurization, and steam sterilization destroy enzymes and enzyme activators; supplements produced utilizing any of these procedures are not vitamin complexes. Hence, the synthetic vitamin, once separated from its protein component, biologically loses its function. Chemically-pure, isolated, synthetic vitamins are devoid of all their synergists – the factors which enable biochemical operation and action.

Synthetic vitamin fractions are mirror image duplicates (enantiomers) of only a portion of the real, biologically-active, and physiologically-precise nutritional complexes. They may be identical in chemical characteristics, but differ from one another in their structure or configuration; they are mirror-image molecules – opposite "twins" – which act and react in different ways. The enzymes produced by living organisms recognize, bind to, and spur the production of only one enantiomer, leaving the nutrients extracted from plants or animals from nature "enantiomerically pure." Synthetic, isolated vitamins yield products that may be 50:50 mixtures of enantiomers that are difficult to separate.

Effects of these "evil twins" in synthetic supplements – processed like pharmaceuticals – (as well as some pharmaceuticals) are unpredictable and sometimes damaging. In the case of synthetic drugs, about 75% of those made in the US come in these "mirror image" mixtures. A major producer of synthetic vitamins has been quoted as saying that "sometimes the mirror

image is useless, yet often can be poisonous." Such an approach in making drugs (as well as making synthetic or isolated supplements) "equates its construction by having part of it designed for its function, and an equal weight of an isomer, which usually has no therapeutic value, but has the potential to cause unsuspected deleterious side effects." Drugs such as thalidomide, ethambutol, and naproxen are examples of those containing "evil twins." It is difficult to predict how such "mirror images" will affect people.

All whole food complexes contribute specific and definite proportions based on an individual's need for metabolic reactions in life; any imbalance is unwise – if not unhealthy. Synthetic supplement pills are inherently unbalanced biochemistry. For example, the use of ascorbic acid supplements – comprised of high amounts of a single part of the vitamin C complex – ignores the fact that the balance is a result of the 150 anti-carcinogens, redox agents, and other phytochemicals present in each fruit and vegetable. Foods contain innumerable substances, some still unknown, that produce a combined effect to which a single ingredient cannot compare.

Another issue in the case for whole food supplement nutrition resides in "potency" factors. "Potency" – derived from the Latin *potentia*, meaning "power" – indicates the strength, ability or capacity to bring about a result. Vitamin potency is usually measured in milligrams or micrograms, based on test results using isolated vitamin fractions. There are deficiencies due to our depleted soils, and refined, processed foods – creating an imbalance and a need for nutritional supplements. However, in the supposed "high potency" vitamins – chemically-pure portions of vitamin complexes, their use is worse than the deficiency. Synthetic vitamins, especially in excessive quantities,

can have drug-like effects and cause the same symptoms that result from their deficiency. The results are drug effects – not nutritional effects – and often reverse nutritive action.

A nutrition fallacy usually embraced is that natural supplements, because they require *less* to get *more* results, are not as potent as synthetic supplements. Nothing could be further from the truth. The bottom line is this: A miniscule amount of a vitamin left in its whole food state is tremendously more functional, powerful, and effective nutritionally (*more potent*) than a large amount of a chemically – pure, synthetic or isolated vitamin. Whole food nutritional supplements contain organic micronutrients – nutrients needed in minute quantities in order to accomplish large biochemical functions. Furthermore, the body treats synthetic supplements as toxins – rushing the "nonfood" item through the circulatory system to the kidneys, in order to be excreted.

Since potency refers to effectiveness, whole food nutritional supplements contain true high potency because they remain intact with natural synergists found in unrefined foods. Synthetic, isolated supplements are less potent – less able to effectively nourish the human body.

Living Nutrients/Homeostatic Nutrients

As mentioned earlier, whole food nutritional supplements are "alive," while synthetic, isolated, or adulterated supplements are "dead." Also, the idea of nutritional "balance" is imperative; any imbalance is unwise, if not unhealthy. Synthetic supplements cannot offer "balance" or homeostasis; however, the utilization of living homeostatic nutrients in the preparation of whole food nutritional supplements offers the balance that is necessary.



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Effective whole food nutritional supplements will utilize homeostatic nutrient complexes, vitamins and minerals which are liberated and "potentiated" – made potent by probiotic microorganisms and their byproducts including enzymes and organic acids. As with the complex structure of whole foods, the result is not simply "mixing" but alchemy. The process of turning ordinary vitamins and minerals into living "whole food" structures is called "organic transmutation." This is the same process that is used by nature to convert inorganic nutrients in the soil into the organic, ionized and charged nutrients we consume in healthy foods. Organic, plant-derived vitamins and minerals are able to be safely used by the body because nature has acted upon them and transformed them into organic material, rather than allowing them to remain in their elemental form. These nutrients literally become part of the whole food complex.

In exceptional whole food nutritional supplements, great care is taken to ensure products from whole foods which are organically-grown, nutrient-dense, minimally processed at low temperature, and are made "body ready" for quick absorption and assimilation. Therefore, optimal potency is ensured; the designed potential is reached and the desired target is hit. One's nutritional state relies on what the body absorbs and assimilates, not only what it ingests. Therefore, "body ready" supplements composed of living homeostatic nutrient complexes through enzymatic fermentation, contain all the requisite co-factors for proper absorption and utilization.

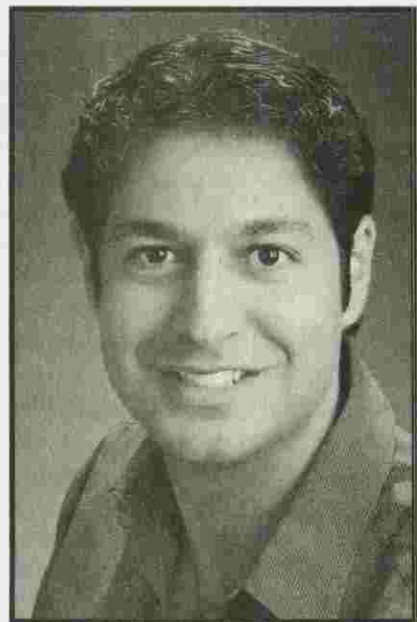
As alluded to earlier, research indicates that upwards of 70% of the populace uses supplements, with at least 50% of those using a multi-vitamin and mineral. They are used to prevent disease such as heart disease or cancer and to look and feel

better. Until recently, no conclusive studies have shown that a multi-vitamin and mineral accomplishes those results; however, that is about to change. Preliminary results of a current double-blind, placebo-controlled clinical trial on **Living Multi™** – a multi-vitamin/mineral formula composed of homeostatic nutrients – indicate that "this will be the first multi-nutrient study on humans that looks at multi-nutrient formulas for what they are designed to do."

Living Multi is designed to: Modify the risk for cancer through feeding cells protective nutrients; detoxify the body from harmful fat soluble toxins; reduce risk for diabetes by restoring the body's ability to utilize insulin with its mineral and enzyme – rich homeostatic nutrient complexes. Nine other essential functional health goals of this living nutrient, multi-vitamin/mineral include: modulation of the immune system function, optimal digestion, control of blood sugar, energy increase, and the reduction of neuro-degeneration, risk factors for obesity, stress effects, allergic responses, as well as inflammatory markers. The **Living Multi** formula contains whole food concentrates including 23 different fruits, 20 vegetables, 9 ocean plants, 11 medicinal mushrooms, 6 botanicals, and more than 100 fulvic acid and ocean – based ionic minerals.

This multi-vitamin and mineral supplement is formulated using the healthiest foods known to us – whole foods – and finds its foundations in the "old school" philosophy of nutritional supplementation. This is definitely a study whose results are worth following; look for more on the published clinical results in the coming months.

*For more information on whole food nutritional supplements and the breakthrough compounds known as *homeostatic nutrients* log onto www.gardenoflifeusa.com



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