

# Whole Food Vitamins And Children

Approximately 32% of children in the United States are regularly given a vitamin/mineral supplement in an effort to optimize their health (1). Unfortunately, most of these supplements contain 'synthetic' USP (United States Pharmacopoeia) vitamin isolates. Synthetic USP vitamin isolates are crystalline in structure, which is physiologically different from the vitamins found in foods (2). **In nature, vitamins originate in plant tissues as food-vitamin complexes** and are never isolated (3). These complexes are important because they influence nutrient absorption and utilization.

**Researchers found that whole food vitamin C was absorbed 1.74 more times into human red blood cells than synthetic USP Vitamin C – ascorbic acid – and 1.35 more times into the plasma** (4,5). Scientists also found whole food Vitamin C to be more effective in the treatment of atherosclerosis and cataracts when compared with synthetic USP Vitamin C (6).

Although bio-availability and effectiveness are very important, they are not the only factors to consider when purchasing a vitamin/mineral supplement. Safety and toxicity are also a concern. **A study by the University of Pennsylvania found synthetic Vitamin C to induce the production of genotoxins – substances found to mutate DNA** (7). It is also well known that synthetic vitamin A has been shown to induce birth defects in human fetuses and is contraindicated for pregnant women (8). These are only a few studies cautioning against the use of synthetic vitamins.

**Fit4Kids™ Whole Food Nutrition Program** contains only vitamins and phytonutrients from fruits, vegetables, and other whole foods.



**It has been well established that vitamins in their natural whole food form are better for the body than synthetic vitamins** (9).

1 J Am Diet Assoc. 2005 May;105(5):703-8.

2 Ensminger et al. *Food & Nutrition Encyclopedia*, 2<sup>nd</sup> ed. New York: CRC Press, 1993.

3 Vinson et al. Royal Society of Chemistry 1989:125-127.

4 Vinson J. Human supplementation with different forms of vitamin C. University of Scranton, Scranton (PA).

5 Vinson J. Am J Clin Nutr 1988; 48:601-6.

6 Vinson et al. Nutr Res 1992:915-922.

7 Science 2001; 292:2083-86.

8 Rothman et al. N Engl J of Med 1995; 333(21):1369-73.

9 Olson. *In Modern Nutrition in Health and Disease*, 8<sup>th</sup> ed. Philadelphia: Lea & Febiger, 1994:287-307.