

# Image Awareness Healthletter

## Why GNLD Products?

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### Introduction

There are a multitude of nutritional products on the market. How does one determine their preferences for one or another? One yardstick is price. Dr. John Douglas once said, “Don’t look for bargains in fire extinguishers, parachutes, or vitamins.”

One large manufacturer of supplements told a customer that they are geared to manufacture for quantity and ship all over the world. The quality is no different than the typical name brand product.

I am convinced that quality of supplements one puts inside the human body matters a good deal more than the quality of the oil one puts in one’s car. It is much easier to buy a new car, than to obtain a new body once it has been destroyed by a lifetime of bad nutrition.



### Food Sourced

It is rare that a cheap price and quality go together. Producing quality products is expensive for a num-

ber of reasons.

Simply choosing foods rather than chemicals greatly increases costs. The synthetic chemicals used to fortify a box of cereal cost only a couple of pennies.

A quality product will also select sources of nutrients from foods a human being would normally eat—foods that have a long history of safety.



### Blue Green Algae

Consider the example of blue green-algae, or Spirulina, available in many products. Wayne Carmichael is a professor of aquatic biology and toxicology at Wright State University. He earned a doctorate in aquatic toxicology at the University of Alberta in Edmonton in 1974.

Carmichael notes the very real possibility of spirulina being contaminated with two types of toxins. One category of toxins is neurotoxins or nerve poisons. The second category of toxins found in blue-

green algae are liver poisons. Carmichael notes, “The neurotoxins and hepatotoxins are certainly the most dangerous cyanobacterial compounds, but they are by no means the only bioactive chemicals made by these bacteria.”

Carmichael writes, “I am becoming increasingly worried by a modern fad: the eating of cyanobacteria from the genus Spirulina as health food. ...Spirulina itself is not harmful. The danger arises because there are no guidelines requiring those marketing Spirulina to monitor their products for contamination by potentially toxic cyanobacteria or by cyanobacterial toxins. Moreover, the general public is ill equipped to distinguish Spirulina and other benign cyanobacterial products from poisonous forms of cyanobacteria.”

Carmichael continues, “Because cyanobacteria are often collected simply from the surface of an open body of water and because neither sellers nor buyers can distinguish toxic from nontoxic strains without applying sophisticated biochemical

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tests, the safety of these items is questionable.”

Carmichael warns that even non-lethal doses of these toxins may be a problem. “The revelation that cyanobacterial hepatotoxins can inhibit protein phosphatases has raised the disturbing possibility that human exposure to nonlethal doses might contribute to the development of cancer.”

Carmichael, Wayne, “The Toxins of Cyanobacteria,” *Scientific American*, January 1994, pp. 78-86.

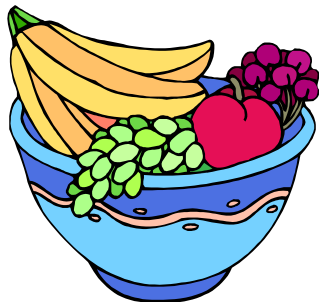
## Colloidal Minerals

Colloidal minerals are not really a natural product. One would not naturally walk up to mud deposits and swallow them—even if they were diluted with water first. Analysis of the colloidal clays reveals that most are extremely high in aluminum. Schauss found that many products contained 1,800 to 4,400 parts per million aluminum. Serious questions have been raised about the safety of this.

Other products have very high levels of salt. Schauss found levels between 1,300 and 22,000 parts per million. The safest and most desirable forms of mineral supplementation are properly chelated minerals and sea vegetation.

Schauss, Alexander, Minerals, *Trace Elements and Human Health*, Tacoma, WA: Life Sciences Press, 1996, pp. 5-9.

Schauss, Alexander, “Colloidal minerals: Clinical implications of clay suspension products sold as dietary supplements,” *American Journal of Natural Medicine*, January/February 1997, p. 5.



## Carotenoids

Carotenoids provide another illustration of the value of food sourced natural nutrients. Researcher Melvyn Werbach, M.D., points out that synthetic beta-carotene is only one of 272 stereoisomers or forms of beta-carotene. A stereoisomer is a 3-dimensional arrangement of a molecule. Synthetic beta-carotene is completely lacking in 9-cis-beta-carotene which composes 1/3 of the natural beta-carotene found in foods. This component of the natural product is far superior as an antioxidant to the synthetic product. The synthetic product does not exist in nature.

Another matter of concern is the blockage or removal of nutrients when large amounts of synthetics are used. For example, large amounts of beta-carotene may decrease absorption of lutein (essential for the eyes), lycopene (important for the prostate), or astaxanthin (important for protecting the mitochondria).

Werbach, Melvyn, “Are Natural Food Supplements Superior to Synthetic Nutrients?” *Townsend Letter for Doctors and Patients*, February/March 2000, p. 172.

## Vitamin E

This problem has also been observed with vitamin E. Stephan Christen found that large amounts of isolated alpha-tocopherol can actually decrease availability of gamma tocopherol. This is an important nutrient for dealing with nitrogen based carcinogens.

Christen, Stephan, et al., “g-Tocopherol traps mutagenic electrophiles such as NO<sub>x</sub> and complements a-tocopherol: Physiological implications,” *Proc. Natl. Acad. Sci., USA*, April 1997, Vol. 94, pp. 3217-3222.

## Genetic Engineering

One aspect of natural sourcing which is usually neglected is the alteration of nutrients by man’s tampering. GNLD does not accept genetically modified materials for use in the products.

For example, soy is a commonly engineered food. The modification of the food is detectable due to the presence of a gene for antibiotic resistance. This could be a potential problem if the gene were passed on to bacteria in the digestive tract. GNLD routinely tests soy for this marker and rejects soy products which have been genetically modified.

Just how dangerous can genetic tampering be? No one knows!

The worst incident indicating risk of even slight changes in foods or supplements was the introduction of altered tryptophan into the American market. The product caused a disease called eosinophilia myalgia syndrome. Thirty-eight people were killed and hundreds became seriously ill.

Jaffe, Russell, “Tryptophan Update: Helpful Adjunct and Innocent Bystander,” *Journal of Nutritional Medicine*, 1994;4:133-139.

## Toxicological Testing

For years GNLD has worked with the founder of the American College of Toxicology, Dr. Arthur Furst. He has established protocols for testing products for both potency and also for possible contamination. Products can be contaminated with pesticides, herbicides, and heavy metals.

## Calcium

Numerous calcium products have been contaminated with lead for years. These products should not be used by children. GNLD has tested calcium products for lead contamination for many years. Many other products on the market have never been tested.

One 1993 study in the American Journal of Public Health reported that 25% of 70 calcium supplements investigated exceeded the Food and

Drug Administration's provisional total tolerable daily intake of lead for children under 6 years of age. Federal regulations were supposed to go into effect in 1999 to restrict the lead content of calcium products.

Bourgoin, Bernard P., Ph.D., et al, "Lead Content in 70 Brands of Dietary Calcium Supplements", *American Journal of Public Health*, August 1993;83(8):1155-1160.

"Lead in Calcium Supplements," *Nutrition Week*, June 20, 1997;27(24):7/ Council for Responsible Nutrition News, May, 1997;14.

## Alfalfa and Herbals

A major supplement manufacturer had a problem of contamination of an alfalfa product with toxic fumigants a number of years ago.

Herbal products in particular are subject to contamination with bacteria. GNLD uses a complex process to safely kill bacteria in herbal products without leaving residues of toxic chemicals and without irradiation.

*Oakland Tribune*, January 22, 1982, p. D-9; *Wall Street Journal*, January 21, 1982.



## Salmon Oil

Fish oils are a particular subject of concern for toxicological testing. The fats in fish are often contaminated with a number of toxic compounds. Evaluation of GNLD Salmon Oil has revealed no detectable contamination of any kind. This means that the supplement may be a better source of nutrients than eating many fish which can carry significant toxic residues.

Contaminants such as PCB's can be passed from mother to infant

through breast feeding. This creates a dilemma because fish oils are important for the development of eye tissue and brain tissue of the infant.

## Assays for Potency

Salmon Oil is also an illustration of the importance of testing for the potency of a particular ingredient in products. Tufts University conducted a study of 10 major fish oil products on the market several years ago. They found that the products averaged only 38% of the EPA (one of the most important and active components of the product) listed on the label. DHA was also substantially reduced from label claims. DHA is an important nutrient for brain, eyes and nerves.

"PCBs in Breast Milk," *Pediatrics*, Committee on Environmental Health, July 1994;94(1):122-123.

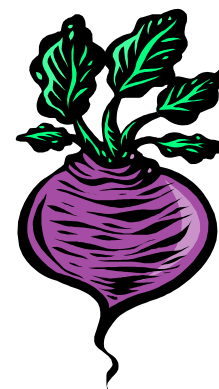
*Tufts University Diet and Nutrition Letter*, Volume 5, Nu. 11, January 1988.

## Digestibility

All nutrition is mediated through the functioning of the digestive tract. Neglect of this area of nutrition can mean that supplements simply will not work. A poorly functioning digestive tract can also result in serious problems handling foods.

GNLD has supplements targeted to support digestive function. GNLD also maintains an artificial digestive tract to evaluate whether supplements will dissolve in the environment of the human digestive tract.

Some competitive products have sat in the artificial digestive tract for a week without ever breaking down. A number of GNLD supplements are specially designed for digestibility and testing has proven their superiority as described below.



## Supplements to Aid the Digestive Process

### Beta-Gest

Beta-Gest is an extract from beets for the support of stomach function. Inadequate hydrochloric acid production (HCL) can result in bloating, belching, burping, bad breath and sometimes heartburn. The outstanding characteristic of the GNLD Beta-Gest is its "controlled-release."

Common sense suggests that HCL is a very powerful acid. A tablet introduced into the stomach could create irritation or even damage if it released rapidly. The controlled release aspect of this supplement prevents these problems.

This is also a betaine HCL. Dr. Hugh Tuckey, who worked on the problem of HCL supplementation for 30 years, found that this natural form of HCL worked better than synthetic alternatives. Other qualitative aspects of the product include the following:

- ◆ 100% plant-sourced enzymes
- ◆ The presence of lactase to aid breakdown of milk sugar
- ◆ Proteases to aid in protein breakdown

If needed, this can be one of the most helpful of all supplements. Many nutrients are essential for production of digestive substances.

Thus a lack of any one of several nutrients can result in decrease in

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digestive substances. The lack of digestive substances then increases the severity of nutrient deficiencies leading to ever more serious problems. HCL is particularly important for absorption of iron, calcium, phosphorus, and vitamin B12.

Stomach acid begins to decline at 30 years of age. By age 70, as much as 30% of the population has serious decline in stomach acid. HCL kills harmful microorganisms that enter the digestive tract with food or beverages. Deficiency here can kill.

Tuckey, Hugh, "The Human Need for Hydrochloric Acid," *National Health Federation Bulletin*, October 1967.



### Enzyme Digestive Aid

This supplement is designed to support breakdown of foodstuffs in the small intestine. This is a com-

plete formula to aid in breakdown of protein, fat and carbohydrate. Once again "targeted delivery technology" is central to the quality of the product.

Enzymes are quite susceptible to damage by the HCL in the stomach. GNLD uses a special enteric coating to protect capsule contents from destruction by stomach acid and assure that active enzymes reach the intestines.

Research suggests that cooking of food can be very taxing on the pancreatic production of digestive enzymes. This supplement can support that vital organ in its life preserving function.

Howell, Edward, *Enzyme Nutrition*, Wayne, New Jersey: Avery Publishing Group, 1985.

### Acidophilus Plus

The acidophilus in the colon synthesize nutrients and help break down foods for improved absorption. In addition, beneficial bacteria crowd out or destroy harmful organisms in the digestive tract which can make us ill.

Researcher Kem Shahani noted at a clinical nutrition meeting in 1996 that he had observed undesirable and pathogenic organisms in some acidophilus products. He also noted that nearly 50% of the products he examined did not have even 10% of

the organisms the product was supposed to have. Other researchers have observed this problem. GNLD customers have noted dramatic differences in effectiveness of GNLD Acidophilus Complex compared to other products.

The GNLD product uses an exclusive Gel-Gard protection system to assure delivery of the maximum number of live bacteria to the colon. These organisms are easily killed by the stomach acid. Each capsule of GNLD Acidophilus Plus delivers 5 billion live organisms. This is as many as eating 10 servings of yogurt!

The product contains five key organisms:

- ◆ *Lactobacillus acidophilus*—cancer inhibition,
- ◆ *Lactobacillus bulgaricus*—potent antitumor activity
- ◆ *Lactobacillus casei*—cancer inhibition, protection from bacterial infection of intestine
- ◆ *Bifidobacterium bifidum*—protection against "travelers' diarrhea"
- ◆ *Streptococcus thermophilus*—protection against "travelers' diarrhea"

Brennan, M., Wanismail, B., and Ray, B., "Prevalence of viable *Lactobacillus acidophilus* in dried commercial products," *J. Food Prot.* 46:887-892.