



INTERNATIONAL

NEWS YOU CAN USE

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Whole grain evidence continues to pile up!

Data continues to pour in from studies investigating the amazing health-protecting power of whole grains. The more we look, the more we find that whole grains do things in our diets that other foods don't and processed grains like white flour simply can't.

Most recently, in the January 2006 edition of the *American Journal of Clinical Nutrition* (volume 83, issue 1), a study titled "Whole-Grain Intake Is Inversely Associated with The Metabolic Syndrome and Mortality in Older Adults" shows that older people who eat whole grains regularly had a significantly reduced risk of heart disease and metabolic syndrome* and lower fasting glucose levels. Conversely, refined grains were associated with higher fasting glucose and increased risk of metabolic syndrome.

This builds on evidence published in 2002, "Effect Of Whole Grains on Insulin Sensitivity in Overweight Hyperinsulinemic Adults" (*Am J Clin Nutr* 2002, 75: 848-855.), that showed a direct whole grain advantage over refined grains when it comes to managing healthy insulin levels.

*Metabolic syndrome is characterized by a group of metabolic risk factors in one person. They include:

- Abdominal obesity—excessive fat tissue in and around the abdomen
- Blood chemistry imbalances—high triglycerides, low HDL cholesterol and high LDL cholesterol—that foster plaque buildups in artery walls
- Elevated blood pressure
- Insulin resistance or glucose intolerance (the body can't properly use insulin or blood sugar)
- Prothrombotic state (high risk of clot formation)
- Proinflammatory state (increased risk of degenerative diseases.)

The idea that a common set of symptoms presenting themselves in a single individual is an important marker for disease risk was discovered by Dr. Gerald Reaven, the eminent medical doctor and researcher from the Stanford University School of Medicine. Dr. Reaven presented his evidence as the keynote speaker of the GNLD-Arthur Furst Lecture on Nutrition and Disease Prevention at Stanford University in March of 2002.

Four large and important studies show the whole grain connection to heart health.

1. A 1998 study of 34,000 women showed that those who ate at least one serving of whole grains per day had between a 30% and a 36% lower risk of heart disease. ("Whole-Grain Intake May Reduce the Risk Of Ischemic Heart Disease Death in Postmenopausal Women: the Iowa Women's Health Study," *Am J Clin Nutr* 1998 68:248-257.)

2. Results of the Nurses' Health Study, which followed 75,000 subjects for up to twelve years, showed that those who ate about three servings of whole grains each day had a 25% lower risk of heart disease and a 36% lower risk of stroke than those who did not make whole grains part of their diet. ("Whole-Grain Consumption and Risk Of Coronary Heart Disease: Results from The Nurses' Health Study," *Am J Clin Nutr* 1999, 70: 412-419.)
3. Another study published in a 2000 issue of the *Journal of the American Medical Association* found similarly strong connections between whole grain intake and health—including up to 50% reduction of risk of ischemic stroke. ("Whole Grain Consumption and Risk of Ischemic Stroke in Women: A Prospective Study," *JAMA*. 2000; 284:1534-1540.)
4. Of the 44,000 men in the Health Professionals Follow-up Study, those who consumed about 3 servings per day of whole grains enjoyed an 18% reduction in risk of heart attack. ("Intakes Of Whole Grains, Bran, and Germ and the Risk of Coronary Heart Disease in Men," *Am J Clin Nutr*, 2004, 80: 1492-1499.)

GNLD has been focusing attention on the importance of whole grains and the unique nutrients they contain for decades. Whole grain nutrition is a basic need of a healthy body. Its importance is appropriately symbolized by its position as a foundation food in the Healthy Food Pyramid. What gives whole grains their heart-health power is no doubt a combination of factors, including lipids, sterols, fiber, vitamins, minerals, and other phytonutrients. What's known for sure is that processed grains don't do the job. It's safe to say that the benefits aren't from the carbs, and there's no evidence they're from the protein whole grains contain. It comes down to two nutrient groups: whole grain "lipids and sterols" and whole grain fiber.

So, what does all this tell you to do? Well, you need to find and eat more whole grain foods—every day. Be cautious though. Foods labeled "whole grain" are often devoid of lipids, sterols, and fiber. But find and eat whole grain products, you must. And to help assure your body is getting what it needs, include supplements in your health game plan. GNLD's Tre-en-en® Grain Concentrates provide an easy, convenient way to increase "lipid and sterol" content, while our fiber supplements Multi-Fiber Blend and All Natural Fiber Supplement can quickly help close your fiber gap.

Factoid: When whole grain wheat is refined to make flour, most of its nutritional value goes down the drain. For example, thirteen key nutrients, including vitamin E, are reduced by as much as 93%. To compensate for this incredible loss, the flour is enriched—but with only five nutrients, creating what many scientists and researchers see as negative nutrition. (www.wholegraincouncil.org)

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Probiotic “Acidophilus” shows promise for athletes and Epstein Barr related fatigue.

When athletes become fatigued, one of the biological markers that doctors and researchers see is a drop in the natural virus fighter known as interferon. Low interferon levels are also seen in people infected with Epstein Barr Virus (EBV) and suffering from the chronic fatigue that accompanies it. According to research published in the May 2006 issue of the *British Journal of Sports Medicine* (BJSM; 40:351-354 – “Reversal of fatigued athlete’s of a defect in interferon-gamma secretion after administration of lactobacillus acidophilus,” by Dr. R. L. Clancy from the University of Newcastle in Australia,) supplementation with lactobacillus acidophilus (20 billion units per day) for just 30 days reversed interferon decline and returned it to healthy levels.

The power of probiotic (life-supporting) organisms has been presented in the GNLD product line for decades. GNLD’s Acidophilus Plus is a “state-of-the-art & science” formulation that delivers a five billion unit synergistic blend of Lactobacillus Acidophilus, plus 4 other proven probiotics in each easy to swallow capsule. Exclusive “Gel-gard” technology assures delivery of viable probiotics directly to their target in the gastrointestinal tract.

More good news about Lycopene and prostate cancer.

Reports that show a connection between the carotenoid Lycopene and prostate cancer risk reduction have appeared in scientific literature and popular press since the early ’90’s. Epidemiological evidence resulting from studying men with and without prostate cancer points to a strong protective effect. One study showed that when Lycopene (from tomatoes) was present in the diet 4 to 5 times per week there was a 25% reduction in prostate cancer risk. Now a new study builds the case for prevention even stronger. Published in the May 2006 issue of the journal *Urological Oncology* (vol. 23, pp. 383-385) this latest 40-member, 2-year study, using tomato-derived Lycopene, showed a 42% decrease in prostate-specific antigen (PSA) levels in the blood and a corresponding 82% increase in blood Lycopene levels. The “control” subjects from the same study, who did not receive Lycopene, showed a 23% climb in PSA levels and a 52% reduction in blood Lycopene levels. Lead researcher Nayan Monhanty states, “This initial small trial has shown that Lycopene is an effective chemopreventive agent in preventing HGPIN (a precancerous prostate condition) from becoming prostate cancer.”

When the GNLD Scientific Advisory Board was developing Carotenoid Complex in the late 1980’s, Lycopene was one of the key carotenoids targeted and achieved for the formula. Derived from tomatoes, the Lycopene in Carotenoid Complex is exactly the form and source shown to have greatest biological effectiveness. When we presented our initial research at the New York Academy of Sciences symposium “Carotenoids in Human Health” in 1991, the first indications as to the prostate protecting power of Lycopene were presented. (“Carotenoids in Human Health,” *Annals of the New York Academy of Sciences*, Vol 691.)

Omega-3 supplementation is great for back and neck pain.

Many previous studies have reported that omega-3 fatty acids, both from fish and fish oil supplements, can reduce and even prevent

inflammation. A study published in the April 2006 issue of the journal *Surgical Neurology* (vol. 65, pp. 326-331) strengthened this connection, further showing that, given a little time to take effect, omega-3 supplementation is as effective as NSAIDs (Non-Steroidal Anti-Inflammatory Drugs) without any of the negative side-effects. 125 people suffering with non-surgical spine pain, and who were taking NSAIDs, volunteered to take a 2400 mg per day supplement of omega-3 fatty acids for a two week period and to follow that with 1200 mg per day thereafter. One month into the test participants responded very positively. 59% reported no more NSAID use. 60% reported improvement in their overall level of pain. 80% said they were satisfied with the results and 88% said they would continue with omega-3 supplementation.

...and it’s great for the brain, too!

In a December 2004 study published in the *American Journal of Clinical Nutrition*, research investigating the long term effect of omega-3 consumption reported finding a direct benefit. In an observational study following a group of 64-year-old patients, it was determined that, when tested and compared to similar tests they had taken in 1947, those with the highest omega-3 intake had the highest IQ and greatest cognitive retention.

An “Evidence Report” published by the *US Agency for Healthcare Research and Quality* (AHRQ) in 2005 found that fish, total omega-3 fatty acid consumption, and specifically DHA were associated with a reduction in risk of both Alzheimer’s and non-Alzheimer’s dementia.

Another study has shown that omega-3 fatty acids may also slow the aging of the brain. Older adults who supplement their diets with EPA and DHA have demonstrated greater cognitive function when compared to those who don’t. In a recent study in the *American Journal of Clinical Nutrition*, researchers reported that study participants who eat oily fish or take fish oil supplements score 13% higher in IQ tests and are less likely to show early signs of Alzheimer’s disease when compared to those who don’t.

Results of yet another trial published in the December 2005 issue of the *Archives of Neurology* showed that those who ate omega-3 rich fish at least once a week had what amounted to a 10% slower rate of brain aging.

GNLD has offered high quality omega-3 supplementation for more than 20 years in the form of Omega-3 Salmon Oil™ and Omega-3 Concentrate™. Our most recent addition to our omega-3 offerings, Salmon Oil Plus,™ represents the leading edge of omega-3 research, understanding, and technology. It’s based on decades of knowledge and more than seven years of development. It delivers every one of the eight forms of omega-3 fatty acids involved in human nutrition, providing more supplemental omega-3 power than ever before—from just the sources and in just the forms nature intended and the body needs!

Four new calcium studies you should know about.

1. In the April 28 2006 issue of the journal *Archives of Internal Medicine*, researchers report that a double-blind, placebo control study lasting five years and involving 1,460 female subjects at least 70 years of age showed a significant reduction in the risk of bone

fracture and improved bone strength and density for those taking the 1200 mg per day calcium supplement versus those on the placebo.

2. In the December 2005 issue of the *Journal of Clinical Endocrinology and Metabolism* (2005; 90: pp. 3153 – 3161), researchers report that teenage boys can increase the mineral content of their bones and increase their height by taking calcium supplements. The study of 143 healthy boys age 16 to 18 separated them into two groups. One group received a 1000 mg per day calcium supplement and the other a placebo. At the end of the twelve month study, the boys receiving the calcium supplement had greater bone density, with the most active boys showing the greatest increase, when compared to the placebo group. Additionally, those boys receiving the calcium supplement also grew by a statistically significant average of .28 inches more.
3. In the *American Journal of Medicine* (2005; 118: pp.778-781), researchers report that acid blockers like Prilosec block calcium uptake. Drawn from a randomized, double-blind study of 18 elderly women, the research shows that such anti-acids inhibit the stomachs natural hydrochloric acid production, dramatically reducing calcium absorption by as much as 41%. Because the average American diet contains inadequate levels of calcium, researchers fear our tendency to rely on anti-acids rather than pro-digestives may be causing low calcium uptake and increasing risk of osteoporosis and bone fracture.
4. In the December 2005 issue of the *Journal of the American Medical Association* (2005; 294: pp.2336-2341), researchers suggest that assuring adequate vitamin-D intake each day might offer better protection from osteoporosis than calcium. The study,

based on data from 944 healthy subjects in Iceland, showed that those getting the highest vitamin-D levels showed better utilization of calcium, while those getting high calcium alone did not. Their conclusion was that getting a healthy abundance of both was the best course.

GNLD first introduced calcium supplementation in 1964, well before some words— like osteoporosis—were even known to the public. Today GNLD offers a variety of easy, convenient, and effective choices for calcium supplementation, including Chelated Cal-Mag. Based on our unique and exclusive “double amino acid chelation” technique developed by founding Scientific Advisory Board member and world-renowned cancer researcher and toxicologist Dr. Arthur Furst, Chelated Cal-Mag provides calcium and magnesium in their most bioavailable forms and comes with and without vitamin-D. And Vitality Calcium Plus delivers our broad spectrum—synergistic bone mineral supplementation that includes Calcium, Magnesium, Zinc, Copper, and Manganese. Additionally, each recommended serving of our protein supplements GR² Control® and NouriShake® deliver 35% and 50% of the RDA for calcium.

Did you know?? Rhubarb is a fruit! It is, at least according to the Indiana State Department of Health. Surprisingly, due to the carotenoids that give it some of its red color, rhubarb is a pretty good source of vitamin-A! Though tart, the stalks are quite tasty, especially when added to something like strawberries. Don't eat the leaves though—they may be beautiful, but they are very poisonous!



SAB HAS THE ANSWERS:

Q. How can Salmon Oil Plus™ have more omega 3 fatty acids than the other omega-3 products and still be in a smaller capsule?

A. By using a unique and exclusive process known as “Molecular differentiation,” we can concentrate on specific omega-3 fatty acids while eliminating unnecessary elements.

Q. How much of the fatty acids are from Salmon Oil?

A. Although the percentages of fatty acid sources are considered proprietary, we can tell you the majority does come from salmon and that salmon oil is the single largest ingredient in the product.

Q. Why did GNLD use tuna in Salmon Oil Plus?

A. Specific types of fish have specific fatty acid profiles. Tuna is naturally higher in DHA and its DPA precursor, therefore tuna oil was chosen as one of the natural omega-3 sources for the production of UHPO3, our ultra high potency omega-3 fatty acid technology.

Q. Will the glucosamine in Full Motion® cause elevated cholesterol?

A. There is no scientific evidence to support glucosamine negatively affecting cholesterol levels. In fact, GNLD's Full Motion does not contain any ingredients that cause a negative effect on cholesterol levels.

Q. What is molecular differentiation?

A. Molecular differentiation is a technology used to select specific nutrient molecules from fish while eliminating or reducing the other molecules not essential to omega-3 nutrition.

Q. Why are anchovies and sardines used in Salmon Oil Plus?

A. Anchovies and sardines are both naturally higher in EPA and its ETA(3) and ETA precursors. Anchovies and sardines were chosen as the starting point to maximize those omega-3 fatty acid levels.

Nutrition for child athletes

As children begin their athletic careers and their need for nutritional support increases, they unfortunately tend to decrease their desire for nutritious foods. Young bodies require tremendous amounts of nutrients to thrive, and the child-athlete needs even more specific nutrients to achieve peak performance. Athletes, including children, require optimal nutrition to recover from the stress of physical activity. (*Journal of School Nursing: Sports Nutrition for Young Athletes*, December 2005, vol. 21(6):323-8.) Allowing the body to recover more completely and/or more rapidly allows the athlete to come to the next training session or competition ready to push to the next level.

Without proper recovery, an athlete of any age cannot maximize the body's ability to improve. Incomplete recovery can hinder training and improvement. Poor recovery combined with long term over-training can reduce the body's immune capacity, which leads to illness and injury—things every athlete wants to avoid.

Parents should be cautious when it comes to giving their children supplements, though—there are too many news stories about athletes who unknowingly take a banned substance contained in a “supplement.” GNLD wants every parent to know that we highly value the health of their children. In fact, GNLD and the SAB guarantee that all GNLD nutritional supplements are free from any substance banned by all the major sports governing bodies, including the United States Anti Doping Association (USADA).

Children need a basic multi-vitamin that provides lipids and sterols in addition to vitamins and minerals. GNLD's Vita-Squares® provide optimal cellular nutrition that supports children's physical and mental development and emotional well-being by specifically addressing their nutritional needs. Vita-Squares contain vitamins, minerals, lipids, sterols, and other whole-food-based nutrients that are deficient in many children's diets yet are essential for good health. Vita-Squares are delicious chewable tablets with great flavor derived from all-natural fruit essences.

Children's tremendous growth rates require adequate protein each and every day too. The young athlete can require more protein than the average child due to stress from physical activity. Unfortunately, they often shun many protein choices or want to eat unhealthy protein sources such as hot dogs or greasy cheeseburgers. What they need is a protein choice that contains all twenty-two amino acids involved in human nutrition, is low in fat and cholesterol, and tastes good. GNLD's Nourishake® is a perfect choice for kids since it contains all twenty-two amino acids, is low in fat and cholesterol, and tastes delicious. Additionally, it is sweetened with fructose, which does not cause the insulin spike associated with table sugar or high fructose corn sweetener.

Getting kids to eat fruits and vegetables has been a challenge throughout the ages. Today, with our society's heavy dependence on fast food, that challenge is even greater. Child-athletes require the protective nutrients found in fruits and vegetables as much—maybe more—than the average child. As with all other children, those needs have to be met or the athlete's ability to repair and recover from the stress of sports can be compromised. Vita-Gard™ provides the most complete antioxidant protection available to defend children's cells from free radical damage. Vita-Gard features both water-soluble and lipid-soluble antioxidants for optimal cellular protection. Vita-Gard is the only children's chewable tablet to deliver a broad spectrum of flavonoids from all natural whole foods such as cranberries, green tea, mixed berries, lemons, and oranges, and carotenoids from all-natural whole foods including carrots, apricots, peaches, strawberries, and tomatoes.

For the adolescent athlete, emphasis on lifelong nutritional habits that support peak performance and are not detrimental to health should be the only accepted practice. GNLD supports the efforts of young athletes and the good health of all champions— past, present, and future!

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