



INTERNATIONAL

NEWS YOU CAN USE

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US, European Studies Confirm Effectiveness Of Glucosamine—Beyond A Doubt!

Faced with aging populations and the accompanying increased incidence of degenerative joint disease (osteoarthritis), government agencies in both the U.S. and Europe have been investigating possible solutions. The importance of finding a solution increased tremendously when the drug treatment of choice—the COX-2 inhibitor drugs Vioxx, Celebrex, and celecoxib—were shown to create an increased risk of heart disease and heart attack.

Great news: Two long-term investigative studies have just reached their conclusion, and they couldn't have come at a better time. The results will be formally presented at the American College of Rheumatology's annual conference in San Diego, November 12-17, but insiders say they are very pleased with the findings.

In the U.S. study, known as the GAIT (Glucosamine/chondroitin Arthritis Intervention Trial), funded and directed by the National Institute of Health (NIH), researchers showed that a 1500 mg daily dose of glucosamine hydrochloride provided 95% of the pain relief benefit of COX-2 inhibitors—without any of the adverse side-effects or cardiovascular risk!

In the study's European counterpart, known as the GUIDE trial (Glucosamine Unum in Die Efficacy), researchers showed that a 1500 mg daily dose of glucosamine sulfate provided better pain relief for patients suffering from knee osteoarthritis than a 3000 mg daily dose of acetaminophen, prompting researchers to conclude that glucosamine supplementation might be the preferred treatment for osteoarthritis.

The final papers will not be presented until the November meeting of the American College of Rheumatology. However, abstracts can be found at: www.rheumatology.org/annual/abstracts/search.asp

GNLD's Full Motion Glucosamine Complex supplement provides the proven effect of a 1500 mg daily dose of pure, biologically functional glucosamine in an easy-to-digest, sulfite-free hydrochloride form. Coupled with GNLD's exclusive Herbal Comfort Complex, Regenerative Mineral Complex, and 3D Advantage, it is the perfect choice for glucosamine supplementation and joint health benefits.

Fish Oil Omega-3's Protect Your Brain!

With the cognitive decline associated with Alzheimer's disease on the rise worldwide, researchers are busy trying to discover the causes behind this mysterious malady. It has long been known that diet plays an important role in brain health and function, but just how critically important is just now coming to light. For the first time, new discoveries show that omega-3 fatty acids act as brain protectors, too.

Publishing their findings in the October 1, 2005, issue of *The Journal of Clinical Investigation*, researchers at Louisiana State University

Factoid: In the 19th century, cod-liver oil was a folk remedy for several wasting diseases. By 1922, its medicinal value was established and related to the presence of vitamins A and D.

(LSU) have shown that the fish-derived omega-3 fatty acid DHA (docosahexaenoic acid) is not only vital as a brain tissue building block, but it also exerts a protective effect against the neuro-degeneration and brain function decline associated with Alzheimer's. These important new discoveries prompted LSU Neuroscience Center of Excellence Director, Dr. Nicolas G. Bazan, to state, "DHA is an essential building block for the structure of brain cells, and now we are finding that this building block also makes a 'golden brick' [labeled NPD1, or neuro-protectin D1] that helps the life of the neurons to continue." After reviewing the data, fellow researcher Dr. Greg M. Cole, Associate Director of the University of California, Los Angeles, David Geffen School of Medicine concurred, "This study shows that both DHA and its NPD1 product are effective in treating human brain cells and reducing the inflammation and toxicity from the toxin called beta amyloid that is widely believed to cause Alzheimer's."

Experts agree that assuring a minimum of 200 -300 mg of DHA daily is critical for long-term brain health and function. (The average North American gets only about 60 mg!)

GNLD's Omega-3 Salmon Oil™ and Omega-3™ Concentrate both deliver the complete goodness of Nature's most abundant sources of fish-derived omega-3 fatty acids—and each recommended dose delivers 360 mg of brain-protecting DHA!

Omega-3's And Exercise Keep Your Brain Fit, Memory Clear And Sharp!

Though we have always known an active lifestyle that includes regular exercise keeps us physically fit, new research shows it keeps us mentally fit, as well. Addressing an audience of the world's preeminent brain researchers attending the British Association for the Advancement of Science this past August, Professor Ian Robertson, Director of the Institute of Neuroscience at Trinity College Dublin, told his audience, "The biggest threat to being able to function well and properly is our brains." Robertson's keys to long-term brain health and function: exercise, omega-3 fatty acids, and whole-food antioxidants! In his investigations, regular exercise, avoiding high stress levels, a rich social life, and a diet rich in fruit and vegetable antioxidants and fish oil omega-3 fatty acids are important health goals we should all pursue. Fellow Trinity professor Dr. Marina Lynch underscored the importance of fish oil omega-3's. "Studies have identified the anti-inflammatory properties, as well as the restorative qualities of omega-3." The biggest surprise in Dr. Lynch's research has been the discovery that omega-3 appeared not only to replace anti-inflammatories that dwindle with age, but also to stem a corresponding rise in chemicals that cause cell inflammation in the first place.

Rest, exercise, and diet have long been the core principles of the GNLD optimal health solution. GNLD's Omega-3 Salmon Oil and Vitality Omega-3 Concentrate are the exact omega-3 nutrient sources the human body and brain need and Nature intended for us to have. GNLD PhytoDefense, a unique and scientifically proven, whole-food phyto-nutrient complex (derived from 25 fruit and

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vegetable sources,) delivers broad protection, including antioxidants known to cross the blood-brain barrier and function as neuro-protective nutrients.

Whole Grains: The Harvard School Of Public Health Gets It!

The importance of making sure we are really getting whole-grain products when we pay for them has not been lost on the folks at the Harvard School of Public Health. On their website (www.hsph.harvard.edu/nutritionsource), they now lead with this warning: “Food companies make it more difficult than it should be to spot whole-grain foods. Aware that consumers are interested in whole-grain products, companies often make foods sound like they’re whole grain and healthy when they aren’t.” This is particularly true of the natural lipid and sterol portion of whole grains. Research shows that even products marketed as Whole Grain have the majority of their natural lipid and sterol content removed. For example, according to USDA data, whole-grain wheat is about 10% lipids and sterols by weight. By the time it reaches the store shelves as a whole-grain wheat cereal such as Wheaties, though, fat (lipid and sterol) content is down to about 1%;—meaning as much as 90% of the natural lipid and sterol content has been removed!

GNLD’s Tre-en-en® Grain Concentrates were designed and formulated to replace important whole-grain lipids and sterols lost to food processing. It is always a good health practice to include whole-grain foods in your diet. But making sure you’re getting the whole-grain goodness Nature intended, the nutrients your cells really need, is not easy, even though “whole grain” products seem to be everywhere. To make sure your diet includes whole-grain lipids and sterols, supplement with Tre-en-en Grain Concentrates. It’s a “health-smart” thing to do.

Factoid: In 1997, the state of Kansas produced 490 million bushels of wheat. That’s enough to make six loaves of bread for every person on the planet!

Older Women Critically Deficient In Vitamin D . . .

“Almost two-thirds of older women with osteoporosis are deficient in vitamin D,” is the message researchers proclaimed to their audience at the American Society for Bone and Mineral Research’s (ASBMR) annual meeting in September. “In this cross-sectional sample, the prevalence of vitamin-D inadequacy is high, regardless of latitude or season,” said Dr. Paul Lips from the Vrije University Medical Center in Amsterdam. The question of which came first, the osteoporosis or the vitamin-D deficiency, remains unanswered, but bone biochemistry specialists have long known that vitamin D is essential for the calcium deposition that leads to bone density and protection from osteoporosis. What’s the message here? If you’re at risk of osteoporosis, or already suffering from it, make sure you’re getting a good supply of vitamin D along with your calcium.

. . . and the general population needs more!

At the September “Science Day” meeting of the Council for Responsible Nutrition, Dr. Reinhold Veith, Professor of Pathology and Laboratory Medicine at Mount Sinai Hospital, Toronto, told the audience that our current understanding of the importance of vitamin D is “too restrictive,” and that widespread deficiencies not only compromise bone health, but also undermine immunity and increase the risk of diabetes and cancer. His recommended daily intake: 1000 to 2000 iu’s.

GNLD’s Scientific Advisory Board has long promoted the bone health benefits of vitamin D. You’ll find GNLD’s Chelated Cal-Mag® is available both with and without vitamin D. Each 3-capsule dose of Cal-Mag capsules delivers 400 iu’s of bone-supporting vitamin D. It is also present in GNLD’s Multi-Min™, Formula IV® and Formula IV Plus, Sports-30™, Stress-30™, Active-40+™, Vegetarian Multi™ and Cod Liver Oil.

Whole-grain Sterols Enlisted In Fight Against Metabolic Syndrome!

Researchers at the VTT Technical Research Center of Finland announced plans to investigate the role of specific whole-grain nutrients in fending off “metabolic syndrome,” the collection of health risks that increase your chance of developing heart disease, stroke, and diabetes. High on their list of bioactive nutrients: Whole Grain sterols. “We will be working on gaining a better understanding of the various compound levels in grains and their localization,” explained project coordinator Professor Kaisa Poutanen. The project will be building on results from recent studies that have revealed how whole-grain foods can have a protective effect against heart disease, stroke, and diabetes.

There are many important, health-protecting nutrients in whole grains that are fundamental to optimal health. Whole-grain sterols have long been known to be important in the diet, but they are now being seen as more than just functional components of lipids, and are emerging as powerful bioactive compounds in their own right. Assuring that whole-grain sterols are always present in the diet is one of the key health contributions of GNLD’s Tre-en-en Grain Concentrates.

Carotenoid-, Flavonoid-, Cruciferous-, And Allium-Rich Fruits And Vegetables Protect Against Pancreatic Cancer!

Publishing their work in the September issue of *Cancer, Epidemiology, Biomarkers and Prevention*, researchers from the University of California, San Francisco presented case-controlled study data that strongly reinforced this protective benefit. Allium-rich onions and garlic; carotenoid- and flavonoid-rich carrots, yams, sweet potatoes, corn, and yellow squash; and dark green leafy vegetables like spinach and other cruciferous vegetables “seem to exert the greatest protection,” the report said. People who received five servings of these fruits and vegetable each day had a 50% reduction in the risk of pancreatic cancer. “Finding strong confirmation that simple life choices can provide significant protection from pancreatic cancer may be one of the most practical ways to reduce the incidence of this dreadful disease,” concluded senior author Dr. Elizabeth Holly.

The critically important health protection and disease prevention roles of these important groups of human food chain fruits and vegetables are not new to GNLD. Pushing people to get at least five servings of these life-protecting phyto-nutrients through foods and supplements is a major element of our plan for optimal health. Our range of supplements address each of these critical nutrient categories: Allium nutrients from Garlic Allium Complex; and Carotenoid, Flavonoid, and Cruciferous nutrients from PhytoDefense. All are backed by scientific proof they deliver the powerful benefits of these critical protector nutrients.

Factoid: The ancient Egyptians revered the onion, believing its spherical shape and concentric rings symbolized eternity. Of all the vegetables recreated in precious metals by Egyptian artists, only the onion was made out of gold!

The Competitive Athlete's Edge: Omega-3 Fatty Acids!

Athletes of all ages and abilities are constantly looking to get a “leg up” on their competition. For many, that usually involves more time spent training and in competition and less time devoted to recovery and proper nutrition. Unfortunately—and contrary to what many athletes believe—recovery is where improvement actually begins, and proper nutrition is what supports the body's ability to fully recover.

Training brings about many physiological changes, both good and bad. The negative aspect of training is the stress and damage placed upon the body. The physiological adaptation to that stress and damage is the body's ability to recover and improve. For the athlete, this improvement is usually in the form of added strength, speed, and endurance.

The downside of training stress, especially too much training, comes when the natural recovery process the body needs to improve is cut short or is not complete before the stress of training happens again. When this happens, the body does not fully adapt, and over-training occurs. The results are often soreness, pain, and injury. For many athletes, this is especially true in their joints.

What athletes need to understand is that joint soreness is a normal function of hard training. However, the need to minimize joint soreness cannot be overstressed. Latent soreness is a signal of micro-damage at the cellular level, and the body must utilize all of its available resources to repair this damage. Quite often, the body's natural mechanisms cannot repair the damage in time for the next training event, and so athletes often turn to anti-inflammatory drugs, such as ibuprofen, to alleviate soreness. In addition to the negative side effects of chronic anti-inflammatory use, the simple fact is that these drugs address the symptom but do nothing about the cause of the problem.

Enter DHA and EPA

Good news for athletes: The two main omega-3 fatty acids found in fish oil, EPA and DHA, have been shown to effectively reduce soreness in joints¹. In the past, athletes had to choose between living

with joint soreness and possible injury, and taking potentially dangerous anti-inflammatory drugs. Today we know that a diet rich in EPA and DHA can be equally effective in relieving pain and soreness in joints. In addition, EPA and DHA have cardioprotective benefits that no anti-inflammatory drug can match.

Secondary Benefits

For the hard training athlete, the benefits of omega-3 fatty acids are multiple. Supplements of omega-3 fatty acids from fish oil have been shown to improve muscular strength and improve aerobic performance in athletes². In addition, omega-3 supplements given to asthmatic athletes provided protection from attacks induced by exercise³. Among the athletes with exercise-induced asthma, there was an almost 80% improvement in a lung function test taken 15 minutes after exercise. These athletes also reduced their need to use bronchodilators after exercise by 20%. The researchers suggest the anti-inflammatory properties of fish oil supplements may be the reason for these powerful results.

Make it part of your daily routine

Any athlete or individual concerned about joint health and peak performance should strive to include the omega-3 fatty acids EPA and DHA in his diet. The standard recommendation is three to four servings of fatty fish every week. However, the average adult does not meet this minimum recommendation, and the hard-training athlete may need even more. The best way to fill this critical need is with a high-quality omega-3 supplement. Make sure the supplement you choose is made from health-screened fish, harvested in cold waters free from contaminants. By making omega-3 fatty acids a part of your training, you will be providing your body with the nutrients it needs to be its very best.

References

1. *American Family Physician*, 7/1/2004.
2. *Nutrition in Exercise and Sport*, CRC Press
3. *American Journal of Respiratory and Critical Care Medicine*, November 2003, vol 168: pp. 1181-1189.



SAB HAS THE ANSWERS:

Q. How does GNLD's Threshold Controlled technology release the nutrients over time?

A. GNLD's Threshold Controlled technology features our exclusive process which allows for slow, monitored release of nutrients into the system. Utilizing a special matrix to control the release of nutrients, Threshold Control technology helps maintain maximum blood levels for six full hours or more.

GNLD's Threshold Control technology is not simply a special method of coating the tablet. The tablet coating does control the rate at which the nutrients first become available to the system. After the coating dissolves it is the job of our unique, natural matrix to gradually release nutrients for absorption. The nutrients are held in place within a framework that breaks down during the digestive process; as the matrix disintegrates it slowly loses its ability to hold onto nutrients and they are gradually freed for the body to take up and use.

Q. Will the licorice in Cruciferous Plus™ cause my blood pressure to rise?

A. We are fully aware of the relationship between large doses of licorice root and the effect on blood pressure. Though GNLD's Cruciferous Plus contains licorice, the amount of glycyrrhizin (the component found in licorice which causes high blood pressure) is so low that there is no risk of high blood pressure from taking Cruciferous Plus.

Just to be on the safe side, anyone under the care of a physician, or taking medication for high blood pressure/hypertension should consult with their physician before taking products containing licorice.

Q. I want to give Full Motion to my dog; can you tell me if the herbs in the product are safe for animals?

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A. GNLD's Full Motion was formulated and tested for human consumption. It was not formulated or tested with pets in mind. Although all the ingredients used in Full Motion are proven safe and effective for human consumption, the amounts may not be appropriate for your pets.

Q. I've been told that freezing Salmon Oil capsules helps minimize repeating. After freezing the Salmon Oil capsules I noticed there were bubbles in some of the capsules, why did this happen? Is this a quality problem?

A. When GNLD's Salmon Oil is stored in the freezer, the oil in the capsules will contract and bubbles may appear. This is a normal action for oil in closed-system gelatin capsule of this type.

Q. How is the green tea in Flavonoid decaffeinated? I am concerned about the chemicals used?

A. You have nothing to be concerned about. GNLD does not use any processes where harsh chemicals could harm or become part of the raw material or finished product. The green tea used in the Flavonoid Complex is extracted using a water-based process, which identifies and removes the desired component(s) and discards the remainder, in this case the caffeine portion of the tea. All our finished products are tested and analyzed to ensure you consistently receive the same high quality product every time.

Q. Can fish oil increase insulin resistance and elevate blood glucose levels in diabetics?

A. While there have been numerous studies with fish oil and diabetic subjects, there is no research to suggest any negative effect from a whole food supplement such as GNLD's Omega III Salmon Oil or Concentrate, when taken as directed.

Quite the contrary, because people with, or at risk of diabetes are also at greater risk of heart disease, assuring an abundant intake of omega-3 fatty acids from food and food supplements is a wise practice. High blood glucose levels can have an inflammatory effect on cardiovascular tissue, including veins and arteries. Omega-3 fatty acids can help protect heart health from this challenge.

Diabetes is a serious medical condition. Treatment for this condition should only be handled by a qualified medical practitioner. We recommend strongly that anyone with diabetes continue to seek out and follow the advice of medical professionals.

Q. Why are Lutein and Zeaxanthin listed on the Carotenoid Complex™ and PhytoDefense® label together?

A. Lutein and Zeaxanthin are chemically and structurally very similar. GNLD has known for a long time that neither nutrient occurs in isolation in natural foods; they only occur with their other carotenoid "family members". Though we can separate them in HPLC (high performance liquid chromatography) analysis, listing them together is more appropriate for labeling purposes. The importance and uniqueness of the carotenoid group lies in their family structure; each member contributes protective benefits and works together as a team to provide maximum benefits. There would be of little benefit to the body to supplement with a single carotenoid.

Q. Why is there sodium in a packet of PhytoDefense®?

A. The sodium contained within each capsule/tablet of GNLD's PhytoDefense occurs naturally and is from the raw ingredients, we do not add sodium. The amount present in each serving of PhytoDefense is only a fraction of a teaspoon; less than one-third of the amount in a single serving of corn flakes.

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