

Image Awareness Wellness Institute Healthletter
Balanced Nutrition: Synergism
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Abstract: Balanced nutrition is not always easy. The reason for this is that many nutrients work synergistically or antagonistically with one another. It is important to understand synergistic and antagonistic activities because they can lead to excesses or deficiencies if intake is out of balance. This is one of the best arguments for intake of nutrients in the balances and rations one finds in foods rather than the use of synthetically derived and isolated nutrients.

Synergism is one nutrient working with another. Different types of synergism exist. For example, one vitamin can work synergistically with another. Vitamin B6 requires Vitamin B2 for proper function. Vitamins can also work synergistically with minerals. Calcium is poorly metabolized without vitamin D. Vitamin A function deteriorates without zinc. Vitamins or minerals may work synergistically with amino acids. The amino acid tryptophan works synergistically with niacin or vitamin B3.

There is a profound synergism associated with antioxidant function. This has been described as a "bucket brigade." Two types of synergism are evident with antioxidants. Firstly, one antioxidant will often regenerate another passing along free radicals from one to another until a water soluble antioxidant carries the free radicals out of the body. Secondly, antioxidants have a specificity of action so one may protect one part of a cell while another antioxidant will protect another part of the cell.

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