

## The Whole Truth

Since our inception, we at Optimal Health Systems have utilized the highest standards when formulating each of our products. By following the laws of nature and using only 100% whole food ingredients in each of our products, we continue to set the standard in the health industry. Our commitment to include whole food ingredients in our supplements is based on proven research. This research shows that the only way an individual can derive maximum benefits from supplements without experiencing harmful side effects is to consume only those supplements made with whole food ingredients. Here is a sampling of some of the recent, compelling research on this topic:

### Synthetic Vitamin C Supplements May Lead to Heart Disease

Researchers from the Institute for Health Promotion and Disease Prevention Research found that "regular intake of [synthetic] vitamin C pills may quicken the thickening of artery walls, a condition known as atherosclerosis". Of the 573 men and women studied, those that had consumed at least 500 milligrams of ascorbic acid Vitamin C supplements a day, developed an inner artery wall layer 2.5 times thicker than that of people who did not take the synthetic supplements. However, the researchers found "no evidence that vitamin C from food caused heightened atherosclerosis progression. According to researcher James H. Dwyer, "When you take in vitamins from food, you take them in with a large number of other components of that food. It is plausible that the protective effective of a diet occurs because of the interaction of many components of those foods."

Rado, Alicia. "Too much of a good thing? Large doses of vitamin C linked to atherosclerosis". HSC Weekly, Feb 25, 2000; Vol 6, No 7.

### Synthetic Vitamin E Harmful

According to a study published in the Proceedings of the National Academy of Sciences, the synthetic form of vitamin E (alpha-tocopherol) does an incomplete job of neutralizing certain compounds and can actually block beneficial natural nutrients in the body. Stephan Christen, lead author of the study, said consuming over 100 international units of alpha-tocopherol may be harmful. Christen said he hopes vitamin/pill companies will soon begin adding gamma-tocopherol to their formulas so consumers can receive the full benefits from vitamin E.

Recer, Paul. "Vitamin E pills may pose risk." The Arizona Republic, April 1, 1997.

### Synthetic Vitamin C May Contribute to DNA Damage

According to an article published in the journal Science, researchers found that "the [synthetic] vitamin C pills taken by millions of health-conscious Americans may actually help produce toxins that can damage their DNA, a step toward forming cancer cells". Ian A. Blair, the study's lead author, said they found that synthetic "vitamin C was highly efficient in converting lipid hydroperoxide [a compound produced in the body from fat in the diet] into gene-damaging toxins."

Recer, Paul. "Lab Study Finds Vitamin C Dangers." The Washington Post, June 14, 2001.

### Beta-Carotene Provides No Benefit in Cancer Prevention

"Former blue asbestos workers known to be at high risk of asbestos-related diseases, particularly malignant mesothelioma and lung cancer, were enrolled in a chemo-prevention program using vitamin A. [The goal of the study was] to compare rates of disease and death in subjects randomly assigned to [synthetic] beta-

carotene or retinol." Results of the five-year study "confirm other findings of a lack of any benefit from administration of large doses of synthetic beta-carotene."

de Klerk NH et al. Vitamin A and cancer prevention II: comparison of the effects of retinol and beta-carotene. Int J Cancer 1998 Jan 30; 75(3):362-7.

<b>NUTRIENT</b>	<b>WHOLE FOOD</b>	<b>SYNTHETIC/INFERIOR</b>	<b>RESEARCH</b>
Vitamin A	Carrots	Palmitate	[1][2][3][10]
Vitamin B	Nutritional Yeast	Thiamin, Riboflavin, etc.	[3][4]
Vitamin C	Cherries Citrus Fruit	Ascorbic acid	[5][6][7]
Vitamin D	Sweet Potatoes, Sun	Calciferol	[8]
Vitamin E	Dark Greens, Nuts, Seeds	dl tocopherols	[9][14]
Minerals	Amino Acid Chelated	Citrates, Carbonates Oxides, Sulfate, etc	[11][12][13]
Probiotics	DDS-1, Stabilized Flora	Non-Stabilized Flora	[15]
Enzymes	Plant Enzymes	Pancreatin, Hcl	[16][17]

[1] Vinson J.A., "Beta Carotene Bioavailability Study", 1991

[2] Vinson J.A., "Effects of Vitamin A, E and a Citrus Extract on in vitro and in vivo Lipid Peroxidation", Medical Science Research, 1992, 20, 145-146

[3] Vinson J.A., Bose P., Lemoine L. and Hsaio K., 1989 in Southgate D.A.T.: Johnson I.T. and Fenwick G.R., Nutrient Availability: Chemical and Biological Aspects, 125-127, Royal Society of Chemistry, Thomas Graham House, Cambridge, U.K. "Yeast trace elements and natural vitamins are more slowly absorbed in animals and man; are more bio-available; and are therefore the preferred form for supplementation."

[4] Baker, H and Frank, O., "Human Study of Pyridoxine", 1983

[5] Lunec, J., Podmore, I.D., "Vitamin C in the form of Ascorbic acid can be bad for your health", Nature, 04,1998.

[6] Vinson J.A., Bose, P., "Comparative Bioavailability to humans of Ascorbic acid Alone or in Citrus Extract", American Journal of Clinical Nutrition, 1988, 48, 3, 601-604.

[7] Dwyer, J.H., Professor of Preventive Medicine, Keck School, "Large doses of Vitamin C Linked to Atherosclerosis", American Heart Association's 40th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, March 2000.

[8] Bland, J., "Study on Re-natured Vitamin D3", Linus Pauling Institute of Science & Medicine, 1985.

[9] Original Article, The effect of Vitamin E and Vitamin A on Cancer, New England Journal of Medicine, Apr. 14, 1994 Vol. 330, 1029-1035.

[10] Oakley, G.P., Erickson, J.D., Vitamin A and Birth Defects-Continuing Caution is needed, New England Journal of Medicine, Nov., 23, 1995, Vol.333, 1414-1414.

[11] Kratzer, F.H., Vohra P., Chelates in Nutrition (Boca Raton:CRC Press 43, 1986

[12] Ashmead H.D., Graph D.J., Ashmead H.H., Intestinal Absorption of Metal Ions and Chelates. Springfield, IL, Charles C Thomas, 1985.

[13] Ashmead H.D., Role of Amino Acid Chelates, Noyes Publications, New Jersey, 1993.

[14] Murray, R.P., Natural vs. Synthetic. Biomedical Health Foundation D.C. 1982.

[15] Shahani, K.M., Vakil, J.R. and Chandan, R.C., 1972. Antibiotic acidophilus and the process for preparing the same. U.S. Patent 3,689,640. Sept. 5

[16] Gilliland, S.E. and Speck, M.L. 1977. Enumeration and identity of lactobacilli in dietary products. J. Food Prot. 40:760-762

[17] Howell, E., Enzyme Nutrition The Food Enzyme Concept,©1985.