



Empowering you Organically - Season 1 - Episode 2

Title: Synthetic vs. Whole Food Supplements & Delivery Systems

Guest: Dr. Daniel (“Doc”) Nuzum

Understanding Synthetic versus Whole Food Supplementation

There are different levels of synthetic versus whole food supplements. It’s good to understand the difference between organic and inorganic matter.

- Organic - Matter that is living or once living
- Inorganic - Matter that is not of biological origin. Often treated as toxins by the body.

Synthetic Processes

- You can synthesize vitamins out of petroleum waste product.
- You can synthesize vitamins out of other food products.
 - *Example: Vitamin C is synthesized from GMO corn.*
- Minerals like Calcium are extracted from limestone, oyster shells, etc.
 - *Note: It’s hard to keep lead out of this type of calcium supplement because they’re extracting calcium from things like limestone.*

Understanding Salts

Anything that is mineral is inorganic. Examples of terms you’ll hear are ‘salts’ or ‘rocks’. Examples you will see on labels are carbonate, oxide, or chloride, these are all mineral salts. Inorganic minerals are unorganized minerals. In their unorganized state, our body can’t use them very well.

Toxicity Risks of Salts

If you’re taking chromium chloride, or a calcium carbonate, or an oxide, or a chloride, those are all mineral salts and your body doesn’t utilize those well.

- In high doses, you have a high probability of becoming toxic.
- Your body doesn’t recognize it as readily so it’s underutilized and can build up in your body to toxic levels.
- Standard mineral supplements, in most cases, use inorganic minerals, or mineral salts.

Whole Food Approach

- The best place to get food benefits is from food. Your body recognizes it!
- You want to get your nutrition from food if possible.

Example: Broccoli and kale have massive amounts of calcium in them.

Many cruciferous vegetables do. Part of the bitter taste in cruciferous Vegetables are from real alkaline minerals, like calcium and magnesium.

- At its most basic form you could grind up any beetroot and put it in a capsule.
- A more nutrient dense approach would be an organically grown beetroot that's juiced and the juice is freeze dried. Multiple vegetables and fruits can now be packed into one capsule.
- A higher level of quality and efficacy is to sprout seeds and nuts to unlock all the information and nutrition in them. One walnut can grow an entire walnut tree. By sprouting the walnut before consuming it unlocks all the information necessary to grow that huge walnut tree all concentrated down in that walnut.
 - *Example: 300-some different phytochemicals that occur in turmeric root. So, if we want to concentrate that, there's a different process, but if you have a seed or a plant that you can sprout and then extract, you've unlocked, typically, between 100 and 1,000 times more nutrition than it would have if you just took the seed. There are massive amounts of nutrition that you unlock by sprouting it.*

Why It Matters

If you are missing nutrients in your nutritional profile your dam is leaking. Everywhere you are missing a nutrient, you've sprung a leak. The dam's not going to function properly until you plug up all the holes.

- When your dam leaks toxins are leaking into your body.
- The Standard American Diet (S.A.D.) typically supplies trace amounts of 17 essential nutrients needed on a daily basis.
 - We require between 73 and 90 essential nutrients on a daily basis.
 - Nutrition is our front line of defense against toxicity.
 - Toxins will not only leak into the body but fill the intended spaces left by your deficiency.
 - *Example: Iodine deficient. Iodine receptors sites are big so smaller elements like chlorine, fluorine or bromine can easily fit in that hole left by the iodine deficiency. If they don't have something to plug in to - they won't.*

Supplementation and Toxicity

Cellular health is important. To keep a cell healthy in a biochemistry lab your basic formula is that there has to be 45% detox and 55% nutrition. Put another way, the amount of activity that has to go on in the cell must be 45% cleaning and 55% restoring nutrients to keep it healthy.

- If you take a particular nutrient, magnesium for example, as one of the 90 needed on a daily basis, and just take massive doses of that one nutrient, that will cause a wave in your nutritional profile.
 - If you continue to take large amounts of that single nutrient, it will start pushing other nutrients out of your nutritional profile because there's only x amount of space within your body.
 - You want to have a broad spectrum of nutrients. That's where you avoid toxicity altogether.
 - A little bit of everything is better than a lot of one thing.

What Does Fermentation Do?

- Predigests the nutrient for better absorption in the body.

- *Example: Organixx's collagen. It is fermented, or predigested, so the amino acids have already been broken up. If you take undigested collagen your digestive system has a hard time breaking that down. If you predigest it, all the marvelous ingredients in collagen are unlocked so your body picks up the nutrients seamlessly.*
- Makes certain ingredients more available for a wider audience.
- *Example: Turmeric. Curcumin, the active ingredient in turmeric, is a flavonoid. The molecule is very large and sticky. It wouldn't get through the gut wall. When fermented the microbes break it down into smaller molecules. This allows the nutrient to be quickly absorbed.*

Let's Talk Delivery Systems

There is no "right" way. It is dependent on what you're trying to deliver.

- Capsule/Tablet
 - Hard tablets are used to get something delivered and past the stomach acid so it isn't damaged.
 - *Example: Mucuna is also called the velvet bean, or the dopa bean. You can get L-dopa from the amino acid peptide that breaks down into the neurotransmitter called dopamine. This bean actually has dopamine precursors in it. Those dopamine precursors get destroyed in stomach acid so an enteric coated tablet is the best delivery system for mucuna.*
 - Tablets often have fillers your body doesn't need.
 - You shouldn't ever have to use a tablet for a whole food supplement. Often your stomach acid will be part of the activating mechanism of a whole food.
- Liquid
 - Gets to digestive system fast.
 - Some ingredients you don't want in a liquid because once it gets wet some of the enzymes and things will start to break down immediately.
- Powder
 - Gets to digestive system fast.
 - Used to consume in a beverage.

Bioavailability Matters

Another set of delivery systems can be used if we're using different compounds to make the ingredients more bioavailable or more capable of being assimilated by your body and not just passed through.

- Humic Acid
 - Is an organic compound.
 - Extracted from a soil compound, humic shale.
 - A source of concentrated nutrients and phytochemicals.
 - Phytochemicals are the medicinal components of an herb, fruit or vegetable. Examples: curcumin in turmeric, polyphenols in green tea, beta glucans from medicinal mushrooms, organic acids in dandelions.
- Fulvic Acid
 - Is an organic compound.

- Extracted from humic acid.
- More refined extract of all the chemicals in humic acid.
- Fulvic extracts have about 60 receptor sites that you can plug other nutrients into.
- In a supplement formula, the 60 empty receptors are filled with the nutrients and shrink-wrapped into a new smaller compound that's easier to pass into your system.
- Angstrom-sized nutrient. Smaller than a nano. 1,000 angstroms = 1 nano

Deeper Dive Resources

Dr. ("Doc") Nuzum:

<https://www.youtube.com/watch?v=2qK9ujZRZfA>

Common Synthetic Vitamins to Avoid - Dr. Edward Group DC, NP, DACBN, DCBCN, DABFM

<https://www.globalhealingcenter.com/natural-health/synthetic-vs-natural-vitamins/>

Vitamin A: Acetate and Palmitate

Vitamin B1 (Thiamine): Thiamine Mononitrate, Thiamine Hydrochloride

Vitamin B2 (Riboflavin): Riboflavin

Pantothenic Acid: Calcium D-Pantothenate

Vitamin B6 (Pyridoxine): Pyridoxine Hydrochloride

Vitamin B12: Cobalamin

PABA (Para-aminobenzoic Acid): Aminobenzoic Acid

Folic Acid: Pteroylglutamic Acid

Choline: Choline Chloride, Choline Bitartrate

Biotin: d-Biotin

Vitamin C (Ascorbic Acid): Ascorbic Acid

Vitamin D: Irradiated Ergosterol, Calciferol

Vitamin E: dl-alpha tocopherol, dl-alpha tocopherol acetate or succinate

NOTE: The "dl" form of any vitamin is synthetic.

Other Toxic Ingredients to Avoid In Supplements

- Magnesium stearate (or stearic acid)
- Monosodium Glutamate (MSG) disguised as "natural flavors"
- Carnauba wax is used in car wax and shoe polish
- Titanium dioxide is a carcinogen

How to Find the Best Multivitamin: 5 Facts Every Educated Consumer Needs to Know

<https://organixx.com/best-multivitamin-facts/>

What are Phytochemicals?

<http://www.phytochemicals.info/>