



VITAMINS / SUPPLEMENTS

Some Truths (and Inconvenient Truths) About Supplements

Robert Thiel, PhD

WHAT YOU NEED TO KNOW

- Even though they are often called natural, most non-food vitamins are isolated substances, which are crystalline in structure. Vitamins naturally in food are not crystalline and never isolated.
- Read the label of any supplement to see if the nutrients in it are truly 100% food. If even one USP vitamin analogue is listed, then the entire product is probably not food.
- This *does not* mean that non-food vitamins do not have any value (they clearly do), but it is important to understand that food-complexed vitamins have actually been shown to be better than isolated, non-food vitamins.

For many decades, the “natural” health industry has been touting thousands of vitamin supplements. The truth is that most vitamins in supplements are made of or processed with petroleum derivatives or hydrogenated sugars;¹⁻⁵ therefore, they are synthetic.

The Food vs. Non-Food Distinction

Even though they are often called natural, most non-food vitamins are isolated substances, which are crystalline in structure.¹ Vitamins naturally in food are not crystalline and never isolated. Non-food vitamins are isolates, which means that they are individual chemicals lacking useful substances that real foods contain.

Vitamins found in any real food are chemically and structurally different from those commonly found in “natural vitamin” formulas. Food vitamins contain a matrix of substances which improve bioavailability and safety. Since they are different, health-conscious people should consider non-food vitamins as vitamin analogues (imitations) and not actually vitamins. Whether sold retail or

wholesale, nearly all companies sell synthetic vitamins.

The standards of naturopathy agreed to in 1947 included the statements, “Naturopathy does not make use of synthetic or inorganic vitamins ... Naturopathy makes use of the healing properties of ... natural foods, organic vitamins.”⁵ Around the same time, the late Dr. Royal Lee wrote that it was not proper for ascorbic acid to be considered as vitamin C,⁶ even though that is what most supplement companies use that claim vitamin C in their products.

According to some scientists, “Vitamins are organic substances that are essential in small amounts for the health, growth, reproduction, and maintenance of one or more animal species, which must be included in the diet since they cannot be synthesized at all or in sufficient quantity in the body. Each vitamin performs a specific function; hence one cannot replace another. Vitamins originate primarily in plant tissues.”⁷

Isolated non-food “vitamins” (often called “natural,” USP or pharmaceutical grade) are not naturally “included in the diet,” do not necessarily “originate primarily in plant tissues,” and cannot fully replace all natural vitamin activities.

What Is Your Vitamin Really?

Again, most vitamins in supplements are petroleum extracts, coal tar derivatives, and/or chemically processed sugar (plus sometimes industrially processed fish oils), with other acids and industrial chemicals (such as formaldehyde) used to process them.¹⁵ Synthetic vitamins were originally developed because they cost less.⁸

Assuming the non-food product does not contain fish oils, most synthetic, petroleum-derived supplements will call their products “vegetarian” not because they are from plants, but because they are *not* from animals.

Read the label of any supplement to see if the nutrients in it are truly 100% food. If even one USP vitamin analogue is listed, then the entire product is probably not food.

“Natural”: No U.S. Government Definition

Although many practitioners have been taught that food and non-food vitamins have the same chemical composition, this is simply untrue for most vitamins. The chemical forms of food and synthetic nutrients are normally different.

Health professionals need to understand that there is no mandated definition of the term *natural* when it comes to vitamins; so seeing that term on a label does not mean the supplement contains only natural food substances.

Because they are not normally in the same chemical form as vitamins found in foods, non-food vitamins should be considered by natural health professionals as vitamin analogues (artificial imitations), and not true vitamins for humans. Vitamin analogues are cheap (or not so cheap) imitations of vitamins found in foods.

Why Food Vitamins Are Superior to Non-Food Vitamins

Although many mainstream health professionals believe, “The body cannot tell whether a vitamin in the bloodstream came from an organically grown cantaloupe or from a chemist’s laboratory,”⁹

this belief is quite misleading for several reasons:

1. It seems to assume that the process of getting the amount of the vitamin into the bloodstream is the same (which is frequently not the case³⁻⁸).
2. Particle size is an important factor in nutrient absorption, even though particle size is not detected by chemical assessment.
3. It is known that, "The food factors that influence the absorption of nutrients relate not only to the nature of the nutrients themselves, but also their interaction with each other and with the nonabsorbable components of food."¹⁰
4. "The physiochemical form of a nutrient is a major factor in bioavailability" (and food and non-food vitamins are not normally in the same form).¹¹
5. As stated previously, most non-food vitamins are crystalline in structure.¹

Published scientific research has concluded, that "natural vitamins are nutritionally superior to synthetic ones."¹² For example, "The vitamin C produced by acerola is better absorbed by the human organism than synthetic ascorbic acid."¹³

Food vitamins in the physiochemical forms that the body recognizes generally are not crystalline in structure, contain food factors that affect bioavailability, and appear to have smaller particle sizes. This *does not* mean that non-food vitamins do not have any value (they clearly do), but it is important to understand that food-complexed vitamins have actually been shown to be better than isolated, non-food vitamins.

For optimal health, you want your patients to eat healthy foods. And for supplementation, they are normally better off with supplements whose nutrients are always food.

References

1. Budvari S, et al., editors. *The Merck Index: An Encyclopedia of Chemicals, Drugs, and Biologicals*, 12th Edition. Whitehouse Station, NJ: Merck Research Laboratories, 1996.
2. *Vitamin-Mineral Manufacturing Guide: Nutrient Empowerment, Volume 1*. Lakeport, CA: Nutrition Resource, 1986.
3. DeCava JA. *The Real Truth About Vitamins and Antioxidants*. Centerfield, MA: A Printery, 1997.
4. Hui JH. *Encyclopedia of Food Science and Technology*. New York, NY: John Wiley, 1992.
5. Gehman JM. "From the Office of the President: Pseudo-Group Once Again Misleading the Naturopathic Field." *Official Bulletin, ANA*, Jan. 25, 1948:7-8.
6. Lee R. *How and Why Synthetic Poisons Are Being Sold as Imitations of Natural Foods and Drugs*. Lee Foundation for Nutritional Research, 1948.
7. Ensminger AH, et al. *Food & Nutrition Encyclopedia*, 2nd Edition. New York, NY: CRC Press, 1993.
8. Mervyn L. *The B Vitamins*. Wellingborough, UK: Thorsons, 1981.
9. Whitney EN, Rolfes S. *Understanding Nutrition*, 4th Edition. New York, NY: West Publishing, 1987.
10. Shils M, et al., editors. *Modern Nutrition in Health & Disease*, 9th Edition. Baltimore, MD: Williams & Wilkins, 1999.
11. Gruenwald, et al., editors. *PDR for Herbal Medicines*, 2nd Edition. Montvale, NJ: Medical Economics Company, 2000.
12. Thiel R. Natural vitamins may be superior to synthetic ones. *Med Hypo*, 2000;55(6):461-469.
13. Assis SAD, Fernandes FP, Martins ABG, Oliveira OMMDF. Acerola: importance, culture conditions, production and biochemical aspects. *Fruits*, 2008;63(2):93-101; also published by Cambridge Press.

MAY 2023

©2024 Dynamic Chiropractic™ All Rights Reserved