

SUMMIT

# Naturopathic News

## What is REALLY in Your Supplement?

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Supplemental vitamins, minerals and herbal products can help or hinder our health. They have the potential to bolster our immune system, shore up our energy stores, calm jangled nerves, lend cancer protection or prevent degenerative diseases. Unfortunately, many mass-market vitamins contain useless or harmful substances. There are now concerns that some herbal supplements may not have any of the labeled ingredients in them at all.<sup>1</sup>

Splashy headlines hit the news in February 2016 when New York's attorney general ordered a cease and desist to four big-box retailers whose supplements were sampled. Walmart's "Spring Valley" supplements took the prize, matching what was on the label only 4% of the time. How is a memory-aiding herbal like *Ginkgo biloba* supposed to help anyone remember anything if there is no *Ginkgo biloba* in the pill? Using DNA barcode testing, investigators found DNA of rice, beans and houseplants in many herbal supplements instead of the listed herbs. Critics and comedians alike called it widespread fraud by unscrupulous supplement manufacturers.<sup>2</sup>

For better or worse, many supplements use *extracts* of active plant chemicals that do not contain the plant's actual DNA. This makes the DNA barcode test unreliable for testing many supplements. Researchers in the supplement world are saying "undermining consumer confidence by taking enforcement actions based on questionable science is a tragic misuse of power" after seeing what the NY attorney general did in February.<sup>3</sup> All of it may leave you wondering what supplements you can trust when cGMPs (current "Good Manufacturing Practices") can be described as "the fox guarding the henhouse".<sup>4</sup> The FDA defines dietary supplement quality in terms of adherence to specifications, which are made up by each individual company instead of the FDA.<sup>5</sup>

If you want the best for your body, take pure U.S. pharmaceutical (USP)-grade vitamins, minerals and herbal products, with no contaminants or additives. Licensed professionals like naturopathic doctors, acupuncturists and compounding pharmacists order professional-line supplements from companies like Thorne, Designs for Health, Integrated Therapeutics, Pure Encapsulations, Metagenics and Xymogen where evidence-based quality is standard. In Summit County, we are lucky to have professional-line formulations sold at Backcountry Herbal Apothecary, and Prescription Alternatives, both located on Main Street in Frisco. Many supplements from Natural Grocers and many health food stores are of excellent quality, reviewed by teams of nutritionists and governed by strict store policies for purchasing. When buying commercial brand supplements, you can check up on their quality, and double check that the ingredients listed on a label are



actually in a product, with websites and apps like “Lab Door” and “Consumer Lab”. When taking a great quality supplement, you should feel the difference. It shouldn't cost an arm and a leg: a month supply of one of the best professional-line multivitamins on the market will cost around \$15/month at Backcountry Herbal Apothecary. People spend 2-3 times this per month on pyramid-scheme supplement regimes, and as much or more than this on mass-market vitamins that are junk or have no effect.

In some cases manufacturers can't avoid a little of the following ingredients or fillers in a supplement. As a rule of thumb however, if you read the label and it has some of these ingredients, question its quality and effectiveness:

- ❑ Magnesium stearate (related to calcium stearate and stearic acid) = lubricating detergents made of large fats, added to help powders move through machines. These ingredients reduce how the ingredients dissolve, hinder absorption, and have harmful effects on our cell membranes when they do get into the bloodstream. Good for the machine, bad for you.
- ❑ Vegetable oil fillers (such as soybean oil) in capsules = easily oxidized by the heat of manufacturing, these once-essential oils become rancid or oxidized, and act as toxins in the body.
- ❑ Numbered colors (yellow#5, red #40.. etc) = synthetic, often petroleum based, unnecessary, and often have links to disease processes. The colors that came before the current # most likely caused cancer in lab animals.
- ❑ Silica/silicate/silicon = sand as a filler.
- ❑ Glues & binders = hold tablets together. Sometimes the tablets won't dissolve or allow you to absorb the active ingredients. Toss the tablet if it doesn't dissolve in a glass of water in less than 8 hours.
- ❑ dL-alpha Tocopherol = Petroleum-based vitamin E that is brought inside the cell, but acts like a toxin rather than the antioxidant vitamin E you expect. Vitamin E should be protective for the heart, blood vessels, and keep blood from clotting; yet studies that use petroleum-based vitamin E show dangerous effects on the cardiovascular system. Look for d-alpha-tocopherol, which is vitamin E derived from food.
- ❑ Iron oxide = metal flakes. Cheap for the manufacturer, but if you are trying to combat anemia, you're not going to get very far because it doesn't absorb well. Absorption is estimated at less than 20%. Look for iron that is bound to things in food that the body wants to absorb, as with iron picolinate
- ❑ Calcium carbonate = chalk. Derived from mining processes, it is cheap for the manufacturer but the body can't absorb it very well. Look for easily absorbed calcium that is from food sources, such as calcium citrate, calcium gluconate, and calcium picolinate. These will absorb well and get into your bones to combat osteoporosis.

1. Press release. “A.G. Schneiderman Asks Major Retailers To Halt Sales Of Certain Herbal Supplements As DNA Tests Fail To Detect Plant Materials Listed On Majority Of Products Tested”. New York City Attorney General Eric Schneiderman's Media Center. February 3, 2015
2. Maher, Bill. “Placebo Nation”. Real Time with Bill Maher Blog. February 18, 2015
3. Levin, Michael. “New York Attorney General Orders Removal of Herbal Products From Store Shelves. What can we learn from this latest actions against the industry?” *Natural Medicine Journal*. February 2015.
4. Pizzorno Joe, Levin Michael. “FDA natural products cGMPs: a missed opportunity.” *Integr Med Clin Journal*. 2007;6(5):7-9.
5. US Food and Drug Administration. CFR: Code of Federal Regulations Title 21.