

Synthetic vs. Natural Vitamins

by Royal Lee, DDS

Most vitamins on the market are synthetic. That is, they are made by a chemical laboratory from coal tar and other chemical sources, instead of from foods. They are imitations, man-made instead of being the product of plant or animal cells. The question arises: Are synthetic imitations equal to the genuine that costs far more?

Many so-called "experts" say that there is no difference. Notoriously, experts can usually be found to express any opinion commercial interests need to promote their wares, or keep people out of jail. Here is a case for everyone to carefully examine the facts for themselves.

The vitamins are all complexes. How can a single factor be isolated from a complex (such as starch from whole wheat) and be justifiably sold with the claim that it is equal? Purified thiamin from natural sources cannot be separated from the anti-paralysis factor, B4 (1). The synthetic thiamin, of course, will not have this extra, most important component (which corrects the fibrillations and arrhythmias that accompany the beriberi heart) any more than a synthetic carbohydrate would have the B-complex of white flour. To say that the synthetic thiamin is identical to the natural is to compare an imitation with a hypothetical, non-existent "natural" thiamin. Can you see the chicanery in the statement that the two are identical?

Again, vitamins in the living cell, in the main, are parts of enzyme systems. Natural complexes are, if properly prepared, still enzymes, and linked with their trace mineral enzyme activators. The trace minerals are in organic form (Vitamin B12, as an example, with organic cobalt). The elimination of these mineral activators from the food or vitamin concentrate is as unjustifiable as the removal of the jewels of a watch by a dealer who passes it on to an ignorant client. They, of course, are never present in the synthetic imitation, any more than there are jewels in a dime store toy watch, intended to look like the real one but not to cost as much.

Do not infer from this that synthetic vitamins have no effect. They DO have DRUG effects, pharmacological actions that may or may not have much in common with the normal nutritional action. As an example, the commonest effect of Vitamin C deficiency is "pink toothbrush." Any good natural Vitamin C will promptly stop hemorrhagic gingivitis, but ascorbic acid has failed to have the

slightest effect in careful tests made in the British Army (2). Here is where another complex is needed and only one factor was replaced. All natural Vitamin C has more or less Vitamin P in it, as the Nobel Prize winner Szent-Gyorgyi stated when he first discovered the nature of this vitamin. The Vitamin P cures the capillary fragility of the scurvy state, the ascorbic acid restores the ability of the cells to rebuild the colloidal fibrous connective tissue matrix of bone and tendon.

Tocopherols have been isolated from the Vitamin E complex and sold as "Vitamin E." Later, we find that natural E complexes contain a factor that is the precursor of the sex hormones (3) and that the tocopherol is just the wrapper that protects the real factors from oxidation. And, in our laboratories, we have isolated another factor from the E complex that exactly performs the function of nitroglycerine in relieving spastic heart pains (Vitamin E2).

Another critical defect of synthetic vitamins is that most organic substances are stereoisomeric; they exist in right and left hand molecules, and natural foods usually are all of one kind, while synthetic imitations usually are of equal mixtures or all of the kind not wanted. The chemist terms these laevo- and dextro- forms (l- and d-). Any price list of amino acids will show how expensive the natural forms are and how cheap the synthetic imitations. Some of the synthetic forms are toxic, and usually block the assimilation of the real amino acid, if present as a contaminant or adulterant.

Now, some vitamins in the wrong form are also poison. Lactic acid in the wrong form has fatally poisoned babies when used in milk formulas (4). Pantothenic acid (Vitamin B5) in the wrong form is poison to test animals (5), causing castrational effects.

Synthetic adrenalin has failed to perform as the natural, and synthetic thyroxin, likewise. The natural forms are now known to be complexes and quite different in action (6,7).

Synthetic Vitamin D has failed to be as effective as the natural and is much more dangerous (8,9).

These are the facts. Why not be honest about it?

References :

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- (4) Lee Foundation Report No. 6, Lee Foundation for Nutritional Research, Milwaukee 3, Wisconsin.
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- (6) Lee Foundation Report No. 6.
- (7) "Endocrinology in Modern Practice," William Wolf, MD, p. 243, pub. 1939.
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