

GNLD's "Double Amino Acid" Mineral Chelation Technology



Don't overlook this important GNLD Difference!

Mineral depletion in the soil—and thus depletion in the foods grown in the soil—continues to worry scientists and generate headlines. Minerals are critically important components of a healthy diet, and their absence or inadequacy can cause wide ranging metabolic challenges. In fact, every chemical reaction that occurs in the body—energy production, tissue manufacture, protein synthesis, water balance, immune system function, cellular growth and reproduction, and on and on—requires at least one mineral.



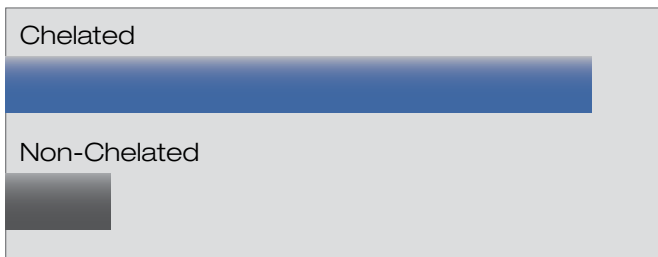
JOHN MILLER
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Vitamins are organic substances (derived from plants and animals) and for the most part move through the processes of digestion and absorption with relative ease. Minerals, on the other hand, are inorganic elements (derived from the earth), and due to their structure and physical properties they can make their digestion and absorption more challenging. The reason for this is that minerals are basic elements, identified and positioned on the Periodic Table of Elements. When digested from foods or food supplements, minerals return to their elemental or ionic form and have a positive charge or valence. Elemental calcium, for example, is divalent, meaning it has a double positive charge, literally Ca^{++} . (Iron and zinc are also divalent; Fe^{++} and Zn^{++} respectively.)

It is this "charge" that complicates absorption because, in this form, minerals are highly reactive to things around them with an opposite charge. In the intestine, elemental calcium can react with fats to form soap-like compounds that can no longer be absorbed. It can also react with the tissue of the intestine itself, bonding to it and becoming non-absorbable in the process. As a result, the body only absorbs a small portion of the minerals consumed.

toxic metals, Dr. Furst understood the absorption challenges confronted in the digestive tract better than anyone. He knew that if he could find a way to neutralize the mineral's positive charges but still have an absorbable molecule, he could improve mineral supplementation. He found his answer in amino acids—the building blocks of protein. By ionizing the mineral and then bonding it with amino acids, Dr. Furst developed the process of double amino acid chelation: bonding one amino acid to each of the two positive charges. This protected the mineral from reacting with other substances and, because the body loves amino acids, improved mineral absorption. Independent research has shown that minerals chelated with amino acids may be absorbed up to six times greater than non-chelated minerals.

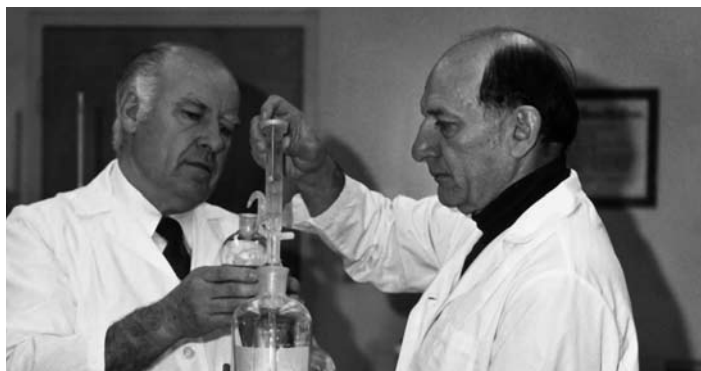
Chelated Minerals Can Yield Up To 6 Times The Absorption Rate Of Non-chelated Minerals



Comparative Rate Blood Levels

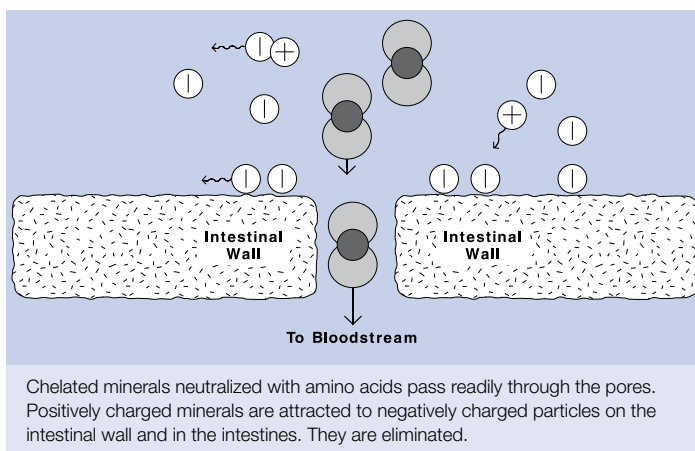
Ashmead HD, et al. 1985. Intestinal absorption of metal ions and chelates. Springfield (IL): Thomas, p 113-125

Today, GNLD's exclusive double amino acid chelation technology, developed for us by Dr. Furst over 30 years ago, is still the most efficient way of delivering supplemental minerals. The processes involved in extracting the elemental mineral ions from its source compound and then bonding it with specific amino acids under control conditions to produce a new, stable, highly absorbable chelated mineral is an exclusive process passed on to us by Dr. Furst and known only to GNLD.



The Birth of GNLD's Mineral Chelation Technology

In the mid-1970's, under the direction of Scientific Advisory Board Founding Member Emeritus, the late Dr. Arthur Furst, GNLD researchers undertook the development of dietary supplements that would provide increased absorption of essential minerals. Having spent decades discovering the amazing and complicated properties of minerals and



The result is mineral supplementation of the highest order and functional potential that can only be had from GNLD products. ■