

NATURAL vs. SYNTHETIC VITAMINS

It could be argued that never in history has so much money been spent on the advertising and purchasing of any merchandise, with so little knowledge of the product itself, on the part of either the seller or the buyer, as has been spent on vitamin and mineral supplements.

Billions are being spent annually, and most of the purchasers, wholesalers, retailers or direct-to-the-consumer salespeople do not know the difference between a synthetic, a crystalline, and a truly natural vitamin, or the difference between a chelated organic and an inorganic mineral.

They know little of how supplements are made, their characteristics, their attributes, their sources, their uses, their advantages and disadvantages, and how to tell one from another by reading a label.

WHAT IS THE DIFFERENCE BETWEEN NATURAL AND SYNTHETIC?

In short, it's the difference between something that's living and something that's dead.

That's a big difference.

NATURAL WHOLE FOOD VITAMINS

On vitamin labels the word "natural" has no specific definition other than that the substance exists somewhere on the planet or in outer space.

The key words to look for are "Whole Food Vitamins"—this means vitamins as they are found in food, untampered-with in any way that would change their molecular structure, their biological or biochemical combination, or their actions.

Vitamins in their natural state always exist as living complexes with specific synergistic co-factors, enzymes, phytonutrients and organic mineral-activators, and never as isolated single factors.

A vitamin needs all of its synergists to function.

Further, there are literally hundreds of such synergists, most of which have not yet been studied but are nevertheless very important.

Organic food sources are preferred since they are more nutrient-dense and contain no pesticide residues.

CRYSTALLINE means that a natural food has been treated with various chemicals, solvents, heat and distillations to reduce it down to one specific "pure" crystalline vitamin. In this process all the synergists, which are termed "impurities," are destroyed. There is no longer anything natural in the action of crystalline "vitamins"—they should more accurately be termed drugs.

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SYNTHETIC means that a chemist attempted to reconstruct the exact structure of the crystalline molecule by chemically combining molecules from other sources. These sources are not living foods, but dead chemicals. For example, Vitamin B₁ is made from a coal tar derivative, and d-alpha tocopherol (so-called Vitamin E) is a byproduct of materials used by the Eastman Kodak company to make film. However, it is not legally necessary to give the source from which the synthetic "vitamin" is derived. Synthetic "vitamins" should more accurately be called drugs.

HOW TO READ A VITAMIN LABEL

To identify synthetics on the label, look to see if a source is given. If it isn't, assume the product is synthetic. These terms also identify a vitamin as synthetic:

- acetate
- bitartrate
- chloride
- gluconate
- hydrochloride
- nitrate
- succinate.

Whole-food natural supplements never come in high dosages. It is only possible to create high-dosage "vitamins" if you isolate one fraction of the vitamin complex as in crystalline, or synthesize one fraction as in synthetics.

Look at the Vitamin C and Vitamin E diagrams. In naturally-occurring Vitamin C Complex, the ascorbic acid portion comprises only about 5% of the whole complex. Similarly, alpha tocopherol only comprises a small percentage of Vitamin E Complex.

Legally, the only portion of the Vitamin C Complex that is allowed to be called Vitamin C is the ascorbic acid portion, and the only part of the Vitamin E Complex that can be called Vitamin E is the alpha tocopherol piece.

THE FALLACY OF "HIGH DOSAGE EQUALS HIGH POTENCY"

We, as consumers, have been thoroughly fooled and misled about vitamins. We have been hoodwinked into believing that large quantities of dead chemicals are more nutritionally potent than smaller amounts of high-quality living compounds.

Relatively small amounts of whole-food natural vitamins, with all of their naturally-occurring synergists, are far more potent than high doses of synthetic imitation "vitamins."

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DO SYNTHETIC VITAMINS FUNCTION AS WELL AS NATURAL WHOLE-FOOD VITAMINS?

No one would argue that high-performance, complex mechanisms like computers or space shuttles require very specific, high-quality materials in their makeup.

Living systems are even more complex and specific in their need for building materials. In addition, living systems are constantly breaking down cells, organs and tissues, and rebuilding and repairing them. For these processes the body must have a continual supply of high-quality material.

If you build a house with cheap, imitation construction materials, your house will quickly fall into disrepair. The same is true for the physical body. The body has a very precise design, which is so incredibly intricate and complex that even with all the scientific and medical research thus far, we have only scratched the surface of understanding it.

What arrogance it is to think that we can alter a design we don't even understand.

Many conventional and non-conventional healthcare practitioners think that there is no difference between natural and synthetic vitamins, or between natural chelated minerals and inorganic minerals. This, of course, is incorrect, and has led to enormous confusion in the nutritional field.

The following examples are a handful of hundreds that could be given to illustrate this point:

- Reported on April 14, 1994 in *The New England Journal of Medicine* was a study in which 29,000 male smokers were given synthetic beta-carotene and synthetic Vitamin E to evaluate the cancer-protective effect of these "vitamins." After 10 years, the men taking the synthetic beta-carotene had an 18% higher rate of lung cancer, more heart attacks, and an 8% higher overall death rate. Those taking synthetic Vitamin E had more strokes.

Food sources of these same nutrients, such as fruits and vegetables, consistently demonstrate protection against cancer, heart disease and stroke.

- On November 23, 1995, the following was reported in *The New England Journal of Medicine*: 22,748 pregnant women were given synthetic Vitamin A. After four years the study was halted because of a 240% increase in birth defects in babies of women taking 10,000 IU daily, and a 400% increase in birth defects in babies of women taking 20,000 IU a day.

Women eating natural food sources of Vitamin A showed no increase in birth defects.

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- Reported in *Reuters Health*, March 3, 2000 was a study on men who took 500 mg of synthetic Vitamin C daily. It was found that over an 18-month period, these men had a 250% increase of the intima-media lining (inner lining) of the carotid artery. This thickening is an accurate measurement for the progression of atherosclerosis. That is, synthetic Vitamin C induced atherosclerosis, even at a 500 mg dose.

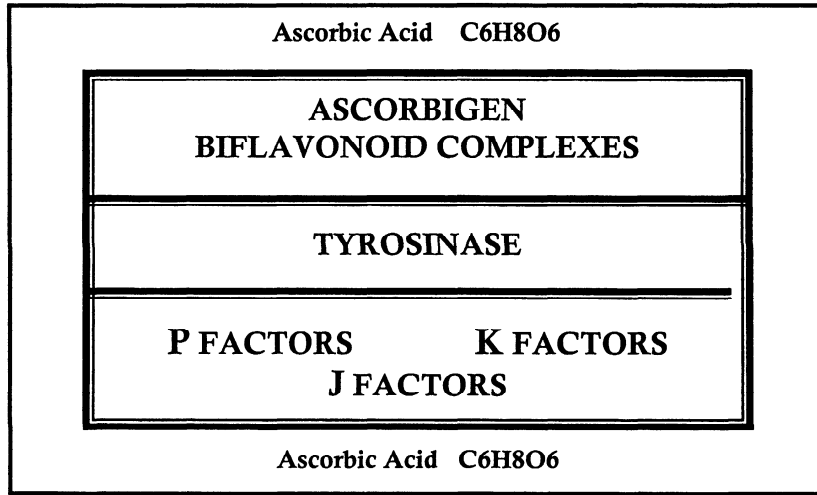
Whole-food Vitamin C protects and repairs the inner lining of blood vessels, and is preventative against atherosclerosis.

IN SUMMARY

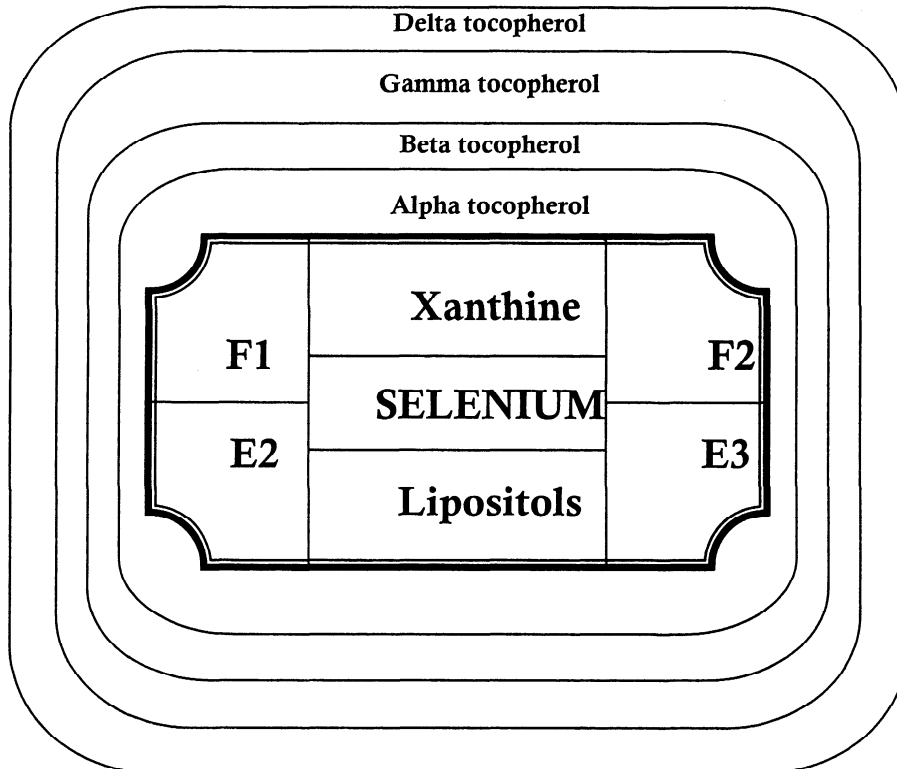
You can't repair and rebuild a living body with dead chemicals.

It simply isn't possible.

SCHEMATIC REPRESENTATION OF WHOLE FOOD VITAMIN C AND VITAMIN E



THE FUNCTIONAL ARCHITECTURE OF THE VITAMIN C COMPLEX



THE FUNCTIONAL ARCHITECTURE OF THE VITAMIN E COMPLEX