

NUTRI FUSION™

Synthetic vs. Natural Vitamins

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Here are some facts that you won't find advertised on most of the vitamin supplements at your local vitamin store:

- **The majority of commercial vitamin supplements are made up of synthetic vitamins**
- **Synthetic vitamins do not perform the same functions in your body as vitamins found naturally in whole food**
- **Many synthetic vitamins deplete your body of other nutrients and tax your kidneys before being excreted through your urine**

If you want a comprehensive understanding of what vitamins are and what they do in your body, it would be best to take a full course in biochemistry. Do you remember all of those molecular formulas and chemical reactions that you studied in your high school chemistry class? Biochemistry is really just an extension of chemistry, with an emphasis on the thousands of chemical reactions that occur in your body on a moment-to-moment basis.

Anyone who studies biochemistry learns that vitamins do not exist as single components that act on their own. **Vitamins are made up of several different components – enzymes, co-enzymes, and co-factors– that must work together to produce their intended biologic effects.**

Vitamins that are found naturally in whole foods come with all of their necessary components.

The majority of vitamins that are sold in pharmacies, grocery stores, and vitamin shops are synthetic vitamins, which are only isolated portions of the vitamins that occur naturally in food.

A good example is vitamin C.

If you take a look at a variety of vitamin C supplements, you will find that the majority of them contain only ascorbic acid or a compound called ascorbate, which is a less acidic form of ascorbic acid. Ascorbic acid is NOT vitamin C. It represents the outer ring that serves as a protective shell for the entire vitamin C complex, much like an orange peel that serves as a protective shell for an orange.

Real vitamin C found in whole foods like fruits and vegetables contain the following components:

- Rutin
- Bioflavonoids (vitamin P)
- Factor K
- Factor J
- Factor P
- Tyrosinase
- Ascorbinogen
- Ascorbic Acid

When you take only ascorbic acid found in your synthetic vitamin C tablet or powder, your body must gather all of the other components of the full vitamin C complex from your body's tissues in order to make use of it. In the event that your body does not have adequate reserves of the other components, **ascorbic acid itself does not provide any of the health benefits that the full vitamin C complex does.** After circulating through your system, the unused ascorbic acid is eliminated through your urine.

Just like vitamin C, almost all other vitamins that we know of offer their full health benefits when they are in the presence of a number of enzymes, co-enzymes, co-factors, and even minerals. For example, Vitamin D may have as many as twelve different active components, while vitamin P has at least five different components. The mineral copper is needed for full vitamin C activity, while vitamin E works closely with the mineral selenium to provide its health promoting, anti-oxidative effect.

Clearly, it is best to get your vitamins from whole foods because whole foods provide complete vitamins rather than fractions of them. In many cases, whole foods also provide the minerals that are necessary for optimal vitamin activity. For example, sunflower seeds are an excellent whole food source of vitamin E and the mineral selenium, both of which need each other to offer their full health benefits.

How do you know if the vitamins on your kitchen counter are from whole foods or if they are synthetic?

If the list of ingredients includes an actual vitamin like "**Vitamin C**" rather than an actual food that contains natural vitamin C like "**acerola cherry powder**", you can bet that it is a synthetic vitamin.