

THE MULTIVITAMIN BATTLE – ANOTHER VIEW

By Michael LeVesque

Perception is everything. So let's look at the influences that help determine it.

Medicine is based upon observation, as the French Philosopher Michel Foucault stated in *The Birth of the Clinic*, when describing the medical profession.

Observation is Perception

For years the wealthy in northern Europe ate off pewter plates, which have a very high lead content. Tomatoes are very acidic and when placed in contact with the pewter they leached out the lead. When eaten, the tomatoes then produced lead poisoning. Lead poisoning manifests itself in many ways from headaches to delirium to death. Based upon perception tomatoes were considered poisonous in those regions for several hundred years by society and the medical community until the 19th Century when a merchant publicly ate a bushel of tomatoes to prove they were harmless without ill effects.

Perception is Our Reality

Twenty-five years ago medical science stated unequivocally that we were born with limited number of brain cells. Once they died, they were never replaced. Although this seemed illogical to some, it was accepted as fact.

For example, canaries help prove the opposite. There is an area of a male canary's brain where their song composing takes place. The song is very important to male canaries because the female canary responds to singing of this song, which helps the male canary in his courting. After the season passes, the brain cells die. The next Spring, new brain cells emerge and the canary offers up a new song, perhaps to make sure the female canary responds, since she has already heard last year's tune.

Today it is recognized that brain cells can be regenerated – not just in canaries – and that new ones are created. With the development of genetics, the World's perception of reality is once again shifting. We now know that change is an integral part of all life, and that change occurs endlessly. Farmers, physicists, meteorologists, and geologists recognize this. It is part of their training, so they recognize it when they see

it. The theory of relativity placed truth within contextual terms and that context changes. Biologists, chemists, mathematicians, and medical science seem to have much more difficulty recognizing it. Perhaps this is because they view the World in reduced terms, seeing the World as a tiny stage with set rules and options. They are often surprised by an observation they never thought could occur because their established rules and language prevented them from seeing it, and their training produced attachment to results firmly established.

An outmoded belief system becomes rigid and corrupted. It is a fixed belief system. Meanwhile, everything is changing. This is exactly what happened at Duke University.

Some oncologists decided to experiment with genetically-altered yellow laboratory agouti mice, specifically raised because they genetically pass cancer on to their young. These mice are used for cancer research in medical labs. The scientists decided to see what would happen if they fed the rats some vitamins, specifically, a mixture of B vitamins – the exact same kind as found in a general multiple vitamin. One of the scientists, Randy Jirtle, thought it both eerie and scary to observe the newborn mice. The young looked very different from their parents. They were lean, brown and healthy. This experiment helped to change science's view of the influence of the environment and opened a new way of viewing genetics due to "epigenetic change." This means that genes express themselves according to their environment, i.e., genetic change. A person changes their genes (turning them on and off) by changing the environment surrounding them – that is, by altering what they eat, drink, and do.

It is now realized that there are approximately 600 enzymes that need vitamins and minerals to function properly. Research has shown that defective enzyme genes are repairable with a higher dose of the proper vitamin or mineral.

It is hitting even the mainstream press. On the front page of the *San Francisco Chronicle*, June 6, 2008, the paper reported that "UC Berkeley researchers are searching for genetic flaws that can be fixed by simply taking vitamin and mineral supplements By knowing which genes

are defective, people will know which vitamins they need . . . Eventually, a person's entire genome may be scanned for flaws, and a set of vitamins could be prescribed for optimum health." (emphasis added)

Change and Observation are Intrinsicly Linked

They create our reality. There are, however, major hurdles for perception to cross. In our society, training can take many forms and frequently the higher the status, the more rigid the training, such as for lawyers and medical doctors. The results can frequently be a narrowness that creates draconian, authoritarian behavior. In addition we have human emotions that present definite hurdles to perception – the greatest of which appears to be greed. Even when we know otherwise, greed and authoritarian mindsets choose the path committed by the person's training as the "truth" to adhere to or the desirable path to maintain for one's own self interest.

These behaviors and mind sets act in our daily lives and seem to usually play a minor role, but those small, important, skewed perceptions create realities that do not fit the intelligence of the Universe, often with great ramifications.

On the large scale, whole organizations and systems base their reality upon these perceptions. The results can often be that information is not accurately observed, or else observed and inaccurately reported, or made to fit the desired perception to create a specific reality. At some point the system fails, there are mistakes. This common event in the Universe is called "karma." (Karma is when what happened yesterday affects what is happening now, and what is happening now affects what will happen tomorrow. In other words, your past karma is what happens to you and your future karma is what you do.) We witness this, for example, in banking, the stock market, healthcare, politics, and education. Ultimately, the Universe sorts it out.

The Heart of the Issue

Are multivitamins unnecessary and dangerous as the media reports? The media gets their information from news releases, interviews, or actual reporting from attending a lecture or conference by a reporter in the employ of someone. Regardless of what the media is saying we know that the general health of Americans is deteriorating and at an increasing rate. We have huge sums of money procured to find cures. Much of it is wasted funding since in most cases there is not a "cure" per se. There is only change that can make the difference. When cancer is recognized more as a result of environmental poisoning and bad diet, and stress, and poor life style with lack of exercise, then change

can take place. Before that time comes to pass, it is all public relations and moneyed interests beating a tin drum.

So what is it about multiple vitamins that make them such an easy target for criticism at this time? Perhaps it is the old "divide and conquer" because there are definitely several schools of thought regarding a good multivitamin making it an easy arena to attack. The movement to control the individual's availability to purchase multivitamins hinges on creating a perception that they are worthless or even dangerous and should only be taken under a doctor's prescription (although the doctor is untrained in the field of nutrition), and therefore must be removed from the open marketplace where the individual has control of his or her own health to that of a "qualified" but largely-ignorant professional.

Without the specifics of the content or quality of the multivitamin being attacked, the health industry has a difficult time responding to criticism. The multivitamin variations are numerous. We can, however, divide them into several categories and critically analyze them.

The Big Differences in the World of Multivitamins

First of all, when it comes to dietary supplements, there is the health-food store standard, also backed by the orthomolecular approach. Next, there is the emerging concept that food-based supplements with low potencies are the answer. Both of these are somewhat on the same side of the fence. Why? They both believe in purity and active ingredients for maximum absorption and assimilation.

Then, on the other side of the fence we have the pharmaceutical drugstore multivitamins. They actually are the ones that the public most frequently purchases. Not only are their potencies usually much lower, but they differ in tableting and excipients used. And all too often the form of the multivitamins differ, with the pharmaceutical brand multivitamin far more often using a synthetic form of a particular vitamin or mineral (e.g., Vitamin D2 (ergocalciferol) instead of Vitamin D3 (cholecalciferol)) that is far inferior in quality to that of the natural or other form found in a brand sold in health-food stores.

Additives and Quality

Often overlooked by consumers who see generic vitamin names on multivitamin labels and rarely look beyond, additives and quality are nevertheless of paramount importance. And it is here where the two types of multivitamins have important differences.

Just consider one of the top-selling multiples in the marketplace, which happens to be a drug-store multiple supplement for seniors. It is highly endorsed by both MDs and pharmacists. First, let's look at its excipients (the extra chemicals needed to make the tablet, complete the filling of the capsule, or added for some other unknowable reason):

Polyethylene Glycol, Polyvinyl Alcohol, Pregelatinized Corn Starch, Sodium Benzoate, Sucrose, Talc, Maltodextrin, Calcium Stearate, Sodium Aluminosilicate, Sunflower Oil, Colloidal Silicon Dioxide, Corn Starch, Crospovidone, FD&C Blue No. 2 Aluminum Lake, FD&C Red No. 40 Aluminum Lake, FD&C Yellow No. 6 Aluminum Lake, Gelatin, Hydrogenated Palm Oil, Hypromellose, and Modified Food Starch.

Do you want or need all those extra excipients? How do they affect assimilation? How do they affect your health? A crash course in additives will quickly help you decide, so read about them – all are easily found on the internet and known by other common names; such as Crospovidone, which is PVP, and hypromellose as HPMC. When all of these additives are researched one wonders how they could possibly pass California's strict anti-carcinogen Proposition-65 requirements for human ingestion since some are related to chemicals that are carcinogens. Does this make the critics correct?

Regarding quality of the drug-store multivitamin, one of the most important differences is the use of the "dl" synthetic, and inferior, form of Vitamin E (which form has no biological activity). The formula has many other inferior forms of nutrients to name a few: Sodium selenate (a form of selenium that is not chelated and is easily reduced by Vitamin C into unabsorbable selenium); an unknown amount of sodium; a nonchelated (and therefore less-viable) form of zinc; and all at such low potencies that researchers consider them ineffective as discussed further on.

Let's now look at a typical health-food store multivitamin and see the difference. Here are the common excipients (some times limited to only rice powder):

Cellulose, stearic acid (vegetable), modified cellulose, magnesium stearate, silica. Coating: vegetable food glaze.

Here is another example:

Cellulose, magnesium, stearate, silica dioxide, modified cellulose gum

Followed usually on most bottles with a statement similar to this:

Free of the most common allergens such as yeast, rice, barley, wheat, lactose (milk sugar) and all milk, fish and egg products. No added flavorings, sugars, salt, artificial sweeteners, coloring, preservatives or salicylates.

The actual vitamins are the most-active forms, such as the natural "d" forms of Vitamin E and usually meaningful portions of newer nutrients such as lutein, which in the "drug store" variety had a quarter of a milligram and less than a third of a milligram of lycopene both of which should measure five to ten milligrams to approach an effective dose. Also, when iron is present in the formula, most frequently it is ferrous-sulfate – a form of iron that causes constipation and interferes with Vitamin-E absorption. The health-food store vitamin formulas also take into account proper ratios of minerals and B vitamins.

No Proof of Harm, But Proof of Benefit

How can anyone compare or make a generalized statement evaluating multivitamins? It is true that people have for the last sixty years taken vitamins, even unintentionally because they have been routinely added to fortify foods such as bread, cereals, canned goods, and other food products. This has been mandated by the government to help protect people's health (although some fortification – such as in the case of iron – has done more harm than good).

For the media to print that the public is getting more vitamins than they need by quoting a doctor or researcher without a proven study is a baseless opinion and absolute nonsense! If there were such a study, it would be headline news! Why?

There has never been a single study, out of all that have been done, that shows the American public comes remotely close to consuming the minimum requirements for vitamins and minerals in their daily diet. Disease prevention and health enhancement in the United States appear to be possible only through supplementation.

Further, studies indicate levels of malnutrition. Doctors have reported to me from the University of California Medical Center their disbelief at finding scurvy (Vitamin-C deficiency disease) in their patients. Meanwhile, agricultural departments, such as at the University of Texas, are finding the nutritional levels of food are lower than ever historically, with a steady significant decline from the early 1900s up to the present.

Industrial farming accounts for dramatic ecological and environmental dangers that put everyone at high risk and decreasing nutritional values as food is mass produced without any regard for quality. This is a relatively recent phenomenon.

According to the 2007 Milken Institute's report "An Unhealthy America – The Economic Burden of Chronic Disease," chronic illness costs the economy \$1 trillion a year. The key points are staggering with more than 109 million Americans suffering from one or more common chronic conditions for a total of 162 million cases (because many Americans have more than one disease case – e.g., diabetes and hypertension). The former U.S. Surgeon General Dr. Richard Carmona said, "The public is telling us the No. 1 domestic issue is health." He goes on to say, "The disease burden is mounting, the economy burden is mounting and the trajectory we're on is unsustainable." How can one possibly ignore these facts and claim that there is no need for everyone to take at least a multivitamin?

Better Health through Better Nutrition

The most recent in-depth study on multiple nutrients recognizes how difficult it is to generalize. (See Block G, Jensen CD, Nordus EP, Dalvi TB, Wong LG, McManus JF and Hudes ML, "Usage Patterns, Health and Nutritional Status of Long-term Multiple Dietary Supplement Users," a cross-sectional study that was published in the October 24, 2007 issue of *Nutritional Journal*.) The study nevertheless could make some statistical statements based upon the 278 long-term users of multiple dietary supplements, 176 users of a single multivitamin/multimineral supplement, and 602 nonusers of supplements whom the scientists studied.

At least half of the subjects in the multiple dietary-supplements group consumed a multivitamin/mineral, B-complex, Vitamin C, carotenoids, Vitamin E, calcium with Vitamin D, omega-3 fatty acids, flavonoids, lecithin, alfalfa, Coenzyme Q10 with resveratrol, glucosamine, and an herbal immune supplement.

The majority of women in this group also consumed gamma linolenic acid and a probiotic supplement. The majority of men additionally consumed zinc, garlic, saw palmetto, and a soy-protein supplement.


Overall, the study showed that the use of multiple dietary supplements led to better health. As the researchers themselves said, individuals who consume a number of nutritional supplements were found to have better biomarkers of health than those who do not consume any supplements or who only consumed a multivitamin/mineral.

Among other benefits, multiple-supplement users also had lower levels of C-reactive protein and triglycerides and higher levels of HDL (the so-called "good") cholesterol. Other findings in the multiple supplements group included lower risks of elevated blood pressure, diabetes (73% less compared to nonusers), and coronary heart disease (52% less compared to nonusers). Subjects consuming multiple dietary supplements also reported having "good or excellent" health status 74 percent more often than non-supplement users.

Other corollary findings included the discovery of various nutrient deficiencies in both the non-supplement users and the multivitamin/mineral users, especially with low levels of Vitamin C. Far from being a danger to health as the mass media would have us believe, using multiple nutritional supplements confers various health benefits that merit further study, not blind condemnation.

Time to Change Perception

So, please read nutrition to know more. At Oxford University in England students tell you that they "read" history, they "read" mathematics, they "read" philosophy. They never seem to say "study." When a person studies something they become attached to what they learn – it becomes the "truth" and hard to change when a new truth appears; whereas, when one reads something, there is less attachment and more investment in critical reasoning and thought – in other words, an "open mind."

And in having a more open mind yourself, you will be more able to help others change their perceptions and mind about health and nutrition. Perceptions can be changed and, with it, everyone's health. Stay healthy – it's your right! 

Michael LeVesque is the author of The BIG Vitamin Dictionary and President of Vitamin Express, Inc. in San Francisco, California. He has been a retailer in the health industry since 1973. Among other things, he reads nutrition. His email address is michael@vitaminexpress.com and has an international retail website at www.VitaminExpress.com.

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