

CARNOSINE EXTENDS LIFE SPAN IN NEW STUDY

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January 2011

Glucose: The Silent Killer!

**Don't Starve Your Brain
of Critical Nutrients**

**Benefits of Gamma E
Continue to Be Ignored**

**Deadly Impact of Even
Slightly Elevated Glucose**

**Higher Testosterone
Slashes Mortality Risk**

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**DIABETES INCIDENCE EXPECTED TO TRIPLE BY 2050
HIGH LDL IN YOUTH PREDICTS CORONARY CALCIFICATION
NEW BOOK: THE IMMORTALITY EDGE**

PURE, HEART HEALTHY Super Omega-3 EPA/DHA

Fish Oil Blend with Sesame Lignans and a MORE Concentrated Olive Fruit Extract

A Comprehensive Fatty Acid Formula

There's no debating the power of omega-3 fatty acids. From support for heart health and brain function to help with inflammation, their broad-spectrum benefits have been firmly established in a wealth of studies.¹⁻⁹

To ensure the purest, most stable, easy-to-tolerate fish oil supplement, **Life Extension® SUPER OMEGA-3 EPA/DHA** is *molecularly distilled*. This patented process ensures any pollutants are reduced to virtually undetectable levels. The result? Our fish oil enjoys a **5-Star rating** for purity, quality, and concentration from the **International Fish Oil Standards** program (IFOS)—the highest possible rating from the world's *premiere* testing laboratory.

Sesame Lignans and Standardized Olive Fruit Extract for Enhanced Benefits

Fish oils (and other fatty acids) have a tendency to oxidize, rendering them nutritionally inferior. Scientific studies show that when added to fish oil, **sesame lignans** safeguard against oxidation and direct fatty acids towards pathways that help with inflammatory reactions.¹⁰

To further emulate the benefits of a **Mediterranean diet**, **Super Omega-3** delivers standardized, high-potency **olive fruit extract**. Research shows that when combined with olive oil, fish oil supplements help with inflammation better than fish oil alone.¹¹

Olive also contains the compounds **hydroxytyrosol**, **tyrosol**, and **oleuropein**. Together these nutrients counter the action of free radicals, delay aging in specialized skin cells, prevent undesirable LDL oxidation, and help maintain normal platelet activation.¹²⁻¹⁵

Super Omega-3 supplies the equivalent content of **6 ounces of extra virgin olive oil**. Take two softgels twice daily with meals.



A bottle containing 120 softgels of **Super Omega-3 EPA/DHA with Sesame Lignans and Olive Fruit Extract** retails for \$32. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$18.90** per bottle. If **10 bottles** are purchased, the cost is just **\$16.81** per bottle. Item #01482

Just four softgels of SUPER OMEGA-3 EPA/DHA with Sesame Lignans & Olive Fruit Extract provide:

EPA Pure+™ Extract (eicosapentaenoic acid)	1400 mg
DHA Pure+™ Extract (docosahexaenoic acid)	1000 mg
Olive Fruit Extract [standardized to 1.5% hydroxytyrosol (9 mg), 0.7% oleuropein (4.2 mg), 0.5% verbascoside (3 mg) and 0.23% tyrosol (1.4 mg)]	600 mg
Sesame Seed Lignan Extract	20 mg

For those with sensitive stomachs, **Super Omega-3** is also available with **enteric coating** and retails for **\$34**. If a member buys four bottles during **Super Sale**, the price is reduced to **\$20.93** per bottle. If **10 bottles** are purchased, the cost is just **\$18.90** per bottle. Item #01484

To order the most advanced fish oil supplement, **Super Omega-3 EPA/DHA with Sesame Lignans and Olive Fruit Extract** (with or without enteric coating), call **1-800-544-4440** or visit www.LifeExtension.com

CAUTION: If you are taking anti-coagulant or anti-platelet medications, or have a bleeding disorder, consult your healthcare provider before taking this product. Contains fish (anchovy, mackerel), soybeans, and sesame.

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Supportive but not conclusive evidence shows that consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease.

LifeExtension®

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REPORTS



34 CARNOSINE EXTENDS LIFE SPAN

For nearly a decade, **Life Extension®** has presented compelling evidence about the anti-aging benefits of *high-dose carnosine*. In a major advance, scientists have boosted longevity up to **36%** in an experimental study using this vital nutrient! Here we reveal the multiple mechanisms carnosine targets to combat age-related disease.



44 GAMMA TOCOPHEROL CONTINUES TO BE OVERLOOKED

Published studies establish that high blood levels of **gamma tocopherol** reduce prostate cancer risk and combat a host of degenerative diseases. Yet most health-conscious people unknowingly take *only* the alpha tocopherol form of vitamin E. Find out why gamma tocopherol is required for optimal health.



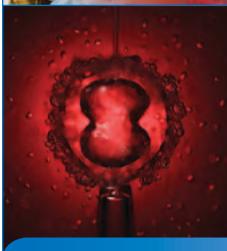
58 ARE YOU UNWITTINGLY STARVING YOUR BRAIN?

Newly released data reveal that someone in America develops an age-related brain disorder *every 70 seconds*. One of the reasons may surprise you: a healthy diet. If you're rightfully avoiding saturated fats and cholesterol, you risk a *deficiency* of two key brain-healthy nutrients clinically proven to prevent dementia and cognitive decline.



68 THE BENEFICIAL OMEGA-6

Most health-conscious people know that getting enough dietary **omega-3 (EPA/DHA)** is crucial to good health. But there's an **omega-6 fatty acid** that effectively combats conditions as diverse as eczema, arthritis, atherosclerosis, and diabetes. Discover the little-known benefits of **gamma linolenic acid** or **GLA**.



80 FDA BLOCKS CUTTING-EDGE ARTHRITIS TREATMENT

More than **27 million Americans** currently suffer from debilitating **osteoarthritis**, a progressive and incurable condition with no effective long-term interventions. Pioneering researcher **Dr. Christopher Centeno** of **Regenerative Sciences** has developed a safe, non-surgical therapy shown to eliminate arthritic pain up to **75%** using his patients' own stem cells. But to continue offering this treatment, he must first beat the **FDA** *in court*.

DEPARTMENTS



25 IN THE NEWS

Greater risk of heart attack and stroke in pre-diabetics; higher antioxidant levels linked to lower mortality risk; branched-chain amino acids extend life span in animal models; and more.



7 ON THE COVER

THE SILENT KILLER

The deadly effects of even **slightly** elevated **glucose** are fatally misunderstood. The result is that record numbers suffer **diabetic-like complications** without knowing their blood sugar

levels are too high! While mainstream doctors acknowledge **Life Extension®'s** four-decade crusade, they are failing to protect their patients against this hidden epidemic. Find out how easy it is to *optimize* your **blood glucose** and slash degenerative disease risk.

ASK THE DOCTOR 89

Michael Aziz, MD is an attending physician at Lenox Hill Hospital in New York City and a frequent guest on national TV and radio shows. Here he underscores the benefits of bioidentical hormone replacement therapy.



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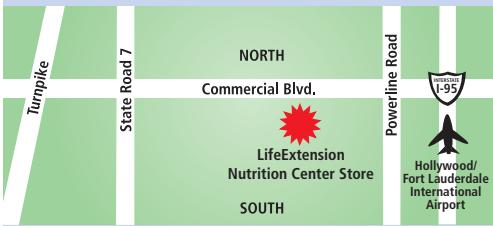
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Glucose: The Silent Killer



BY WILLIAM FALOON



The deadly effects of even *slightly* elevated **glucose** are fatally misunderstood.

One reason for this calamity is physicians who continue to rely on **obsolete** blood glucose ranges. These doctors fail to recognize that any **excess** glucose creates lethal metabolic pathologies that are underlying factors behind multiple age-related diseases.

People today thus suffer and die from diabetic-like complications without knowing their blood sugar (glucose) levels are too high!

Life Extension[®] long ago argued that most aging people have elevated **blood glucose**. Our controversial position has been vindicated as mainstream medicine consistently lowers the upper-level threshold of acceptable (safe) fasting blood glucose.

As new evidence accumulates, it has become abundantly clear that maturing individuals need to take **aggressive** actions to ensure their fasting and after-meal glucose levels are kept in safe ranges.



Glucose Is Like Gasoline

Our body's primary source of energy is glucose. All of our cells use it, and when there is not enough glucose available, our body shuts down in a similar way that a car engine stops when the gasoline tank is empty.

When glucose is properly utilized, our cells produce energy efficiently. As cellular sensitivity to **insulin** diminishes, excess glucose accumulates in our bloodstream. Like spilled gasoline, excess blood glucose creates a highly combustible environment from which oxidative and inflammatory fires chronically erupt.

Excess glucose not used for energy production converts to **triglycerides** that are either stored as unwanted **body fat** or accumulate in the blood where they contribute to the formation of **atherosclerotic plaque**.¹⁻⁶

If you were filling your automobile with gasoline and the tank reached full, you would not keep pumping in more gas. Yet most people keep fueling their bodies with excess energy (glucose) with little regard to the deadly consequences.

As an aging human, you face a daily onslaught of **excess glucose** that poses a greater risk to your safety than overflowing gasoline. Surplus glucose relentlessly reacts with your body's proteins, causing damaging **glycation** reactions while fueling the fires of **chronic inflammation** and inciting the production of destructive **free radicals**.⁷⁻²⁰

The Evolving Definition of Type 2 Diabetes

Medical dictionaries define diabetes as a condition whereby the body is not able to regulate blood glucose levels, resulting in too much glucose being present in the blood. The debate is over what level of blood glucose is considered "too high."

Nearly four decades ago, we emphatically stated that fasting blood glucose should be below 100 (mg/dL). Yet from 1979 to 1997, the medical establishment dictated that one of the criteria for a diagnosis of diabetes was fasting glucose readings of **140 mg/dL** or higher on two separate occasions.

In 1997, the medical establishment revised the fasting glucose

threshold for a diagnosis of diabetes to **126 mg/dL**. In addition, the medical establishment (American Diabetes Association), characterized the so-called *impaired fasting glucose* threshold level at **110 mg/dL**, which was subsequently lowered in 2003 to what Life Extension originally stated, i.e. that no one should have fasting glucose **100 mg/dL** or higher.

The problem is that we now know that the optimal fasting glucose ranges are **70-85 mg/dL** based upon the totality of the scientific evidence.³³

Those with glucose above **85 mg/dL** are at increased risk of heart attack.³⁴ This was shown in a study of nearly 2,000 men where fasting blood glucose levels were

Where Does Blood Glucose Come From?

Glucose accumulates in the blood primarily from carbohydrate foods we eat.

Less understood is the role of saturated fats that impair *insulin sensitivity*. When cells lose their sensitivity to insulin, glucose levels increase because it is not able to be utilized by energy producing cells. When people take compounds that block fat absorption and carbohydrate breakdown, fasting glucose levels plummet, along with triglycerides and cholesterol.^{21,22}

Digested carbohydrate foods are the primary source of blood glucose. We can control blood glucose by reducing calorie intake,²³⁻²⁵ blocking calorie absorption,^{22,26-32} and/or enhancing the ability of our cells to efficiently utilize glucose for energy production.

measured over a 22-year period. The startling results showed that men with **fasting glucose** over **85** (mg/dL) had a **40% increased** risk of death from cardiovascular disease.

The researchers who conducted this study stated "**fasting blood glucose values in the upper normal range appears to be an important independent predictor of cardiovascular death in nondiabetic apparently healthy middle-aged men.**"³⁴

So pull out your latest blood test result and see where you stand. At a minimum, you want to see your fasting glucose **below 86** mg/dL.

Why Any "Excess" Glucose is Dangerous

Sugar damages cells via multiple mechanisms and is a causative factor in common diseases of aging.³⁵⁻⁵²

In a group of humans who reduced their food intake to calorie restriction levels, fasting glucose declined to an average of **74** mg/dL.²³ This corresponds to animal studies in which caloric restriction induced significant reductions in blood glucose in conjunction with extension of life span.⁵³⁻⁵⁵

It is well established that cutting calorie intake reduces one's risk of age-related diseases and slows markers of aging.⁵⁶⁻⁶² One reason for this may be the reduction in blood glucose (and insulin) levels that occurs in response to ingesting fewer calories.

In a study of 33,230 men, high glucose was independently associated with a **38% increase** in deaths from digestive tract cancers.⁶³ Other studies show that diabetics have even greater increased cancer risks.⁶⁴⁻⁷⁰

Diabetics suffer such horrific incidences of vascular disorders that some experts believe that coronary artery occlusion and diabetes should be classified as the same disease. In other words, if you are diabetic, you are almost certainly going to suffer coronary atherosclerosis.

In a recent study involving 1,800 people, coronary disease rates were the same over a 10-year period in pre-diabetics compared to those with full-blown diabetes. The authors of the study commented that impaired fasting glu-

ose significantly increased risk in comparison with the normal glucose group and concluded:

"Early control of blood glucose is essential to prevention and control of coronary heart disease."⁷¹

As people age, their fasting glucose levels usually increase as their health declines.

Standard laboratory reference ranges allow an upper-limit of fasting glucose of **99** mg/dL. Yet the most effective anti-aging therapy—caloric restriction—lowers fasting glucose levels to the **70-85 mg/dL** range.

Recent studies indicate that keeping fasting glucose levels in the range of **70-85 mg/dL** and not allowing after-meal glucose levels to spike higher than **40 mg/dL** over your fasting value, favorably influences our **longevity genes**.⁷²

The take-home lesson is that one can slash their risks of age-related diseases and possibly slow their rate of aging by tightly controlling blood glucose levels.



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Dangers of After-Meal Glucose Spikes

When after-meal glucose levels surge above **140 mg/dL**, risks of virtually all degenerative diseases increase.

Remember that you should strive for **fasting glucose** levels of no greater than **85 mg/dL** (optimal range: **70-85 mg/dL**). In response to eating, your blood glucose reading should increase no more than **40 mg/dL** above your fasting value. This means if your fasting glucose is **80**, your after-meal glucose should be no higher than **120 mg/dL**.

The dangers of high glucose are so strongly evident that the *International Diabetes Federation* has warned that non-diabetics with postprandial glucose above 140 mg/dL (normally measured two hours after a meal) are at significant risk for many diseases including:⁷³

- Retinal damage to the eye
- Arterial blockage
- Oxidative stress
- Increased inflammation
- Endothelial dysfunction
- Reduced coronary blood flow
- Increased cancer risk

Life Extension has developed a wide range of programs to enable members to take precautions before meals to protect against damaging surges of blood glucose.

Shield Your Body From Excess Glucose

An enormous volume of published data shows that by taking the proper compounds before meals, the surge of glucose into the bloodstream and the subsequent insulin spike can be mitigated.⁷⁴⁻⁸⁴

Nutrients that neutralize carbohydrate-degrading *enzymes* (like white kidney bean and brown seaweed extracts) are helpful.^{77,85} The addition of special fibers (like propolmannan) can slow the rate of carbohydrate absorption from the small intestine, thus further blunting the after-meal (post-prandial) flow of glucose into the blood.⁸⁶⁻⁸⁹

Life Extension introduced a multi-ingredient powdered formula in **2010** that was designed to be taken before heavy meals to control the rate of fat and carbohydrate absorption.

I cannot emphasize the critical importance for those with glucose levels above **85 mg/dL** to take these kinds of compounds before meals that help shield one's bloodstream against dangerous glucose-insulin spikes.

Why Most Aging People Should Take Metformin

Metformin is a drug approved to treat type 2 diabetes. It is also very effective for those at high risk of developing diabetes due to elevated blood sugar readings. The *Diabetes Prevention Program* showed that metformin can reduce the risk of developing diabetes in high risk patients by a whopping **31%**, with the greatest benefit for those significantly overweight.⁹⁰

Metformin improves insulin sensitivity,⁹¹⁻⁹³ and inhibits the release of glycogen (the storage

form for glucose) from the liver,⁹⁴⁻⁹⁸ thus lowering fasting glucose blood levels.

Life Extension funded research showing that metformin may have calorie restriction mimetic properties in laboratory mice. The drug's unique ability to reduce glucose-insulin blood levels and its super low-cost make it something you'll want to ask your doctor about.

Are Most of Us Pre-diabetic?

In reviewing thousands of blood test results and published scientific studies, I have come to the conclusion that more than 75% of people over the age of 40-50 are suffering from some degree of prediabetic-related disorder inflicted by elevated blood sugar.

These problems may silently smolder as kidney impairment,^{99,100} aberrant cell proliferation,¹⁰¹⁻¹⁰⁹ and endothelial dysfunction¹¹⁰⁻¹¹⁷—or explode outwardly as a sudden-death heart attack.¹¹⁸⁻¹²² Young healthy people can usually maintain optimal glucose ranges, whereas glucose levels creep up as we age. The data showing that modestly elevated “normal” glucose increases disease risk cannot be ignored.^{119,123-127}

Normal aging predisposes most of us to metabolic complications as a result of impaired glucose metabolism. If we fail to recognize this fact, we are doomed to suffer a plethora of degenerative conditions that were largely preventable.

The good news is that there are nutrients, hormones, and drugs that healthy people can take to achieve optimal glucose readings, or at least reduce blood sugar levels to safer ranges. The section at the end of this article provides a concise description of simple steps you can take to slash your glucose levels.

What Are Fasting Glucose Levels Of Life Extension Members?

Each year, tens of thousands of **Life Extension** members utilize our low-cost blood testing service. This enables individuals to monitor their disease risk factors—and provides us with a treasure trove of data to ascertain health of our overall membership.

Immediately before introducing the **Calorie Control Weight Management Formula** in September 2010, we evaluated the last **47,232** blood test results in our files. The reason we chose this cutoff date was that we knew many of our members would start using **Calorie Control Weight Management Formula** in September to help reduce their glucose levels (and shed fat pounds).

The findings from this pooled analysis revealed mean fasting glucose levels in **males** were **97** (mg/dL), whereas mean female levels were **92**. Both of these numbers were above *optimal* fasting glucose of **70-85**.

In fact, only **22.8%** of Life Extension members had fasting glucose in the optimal range of **70-85** mg/dL.

With so many members now taking a scoop of **Calorie Control Weight Management Formula** powder before the two heaviest meals of the day, and following other steps to lower excess glucose, we expect our next pooled analysis to show a considerable reduction in mean fasting glucose levels amongst Life Extension members.

Don't Be a Victim of Physician Ignorance

We at *Life Extension* hear from members who say their doctor is not concerned that their fasting glucose level is a little over **100 mg/dL**. The reason physicians don't panic about this kind of high reading is that they are so used to seeing it in older individuals.

As you have just learned, however, glucose readings over **85 mg/dL** place aging humans at sharply elevated risks for cardiovascular disease. You don't have to become a victim of physician apathy and ignorance. There are a myriad of steps you can take to drive down your glucose to safer ranges. The section beginning on the next page provides a menu of options to select from to gain glycemic control over your body.

As more Americans wake up to the **inadequacies** of mainstream medicine, they are joining the **Life Extension Foundation**. One benefit of membership is being able to order your own **blood tests** at ultra-low prices. For instance,

we offer a comprehensive blood chemistry test that measures glucose, triglycerides, LDL, HDL, total cholesterol, liver-kidney function, blood cell counts and more for only **\$35**. You can order this test by calling **1-800-208-3444** (24 hours a day) and have your blood drawn in your area at your convenience.

Research Funded by Life Extension in 2010

The Life Extension Foundation expanded its research funding in 2010, with special emphasis on grants to scientists working on cutting-edge **cancer** therapies. We selectively fund research that offers the best opportunity to discover a cure during the early clinical trial phase. In other words, when cancer patients enter our clinical trials, we take extraordinary efforts to give them the best chance of attaining a complete response or eradication of the disease.

Pharmaceutical companies, on the other hand, conduct placebo-controlled studies on can-

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cer patients to gather data with little regard to the human lives they know will be lost because of the barbaric way their studies are designed. Cancer research funded by Life Extension is not being done by pharmaceutical giants because it seldom involves a compound that can be patented. As members are aware, therapies that don't have the potential to produce gigantic profits are neglected and even suppressed by the pharmaceutical industry.

Life Extension supports a relentless campaign to reform corrupt governmental policies that deprive Americans of life-saving therapies. By exposing the lethal impact of medical ignorance, such as showing that doctors accept dangerously high **glucose** levels as being normal, we spare countless humans the ravages of debilitating and lethal diseases. Just once a year, we discount the price of every product we offer. During our annual **Super Sale**, members stock up on our most advanced formulations and enjoy considerable savings.

I want to thank members for purchasing most of their supplements from the **Life Extension Buyers Club**. We use these sales to fund critical **research projects** aimed at eliminating disease and death, while battling **oppressive** government attempts to establish dictatorial control over your health and longevity.

For longer life,



William Faloon

Proven Methods to Reduce Fasting and Postprandial Glucose Levels

Scientific studies indicate that any amount of fasting glucose over 85 mg/dL incrementally adds to heart attack risk.³⁴

If you can choose an ideal **fasting glucose** reading, it would probably be around 74 mg/dL.²³ We know, however, that some people are challenged to keep their glucose under 100 mg/dL. What this means is that it is critically important for aging individuals to follow an *aggressive* program to suppress excess glucose as much as possible.

The good news is that many approaches that reduce glucose also lower fasting insulin,^{31,128-130} LDL,^{86,128,131-134} triglycerides,^{21,22,28,128,130} and C-reactive protein,¹³⁵ thereby slashing one's risk of vascular disease,^{21,31,76,136} cancer,¹³⁷⁻¹⁴¹ dementia¹⁴²⁻¹⁴⁶ and a host of other degenerative disorders.

In this section, we succinctly describe drugs, hormones, nutrients and lifestyle changes that facilitate healthy glucose levels.

NUTRIENT OPTIONS

Since **Life Extension** members know it is best to take dietary supplements with meals, it should not be difficult for them to make it a routine practice to shield their bloodstream from excessive calorie absorption by taking the proper nutrients before most meals.

An efficient way of obtaining nutrients that can impede the impact of carbohydrate and fat foods when taken before meals is a powdered drink mix that provides the nutrients in the box below:

NUTRIENTS THAT REDUCE THE IMPACT OF EXCESS CALORIE INTAKE

Propolmannan

2,000 mg

Mechanism(s): Slows gastric emptying to delay rapid carbohydrate absorption. It also provides a viscous barrier that binds bile acids that normally facilitate fat absorption.^{80,81,147}

Phaseolus vulgaris

445 mg

Mechanism(s): Inhibits the *amylase* digestive enzyme used to break down carbohydrate foods for eventual absorption into the blood as glucose.^{22,148,149}

Irvingia gabonensis

150 mg

Mechanism(s): Inhibits *amylase* and functions via three additional mechanisms to internally regulate glucose and triglyceride metabolism.^{30,131,150}

Green Tea Phytosome

150 mg

Mechanism(s): Inhibits the *lipase* digestive enzyme used to break down fatty foods and boosts internal utilization of glucose by boosting resting metabolic rate.^{27,151}

We suggest taking a powdered drink mix containing these ingredients before the two heaviest meals of the day.

FOR SUGAR ADDICTS

For those whose glucose levels remain unacceptably high despite taking the powdered drink mix, there are encapsulated nutrients that work to specifically block the *sucrase* and *glucosidase* digestive enzymes. Sucrase breaks down sucrose and *glucosidase* converts all carbohydrates into glucose. Blocking these enzymes reduces the amount of glucose absorbed from dietary sources. One capsule containing **L-arabinose** and a special **brown seaweed extract** should be taken before eating sucrose (table sugar) containing foods.^{33,79,152,153}

ENHANCING INSULIN SENSITIVITY

Aging causes a loss of *insulin sensitivity*, which means that **glucose** that would normally be utilized by energy-producing cells instead either remains in the blood or converts to storage as **triglyceride** (in blood and fat cells) or **glycogen** in the liver.

A new **cinnamon extract** has been developed to enhance the ability of **insulin** to drive blood **glucose** into muscle cells. This novel **cinnamon** compound that enhances *insulin sensitivity* is combined with **brown seaweed extract** (to inhibit the *glucosidase* enzyme) to provide additive control over glucose levels.^{29,77,153-157}

DRUG OPTIONS

An anti-diabetic drug that *Life Extension* suggests normal aging people consider taking to lower glucose is **metformin**. It is available in low-cost generic form.

Metformin has a long history of safe human use, plus intriguing data to suggest that it may possess anti-aging properties.^{158,159} We think that those with excess blood glucose (above **80-85** mg/dL) should ask their doctor about it even if they are not diagnosed as diabetic.

Some of the side benefits of metformin include weight loss¹⁶⁰⁻¹⁶² and triglyceride reduction,¹⁶³⁻¹⁶⁵ which are in themselves proven heart attack risk reducers.

Metformin functions to reduce absorption of ingested carbohydrates,^{98,166,167} suppress



Metformin Dosing and Precautions

The dose of metformin varies considerably. The starting dose may be as low as **250-500** mg once a day with a meal. If hypoglycemia (low blood sugar) does not manifest, the dose of metformin may be increased to **500-850** mg taken before the two or three meals, all under the supervision of your physician, of course. One side effect of metformin is that it can cause homocysteine levels to elevate.¹⁷² This is less likely to happen to Life Extension members who already take nutrients that suppress homocysteine. Those with impaired kidney function or congestive heart failure may not be able to take metformin.

appetite,^{168,169} enhance insulin sensitivity,⁹¹⁻⁹³ and most uniquely, metformin inhibits the release of stored liver glucose (glycogen) back into the blood.^{95-98,170}

One of the problems that frustrates so many people who follow a low-calorie diet, yet have persistently elevated glucose levels is that the liver improperly dumps too much glucose into the blood. This of course is a vital life function in a starvation state, but for aging individuals, excess hepatic release of glycogen (called gluconeogenesis) causes them to suffer chronically high glucose and insulin levels. Metformin inhibits gluconeogenesis.^{170,171}

Another low-cost drug that lowers glucose levels is **acarbose**, which reduces the absorption of ingested carbohydrates by inhibiting the *glucosidase* and other sugar absorbing enzymes in the small intestine. A typical dose is **50-100** mg of acarbose taken before each meal. Some people experience intestinal side effects, but otherwise, acarbose is highly efficacious in reducing blood glucose levels and reducing several cardiac risk markers in the blood.^{21,31,76}

There are of course other FDA-approved drugs that will lower your glucose levels. Many of these drugs, however, function by mechanisms that carry side effect risks.

Life Extension stands on solid scientific ground in recommending that those with impaired glucose tolerance follow an aggressive program that involves eating healthier and smaller meals, exercising, and taking nutrients before meals that deflect the impact of excess calorie intake. Drugs like **metformin** may be considered for its multiple benefits that extend beyond mere glucose control. **Acarbose** should be utilized if glucose levels remain stubbornly high.

HORMONE OPTIONS

Normal aging is accompanied by a sharp decline in **hormones** that are involved in maintaining insulin sensitivity and hepatic glucose control. Restoring **DHEA** (dehydroepiandrosterone) levels to youthful ranges in men and women may help enhance insulin sensitivity and glucose metabolism in the liver.¹⁷³⁻¹⁷⁷

Progressive doctors are realizing that in men, a **testosterone** deficiency can induce a serious reduction of *insulin sensitivity*. For men, restoring youthful levels of testosterone has been shown to be particularly beneficial in facilitating glucose control.¹⁷⁸ Blood tests can assess your hormonal status

Hormone Precautions

Men with pre-existing prostate cancer should avoid testosterone until their cancer is cured. Women with certain types of hormone-related cancers are advised to avoid DHEA until their cancer is cured. Men who replace testosterone are advised to test their blood within 60 days to make sure that their estrogen (estradiol) levels and PSA are not increasing. Some men convert (aromatize) testosterone into estradiol. If this happens, there are drugs (like Arimidex®) or nutrients that inhibit the aromatase enzyme to keep estradiol in the safe range of between 20-30 pg/mL. These blood tests, taken 60 days after testosterone therapy is initiated, can also detect liver or blood count abnormalities that in rare cases can be exacerbated by testosterone.



so a man can replenish testosterone (and DHEA) to more youthful ranges. Optimal *free testosterone* blood levels in men are between 20-25 pg/mL.¹⁷⁹

Life Extension has published articles showing that diabetic men can derive enormous benefits by restoring testosterone to youthful ranges, as opposed to overloading the body with excess insulin as mainstream doctors continue to do.¹⁸⁰⁻¹⁸²

DIETARY OPTIONS

One can achieve remarkable control over glucose levels by altering their diet and exercising more. Below are three dietary options to consider:

1. Consume a **low-calorie diet** (often less than 1,400-1,800 calories a day). Most people cannot adhere to this kind of low-calorie diet.⁵⁶
2. Consume a **Mediterranean diet**, with lots of fresh fruits and vegetables, fish and beans as protein sources, and omega-3 and monounsaturated fats (olive oil), while avoiding saturated fats, refined carbohydrates, cholesterol-laden foods, excess omega-6 fats, and most animal products. An increasing percentage of health-conscious Americans are adopting this kind of diet.¹⁸³⁻¹⁸⁵

3. Avoid sugary fruit juices (almost all fruit juices contain too many sugars) and beverages spiked with fructose,¹⁸⁶⁻¹⁹⁰ sucrose,¹⁹¹⁻¹⁹⁶ and/or high-fructose corn syrup.¹⁹⁷⁻²⁰¹ Consume a low-glycemic index and low-glycemic load diet.^{202,203}

Summary

From a practical approach, achieving optimal glucose readings on your next blood test will probably involve a combination of the various approaches described in this section. Each individual will respond differently.

For some, a modest reduction in calorie intake and an increase in physical activity will sufficiently lower fasting and after-meal glucose levels. Most aging individuals, however, will need to take the powdered drink mix described on page 12 before the two heaviest meals of the day to impede the impact of ingested calories. Others

should ask their doctor about the prescription drug suggestions such as metformin.

When one questions the importance of doing all this, please know that the incidence of pre-diabetes, metabolic syndrome and type 2 diabetes is increasing at alarming rates. In fact, diseases related to glucose impairment are skyrocketing everywhere in the world that adopts unhealthy Western eating habits.

A medical catastrophe is predicted for the United States as the vast majority of the population is now overweight and suffers frighteningly high levels of glucose, insulin and triglycerides.

The single most important component of one's longevity program may be the steps taken before meals to neutralize the toxic effects of excess calories most of us invariably ingest.

Life Extension urges all members to enact a personal program designed to suppress **fasting glucose** levels to ranges of **80-85 mg/dL** (or lower). Fortunately, there are a wide range of options that enable aging humans to accomplish this profoundly effective anti-aging feat. ●

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ULTRA NATURAL PROSTATE FORMULA PROVIDES ULTRA PROTECTION

For a large percentage of men over the age of 50, having a healthy prostate is the key to living a normal life. Dietary supplementation for urinary and prostate health helps men maintain a normal hormonal balance which promotes normal urinary flow and prostate health. Choosing to support a healthy prostate through supplementation is one of the smartest choices an aging man can make.

Ultra Natural Prostate Formula combines eleven cutting-edge *natural* ingredients that have been scientifically substantiated to protect the prostate gland and maintain its healthy function.* One of the newest additions to the formula is **European pumpkin seed oil extract**, which is rich in **delta-7 sterols** and **fatty acids**.

The formula provides **saw palmetto extract** and **Graminex Flower Pollen Extract™** to interfere with DHT activity and help regulate inflammatory reactions in the prostate.* **Lycopene** is a carotenoid that has been added to the formula to help maintain healthy DNA gene function in prostate cells.

In order to boost its anti-estrogen capabilities, **Ultra Natural Prostate Formula** incorporates **HRMLignan™**, derived from Norway spruce, flax lignans, and **nettle root extract**.

Since normal aging can lead to potentially unsafe levels of prostaglandins in the prostate, **Pygeum africanum** extract is included to help suppress prostaglandins, and thereby promote prostate comfort.* **Beta-sitosterol** has been added because it is the most biologically active component of *pygeum* and enhances its protective effects.

Ultra Natural Prostate Formula also contains **5-LOXIN® boswellia extract** to protect against the dangerous enzyme *5-lipoxygenase*, and the mineral **boron** to help slow elevation of prostate-specific antigen (PSA).

The retail price for one bottle of **Ultra Natural Prostate Formula** is \$38. If a member buys four bottles during **Super Sale**, the price is reduced to **\$23.63** per bottle.

Contains soybeans.



The daily dose of two softgels of Ultra Natural Prostate Formula provides:

USPlus® Saw Palmetto (CO ₂ DeepExtract™)	320 mg
(std to 85%-95% total fatty acids and sterols)	
Graminex Flower Pollen Extract™	252 mg
5-LOXIN®	70 mg
Pumpkin seed oil (<i>Cucurbita pepo</i>) extract (standardized to 85% total fatty acids)	200 mg
Stinging nettle root extract (<i>Urtica dioica</i>)	240 mg
Pygeum extract	100 mg
Lycopene	10 mg
Phytosterol complex (standardized to 26.6% beta-sitosterol)	678 mg
Proprietary blend of HRMLignan™ Norway Spruce and ActiFlax™ Flax Lignan extracts	20.15 mg
Boron	3 mg

5-LOXIN® is a registered trademark of P.L. Thomas & Co., Inc. U.S. patents pending. ActiFlax™ is a trademark of Pharma Science Nutrients, Inc., all rights reserved. HRMLignan™ is a trademark used under sublicense from Linnea S.A. USPlus® and DeepExtract™ are trademarks of Valensa International and are used under license. US Patents 6,319,524 & 6,669,968. Not available for export.

To order Ultra Natural Prostate Formula, call 1-800-544-4440 or visit www.LifeExtension.com

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

World's Most Advanced RESVERATROL Formula

In 2003, the **Life Extension Foundation**® introduced a standardized extract of **resveratrol** shown to favorably alter genes implicated in the aging process—many of the same genes that respond to **calorie restriction** or **CR**.

Since then, we have gone to extraordinary lengths to identify additional compounds that simulate calorie restriction's ability to trigger youthful **gene expression**—the process by which genes transmit signals that slow certain aspects of aging.

For example, initial research funded by Life Extension showed that a combination of low-dose **resveratrol** plus **grape seed extract** induced many of the favorable gene expression changes observed in **calorie-restricted** animals.

We have since uncovered compelling evidence that certain compounds found in berries, such as **pterostilbene** and **fisetin**, *also* possess potent "longevity gene" activators that work in synergy with resveratrol. For example, **fisetin** (found in strawberries) has been shown to **stabilize** resveratrol in the body by shielding it from metabolic breakdown,¹⁻¹⁰ thus extending its beneficial effects.

High-Potency Resveratrol with Synergistic Activators

Life Extension members gain access to standardized **trans-resveratrol** combined with plant extracts that favorably influence longevity gene expression. Unlike many commercial formulas, Life Extension standardizes to **trans-resveratrol**, which researchers contend is the most active constituent.

A bottle containing 60 vegetarian capsules of **Optimized Resveratrol with Synergistic Grape-Berry Actives** retails for \$46. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$27.90** per bottle. The suggested dose of one capsule a day provides:

Trans-Resveratrol	250 mg
Grape-Berry Actives	85 mg
Quercetin	60 mg
Trans-Pterostilbene	0.5 mg
Fisetin	10 mg

Contains yeast.

Item #01430



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To order Optimized Resveratrol, call 1-800-544-4440 or visit www.LifeExtension.com



The Drink to Take Before Your HEAVIEST MEALS

The vast majority of Americans suffer persistently high blood levels of **glucose**, **insulin**, and **triglycerides**. The result is unwanted **weight gain** coupled with age-related health issues.

By reducing the daily **calorie burden** your body is exposed to, healthy life span may be greatly extended.¹

The **Calorie Control Weight Management Formula** is designed to be taken before the two heaviest meals of the day. The unique ingredients have been shown to **impede** calorie absorption while favorably influencing internal regulators of fat storage.

Excess Calories are Deadly!

Few people are aware of how many deadly calories they **absorb** each day. These individuals often gain weight even as they try to cut down on food intake and exercise more.

While most of us need to eat less, some of our excess calorie intake can be mitigated by consuming specific ingredients before meals to interfere with carbohydrate and fat **absorption**.

The **Calorie Control Weight Management Formula**

Formula provides the following **ingredients** in the same **potencies** that were used in published human studies:

1. LuraLean® (propolmannan)—This proprietary fiber has been developed to swell in the stomach after ingestion with water to help reduce calorie consumption. **Propolmannan** binds to **bile acids** in the small intestine and helps transport them out of the body.² These bile acids otherwise facilitate the digestion and assimilation of **dietary fat** into the bloodstream. LuraLean® propolmannan also slows the rapid emptying of ingested food into the small intestine, thereby reducing the surge of **glucose** entering the bloodstream.

The reason LuraLean® works better than other fibers is that its own enzymes have been removed, thus sparing it from degradation in the digestive tract.³⁻⁸ This enables LuraLean® to form a stable **viscous barrier** to help impede calorie absorption and maintain its sponge-like activity throughout the digestive tract. In placebo-controlled studies, LuraLean® (propolmannan) has induced moderate weight loss along with significant reductions in fasting lipid and post-meal glucose/insulin levels.^{9,10}

2. White Kidney Bean (*Phaseolus vulgaris*) – The *amylase* digestive enzyme breaks down carbohydrates that are then absorbed into the bloodstream as glucose. *Phaseolus vulgaris* inhibits *amylase* and has produced significant weight loss and abdominal fat reductions.¹¹⁻¹³

3. Irvingia gabonensis – Like white kidney bean, Irvingia has *amylase*-inhibiting properties.¹⁴ Irvingia also favorably regulates: **Leptin** to decrease appetite and facilitate triglyceride removal from adipocytes; **Adiponectin** to facilitate insulin sensitivity¹⁵ and **Glycerol-3-phosphate dehydrogenase** to inhibit glucose from converting to triglyceride fat in adipocytes.¹⁶ Irvingia has demonstrated favorable weight loss results in placebo-controlled trials.¹⁵

4. Green Tea Phytosome – Aging results in a slowdown of *resting energy expenditure*. This means more calories we eat convert to stored body fat instead of being utilized for energy production. This proprietary **green tea phytosome** has been shown to absorb much better into the bloodstream than conventional green tea and induce **30.1 pounds** of weight loss when combined with a reduced calorie diet.¹⁷ Green tea polyphenols boost **resting metabolic rate**¹⁸ and help impede the **lipase** enzyme used to facilitate dietary fat breakdown.¹⁹

Urgent Need to Impede Excess Food Absorption!

Our aging bodies cannot handle the same number of calories they did in youth. This is evidenced not only by surplus stored body fat, but also higher glucose, insulin and triglyceride blood levels.

One-scoop of the **Calorie Control Weight Management Formula** taken before the two heaviest meals of the day can help shield your bloodstream from the deadly impact of excess calorie intake.

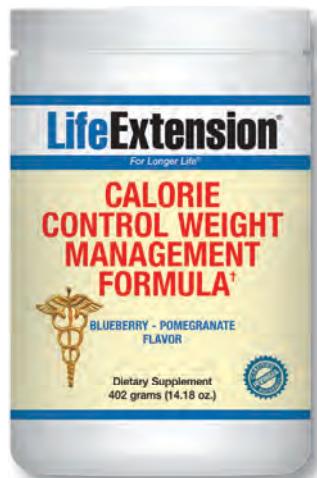
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The retail price for a one month (60-serving) supply of **Calorie Control Weight Management Formula** is \$56. If a member buys four bottles (a four month supply) during the **Super Sale**, the price is reduced to **\$32.40** a bottle. Purchase eight bottles and the cost per bottle drops to only **\$29.70**. The proprietary ingredients in this great-tasting powder formula cannot be obtained for less anywhere else!

Contains soybeans, tree nuts, and corn.

Note: These supplements should be taken in conjunction with a healthy diet and regular exercise program. Results may vary. Integra-Lean® Irvingia is protected by U.S. Patent No. 7,537,790. Other patents pending. Phase 2® is used under license. LuraLean® is a registered trademark of AHD International LLC.



Item # 01493

To order **Calorie Control Weight Management Formula** today, call 1-800-544-4440 or visit www.LifeExtension.com/Calorie-Control

BEST TO TAKE THESE NUTRIENTS IN POWDER FORM

We encourage members to take the ingredients in the **Calorie Control Weight Management Formula** in this easy-to-mix powder form. Drinking this blend before meals can help induce early satiety by reducing the desire to ingest excess calories.

To obtain the same potencies of LuraLean®, Irvingia, White Kidney Bean and Green Tea Phytosome, one would need to take two capsules of Optimized Irvingia and four capsules of LuraLean® before the two heaviest meals. These two products are available for those who insist on capsules or for meals consumed away from home. Optimized Irvingia and LuraLean capsules can be ordered at Super Sale prices by calling 1-800-544-4440.

Many of us consume too many **simple carbohydrates** that rapidly **absorb** as **glucose** into the bloodstream. We are also tempted by high sucrose, fructose, and other sugary foods that create instant glucose spikes.

Excess glucose creates a myriad of problems ranging from unwanted body fat to age-related health issues.¹⁻¹³ Maturing individuals thus have an urgent need to reduce systemic glucose exposure.

Control Your Rate of Glucose Absorption

Specific nutrients taken before sugary/starchy meals can *impede* the surge of blood glucose and facilitate healthy utilization of carbohydrates that are absorbed.

A new formula called **Natural Glucose Absorption Control** features a blend of **four** natural ingredients that support healthy glycemic metabolism and target specific enzymes responsible for breaking down carbohydrates into glucose *before it enters your bloodstream*. Just one capsule provides optimal potencies of:

1. Phase 3™ Sucrase Inhibitor L-Arabinose. Sucrase is an enzyme that breaks down sucrose in the digestive tract for absorption into the bloodstream. Phase 3™ contains a phytonutrient called L-Arabinose that affects sucrase digestion and works synergistically with chromium to support healthy blood sugar and insulin levels already within normal range.

2. InSea™. A proprietary seaweed extract that has demonstrated effects on both the *alpha-amylase* (which helps break down starches into glucose) and *alpha-glucosidase* (which breaks down simple carbohydrates into glucose) digestive enzymes. In laboratory animal studies, InSea™ reduced after-meal fluctuations in blood sugar by up to **90%** when compared to non-supplemented animals and reduced insulin by as much as **40%**.

3. Chromium. A critical micronutrient recognized for its vital role in maintaining healthy blood sugar levels in those already within normal range when used as part of a healthy diet.

4. Iodine. A trace element involved in the production of T3 (triiodothyronine) and T4 (thyroxine), two thyroid hormones primarily responsible for regulating energy metabolism.

The suggested dose is to take just one vegetarian capsule of **Natural Glucose Absorption Control** before a carbohydrate heavy meal, or up to two capsules daily. Each capsule supplies:

Phase 3™ Sucrase Inhibitor L-Arabinose	550 mg
Chromium (as GlycoProtein Matrix)	100 mcg
InSea™	125 mg
Iodine (naturally occurring)	37.5 mcg

THE PILL TO TAKE BEFORE YOU EAT SUGAR



Item #01471

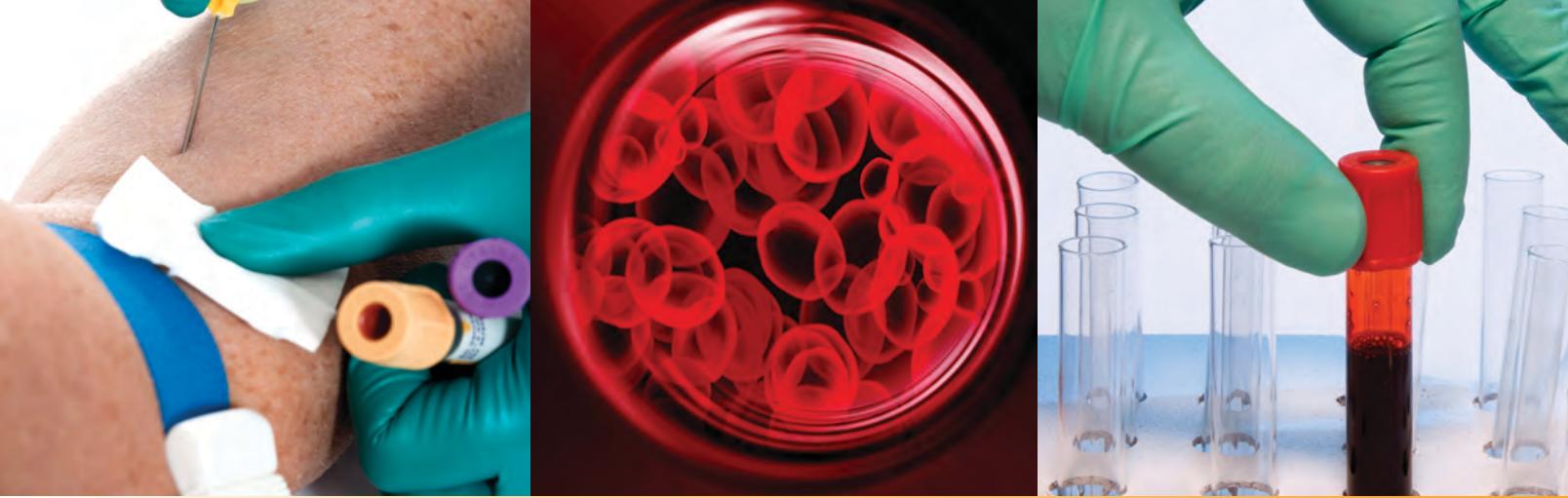
A bottle containing 60 vegetarian capsules of **Natural Glucose Absorption Control** retails for \$39. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$24.30** per bottle. Contains soybeans, yeast, and corn.

InSea™ is a trademark of InnoVativ™. Phase™ is used under license. This supplement should be taken in conjunction with a healthy diet and regular exercise program. Results may vary.

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To order **Natural Glucose Absorption Control**,
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IN THE NEWS

Metabolic Syndrome Sharply Increases Heart Attack and Stroke Risk

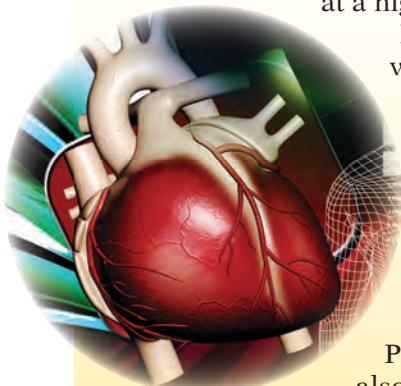
Metabolic syndrome is caused by a deadly cluster of at least three of the following cardiovascular risk factors: obesity, high blood pressure, high blood sugar, high levels of triglycerides, and low levels of "good" HDL cholesterol. With nearly a quarter of the North American population affected, some doctors believe we are reaching epidemic proportions of people at risk.*

"We are in the midst of an obesity epidemic that is contributing to an increase in the number of people with the metabolic syndrome in North America," noted senior researcher Dr. Mark Eisenberg of McGill University, in Montreal. "Thus, an increasingly large number of people are at a high cardiovascular risk."

In Dr. Eisenberg's report, which was published in the *Journal of the American College of Cardiology*, the researchers found that the metabolic syndrome increased the risk of cardiovascular disease, heart attack, and stroke by **two-fold** or more.

Patients with the syndrome also had a **50% increased** chance of dying from any cause.

—J. Finkel



* <http://www.reuters.com/article/idUSTRE68K2D320100921>. Accessed October 27, 2010.

Higher Antioxidant Levels Predict Reduced Mortality Risk Over 13 years

A report published in the *British Journal of Nutrition* revealed a protective effect for a number of antioxidant nutrients against all-cause and disease-specific mortality in older individuals over a 13-year average period.*

Researchers evaluated data from 1,054 participants in the British National Diet and Nutrition Survey. Four day dietary records were analyzed for the intake of energy and nutrients. The participants were followed through September, 2008.

Increased plasma vitamin C, alpha-carotene, selenium, and zinc were significantly associated with a reduction in all-cause mortality, as was the dietary intake of vitamin C, carotenoids, zinc, copper, and total energy. "Future studies should attempt to determine, first, which nutrients are the most frequent predictors of all-cause and specific-cause mortality in different populations, and second, whether these predictions can imply causal relationships, such that dietary or other interventions might promote disease-free longevity," the authors write.

Editor's note: These patterns remained fundamentally similar when deaths from vascular, cancer, and respiratory diseases were separately considered, however, increased dietary vitamins C and E were found to confer a significant protective effect against cancer, and dietary vitamin E protected against respiratory disease in males (while carotenoid intake was protective in women).

—D. Dye

* *Br J Nutr.* 2010 Sep 1.

IN THE NEWS

Branched-chain Amino Acids Extend Life Span in Animal Model

The journal *Cell Metabolism* reports that branched-chain amino acids, which include leucine, isoleucine, and valine, extended the average life span of mice when administered in their drinking water.* Normal mice given the amino acids beginning at nine months of age had a median life span of 869 days, while untreated animals had a life span of 774 days.

Further experimentation determined that supplemented animals experience an increase in cardiac and skeletal muscle mitochondria, which are the energy producing organelles of cells. There was also greater activity of a longevity-associated gene known as SIRT1, and less oxidative damage, which are effects similar to those conferred by calorie restriction in some studies. Animals given branched-chain amino acids additionally showed increased exercise endurance and motor coordination.

Editor's note: Lead researcher Dr. Enzo Nisoli observed that amino acid supplements do not have to be digested as do the proteins which contain them, enabling them to enter the bloodstream immediately, remarking that, "They come with no energy cost."

—D. Dye

* *Cell Metab.* 2010 Oct 6;12(4):362-72.



Multivitamin Use Associated with Lower Heart Attack Risk in Women

An article published in the *American Journal of Clinical Nutrition* reports an association between multivitamin use and a reduced risk of myocardial infarction (MI or heart attack) in older women.*

The current study included 2,262 women with a history of cardiovascular disease and 31,671 women with no history of the disease who participated in the Swedish Mammography Cohort. Over the 10.2 year average follow-up period, 269 heart attacks occurred among women who had cardiovascular disease, and 932 occurred in those with no history. Among women who had no history of the disease, those who reported using a multi-nutrient supplement had a 27% lower adjusted risk of heart attack than those who were not supplement users. Using a multivitamin along with other supplements was associated with a 30% lower risk, and use for at least five years was linked to a 41% lower risk of myocardial infarction compared to non-users.



Editor's note: Concerning the contradiction of the current study's findings with other research which failed to uncover a benefit, the authors explain that ingredients and dosage of the components of multi-nutrient supplements vary, that some trials were conducted in subjects with pre-existing cardiovascular disease, and that the majority of trials had short follow-up periods.

—D. Dye

* *Am J Clin Nutr.* 2010 Nov;92(5):1251-6.

Correct Vitamin D Deficiency Before Surgery, Orthopedist Recommends

The *Journal of Bone and Joint Surgery* reports that nearly half of orthopedic surgery patients are deficient in vitamin D, a condition that impairs bone healing, muscle function, and surgery recovery.*

Joseph Lane, MD and colleagues reviewed the charts of 723 men and women scheduled for orthopedic surgery from January, 2007 to March, 2008 and found that 43% of the patients had insufficient preoperative vitamin D levels and 40% had deficient levels.

Sixty percent of trauma service patients had insufficient levels and 52% were deficient. A high percentage of vitamin D insufficiency was also observed in sports medicine and arthroplasty (hip and knee replacement) services.

"The take home message is that low vitamin D has an implication in terms of muscle and fracture healing, it occurs in about 50% of people coming in for orthopedic surgery, and it is eminently correctable," Dr. Lane stated.

Editor's note: Dr. Lane suggested that, "Patients who are planning to undergo any orthopedic procedure can request a screening (specifically, a blood test called the 25-hydroxyvitamin D test) or ask to be placed on a medically supervised vitamin D supplement regimen prior to surgery."

—D. Dye

* *J Bone Joint Surg.* 2010 Oct 6;92(13):2300-4.

Luteolin May Help Prevent Memory Loss

Researchers at the University of Illinois report that the flavonoid luteolin helped reduce inflammation in the brains of aged mice, which restored memory to levels observed in younger animals.*

The study examined luteolin's effect in immune cells in the brain known as microglial cells, which produce inflammatory signaling molecules in response to infection. When the researchers exposed microglial cells to a bacterial toxin, they produced inflammatory cytokines capable of destroying brain cells known as neurons. While pretreatment of neurons with luteolin showed no benefit, exposure of microglia to this compound prevented neuron death.

In an experiment with mice, adult and aged animals were fed a control diet or a luteolin-enhanced diet for four weeks. Assessment of spatial memory found increased learning and recall in older mice supplemented with luteolin compared to aged controls. In addition, inflammatory markers in the brain's hippocampus were decreased.

Editor's note: Luteolin is found in carrots, rosemary, celery, and some supplemental nutritional formulas.

—D. Dye

* *J Nutr.* 2010 Oct;149(10):1892-8.

Night Light Could Equal Weight Gain

A report published in the *Proceedings of the National Academy of Sciences* suggests that some of the increase in obesity observed over the past several decades could be due to increased exposure to light at night.*

Dr. Randy Nelson and colleagues evaluated the effects of nighttime light exposure in mice. A greater increase in body mass was observed among mice exposed to constant light and those exposed to a cycle of daylight and dim light compared to animals that received standard light-dark exposure.

In another experiment, feeding during darkness prevented excess fat gain in animals exposed to the daylight/dim light cycle. Due to their nocturnal nature, mice normally consume most of their food at night when they are active, in contrast with humans, who normally eat during the day. Dr. Nelson suggests that in humans, late-night eating could be a risk factor for obesity.

Editor's note: Exposure to light at night disrupts melatonin signaling, which could lead to changes in activity, food intake, and metabolism.

—D. Dye

* *Proc Natl Acad Sci.* 2010 Oct 11.

Gamma Tocotrienol Inhibits Prostate Cancer Stem Cells

Researchers at Australia's Queensland University of Technology (QUT) have found that gamma tocotrienol, one of eight forms of vitamin E, could help prevent prostate cancer regrowth due to an ability to inhibit prostate cancer stem cells. The research was described in an article published in the *International Journal of Cancer*.*

Dr. Patrick Ling and colleagues demonstrated that gamma tocotrienol downregulates the expression of prostate cancer stem cell markers in androgen-independent prostate cancer cell lines. Pretreatment of one of the cell lines with gamma tocotrienol was found to suppress the cells' ability to initiate tumor growth.

"Currently there is no effective treatment for metastatic prostate cancer, because it grows back after conventional therapies in more than 70% of cases," Dr. Ling observed. "But with gamma-tocotrienol, QUT researchers have found a better way to treat prostate cancer, which has the potential to inhibit recurrence of the disease."

Editor's note: Dr. Ling noted that, "Previous clinical trials using another vitamin E constituent to inhibit prostate cancer development were unsuccessful, but these trials did not use the vitamin E constituent gamma-tocotrienol."

—D. Dye

* *Int J Cancer.* 2010 Jul 8.



Luteolin May Help Prevent Memory Loss

Researchers at the University of Illinois report that the flavonoid luteolin helped reduce inflammation in the brains of aged mice, which restored memory to levels observed in younger animals.*

The study examined luteolin's effect in immune cells in the brain known as microglial cells, which produce inflammatory signaling molecules in response to infection. When the researchers exposed microglial cells to a bacterial toxin, they produced inflammatory cytokines capable of destroying brain cells known as neurons. While pretreatment of neurons with luteolin showed no benefit, exposure of microglia to this compound prevented neuron death.

In an experiment with mice, adult and aged animals were fed a control diet or a luteolin-enhanced diet for four weeks. Assessment of spatial memory found increased learning and recall in older mice supplemented with luteolin compared to aged controls. In addition, inflammatory markers in the brain's hippocampus were decreased.

Editor's note: Luteolin is found in carrots, rosemary, celery, and some supplemental nutritional formulas.

—D. Dye

* *J Nutr.* 2010 Oct;149(10):1892-8.

Night Light Could Equal Weight Gain

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* *Int J Cancer.* 2010 Oct;23(5):688-92.



IN THE NEWS



Reduced Testosterone Levels in Men Linked to Increased Mortality Over 7-year Period

A report published in a recent issue of the journal *Heart* reveals an increased risk of premature death from all causes and cardiovascular disease among men whose testosterone levels were deficient.*

Researchers at Royal Hallamshire Hospital in Sheffield, England analyzed data from 930 men with cardiovascular disease who underwent elective coronary angiography in a cardiac referral center between June 2000 and June 2002. Serum total testosterone and bioavailable testosterone were measured on the day of the procedure.

The subjects were followed for an average of 6.9 years, during which 129 deaths occurred. Twenty-one percent of those with deficient bioavailable testosterone levels died from all causes over follow-up, compared to 12% of those with normal levels. Borderline low levels of total testosterone were also associated with an increased risk of dying over follow-up.

Editor's note: The current study's finding indicates that men with low testosterone are almost twice as likely to die over a 7-year period.

—D. Dye

* *Heart*. 2010 Nov;96(22):1821-25.

High LDL Levels in Early Life Predict Coronary Calcification

People seldom die of a "sudden" heart attack. Instead, coronary artery blockage represents an accumulation of risk factors that were reversible if detected before the heart attack happened.*

A meticulous study done recently in the *Annals of Internal Medicine* looked at a large group whose blood was initially tested between ages 18-30. Seven additional blood tests were done on each person over a 20-year period. The results showed that those with the highest LDL (over 160 mg/dL) were 5.6 times more likely to have calcium buildup in their coronary arteries by age 45.

LDL (low-density lipoprotein) transports cholesterol from the liver throughout the vascular system. In the presence of excess LDL, too much cholesterol saturates the blood and contributes to arterial occlusion. This study in the *Annals of Internal Medicine* showed that over a 20-year period, those with even moderately elevated LDL (100-129 mg/dL) were 2.4 times more likely to have coronary calcification.

This study validates the need for everyone to have their blood tested for cardiac risk factors starting no later than age 18.

—J. Finkel

* *Annals Intern Med*. 2010 Aug 3;153(3):137-46.

Diabetes Epidemic: Numbers Projected to Triple by 2050

Diabetes is the number one cause of blindness, lower limb amputations, heart attack, stroke, dementia, and cancer, yet a recent report by the Centers for Disease Control and Prevention (CDC) states that if the current upward trend of diabetes isn't stemmed, the number of Americans living with this disease will skyrocket.*

"Certainly the fact that diabetes prevalence is increasing and is likely to continue to increase into the future isn't really surprising," said Dr. M. Sue Kirkman, vice president of clinical affairs at the American Diabetes Association. "The absolute numbers in terms of the projections, are, of course, concerning and shocking."

CDC researchers also studied the rise in obesity in the US and found that the number of Americans living with diabetes is expected to double and possibly even triple by 2050. The overwhelming majority of these people will develop type 2 diabetes, where the body loses its ability to produce insulin.

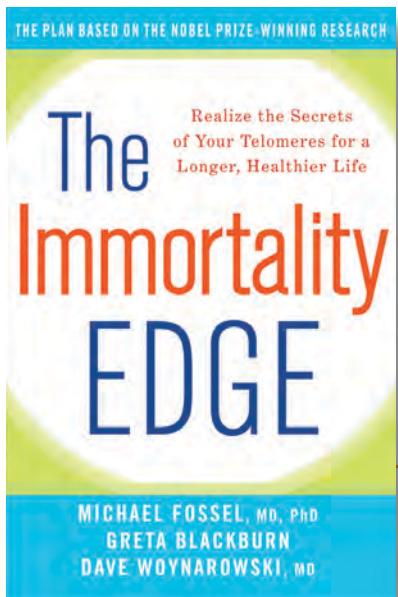
"A large number of type 2 cases can be prevented," Ann Albright, director of the CDC's Division of Diabetes Translation said. "A smart nutritious diet and moderate exercise, even just 30 minutes a day of vigorous walking, can help maintain proper blood sugar levels and help prevent type 2 diabetes."

—J. Finkel

* <http://pagingdrgrgupta.blogs.cnn.com/2010/10/22/diabetes-numbers-expected-to-triple-by-2050/>. Accessed October 26, 2010.



BOOK REVIEW



THE IMMORTALITY EDGE

Realize the Secrets of Your Telomeres for a Longer, Healthier Life

By Michael Fossel, MD, PhD,
Greta Blackburn, and Dave Woynarowski, MD

The introduction for this book is titled *The Hunt for Immortality*, but that phrase could be used to describe the overall tone of the book as well. Throughout its 200 or so pages, authors Michael Fossel, MD, PhD, Greta Blackburn, and Dave Woynarowski, MD, take the reader on a relentless pursuit of increased longevity. No aspect of immortality is left unturned, from a history of the science behind slowing aging to specific steps you can take to live longer, this book has it all.

Divided into three parts, *The Immortality Edge* is essential reading for Life Extension® members.

Part One: *The Immortality Promise* tackles the question of whether aging is a disease with a cure or a natural process that has existed forever. By examining the roots of longevity science, readers will gain a basic knowledge of where cutting-edge anti-aging science is at today. The bulk of this chapter rests upon this foundation and the introduction of the telomere theory of aging. In fact, the authors state the following: "we are quite positive that the cause of and the solution to aging lies in telomere biology."

Part Two: *The Immortality Edge Longevity Program* is actually divided into four parts; *The Immortality Edge Supplement Plan*, *The Immortality Edge Fitness Plan*, *The Immortality Edge Stress-Reduction Plan*, and *Add Years to Your Life*. While

the titles of each section are self-explanatory, the information inside deserves a thorough reading. In fact, you might want to take notes, as there is so much information involving key supplements for longevity you'll want to refer back to the pages several times over. The fitness plan and stress-reduction plan are sections that even advanced exercisers can pull tips from. But what separates this book from others in the field is the level of explanation and justification for each strategy. The authors aren't merely telling you to do something; they're telling you why and giving you lessons in longevity to boot.

Part Three: *The Immortality Edge Forever* is made up of two parts, *The Immortality Edge Nutrition Plan* and *The Immortality Edge Forever Exercise Plan*. These sections take the previous chapters in the book to another level, including such spot on sidebars as the Top Twenty Telomere-Friendly Foods and lists of foods with the most protein or fiber content. In short, this book provides everything you need, from knowledge, to nutrition, to fitness, to start your longevity program today!

Item #33829 • Cover price \$25.95 • Member price \$18.17

To order *The Immortality Edge*,
call 1-800-544-4440 or visit www.LifeExtension.com



Discount Prices For Premium-Quality Products

Life Extension® members are longevity enthusiasts, willing to take extraordinary steps to stave off disease, aging, and death. When members buy products from the **Life Extension Foundation Buyers Club**, they are assured of receiving the highest quality products based on the latest scientific studies that demonstrate benefits.

The **large discounts** available to Foundation members enable them to purchase **premium-quality** supplements at prices substantially below those charged by commercial companies.

Here are some examples of **savings** members enjoy during the annual **SUPER SALE**:

		Our Low Retail Price	SUPER SALE Member-Volume Discount Price Per Bottle
Super Omega-3 EPA/DHA with Sesame Lignans & Olive Fruit Extract 120 softgels, Item # 01482		\$32	\$16.81 (ten-bottle purchase)
Super-refined EPA/DHA fish oil plus sesame lignans and potent olive fruit extract to provide critical omega-3 fatty acids and essential components of the Mediterranean diet			
Super Ubiquinol CoQ10 with Enhanced Mitochondrial Support™ 100 mg, 60 softgels, Item # 01426		\$62	\$35.10 (ten-bottle purchase)
The superior <u>ubiquinol</u> form of CoQ10 plus an organic compound (shilajit) shown to double mitochondrial CoQ10 levels			
Life Extension Mix™ , 315 tablets, Item # 01555		\$98	\$46.91 (ten-bottle purchase)
High-potency multi-nutrient formula now with C3G, natural folate, and Crominex® 3+ at no extra cost			
Optimized Resveratrol with Synergistic Grape-Berry Actives 250 mg, 60 vegetarian capsules, Item # 01430		\$46	\$27.90 (four-bottle purchase)
High potency <i>trans</i> -resveratrol with quercetin, plus pterostilbene and fisetin to support DNA "longevity genes"			
Ultra Natural Prostate Formula , 60 softgels, Item # 01495		\$38	\$21.60 (twelve-bottle purchase)
Most comprehensive formula to support normal urinary flow and help support healthy prostate function			
Calorie Control Weight Management Formula* 402 grams of powder, Item # 01493		\$56	\$29.70 (eight-bottle purchase)
Four potent ingredients to impede glucose-lipid absorption and combat age-associated weight gain			
ArthroMax™ with Theaflavins , 120 vegetarian capsules, Item # 01303		\$44	\$27 (four-bottle purchase)
Joint support formula with theaflavins from black tea			
PQQ Caps with BioPQQ™ , 10 mg, 30 vegetarian capsules, Item # 01500		\$24	\$14.85 (four-bottle purchase)
Promotes mitochondrial biogenesis (generation of new mitochondria)			
DHEA (Dehydroepiandrosterone) , 25 mg, 100 capsules, Item # 00335		\$15	\$8.44 (four-bottle purchase)
A hormone that declines with aging. Benefits overall health			
Mitochondrial Energy Optimizer with BioPQQ™ , 120 capsules, Item # 01568	\$94		\$56.70
To maintain healthy cellular function, protein structural integrity, and mitochondrial biogenesis			(four-bottle purchase)
SAME , 400 mg, 20 tablets, Item # 00557		\$32	\$16.88
S-adenosylmethionine from Europe in double-strength potency for mood elevation			(six-box purchase)
Super Zeaxanthin with Lutein, Meso-Zeaxanthin Plus Astaxanthin and C3G , 60 softgels, Item # 01586		\$42	\$25.65
Supports night vision and macular density			(four-bottle purchase)

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

* This supplement should be taken in conjunction with a healthy diet and regular exercise program. Results may vary.

To order call toll-free 1-800-544-4440

		Our Low Retail Price	SUPER SALE Member-Volume Discount Price Per Bottle
Vitamin D3 with Sea-Iodine™, 5000 IU, 60 vegetarian capsules, Item # 01372	\$14	\$8.44 (four-bottle purchase)	
High-potency vitamin D to assure adequate intake of this essential nutrient plus 1000 mcg of Sea-Iodine™			
Super R-Lipoic Acid, 300 mg, 60 vegetarian capsules, Item # 01208	\$49	\$30.38 (four-bottle purchase)	
Superior efficacy compared to alpha-lipoic acid—supplies 210 mg of stabilized R-lipoic acid			
Optimized Tryptopure® Plus, 90 vegetarian capsules, Item # 01202	\$40	\$24.30 (four-bottle purchase)	
For natural support of healthy serotonin levels in the brain. Includes co-factors that protect tryptophan from degrading in the bloodstream before it crosses the blood-brain barrier			
Cognitex with NeuroProtection Complex	\$74	\$43.20 (twelve-bottle purchase)	
90 softgels, Item # 00922			
Optimal support for the brain. Includes glyceryl-phosphoryl-choline, vinpocetine, phosphatidylserine, Sharp-PS® GOLD PS-DHA, uridine, and others			
Optimized Irvingia with Phase 3™ Calorie Control Complex*	\$78	\$48.60 (four-bottle purchase)	
120 vegetarian capsules, Item # 01492			
Combats age-related fat accumulation via eight distinct mechanisms			
Acetyl-L-Carnitine Arginate, 100 capsules, Item # 00788	\$59	\$34.42 (four-bottle purchase)	
Patented form of carnitine to support healthy neurite growth for optimal brain health			
Triple Action Cruciferous Vegetable Extract	\$24	\$14.85 (four-bottle purchase)	
60 vegetarian capsules, Item # 01468			
Comprehensive cruciferous plant extract formulation, with apigenin, for optimal cellular health			
Prelox® Natural Sex for Men®, 60 tablets, Item # 01373	\$50	\$30.38 (four-bottle purchase)	
Supports healthy endothelial function and blood flow for maximum male performance			
Bone Restore, 150 capsules, Item # 00811	\$22.50	\$13.16 (four-bottle purchase)	
High-potency bone protection formula with FruiteX B® OsteoBoron®			
Mitochondrial Basics with BioPQQ™, 30 capsules, Item # 01569	\$52	\$31.05 (four-bottle purchase)	
Promotes mitochondrial biogenesis and mitochondrial function			
CinSulin® with InSea²™ and Crominex®3+	\$38	\$22.95 (four-bottle purchase)	
90 vegetarian capsules, Item # 01503			
Promotes healthy blood glucose levels			
Super MiraForte with Standardized Lignans, 120 capsules, Item # 01315	\$62	\$37.80 (four-bottle purchase)	
Supports healthy testosterone levels in men			
Natural Stress Relief, 30 vegetarian capsules, Item # 00987	\$28	\$16.20 (four-bottle purchase)	
With lemon balm extract to reduce anxiety and sleeplessness, and pure L-theanine to promote relaxation without drowsiness			
Gamma E Tocopherol with Sesame Lignans, 60 softgels, Item # 00759	\$32	\$19.58 (four-bottle purchase)	
Provides the critical gamma tocopherol form of vitamin E plus sesame lignans to enhance the free radical scavenging benefits of alpha and gamma tocopherol			
Super Bio-Curcumin® 60 vegetarian capsules, Item # 00407	\$35	\$21.60 (four-bottle purchase)	
Super-absorbable formulation promotes healthy lipid & joint function, and healthy DNA			
Super Booster Softgels with Advanced K2 Complex	\$42	\$25.65 (four-bottle purchase)	
60 softgels, Item # 01380			
A convenient one per day capsule that includes optimal potencies of gamma-tocopherol, sesame lignans, lycopene, lutein, ginkgo, selenium and both forms of vitamin K2			
Skin Restoring Ceramides with Lipowheat™	\$25	\$15.53 (four-bottle purchase)	
30 liquid capsules, Item # 01502			
Rehydrates aged skin			

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with the most effective form of Vitamin K2,
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Despite abundant scientific validation, many people still do not take vital nutrients because they don't want to swallow so many pills. This problem has been solved with a one-per-day softgel that includes multiple health-promoting nutrients in just one supplement.

The **Life Extension® Super Booster** contains critical oil-based nutrients that cannot be incorporated into dry-powder based formulas like the **Life Extension Mix™**.

The **Super Booster** provides the most effective form of **vitamin K** known as **menaquinone-7** along with other forms of this critical nutrient.

Just one **Super Booster** softgel provides:

- **Gamma Tocopherol** If one consumes only alpha tocopherol, the critically important gamma tocopherol is displaced from cells within the body. While alpha tocopherol vitamin E inhibits *lipid peroxidation*, the gamma tocopherol form quenches the dangerous *peroxynitrite* free radical. It is especially important for those who take vitamin E supplements to make sure they consume at least 200 mg a day of gamma tocopherol.

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- **Vitamin K2** Vitamin K1 from dietary plant sources is poorly absorbed and only a small fraction gets into the bloodstream. **Vitamin K2** is absorbed much more efficiently.



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Scientific studies show **K2** provides superior benefits for the bones, arteries, and other tissues. The **MK-4** form of vitamin K2 is the most rapidly absorbed and is now routinely used in Japan to maintain healthy bone density. **MK-4**, however, only remains active in the blood for a few hours. The **MK-7** form of K2, on the other hand, remains bioavailable to the human body over a sustained **24-hour period**. Super Booster provides a potent dose of **MK-7** to keep calcium in the bone and out of the arteries.

- **Lycopene** Evidence suggests that people who ingest the carotenoid lycopene enjoy healthier prostate function. Lycopene also helps guard against LDL oxidation.

- **Lutein** The carotenoid lutein helps maintain healthy cell division, supports the macula of the eye, and protects the endothelial lining of the arteries.

- **Ginkgo** Hundreds of studies substantiate the multifaceted effects of *Ginkgo biloba* in promoting healthy circulatory and neurological function.

- **Chlorophyllin** Scientific studies indicate that chlorophyllin may protect against environmentally induced damage to DNA.

- **Selenium** Some scientific evidence suggests that consumption of selenium may reduce the risk of certain forms of cancer. However, the FDA has determined that this evidence is limited and not conclusive. Selenium's effects in boosting glutathione are well-established.

A bottle of 60 Super Booster softgels retails for \$42. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$25.65** per bottle.

The **Super Booster** saves consumers **huge dollars** by combining a wide variety of costly nutrients into one daily softgel. If you add up the price of the individual ingredients contained in the **Super Booster**, you would spend **two to three times more** for this potency if taken separately.

Contains soybeans, peanuts, and sesame.

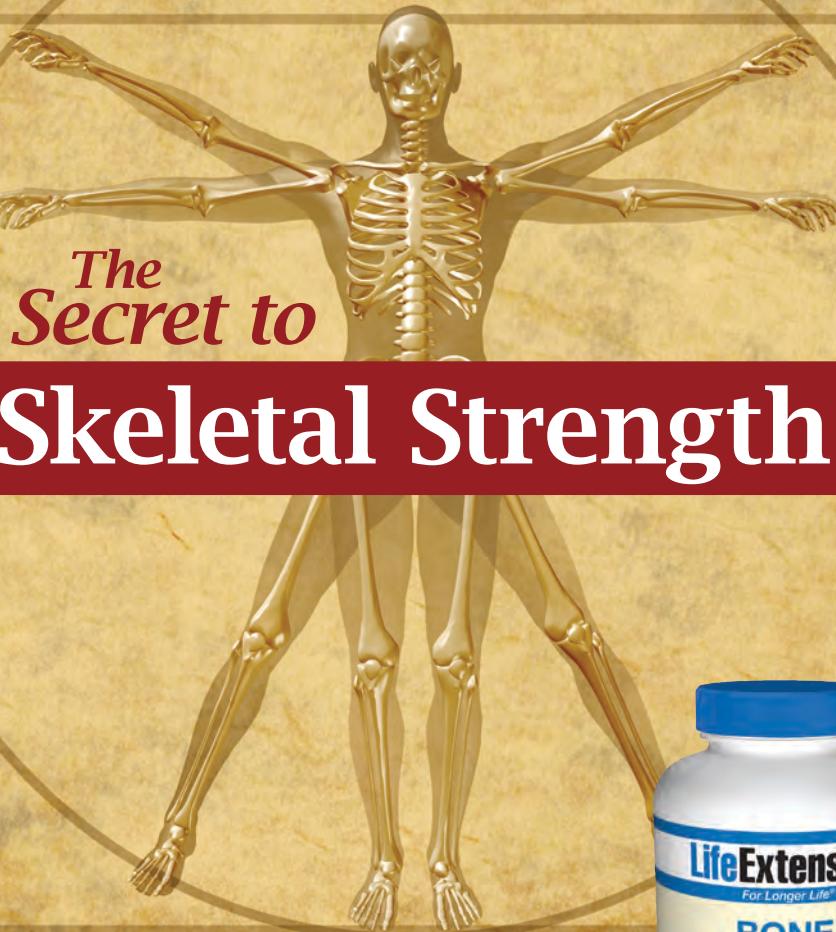
Caution: If you are taking anti-coagulant or anti-platelet medications, or have a bleeding disorder, consult your healthcare provider before taking this product. Individuals with in-born errors of copper metabolism (e.g. Wilson's disease) should avoid daily, chronic use of this product.

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Just one softgel of Super Booster supplies:

Gamma tocopherol	230 mg
Ginkgo extract	120 mg
Chlorophyllin	100 mg
Vitamin K2 (as menaquinone-7)	100 mcg
Vitamin K2 (as menaquinone-4)	1000 mcg
Vitamin K1	1000 mcg
Sesame lignans	20 mg
Lycopene	10 mg
Lutein	2 mg
Se-methylselenocysteine	67 mcg
L-Selenomethionine	67 mcg
Sodium selenite	67 mcg
Vitamin B12	300 mcg
Vitamin C	90 mg
Ascorbyl palmitate	50 mg
Zinc	10 mg
Mixed tocopherols	359 mg



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Skeletal Strength

A common construction rule states that the stronger the foundation, the stronger the building. When it comes to humans, our bones are our foundation, and keeping them strong is *vital* to maintaining optimal quality of life as we age. While many Life Extension® members take supplements, many often fail to consume enough **calcium**, **vitamin D**, and other nutrients shown to help maintain healthy bones.

With this in mind, Life Extension® created **Bone Restore**, the most comprehensive bone supporting formula ever. Utilizing the most recent studies about vitamin D, one recommended dosage of **Bone Restore** contains 1,000 IU of **vitamin D3**, along with 1,200 elemental milligrams of *bone fortifying calcium*.

In addition, **Bone Restore** delivers a patented form of **boron** that is identical to natural plant forms found in food. Considered more bioavailable than other forms of boron, **FruiteX B® OsteoBoron®** supports healthy joints and bone.

Bone Restore comes in fast-release capsules, making the minerals and other nutrients immediately available for absorption.

The retail price for 150 capsules of **Bone Restore** is \$22.50. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$13.16** per bottle.



Just five capsules of Bone Restore provide:

Highly-Absorbable Calcium (from dicalcium malate, bis-glycinate, and fructoborate)	1,200 mg
Vitamin D3	1,000 IU
Magnesium	340 mg
Boron (calcium fructoborate as patented FruiteX B® OsteoBoron®)	3 mg
Zinc	2 mg
Manganese	1 mg
Silicon	5 mg

**To order Bone Restore,
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FruiteX B® and OsteoBoron® are registered trademarks of VDF Futureceuticals, Inc., U.S. Patent No. 5,962,049.



CARNOSINE: Exceeding Scientific Expectations

BY KIRK STOKEL

Almost ten years ago, *Life Extension*[®] published compelling data showing that supplementation with higher-dose **carnosine** induced a wide range of anti-aging effects, including marked reductions in lethal **glycation** reactions.

We reported on experimental findings in the 1990s demonstrating life span extending effects when **carnosine** was added to the diet.

Since then an enormous number of published scientific studies have corroborated the multiple beneficial effects of carnosine including protecting brain cells from toxic metal ion reactions that lead to dementia.

Carnosine is an amino acid compound found primarily in red meat. A typical red meat meal may provide 250 mg of **carnosine**, but this is quickly degraded in the body by the **carnosinase** enzyme. What this means is that even if a person relied on red meat for their carnosine, it would not last long enough in the body to provide sustained protective effects. Supplementation with 1,000 mg a day of **carnosine** overwhelms the carnosinase enzyme, thus enabling one to maintain consistent blood levels of this critical nutrient.

In this article, we report on a new longevity study using **carnosine**.¹ Highly concentrated in brain and muscle tissue (including the heart), it turns out that carnosine strikes at *multiple* molecular targets to delay aging in laboratory animals and human tissues!²⁻⁴

This article uncovers new data about carnosine's ability to provide targeted support to vital tissues in the heart, brain, and eye. [>>](#)

A Groundbreaking Discovery

Dr. Sergey Stvolinsky, a highly-regarded anti-aging scientist at the Russian Academy, has studied carnosine for years. In 2010 he published some surprising results in the journal *Rejuvenation Research* about carnosine's effect on fruit flies.

Fruit flies are incredibly useful experimental animals, particularly for genetic and aging research, because of their very short life spans and rapid reproductive rates. Stvolinsky and his research team found that adding a tiny amount of carnosine to the flies' food supply produced an immediate **20% increase** in the average life span of male flies.⁵ Alone, carnosine had little effect on female flies' life span, but when combined with a *water-soluble* form of vitamin E, female flies experienced a **36% increase** in longevity as well.^{5,6}

Stvolinsky's work is indeed groundbreaking, but one is left with the question of why carnosine produces such dramatic effects and whether these results in insects have relevance for human life span. Let's look at carnosine's broad spectrum longevity benefits for some answers.

Cardiovascular Health Benefits

Oxidant stress eventually shortens our life span by contributing to the risk of atherosclerosis and its consequences such as heart attack and stroke. Carnosine's powerful antioxidant effects, coupled with its ability to scavenge both free radicals and damaged protein products, give it unique protective characteristics that have the potential to lengthen life span.⁷

Carnosine can inhibit sympathetic nervous system activity that otherwise promotes hypertension, thus diminishing obesity-associated blood pressure elevations.⁸ Its antioxidant properties protect heart muscle directly against toxins, even powerful chemotherapy agents that would otherwise pose serious risks to heart tissue.⁹ Its **anti-glycation** properties help prevent harmful modifications of LDL cholesterol molecules that contribute to early stages of arterial plaque formation, a benefit especially important in protecting blood vessels from diabetic damage.¹⁰

But even after substantial damage has been done, and arteries are clogged, carnosine offers potentially lifesaving benefits. When blood flow is obstructed, tissue is starved of oxygen and nutrients by the resulting ischemia. Even though the restriction of blood flow produces immediate damage, still more damage occurs when blood flow is restored and oxygen-rich blood floods the area. This double-hit is called *ischemia/reperfusion injury*, and accounts for much of the

disability that follows a heart attack, stroke, or traumatic injury.

Carnosine protects against ischemia/reperfusion injury in a number of remarkable ways.¹¹ It protects brain cells after a stroke by reducing toxicity of the excitatory neurotransmitter glutamate.¹² Interestingly, treatment with carnosine significantly reduced the amount of brain tissue involved in experimentally-produced strokes in mice.¹³ Perhaps more impressively, carnosine supplements protect animals' brains against localized ischemia in the first place.^{14,15} This discovery has been credited with increasing survival of experimental animals following stroke.¹⁶

Carnosine also prevents or reverses ischemia/reperfusion injury in liver and kidney tissue following injury or surgical procedures, helping to reduce complications.¹⁷⁻²¹ The more we learn about ischemia/reperfusion injury the more we find it contributes to long-term disability and reduces life span. Carnosine certainly deserves a place in a cardiovascular prevention program.

Combating the Dangers of Elevated Glucose

The destructive changes in vital enzymes and other proteins by glucose (the glycation process) is one of the major causes of aging and age-related tissue dysfunction.²² While this process is accelerated in diabetes due to constantly elevated glucose levels, it



occurs in all of us, and the effects accumulate over time.²³ A substance that can prevent glycation in the first place, or one that can reverse existing protein glycation, would therefore be a powerful anti-aging compound.²²

Carnosine acts on multiple targets within cells and tissues to quench the chemical reactions that prevent proteins from functioning properly.^{22,24,25} One benefit discovered early from this process is a suppression of elevated blood pressure in diabetic animals.²² An animal study showed that carnosine decreases blood glucose levels indirectly through beneficial effects on the autonomic nervous system. This modulation of blood glucose levels makes damaging glycation reactions less likely to occur.²⁶

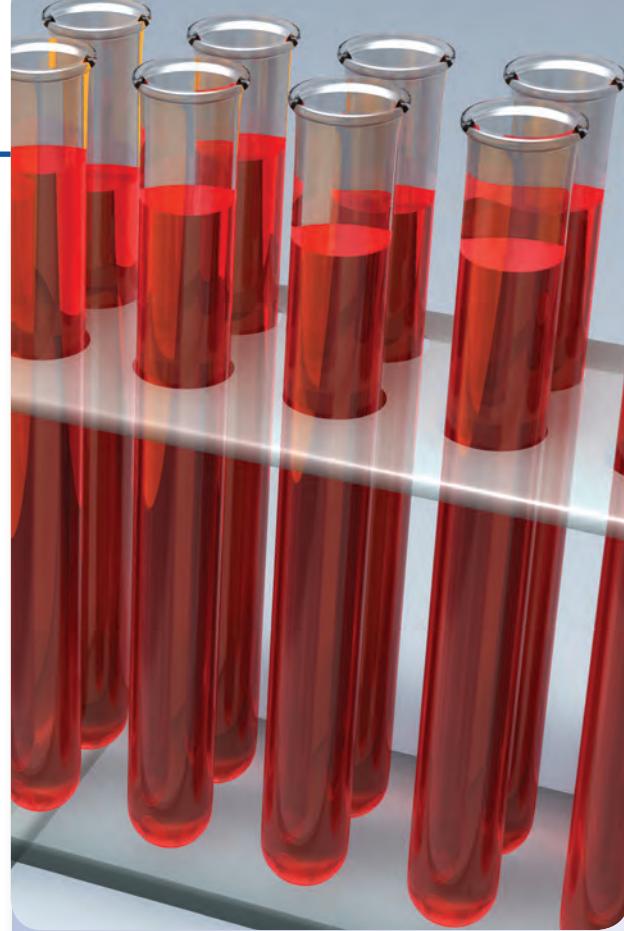
These benefits have immediate payoff in living organisms. Carnosine stabilizes red blood cell membranes against the damaging effects of glycation products in diabetes.²⁷ Additionally, it protects human LDL cholesterol from both oxidation and glycation, early events in the production of atherosclerosis.^{10,28} Astonishingly, carnosine supplementation in animals delays onset of diabetes and increases the mass of insulin-secreting pancreatic cells.²⁹

Novel Anti-Cancer Properties

The use of carnosine as a chemopreventive is in its infancy, but encouraging studies are rapidly emerging as scientists look for more ways to capitalize on its antioxidant, anti-inflammatory features. As an antioxidant, carnosine helps block the DNA damage that can lead to cancerous transformation in cultured cells—and it increases the life span of cells cultured from young subjects in the laboratory.³⁰ Carnosine also prevents release of inflammatory cytokines in intestinal cells, reducing a significant risk for colon cancers.³¹ Its ability to inhibit new metastases, and to interfere with cancer cells' energy metabolism, make it still more appealing as a potential anticancer nutrient.³²⁻³⁴

Safeguarding the Aging Brain

Brain tissue naturally contains high levels of carnosine, which is capable of reducing the oxidative, nitrosative, and glycemic stress to which the brain is especially vulnerable.^{7,35,36} Oxidation and glycation produce inflammation, and also contribute to cross-linking of proteins, including the Alzheimer's disease protein called amyloid-beta.³⁷ Carnosine can prevent that cross-linking, preserving normal neuronal function, and also helps minimize toxicity created by the high levels of metal ions that are present in certain areas of the brain.^{4,38-40}



Carnosine

- Carnosine lowers blood glucose, enhances insulin sensitivity, and may help prevent type 2 diabetes from emerging.
- Breakthrough research has shown that carnosine can dramatically extend the lifetimes of laboratory animals.
- Carnosine also extends lifetime of human cells in culture.
- Carnosine is a natural antioxidant and anti-glycation substance found in normal human tissues, predominantly in the brain and heart.
- By fighting oxidant and glucose-induced damage, carnosine blocks the central changes to cells and tissues that result in aging and age-related diseases.
- Carnosine helps prevent cardiovascular damage and brain injury through a host of mechanisms closely related to the interplay of glycation, oxidation, and inflammation.
- Carnosine should form a part of a comprehensive anti-aging supplement program.

Carnosine levels are significantly lower in patients with Alzheimer's and other neurodegenerative disorders, suggesting either that carnosine deficiency contributes to the disease, or, more likely, that the disease processes are using up protective carnosine.^{41,42} In either case, supplementation with carnosine could be expected to alleviate much of the cellular toxicity that contributes to these diseases, which is why animal and human studies now suggest an important role for carnosine supplementation in prevention of Parkinson's and Alzheimer's diseases.⁴³⁻⁴⁷

Blocking Cataract Formation

In addition to extending the quantity of life, carnosine can contribute to improved quality of life by reducing the risk and severity of cataracts in the eye.⁴⁸ The lens of the eye is highly sensitive to glycation of its proteins, which render it opaque. Carnosine's anti-

Why We Need Supplemental Carnosine

Carnosine levels in the body decline with age. Muscle levels decrease 63% between ages 10 to 70, which may account for the reduction in muscle mass and function seen in aging humans.¹

Carnosine acts not only as an antioxidant in muscle, but also as a pH buffer.² In this way it keeps on protecting muscle cell membranes from oxidation under the acidic conditions of muscular exertion.

Carnosine enables the heart muscle to contract more efficiently through enhancement of calcium response in heart cells.³ Muscle levels of carnosine correlate with the maximum life span of animal species.

Carnosine has been shown to rejuvenate connective tissue cells, which may explain its beneficial effects on wound healing. Damaged proteins accumulate and cross-link in the skin, causing wrinkles and loss of elasticity. The multiplicity of pathological effects caused by protein degradation places this problem beyond the scope of simple antioxidants.⁴ Carnosine is the most promising broad-spectrum shield against protein degradation.

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glycation effects, therefore, provide prominent vision protection.⁴⁹ Carnosine in different delivery systems has been shown to reduce cataract formation in studies of diabetic animals, which, like diabetic humans, are prone to cataract development.⁵⁰⁻⁵²

Summary

Growing scientific interest in longevity-boosting compounds has led to groundbreaking new research on carnosine. Highly concentrated in brain and muscle, carnosine is a natural antioxidant and glycation-fighting nutrient whose levels in the body naturally decline with age.

A 2010 study revealed that carnosine extends life span in laboratory animals, consistent with other recent findings that carnosine fights aging at multiple targets in heart, brain, skin, and other organ systems.

Carnosine's multiple and interrelated mechanisms of action mean that carnosine can provide benefits to cells and tissues throughout the body that would otherwise succumb to the pathologic effects of aging. ●

If you have any questions on the scientific content of this article, please call a Life Extension® Health Advisor at 1-866-864-3027.

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Carnosine at Work

An obvious feature of carnosine is its powerful antioxidant effect, which may prevent age-related accumulation of free radicals and their disastrous impact on tissues.⁵³⁻⁵⁵

Carnosine is a dipeptide—that is, a small molecule composed of two amino acids, histidine and beta alanine. It continues to work to prevent oxidant damage even after cellular molecules are attacked. It prevents destructive effects of oxidized chemicals such as malondialdehyde (MDA) that are associated with brain cell death in neurodegenerative disorders such as Alzheimer's and Parkinson's diseases.^{4,43}

A separate and equally important feature of carnosine is its ability to interfere with protein modifications by glucose and oxygen, two events that contribute powerfully to inflammation and aging.^{3,56} Carnosine also directly and indirectly inhibits release of inflammatory mediators such as cytokines and inducible nitric oxide synthase (iNOS), and is being closely studied for its ability to mitigate the inflammatory effects of viral infections such as influenza.⁵⁷

The sum of all these intracellular biochemical events helps to explain the remarkable explosion of literature on carnosine as a possible life span extender. A central biochemical characteristic of aging is the accumulation of proteins altered by chemical reactions with oxygen, nitrogen, and glucose.^{58,59} Carnosine's ability to interfere with that alteration may account for its observed ability to extend life span not only of fruit flies but also of "higher" laboratory animals and human tissue in culture.^{1,2,60-63}

A close-up look at carnosine's actions reveals a remarkable effect on telomeres, the DNA sequences at the ends of chromosomes that act as a sort of cellular "clock," largely controlling the aging process. As telomeres shorten with each cellular replication, the remaining life span of the cell is diminished.⁶⁴ Telomere shortening is induced by oxidative changes and other protein modifications of precisely the kind that carnosine can prevent.⁶⁵ Carnosine can therefore block telomere shortening and reduce aging effects in individual tissues.⁶⁶ For example, carnosine can prevent telomere shortening-induced cataracts in the lens of the eye.^{64,67,68}

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Carnosine Dosage Guidelines

Most people consume relatively small amounts of carnosine in their diet. Based on a study showing that 250 mg of ingested carnosine from 7 oz. of hamburger meat was completely cleared from the blood of study volunteers within 5-6 hours by the carnosinase enzyme,⁶⁹ Life Extension recommends that individuals seeking its anti-aging effects supplement with at least 1,000 mg of carnosine daily to maintain optimal levels in the body.

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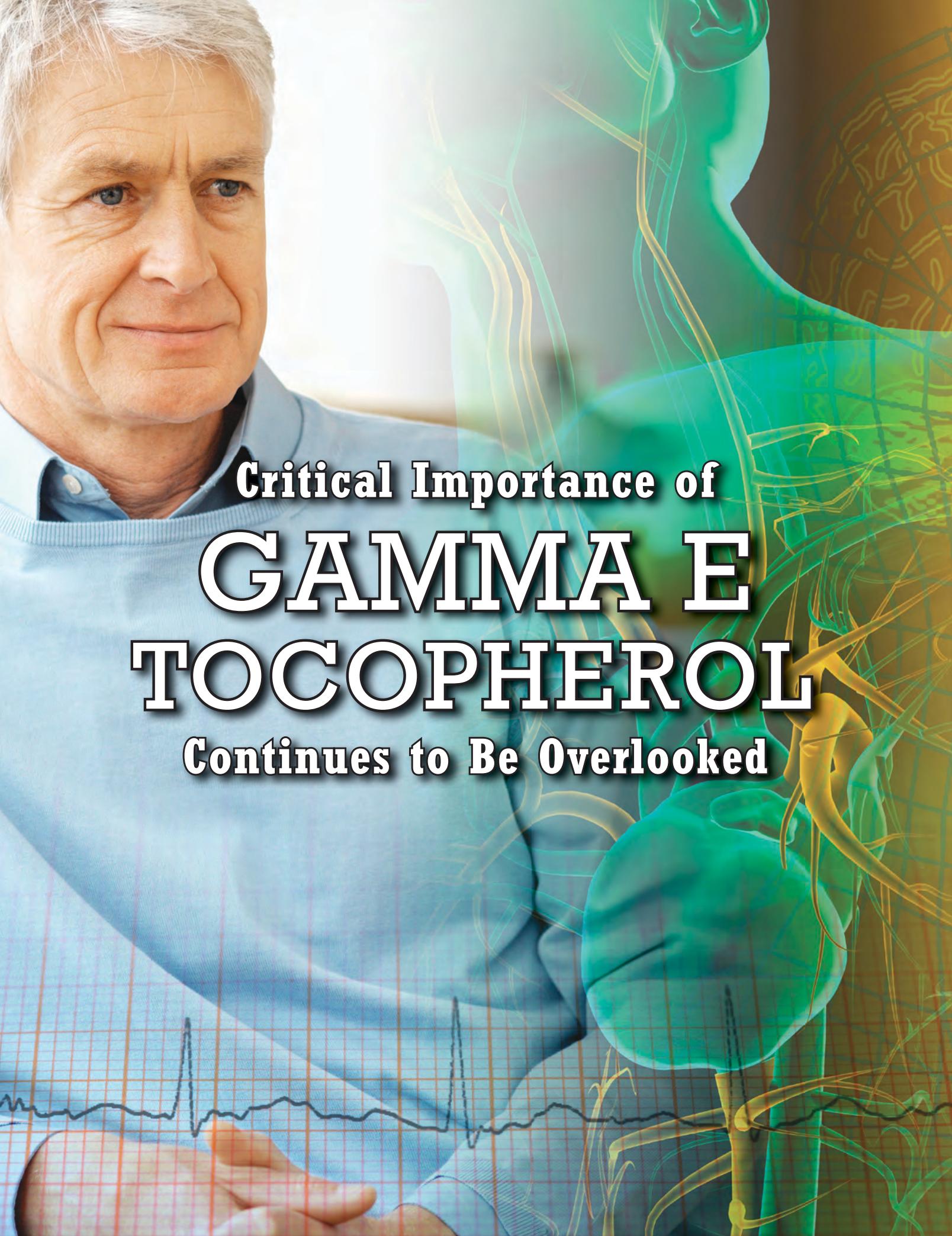
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* *Rejuvenation Res.* 2010 Aug;13(4):453-7.

Note: Those who take the **Mitochondrial Energy Optimizer** are already consuming 1,000 mg of L-carnosine, along with benfotiamine.

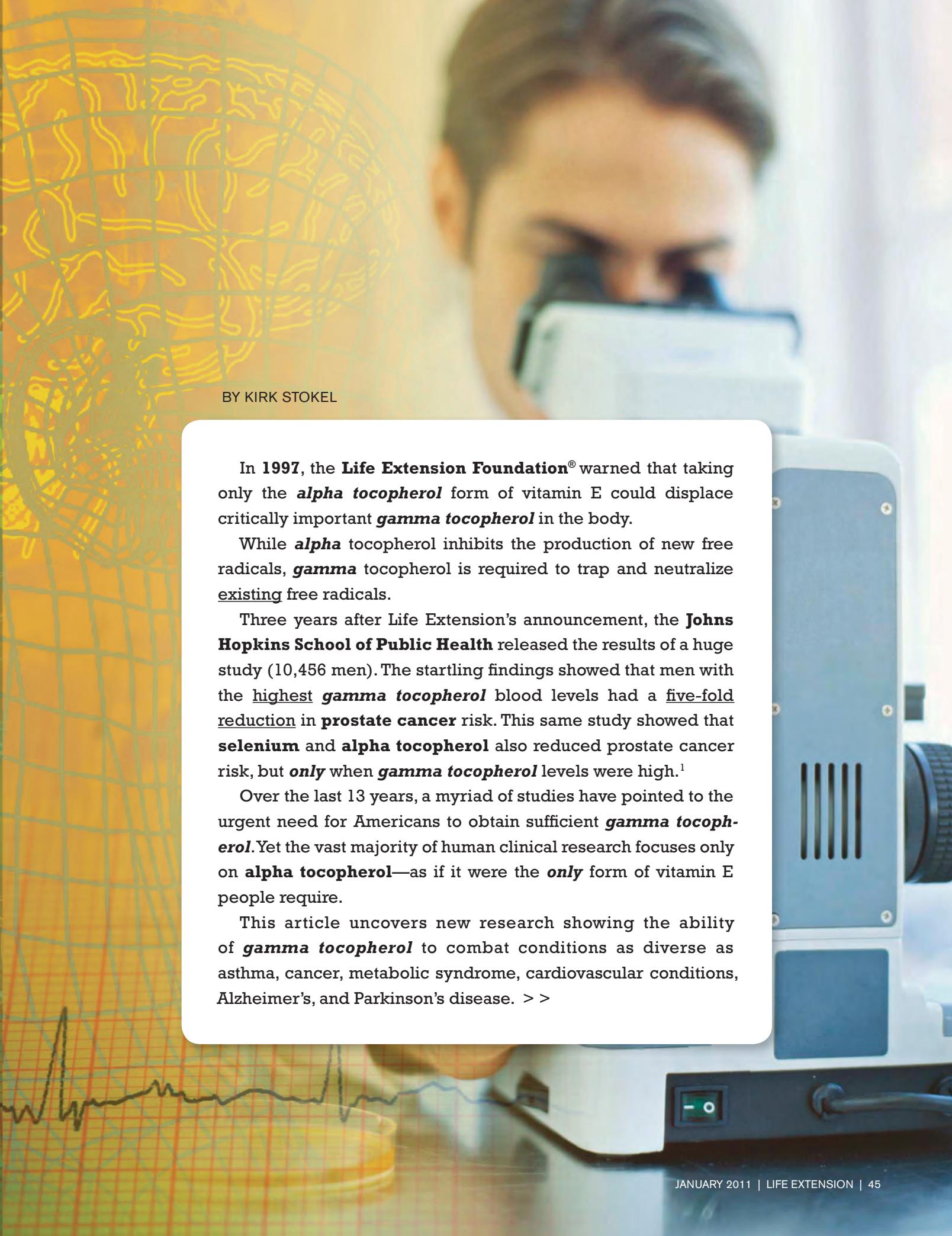
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Critical Importance of

GAMMA E TOCOPHEROL

Continues to Be Overlooked



BY KIRK STOKEL

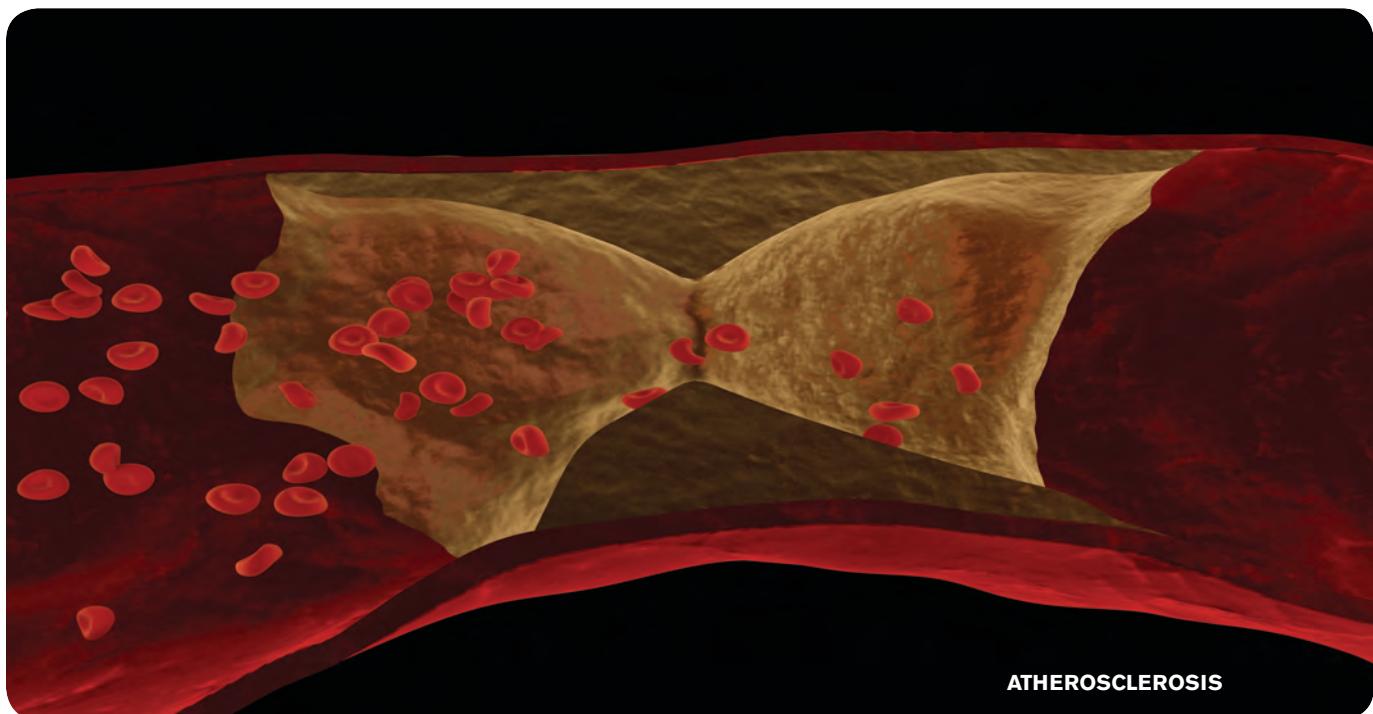
In 1997, the **Life Extension Foundation**[®] warned that taking only the ***alpha tocopherol*** form of vitamin E could displace critically important ***gamma tocopherol*** in the body.

While ***alpha tocopherol*** inhibits the production of new free radicals, ***gamma tocopherol*** is required to trap and neutralize existing free radicals.

Three years after Life Extension's announcement, the **Johns Hopkins School of Public Health** released the results of a huge study (10,456 men). The startling findings showed that men with the highest *gamma tocopherol* blood levels had a five-fold reduction in prostate cancer risk. This same study showed that ***selenium*** and ***alpha tocopherol*** also reduced prostate cancer risk, but ***only*** when ***gamma tocopherol*** levels were high.¹

Over the last 13 years, a myriad of studies have pointed to the urgent need for Americans to obtain sufficient ***gamma tocopherol***. Yet the vast majority of human clinical research focuses only on ***alpha tocopherol***—as if it were the ***only*** form of vitamin E people require.

This article uncovers new research showing the ability of ***gamma tocopherol*** to combat conditions as diverse as asthma, cancer, metabolic syndrome, cardiovascular conditions, Alzheimer's, and Parkinson's disease. > >



Differences Between Alpha and Gamma Tocopherol

Alpha tocopherol is the best known form of vitamin E and is found in the largest quantities in blood and tissue. It is critical, however, for anyone supplementing with vitamin E to make sure they are also getting adequate gamma tocopherol each day.

The key benefit is gamma tocopherol's ability to dramatically reduce inflammatory threats, a major cause of virtually all degenerative diseases. Current research supports the importance of gamma tocopherol in preventing numerous components of the degenerative diseases associated with aging.^{2,3}

Although little known to the general public, gamma tocopherol is the form of vitamin E most prevalent in our natural diets. In addition to its impressive anti-oxidant capacity, gamma tocopherol possesses key functions critical to our well-being.^{4,5} It is now recognized that gamma tocopherol, like alpha tocopherol, is retained in the body and delivered to tissues.⁶

Gamma tocopherol has far more powerful anti-inflammatory actions than does the alpha form. Further, it is more potent at inhibiting certain inflammatory cytokines in cell culture and in living animals.⁷⁻⁹ And it inhibits production of stress-related "heat shock proteins" that result from inflammatory stimuli.¹⁰ Kidney dialysis patients, with huge inflammatory stresses, show reduced markers of inflammation when supplemented with gamma tocopherol.¹¹

Enhanced Protection Against Atherosclerosis

Cardiovascular diseases are now recognized as the result of oxidative stress and inflammation at every stage. Gamma tocopherol is gaining the attention of cardiovascular scientists and clinicians because of its unique ability to block inflammation and to induce favorable changes in blood vessel function.

As researchers now know, it is the *oxidation* of LDL that makes it such a dangerous atherogenic lipid in the blood. In a study comparing the effects of gamma vs. alpha tocopherol in preventing oxidation of LDL, scientists found that it was the gamma tocopherol that provided potent protection in every parameter.¹²

One of the most important benefits of gamma tocopherol is its ability to improve *endothelial function* by increasing *nitric oxide synthase*, the enzyme responsible for producing vessel-relaxing **nitric oxide**.¹² One major way it produces this effect is by sponging up destructive reactive nitrogen species, such as peroxynitrite.¹³ In fact, gamma tocopherol is able to "trap" a variety of reactive nitrogen species and halt their negative effects on a host of cellular processes.¹⁴

The cumulative effect of all of these actions was shown in a study demonstrating that gamma tocopherol could prevent cerebral infarction (the most common type of stroke) in a mouse model.¹⁵

Supplementation in humans with only **100 mg per day** of gamma tocopherol showed similar promise,

demonstrating a reduction in several risk factors for arterial clotting such as platelet aggregation and LDL cholesterol.¹⁶

Another study using a daily supplement containing **800 mg** of gamma tocopherol resulted in reduction of oxidative stress and inflammatory markers in adults with metabolic syndrome.³ Interestingly, the effects were even more pronounced when 800 mg of alpha tocopherol was added, demonstrating that both forms of vitamin E are synergistically vital for optimal cardiovascular health.

Strenuous exercise, while beneficial for people in good physical shape, does tend to increase blood coagulation and platelet aggregation in sedentary individuals—a bad thing in people with pre-existing atherosclerosis. Gamma tocopherol supplementation can mitigate these effects, potentially lowering stroke and heart attack risk.¹⁷

Anti-Cancer Effects

Just as we saw with cardiovascular disease, gamma tocopherol exerts anti-cancer effects through a variety of important mechanisms, giving it an especially broad spectrum of action against a host of tumor types. At the very beginning of the cancer development process, gamma tocopherol traps reactive nitrogen species and other free radicals that cause mutations in DNA strands and render cells vulnerable to malignant transformation.^{18,19} This is a crucial step in the prevention of cancer.

Gamma tocopherol inhibits cancer cell growth in culture through a number of different mechanisms.²⁰ It down-regulates control molecules known as *cyclins*, which trap cancer cells in the midst of their reproduction cycle and prevent them from reproducing and spreading.²¹ This anti-cancer effect appears to be based on a mechanism separate from the vitamin's well-known antioxidant powers.

A cell membrane receptor called PPAR-gamma is a promising target for anticancer therapies because it affects genes that control cancer cell growth and death.²² This is why PPAR-activating drugs are being researched and developed by pharmaceutical companies as anti-cancer drugs. Gamma tocopherol is more powerful than alpha tocopherol at stimulating PPAR-gamma activity, especially in colon cancer cells.^{23,24} In prostate cancer cells, PPAR-gamma stimulation by gamma tocopherol resulted in a complete cessation of cancer cell growth.²⁴

Once cancerous transformation has taken place, there are still biological opportunities to prevent

Gamma E

- Emerging data reveal that gamma tocopherol supplies potent protection against cardiovascular disease, cancer, and even neurodegenerative conditions.
- Gamma tocopherol has superior anti-inflammatory and gene regulatory activities, while alpha-tocopherol remains a potent antioxidant.



full-blown tumor development. One of these ways is the induction of deliberate cell death through built-in genetic programs, a process called apoptosis. In a variety of cancer tissues, gamma tocopherol has been found to be superior to alpha tocopherol at inducing apoptosis, triggering a number of cell-death-inducing pathways.^{25,26} In prostate cancer cells, gamma tocopherol induced cell death by blocking synthesis of important cell membrane components.²⁷ And gamma tocopherol also reduces the development of new blood vessel formation in tumors, depriving them of the nutrients they need to thrive.²⁸

To date, all of these mechanisms have been shown to inhibit cancers of the colon, prostate, breast, and lung in animal models, with many more under active investigation.²⁹

Human studies provide excellent confirmation of the unique chemoprotective effects of gamma tocopherol. A diet rich in walnuts, which contain gamma tocopherol (3 oz. contain 15.6 mg gamma tocopherol), produced a trend towards improvement in measurements of prostate-specific antigen (PSA)—a marker of prostate cancer.³⁰ Note that one would have to eat massive amounts of walnuts each day (almost 2.5 pounds) to obtain optimal gamma

tocopherol dosing. This is why **supplementation** with **gamma tocopherol** is an important component of any prevention program.

Neurodegenerative Disease Defense

A particularly dangerous free radical known as *reactive nitrogen species* has been implicated in Alzheimer's disease. High intakes of vitamins C and E have been associated with substantially lower risk of age-related neurodegenerative diseases such as Alzheimer's.^{31,32} Gamma tocopherol scavenges *reactive nitrogen species* and may prove beneficial in reducing the impact of the disease.³³

Neurodegenerative diseases also have a large inflammatory component. Human trials of supplemental vitamin E in neurodegenerative diseases have almost exclusively used alpha tocopherol, leading many experts to call for new studies using gamma tocopherol because of its more potent anti-inflammatory effects.⁵ In a mouse model of Parkinson's disease, gamma tocopherol was more effective than alpha tocopherol at preventing loss of the essential neurotransmitter dopamine, the chemical defect that produces Parkinson's symptoms.³⁴





Combating Inflammatory Airway Diseases: Allergies and Asthma

Asthma and allergies are closely related conditions that are triggered by our immune system going into red alert in response to substances in the environment. In numerous studies, gamma tocopherol prevents migration of inflammatory cells into the airways at the beginning of an attack of asthma or allergic rhinitis, and also reduces overgrowth of mucous cells in the nose and upper airways.³⁵ Gamma tocopherol supplementation decreases overall oxidative stress and suppresses excessive release of inflammatory cytokines in both normal and asthmatic human subjects.³⁶

Oxidant molecules such as ozone are particularly dangerous for people who suffer from these inflammatory airway conditions.³⁷ Studies of gamma tocopherol have shown broad anti-inflammatory effects in allergic animals experiencing airway inflammation by exposure to ozone.^{37,38}

Summary

Vitamin E is one of the earliest-known and best-studied vitamins. Published studies demonstrate that people with higher intakes of **gamma tocopherol** may achieve a considerable *reduction* in their risks of common age-related diseases.

Regrettably, most health conscious individuals take only **alpha** tocopherol and are deprived of the optimal and synergistic benefits provided by the **gamma** tocopherol form of vitamin E.

Human studies indicate benefits with supplemental doses ranging from **100 mg** to **800 mg** of **gamma tocopherol** a day. A review of the scientific literature indicates that most people should supplement with at least **200 mg** of **gamma tocopherol** each day.^{1,39} ●

If you have any questions on the scientific content of this article, please call a Life Extension® Health Advisor at 1-866-864-3027.

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Life Extension Mix™

Tablets, Capsules, or Powder...Your Choice!

Consumers take dietary supplements to obtain concentrated doses of some of the beneficial nutrients found in fruits and vegetables. Commercial multivitamins, however, do not provide all the vital plant components that scientists have found are needed to maintain good health.

Life Extension Mix™ is formulated based on findings showing that consuming lots of **fruits and vegetables** dramatically **lowers the risk** of health problems. **Life Extension Mix™** provides concentrations of the **fruit and vegetable extracts** that researchers have found protect against a wide variety of cellular insults.

Life Extension Mix™ has been upgraded to provide **natural folate** and **cyanidin-3-glucoside** (C3G). C3G is a berry compound that promotes the healthy function of delicate structures within the retina that help with night vision at no additional cost.

Life Extension Mix™ is available in tablet, capsule, and powder forms, with or without copper, and with or without extra niacin.



Item #
01554

LIFE EXTENSION MIX™ 315 TABLETS

	RETAIL PRICE EACH BOTTLE	SUPER SALE MEMBER PRICE EACH BOTTLE
1 BOTTLE	\$98	\$66.15
4 BOTTLES	\$86	\$58.05
10 BOTTLES	\$69.50	\$46.91

The regular 94-ingredient tablet version of Life Extension Mix™ used by most members contains 73 mg of niacin and 1 mg of copper. There is an extra-niacin version that provides 345 mg of niacin at no additional charge. Niacin is used to help maintain healthy cholesterol, triglyceride and fibrinogen levels in those within normal ranges. Some people find the niacin "flush" unpleasant. Those with underlying liver disease sometimes cannot tolerate any niacin (or beta-carotene). Either one of these versions can be obtained without copper. The suggested dose is 9 tablets per day in divided doses with meals.



Item #
01554

LIFE EXTENSION MIX™ 490 CAPSULES

	RETAIL PRICE EACH BOTTLE	SUPER SALE MEMBER PRICE EACH BOTTLE
1 BOTTLE	\$110	\$74.25
4 BOTTLES	\$98	\$66.15
10 BOTTLES	\$85	\$57.38

The encapsulated version of Life Extension Mix™ used by many members provides 1 mg of copper. These capsules are also available without copper. The suggested dosage is 14 capsules per day in divided doses with meals. Capsules are easier to swallow for some people than tablets.



Item #
01556

LIFE EXTENSION MIX™ 14.81 OZ POWDER

	RETAIL PRICE EACH BOTTLE	SUPER SALE MEMBER PRICE EACH BOTTLE
1 BOTTLE	\$98	\$66.15
4 BOTTLES	\$86	\$58.05
10 BOTTLES	\$72	\$48.60

The powder version of Life Extension Mix™ contains 1 mg of copper. This powder version is also available without copper. The suggested dose is three scoops per day in divided doses with meals. Because there are so many different ingredients, the powder can be difficult for some people to easily mix. Some people use a blender to combine the Life Extension Mix™ powder with whey protein and other powdered supplements.

To order your supply of **LIFE EXTENSION MIX™**,
call 1-800-544-4440 or visit www.LifeExtension.com

Contains soybeans, corn, and sesame.

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

The Upgraded

LIFE EXTENSION MIX™

Scientists have identified multiple mechanisms by which **green tea** extract helps protect against LDL oxidation, neuronal oxidation, and a host of other structural and functional age-related changes. LIFE EXTENSION MIX™ provides more green tea extract than found in commercial formulations.

Broccoli is one of the vegetables best documented to protect healthy DNA. The broccoli concentrate in LIFE EXTENSION MIX™ is standardized to provide **sulforaphane** and other **glucosinolates**, compounds responsible for broccoli's protective benefits.

Olive polyphenols help protect against LDL oxidation, quench free radicals, and stabilize cell membranes. LIFE EXTENSION MIX™ contains a potent olive extract that provides the best-documented polyphenol called **hydroxytyrosol** in an amount equivalent to drinking one ounce of virgin olive oil a day.

Luteolin is a flavonoid found in **parsley, artichoke, basil, celery**, and other foods. It has shown the ability to help protect against DNA oxidative damage. When measured against 27 other citrus flavonoids, **luteolin** showed one of the most beneficial effects at maintaining healthy DNA. **Luteolin** also suppresses excess levels of **interleukin-6** and **interleukin-1b**. LIFE EXTENSION MIX™ contains a standardized dose of **8 mg** of luteolin.

Lycopene is the red carotenoid in **tomatoes** that supports a healthy prostate and helps promote healthy lipid profiles for those already within a normal range.

Lutein is found in **spinach** and **collard greens** and has been shown to help maintain **eye macula pigment** structure.

D-glucarate is found in **grapefruit, apples, oranges, broccoli**, and **Brussels sprouts**. D-glucarate supports a detoxification process that helps to remove DNA toxins.

Pomegranate may be the most effective plant to help maintain optimal endothelial function. This pomegranate extract is standardized to provide the punicalagins and other polyphenols found in up to 2.6 ounces of pomegranate juice.

Sesame lignans increase tissue levels of **vitamin E** and **gamma tocopherol**, and inhibit the formation of an inflammatory precursor called arachidonic acid.

Wild blueberry extract, concentrated and standardized to help maintain optimal neuronal function.

Pterostilbene is a compound naturally found in blueberries and grapes that has been shown to have beneficial, anti-aging effects on gene expression and to promote healthy cognitive function.

Cyanidin-3-Glucoside is a berry compound that promotes healthy function of the retina to help with night vision.

Pyridoxal 5'-phosphate helps protect against glycation reactions, a toxic process in which sugars bind to lipids and proteins to form non-functional structures in the body.

315 tablets
Item #01555

490 capsules
Item #01554

14.81 oz powder
Item #01556



9 tablets, 14 capsules, or three scoops of powder provide:

Vegetable-Fruit Complex

Green tea extract (decaf.) (98% polyphenols/45% EGCG)	325 mg
Broccoli sprout concentrate	525 mg (providing sulforaphane, glucosinolates, D-3T, and PEITC)
Olive juice extract (providing hydroxytyrosol, oleuropein)	12.5 mg
Grapeseed extract (Leucoselect®)	25 mg (95% proanthocyanidins)
Grape (<i>vitis vinifera</i>) extract (BioVin®)	25 mg [Std. to 95% proanthocyanidins (23.75mg)]
Ginger extract (5% gingerols)	200 mg
Luteolin (Pureolin™)	8 mg
Lycopene (tomato extract)	3 mg
Lutein complex (marigold)	33.33 mg (15 mg lutein/465 mcg trans-zeaxanthin)
Milk thistle extract (85% silymarin)	100 mg
Bromelain	15 mg
Calcium D-Glucarate	200 mg
Citrus Bioflavonoids	200 mg [Standardized to 50% Hesperidin (100mg)]
Acerola extract 4:1	300 mg
Bilberry (36% total anthocyanins)	30 mg
Pomegranate (30% punicalagins) (POMELLA®)	85 mg
Sesame seed lignan extract	10 mg
Berry-fruit blend	200 mg (blackberry, blueberry, cranberry, elderberry, persimmon, plum, and cherry)
Wild Blueberry (<i>Vaccinium angustifolium</i>)	150 mg
Std. anthocyanin extract (fruit)	
trans-Pterostilbene (from pure Pterospan™ and SMART™ pterostilbene)	0.5 mg
Cyanidin-3-Glucoside (C3G)	1.25 mg

Water-Soluble Vitamins and Enzymatic Activators

Vitamin C	2000 mg as: ascorbic acid, calcium, magnesium & niacinamide ascorbates, ascorbyl palmitate, acerola extract
Natural Folate (from lemon extract)	400 mcg
Biotin	3000 mcg
Trimethylglycine (TMG)	100 mg
Vitamin B1 (thiamine HCl)	125 mg
Vitamin B2 (riboflavin)	50 mg
Supplying: Riboflavin 5'-phosphate	2 mg
Vitamin B3 (niacinamide and niacinamide ascorbate)	117 mg
Vitamin B3 (niacin)	73 mg
Vitamin B5 (D-calcium pantothenate)	600 mg
Pantethine	5 mg
Vitamin B6 (pyridoxine HCl)	5 mg
Pyridoxal 5'-phosphate (vitamin B6)	100 mg
Vitamin B12 (cyanocobalamin)	252 mcg
Vitamin B12 (hydroxylcobalamin)	252 mcg
Vitamin B12 (ion exchange resin)	96 mcg
PABA (para-aminobenzoic acid)	200 mg

The Most Complete Multivitamin Available Today — Now with C3G!

Published scientific studies document that people who eat the **most fruits and vegetables** have much lower incidences of health problems. Few people, however, consistently eat enough plant foods to protect against common age-related decline,¹⁻³ and commercial multivitamins do not provide all of the vital plant components needed to maintain good health.

Life Extension Mix™ has been upgraded to include cyanidin-3-glucoside or C3G, a compound found naturally in black currant and has been shown to promote the healthy function of delicate structures in the retina that help with night vision. The new Life Extension Mix™ now contains natural food-based folate and Crominex® 3+ which helps maintain healthy blood sugar levels. During **Super Sale**, the full daily dose of Life Extension Mix™ can be obtained for as little as **\$1.34** per day.

Fat-Soluble Vitamins

Vitamin A (as 90% Betatene® <i>D. salina</i> natural beta-carotene and 10% acetate)	5000 IU
Vitamin D3 (cholecalciferol)	2000 IU
Ascorbyl palmitate (fat-soluble vitamin C)	250 mg
Vitamin E (natural D-alpha tocopheryl succinate)	400 IU

Vitamin D3 helps maintain healthy bone density and DNA. There is five times more vitamin D in LIFE EXTENSION MIX™ compared to conventional multivitamins.

Amino Acid Complex

N-acetyl-L-cysteine	600 mg
Taurine	200 mg

LIFE EXTENSION MIX™ contains only the expensive dry powder form of **vitamin E**. This natural form of vitamin E (succinate) has been shown to promote healthy DNA better than other forms.

Mineral Complex

Selenium (from Se-methyl L-selenocysteine)	100 mcg
Selenium (from L-selenomethionine—SelenoPure™)	50 mcg
Selenium (from sodium selenate)	50 mcg
Zinc (monomethionine) (OptiZinc®)	20 mg
Zinc (succinate)	15 mg
Boron (as boron citrate/aspartate/glycinate)	3 mg
Calcium	218 mg
Copper (as copper bisglycinate chelate)	1 mg
Chromium	500 mcg
(as Crominex® 3+ chromium stabilized with Capros® and PrimaVie® Shilajit)	
Potassium chloride (37.4 mg elemental)	71.3 mg
Molybdenum (sodium molybdate)	125 mcg
Manganese (gluconate)	1 mg
Iodine (potassium iodide)	150 mcg
Magnesium oxide (335.96 mg elemental)	560 mg
Magnesium citrate (35.28 mg elemental)	261.3 mg
Magnesium glycinate (11.74 mg elemental)	100 mg
Magnesium taurinate (7.83 mg elemental)	100 mg
Magnesium arginate (5.87 mg elemental)	100 mg
Magnesium ascorbate (3.40 mg elemental)	58.1 mg

N-acetyl-L-cysteine suppresses free radicals inside the cells and maintains healthy glutathione levels. **Taurine** may protect against free radicals between cells and supports eye health.

Some scientific evidence suggests that consumption of **selenium** may reduce the risk of certain forms of cancer; however, the FDA has determined that this evidence is limited and not conclusive.

Zinc is often poorly absorbed, but LIFE EXTENSION MIX™ provides two of the most bioavailable forms of zinc.

Boron is not only needed to maintain healthy bone density but may also help promote healthy prostate cell development.

LIFE EXTENSION MIX™ provides a high amount of **chromium** to help maintain arterial wall structure and already normal glucose levels.

We have upgraded our chromium-containing products with Crominex® 3+, a highly stable and biologically active form of chromium blended with Capros® and PrimaVie®.

Magnesium helps protect arteries and heart valves, and supports heart and brain cells. LIFE EXTENSION MIX™ provides high potencies of six different forms of magnesium to fully saturate the body with this lifesaving mineral.

Maintaining high levels of **acetylcholine** in the brain helps support cognitive function and memory.

Cholinergic Complex

Choline (from bitartrate)	120 mg
Phosphatidylcholine (from soy)	150 mg
Inositol	250 mg

CAUTION: The high-niacin version of Life Extension Mix provides 862 mg in the daily dose, of which 345 mg is the form of niacin that can cause temporary flushing, itching or gastric disturbances. Liver function testing is recommended when niacin is taken in excess of 500 mg daily. Those with gout or liver diseases should avoid taking high doses of niacin. Consult with your doctor before using this product if you are taking anticoagulant medications. Individuals consuming more than 2,000 IU/day of vitamin D (from diet and supplements) should obtain a serum 25-hydroxyvitamin D measurement. Vitamin D supplementation is not recommended for individuals with hypercalcemia (high blood calcium levels).

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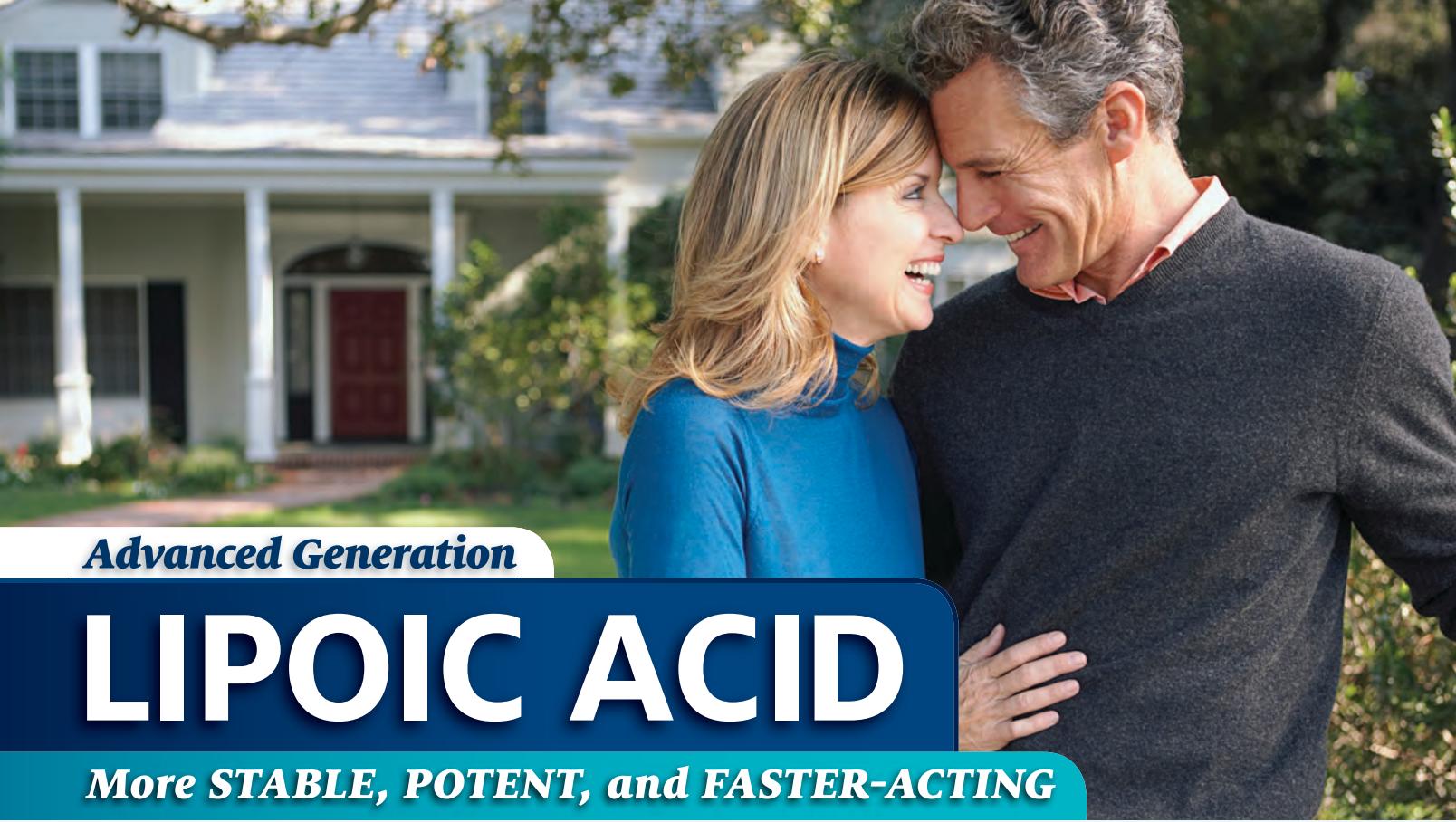
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To order call toll-free
1-800-544-4440 or visit
www.LifeExtension.com

Contains soybeans, corn, and sesame.

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.



Advanced Generation

LIPOIC ACID

More STABLE, POTENT, and FASTER-ACTING



Dedicated research and development has produced a form of **R-lipoic acid** that is being hailed as the “next-generation” antioxidant powerhouse.

Life Extension's **Super R-Lipoic Acid** has demonstrated superior bioavailability, stability, and potency for a variety of health benefits. This breakthrough converts the biologically active “R” form of lipoic acid to sodium-R-lipoic acid, which in a recent human study achieved **10–30 times** higher peak blood levels than pure R-lipoic acid.¹

Not only does this lipoic acid formulation reach higher peak blood levels,² it also achieves them sooner, up to **12 times** faster than R-lipoic acid, ensuring rapid uptake from the plasma into the tissues.¹ A recent study showed that oral ingestion of **Super R-Lipoic Acid** reached peak plasma concentrations within just **10–20 minutes** of supplementation.²

What's more, unlike other forms of lipoic acid, **Super R-Lipoic Acid** is more stable in the body. The increased stability of this enhanced formulation is the reason for its greater absorption and bioavailability compared with R-lipoic acid.²



POWERFUL ANTIOXIDANT PROTECTION

The superior antioxidant effects of **R-lipoic acid** are already well known for supporting healthy mitochondrial function. **Super R-Lipoic Acid** provides more potent benefits for preserving youthful cellular energy levels.

A bottle of **Super R-Lipoic Acid** containing 60 capsules retails for \$49. If a member buys four bottles during **Super Sale**, the cost is only **\$30.38 per bottle**. Each capsule contains **300 mg** of stabilized, Bio-Enhanced® sodium-R-lipoic acid supplying **210 mg** of R-lipoic acid.



Item #01208

To order
Super R-Lipoic Acid,
call **1-800-544-4440** or
visit www.LifeExtension.com

Bio-Enhanced® is a registered trademark of GeroNova Research, Inc.

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Contains soybeans and rice.

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.



ARE YOU TAKING THE OPTIMAL FORMS OF VITAMIN E?

According to the *Proceedings of the National Academy of Sciences*, alpha tocopherol (regular vitamin E) displaces critically important gamma tocopherol in the cells.¹ While alpha tocopherol inhibits free-radical production, gamma tocopherol is required to trap and neutralize existing free radicals.²

Four prestigious scientific journals have highlighted **gamma tocopherol** as one of the most critically important forms of vitamin E for those seeking optimal health benefits.

Most commercial vitamin E supplements contain little, if any, **gamma tocopherol**. They instead rely on **alpha tocopherol** as the primary ingredient. However, it is gamma tocopherol (not the alpha form) that quenches **peroxynitrite**, the free radical that plays a major role in the development of **age-related decline**.^{2,3}

SESAME LIGNANS: The Natural Vitamin E Booster

Life Extension® has uncovered research suggesting that adding **sesame lignans** to gamma tocopherol may significantly enhance its beneficial effects. Sesame and its lignans have been shown to boost antioxidant levels and help maintain already-normal blood pressure.*

In a human study that combined **gamma tocopherol** with **sesame lignans**, gamma tocopherol/sesame was **25% more effective** than gamma tocopherol/tocotrienols in suppressing tissue measurements for free-radical and inflammatory damage.^{4,5} Since tocotrienols are considered nature's most potent antioxidants, the fact that low-cost gamma tocopherol with sesame is more effective is a remarkable finding.

Life Extension fortified the popular **Gamma E Tocopherol** supplement with standardized **sesame lignans**. Consumers obtain superior benefits at a much **lower cost**.

To order **Gamma E Tocopherol with Sesame Lignans**,
call 1-800-544-4440 or visit www.LifeExtension.com

WORLD'S MOST COMPREHENSIVE VITAMIN E FORMULA!

The **Gamma E Tocopherol** formula provides potent doses of critically important gamma vitamin E along with **sesame lignans** to augment its antioxidant effects.

The retail price for 60 softgels of **Gamma E Tocopherol with Sesame Lignans** is **\$32**. If a member buys four bottles during **Super Sale**, the price is reduced to only **\$19.58 per bottle**.

Each softgel of **Gamma E Tocopherol with Sesame Lignans** provides:

Gamma tocopherol	215.4-244.12 mg
Delta tocopherol	89.75-125.65 mg
Alpha tocopherol	17.95-35.9 mg
Beta tocopherol	0-7.18 mg
Sesame seed	20 mg (<i>Sesamum indicum</i>) lignan extract



Contains soybeans and sesame.

Antioxidant Vitamins & Cancer. Some scientific evidence suggests that consumption of antioxidant vitamins may reduce the risk of certain forms of cancer. However, the FDA does not endorse this claim because this evidence is limited and not conclusive.

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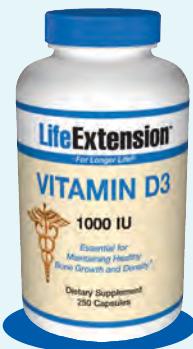
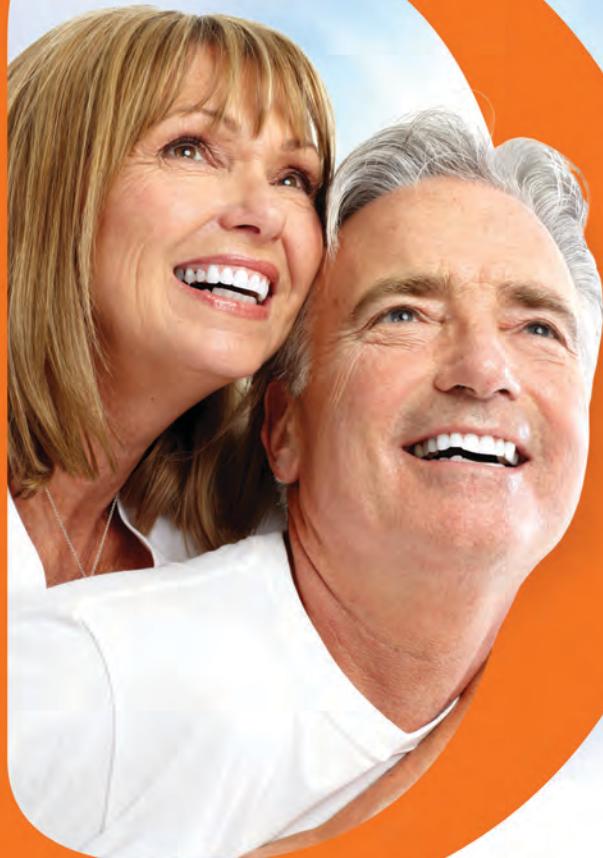
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Which VITAMIN D is Right for You?

Study after study confirms the vital importance of maintaining optimal levels of **vitamin D** for broad-spectrum health benefits. Research often indicates that a blood level of 50 ng/mL of **25-hydroxyvitamin D** is ideal.

Because people have individual requirements, Life Extension® has created the largest selection of **vitamin D** supplements available to ensure that you achieve your **vitamin D3** goals.

Keep in mind that you may already be getting 1,000-3,000 IU of vitamin D in your multi-nutrient formula.



Vitamin D3 1,000 IU 250 capsules

Retail: \$12.50

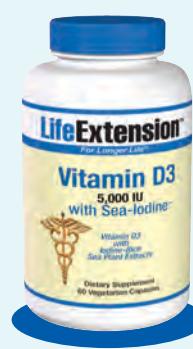
Super Sale four bottle

Member Price: **\$7.59**

Commercial companies offered only 400 IU vitamin D products when Life Extension long ago introduced this 1,000 IU version. For most people, this 1,000 IU potency is *insufficient* to attain optimal vitamin D blood levels. For smaller individuals who obtain 2,000-3,000 IU in their multi-nutrient formulas (and children), this potency of vitamin D may be suitable.

Item# 00251

Contains corn and rice.



Vitamin D3 5,000 IU with Sea-Iodine™ * 60 vegetarian capsules

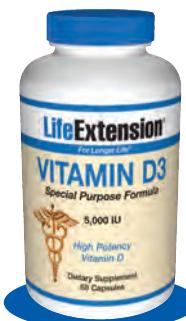
Retail: \$14

Super Sale four bottle

Member Price: **\$8.44**

Most people do not ingest enough vitamin D *and* iodine, especially those seeking to reduce their salt intake. Combining 5,000 IU of **vitamin D3** and 1,000 mcg of **iodine** into *one* capsule makes taking these two nutrients economical and convenient. **Item# 01372**

Due to the source of kelp, this product may contain fish and shellfish. Contains corn and rice.



Vitamin D3 5,000 IU 60 capsules

Retail: \$11

Super Sale four bottle

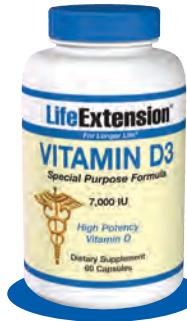
Member Price: **\$6.68**

For those obtaining 1,000-3,000 IU of vitamin D in their multi-nutrient formulas, this 5,000 IU potency is what most need to achieve optimal vitamin D blood levels.

Item# 00713

Please refer to website for allergen information.

Contains corn and rice.



Vitamin D3 7,000 IU 60 capsules

Retail: \$14

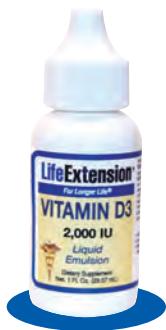
Super Sale four bottle

Member Price: **\$8.51**

Some individuals (such as those weighing more than 180 pounds) may require higher potencies of vitamin D. When combined with 1,000-3,000 IU obtained from multi-nutrient formulas, this 7,000 IU vitamin D3 capsule should enable these individuals to attain 25-hydroxyvitamin D blood levels above the desired range of 50 ng/mL.

Item# 01418

Contains corn and rice.



Vitamin D3 Liquid Emulsion 2,000 IU 1 ounce

Retail: \$28

Super Sale four bottle

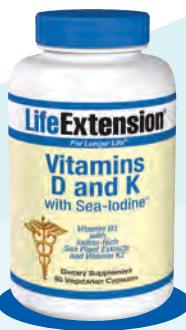
Member Price: **\$16.88**

For those rare individuals who have difficulty absorbing enough vitamin D3 from powdered capsules, this liquid emulsion of vitamin D can be used. **Item# 00864**



Just one softgel of Essential Fat Soluble Nutrients provides:

Vitamin D3	7,000 IU
Vitamin K2 (MK-7)	100 mcg
DHA (from fish oil)	500 mg
Gamma tocopherol	215.4-244.12 mg
Delta tocopherol	89.75-125.65 mg
Alpha tocopherol	17.95-35.9 mg
Beta tocopherol	0-7.18 mg



Just one capsule of Vitamins D and K provides:

Vitamin D3	5,000 IU
Vitamin K2 (MK-4) (short-acting)	1,000 mcg
Vitamin K2 (MK-7) (long-acting)	100 mcg
Sea-Iodine™	1,000 mcg

A bottle containing 60 vegetarian capsules of **Vitamins D and K with Sea Iodine™** retails for \$24. If a member buys four bottles during **Super Sale**, the cost is just **\$14.85** per bottle.

Item# 01472

May contain fish and crustacean shellfish. Contains rice and corn.

A bottle containing 30 softgels of **Essential Fat-Soluble Nutrients** retails for \$28. If a member buys four bottles during **Super Sale**, the cost is just **\$16.88** per bottle. These formulas make it convenient for those who understand the importance of high doses of **vitamin D** to automatically obtain the calcium-regulating benefits of **vitamin K** plus their vitamin D and other essential nutrients.

Item# 01428

Contains fish (tuna) and soybeans.
Contains corn.

**To order any of these high-potency
vitamin D3 supplements, call 1-800-544-4440
or visit www.LifeExtension.com**

CAUTION: Individuals consuming more than 2,000 IU/day of vitamin D (from diet and supplements) should periodically obtain a serum 25-hydroxyvitamin D measurement. Do not exceed 10,000 IU per day unless recommended by your doctor. Vitamin D supplementation is not recommended for individuals with hypercalcemia (high blood calcium levels). People with kidney disease, certain medi-

cal conditions (such as hyperparathyroidism or sarcoidosis), and those who use cardiac glycosides (digoxin) or thiazide diuretics should consult a physician before using supplemental vitamin D.

* If you have a thyroid condition or are taking antithyroid medications, do not use without consulting your healthcare practitioner.



FEED Your Brain!

BY ALAN SMITHEE

Millions of people around the world are adhering to low-fat, low-cholesterol diets in an effort to reduce the impact of disease-promoting calories. What they don't realize is they're also starving their brains of specific nutrients needed for **memory** and **healthy cognitive function**.

"Heart-healthy" diets that restrict eggs, meats, cheese, and other sources of cholesterol and saturated fats may not be so healthy for the brain. Such diets can lead to shortages of two essential nutrients, **choline** (as *alpha-glycerylphosphorylcholine*) and **serine** (as *phosphatidylserine*), required by the brain to manufacture memory-related neurotransmitters and functional membrane lipids.

The brain's demand for choline and serine becomes even more critical with aging. Recent trends in the incidence of cognitive dysfunction suggest that optimizing our intake of these compounds could help reverse the alarming rise in dementia among older Americans. An estimated **10-20%** of people **over 65** years of age already suffer from mild cognitive impairment¹ and as many as **5.2** million people in the US are currently living with Alzheimer's disease.² Researchers predict that as many as **10** million baby boomers could develop Alzheimer's during their lifetime.²

New research suggests that the biochemical processes that lead to cognitive decline represent a **modifiable risk factor** for the development of dementia, including Alzheimer's disease, and that two essential brain nutrients, **phosphatidylserine** and **alpha-glycerylphosphorylcholine** (GPC), may enable aging humans to forestall or even reverse declines in memory and cognitive performance. >>



Phosphatidylserine: A Documented Way to Fight Brain Aging

Phosphatidylserine is essential to help brain neurons support and maintain **memory function** and **neuroplasticity**—the dynamic capacity to replace damaged neurons and to make new ones. Neuron-to-neuron communication and neuroplasticity depend on a steady supply of phosphatidylserine and other “smart” nutrients.

Maintaining an optimal intake of phosphatidylserine is crucial to preventing age-related cognitive decline. Even if you are a healthy individual today, research shows that you could eventually experience a dramatic decline in your cognitive capacities by the time you reach **70** years of age.³

In 2003, even the biased FDA granted “qualified health claim” status to phosphatidylserine, allowing supplement manufacturers to state that “*consumption of phosphatidylserine may reduce the risk of dementia in the elderly*” and “*consumption of phosphatidylserine may reduce the risk of cognitive dysfunction in the elderly.*”⁴

Studies suggest that phosphatidylserine can benefit people of all ages. In the middle-aged and the elderly, phosphatidylserine has been shown to prevent and restore memory loss⁵ and alleviate stress⁶ and anxiety.⁷ Preliminary research indicates that phosphatidylserine may also benefit children with attention, learning, or behavioral problems.⁸⁻¹⁰

A significant component of human breast milk, phosphatidylserine¹¹ is classified as a **phospholipid**. Phospholipids are **orthomolecules**¹² (those naturally present in the body) that play a vital role in **cell-to-cell communication** in the brain and are required to maintain the **fluidity** of all cell membranes.

Membranes are the “working surfaces” of every cell, carrying out cellular communication and hormonal signal transduction.

Preclinical¹³⁻¹⁷ and human studies^{5,18,19} have shown that phosphatidylserine can favorably affect neuronal membranes, cell metabolism, and levels of brain neurotransmitters such as acetylcholine. Two “meta-analyses” of multiple clinical studies concluded that phosphatidylserine could provide **significant benefits** for cognitive functions that typically decline with age, including concentration, learning, memory, and vocabulary skills.^{20,21}

By boosting **glucose metabolism** and stimulating production of **acetylcholine**, supplemental phosphatidylserine (**100 mg** three times daily) has been shown to improve cognitive performance in patients experiencing age-associated memory impairment or other signs of cognitive decline.^{22,23}

In a double-blind, placebo-controlled trial involving 425 patients ages 65-93 with moderate-to-severe cognitive decline, investigators gave study participants oral doses of **300 mg** of phosphatidylserine daily for up to six months. Those individuals in the treatment group showed consistent improvement in clinical global impression and such activities of daily living as memory, learning, and socialization.²⁴

Results of a recent Israeli Phase IV clinical trial showed that a nutraceutical formulated with phosphatidylserine (**100 mg**) and GPC (**600 mg**) could **significantly improve memory and restore loss of essential mental skills** in men and women **67-80** years of age.²⁵ The study’s investigators were able to measure this remarkable improvement in **15 weeks**. In other studies, most using phosphatidylserine at a dosage of **300-400 mg/day**, improvement tended to be the greatest in those with less severe cognitive impairment.^{22,26-28}

GPC: A Brain-Friendly Form of Choline for Mental Health

Choline is found in foods such as beef and chicken liver, egg yolk, soybeans, beef, milk, and peanuts. However, strict vegetarians, endurance athletes, people who drink a lot of alcohol, and those who follow low-fat/low-cholesterol diets may be at risk of choline deficiency.

GPC (alpha-glycerylphosphorylcholine), like phosphatidylserine, is an orthomolecular compound (found naturally in the brain), where it serves as an **acetyl-choline precursor**.^{29,30} Acetylcholine is an essential neurotransmitter involved in memory, cognition, sleep, and neuromuscular control.³¹ Acetylcholine *decline* coincides with advancing age, and is a hallmark of neurodegenerative disease.

In Europe, GPC is regulated as a prescription drug used to treat Alzheimer's disease, where it is known under the generic name, *choline alphoscerate*. In the United States, GPC is available as a dietary supplement. GPC is believed to prevent and ameliorate dementia and memory and learning loss because it increases plasma levels of choline and therefore increases production of acetylcholine and phosphatidylcholine.^{32,33}

In a well-controlled multicenter study that included 261 participants, GPC significantly improved cognitive function in patients with mild-to-moderate Alzheimer's disease.³⁴ The patients were randomly assigned to receive either **1,200 mg** of GPC or placebo daily for six months, and both groups were similarly impaired before entering the study. Patients who received GPC scored better than those who received placebo at three months and at six months. A measure of cognitive function substantially improved in the GPC treated group, but worsened in the placebo group. Compared to placebo, the GPC group also fared better in behavioral improvement and standardized physician ratings. *What makes these results particularly encouraging is that they resemble those obtained through the use of three currently prescribed Alzheimer's drugs: Aricept®, Exelon®, and Razadyne®.*

Other human trials of GPC reveal equally impressive results. One review of published clinical data on GPC and cognitive decline in 10 controlled trials with a total of 1,570 patients with various forms of dementia concluded that GPC was better or equal to those observed in control groups under active pharmacological treatment and superior to the results observed in placebo groups.³⁵

GPC has also been used to treat people who suffer from stroke and transient ischemic attack (TIA). In one study, 2,044 patients received GPC within 10 days

Cognitive Function

- Diets that contain processed foods and those that limit consumption of high-cholesterol foods, including eggs and meats, may not contain sufficient amounts of the essential nutrients that support cognitive function and membrane structure.
- A growing body of research suggests that mild cognitive decline is **preventable** and sometimes **reversible** through the use of such supplements as phosphatidylcholine and GPC, which are known to support the optimal structure and function of brain cells.
- After the age of 30, we become **increasingly vulnerable** to brain aging and its consequences, including **impaired memory** and **progressive loss of cognitive function** that can lead to the development of Alzheimer's disease and other forms of dementia.
- Preventing cognitive decline throughout life requires **early intervention** decades before the onset of the symptoms of cognitive decline.
- A proactive and preventive approach to preserving and enhancing cognitive function using **phosphatidylserine** and **GPC** may help protect against mild cognitive decline and may be effective in helping people with senile dementia, including Alzheimer's disease.
- Data from animal and human studies that have tested phosphatidylserine and GPC strongly suggest that these neuroprotective and neurotrophic compounds play an essential role in **preventing** and **restoring** loss of healthy brain functions as we age.
- Studies show that GPC and phosphatidylserine enjoy a higher safety profile and **superior benefit-to-risk profile** than drugs currently prescribed to treat dementia.
- Studies suggest that GPC and phosphatidylserine **act on multiple levels** and work **synergistically** to prevent cognitive decline and restore healthy brain function.

GPC may protect and facilitate communication between nerves through its effect on receptors for nerve growth factor

post-stroke or TIA (1,000 mg/day intramuscularly for 28 days followed by 400 mg three times daily orally for the next five months). At the end of the trial, a remarkable 71% showed no cognitive decline or forgetfulness.³⁶

GPC may protect and facilitate communication between nerves through its effect on receptors for nerve growth factor, a naturally occurring substance that regulates acetylcholine receptors. With aging, the number of nerve growth factor receptors typically decline. GPC promotes the growth, repair, and increased expression of nerve growth factor receptors in the cerebellar cortex, a brain region responsible for coordination and movement control.³⁷

Animal studies have shown that GPC treatment counters the age-dependent reduction of nerve cell density and acetylcholine receptors in the hippocampus of older rats.^{38,39} These results suggest that GPC treatment is effective in slowing down the expression of structural changes occurring in the aging brain.

Another animal study found that long-term treatment with GPC offset, in part, the loss of nerve fibers and brain cells that typically occurs with aging. In GPC-treated rats, both the density and the area occupied by neuroconnecting fibers were significantly

GPC: A Vital Brain Nutrient

GPC performs a number of essential roles in maintaining optimal cognitive function throughout the human life span:

1. GPC enhances communication between nerves in the cerebellar cortex, a brain region responsible for coordination and movement control through its effect on receptors for nerve growth factor. As we age, nerve growth factor receptors tend to decrease unless sufficient GPC is present.⁴¹
2. GPC stimulates release of the neurotransmitter, **GABA** (gamma-aminobutyric acid) in an animal model study, making more GABA available to brain cells.⁴² GABA is the chief inhibitory neurotransmitter in the mammalian nervous system,

higher than in age-matched controls. The number of neurons of the hippocampus, a part of the brain that is closely associated with the cerebral cortex, was higher in GPC-treated animals than in control 24-month-old rats. Study investigators stated that it appears GPC treatment “*counteracts some anatomical changes of the rat hippocampus occurring in old age.*”⁴⁰

Safer Than Prescription Drugs

It is widely recognized that a **decline in brain acetylcholine** levels coincides with advancing age and that such a decline can lead to neurodegeneration, a hypothesis that was proposed almost 30 years ago.⁴⁵

It is now believed that a dysfunction of acetylcholine-related neurons and their “transmission lines”



and declining GABA levels have been linked with neurological disorders such as anxiety, depression, pain, panic, Parkinson's disease, and Alzheimer's disease.⁴³

3. GPC is also involved in the synthesis and recycling of phospholipids in the brain. Laboratory studies suggest that GPC can increase the rate of phospholipid synthesis, including the phosphoinositides, which are used for signal transduction in the central nervous system.⁴⁴



(axons and dendrites) in the brain contribute to the cognitive decline observed in aging humans and in those diagnosed with Alzheimer's disease. This hypothesis has provided the dominant rationale for the development of drugs to treat dementia, which are designed to deactivate an enzyme that degrades acetylcholine. Regrettably, the prescription drugs such as Aricept® (donepezil) which were designed to block the acetylcholinesterase enzyme in the brain suffer from **poor benefit-to-risk profiles** and pose numerous **health risks** to older patients who use them.^{46,47}

As acetylcholinesterase inhibitors, these drugs increase the concentration of acetylcholine at the synapse (nerve-to-nerve junction) for longer periods, thereby enhancing activity in nerve pathways that use acetylcholine. Unlike drugs that inhibit the breakdown of acetylcholine, **GPC stimulates the manufacture of new acetylcholine**. This could be one reason for GPC's greater safety record compared to prescription drugs.

Summary

Mild cognitive decline is no longer considered solely a normal part of aging.

Memory deficits can occur because of suboptimal intakes of neuroprotective and neurotrophic nutrients through "low-fat" and low cholesterol dieting, consuming foods devoid of such nutrients, and lifestyle-related chronic inflammation and oxidative damage to brain neurons.

By taking advantage of recent advances in our understanding of cognition, memory, and nerve cell

function, health-conscious adults can use safe and effective brain-protective nutrients such as **phosphatidylserine** and **GPC** to prevent and reverse the very nutrient deficits that can lead to cognitive decline. A large body of published evidence indicates that phosphatidylserine and GPC play vital roles in helping aging individuals to maintain sharper memory and other cognitive abilities. •

If you have any questions on the scientific content of this article, please call a Life Extension® Health Advisor at 1-866-864-3027.

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GO TO THE MAX

Vitamin C's popularity is undeniable – and so are its benefits! It has been over 80 years since this critical vitamin was isolated and its importance in our diet cannot be understated. However, since humans don't manufacture **vitamin C** internally, it must be obtained through dietary sources or supplements.

This can be problematic because **vitamin C** is a *water-soluble* nutrient that is quickly oxidized and released by the body, which means that for those seeking vitamin C's optimal health benefits they have to consume the vitamin several times a day.¹

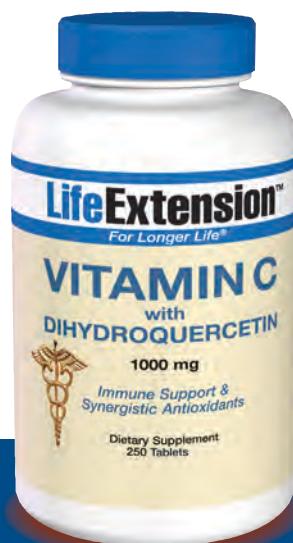
Fortunately, a *flavonoid* antioxidant known as *dihydroquercetin* functions as a **vitamin C** "supercharger." Studies demonstrate that *dihydroquercetin* acts to inhibit the oxidation of **vitamin C**, thereby helping to maintain its concentration and to recycle **vitamin C** throughout the body.^{2,3} This synergistic relationship between *dihydroquercetin* and **vitamin C** greatly enhances the efficacy of both molecules in the body's organs and tissues.

Vitamin C with Dihydroquercetin was formulated for those seeking to obtain optimal efficacy and antioxidant protection from their vitamin C supplement. The suggested daily dose of one tablet of this formula supplies **1,000 mg of vitamin C** (as ascorbic acid), along with **10 mg of Dihydroquercetin-3-rhamnoside**, a highly bioavailable form of dihydroquercetin derived from grape leaf extract.

A bottle containing 250 tablets of **Vitamin C with Dihydroquercetin** retails for \$25.50. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$15.69 per bottle**. Contains corn.

References:

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To order **VITAMIN C with Dihydroquercetin**,
call 1-800-544-4440 or visit www.LifeExtension.com

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

Super Vitamin K Softgels

Humans get most of their vitamin K from green vegetables in the form of **vitamin K1**. The problem is that K1 is tightly bound to plant fiber and only a small fraction *absorbs* into the bloodstream.

Vitamin K2 is absorbed much more efficiently than K1. Scientific studies show K2 provides overwhelmingly superior benefits for the bones, arteries and other tissues.¹⁻⁸

The predominant sources of K2 in Western diets are organ meats, dairy and egg yolks — foods that health conscious people seek to minimize. The result is that most people in Western societies are not obtaining *optimal* potencies of vitamin K.

The solution is to use a vitamin K supplement that provides ideal potencies of K1 and the two active forms of K2.

Ideal Forms of Vitamin K2

Two forms of **vitamin K2** have been extensively researched and the findings reveal vastly improved effects compared to K1.

The **MK-4** form of vitamin K2 is the most rapidly absorbed and is now routinely used in Japan to maintain healthy bone density. MK-4, however, only remains active in the blood for a few hours.

In contrast, the **MK-7** form of vitamin K2 boasts a very long half-life in the body, yielding higher sustained levels in the blood, for optimal transport of calcium into bone tissue.⁹

Both **MK-4** and **MK-7** have demonstrated remarkable health benefits when studied in human populations.

The Most Complete Vitamin K Formula

Vitamin K1 is the form found in plants and vegetables and should be part of most people's daily supplement regimen. Even more important is inclusion of the **MK-4** and **MK-7** forms of **vitamin K2**.

Based on data substantiating the long-acting effects of MK-7, one can achieve far higher sustained blood levels of this critical nutrient.

Super K formula provides in just one daily softgel:

Vitamin K1	1000 mcg
Vitamin K2 (MK-4)	1000 mcg
Vitamin K2 (MK-7)	100 mcg

Item #01224



The virtue of Super K is that it provides the precise amount of the long-acting **MK-7 form** of **vitamin K2** that human studies have shown provides optimal K2 levels over a 24-hour period. The **MK-4** is included to provide the rapid increase in vitamin K blood levels that may account for its beneficial effects in certain studies.

All Three Forms of Vitamin K

Super K with Advanced K2 Complex provides all three forms of vitamin K that the body can utilize.

The retail price for a bottle containing **90 softgels** (three-month supply) is \$26. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$15.53 per bottle**.

The same **Super K** formula containing the identical potencies of Vitamin K1, K2 (MK-4) and K2 (MK-7) can be found in the **Life Extension® Super Booster**. If you take the **Super Booster**, you do not need additional **Super K softgels**.

Contains tree nuts (coconut).

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Warning to Coumadin® (warfarin) Drug Users

Patients prescribed vitamin K-antagonist anti-coagulant prescription drugs like warfarin should consult their physician before taking vitamin K supplements like Super K and Super Booster. There is evidence, however, that users of drugs like warfarin could benefit from a consistent low dose of supplemental vitamin K. Ask your doctor if you can take a low dose (45 mcg a day) of vitamin K2 in the long-acting MK-7 form for the purpose of stabilizing your INR levels and also protecting your body against long-term vitamin K deficit. Do not initiate any form of vitamin K supplementation without full cooperation of your treating doctor, as your doctor may need to increase your dose of warfarin to compensate for the vitamin K you supplement with. Life Extension provides several forms of low-dose vitamin K for physician consideration.

**To order Super K formula
or Super Booster, call 1-800-544-4440
or visit www.LifeExtension.com**

Value-Priced Formula!

Don't Starve Your Brain

Maintain Mental Acuity with New

Cognitex Basics

Shocking data just released reveal that someone in America develops an age-related brain disorder **every 70 seconds!**¹



Within 20 years an astounding **71 million** aging individuals will be at risk for cognitive problems.¹

Thankfully, new research indicates that some of the factors behind this alarming trend may lie within your control. The key is to maintain a steady supply of special **nutrients** clinically shown to support brain health as you age.

FOOD FOR THOUGHT

A healthy adult brain has about 100 billion nerve cells. Each cell requires specific dietary support for optimum performance. **Most aging individuals, however, are unwittingly starving their brains of these critical nutrients.**

You may be one of them.

The reason? Healthy dieting. Many of the foods you should rightfully avoid to protect against cardiovascular disease—eggs, red meat, cheese—contain these vital brain-boosting nutrients.

To remedy this **deficiency**, **Life Extension**[®] developed the comprehensive Cognitex formula back in **1982**, to provide optimal support for the aging brain.

We now introduce **Cognitex Basics**, a simplified, low-cost formula featuring two important compounds missing from a healthy diet—for maximum cognitive support **and** lifelong mental power. These two nutrients are:

1. ALPHA-GPC: A PRESCRIPTION DRUG IN EUROPE

The neurotransmitter **acetylcholine** is critically involved in memory, cognition, sleep, and motor control. The nutrient **Alpha-GPC** (alpha-glyceryl-phosphoryl-choline) is an acetylcholine “precursor.” Your brain needs it to produce optimal amounts of acetylcholine. Owing to the clinical studies validating its brain-supporting power, **Alpha-GPC**



is sold as an expensive *prescription drug* in Europe. The suggested serving of two softgels of **Cognitex Basics** supplies **600 mg** of **Alpha-GPC**.

2. AN FDA-SUPPORTED BRAIN HEALTH PROMOTER

Found in human milk, **phosphatidylserine** is essential in helping brain neurons support memory and promoting healthy nerve cell division and repair. Research shows it can benefit people of all ages. So much so that since 2003, the FDA has recognized that phosphatidylserine consumption may reduce the risk of dementia and cognitive dysfunction in the elderly.² The suggested daily serving of **Cognitex Basics** provides **100 mg** of phosphatidylserine.

Age-related cognitive decline is often referred to as a “senior moment”, “brain fog”, or “drawing a blank.” These problems lie in store for anyone who lives long enough. Taking precautionary measures can yield huge neurological health dividends in the future.

A bottle containing 60 softgels of **Cognitex Basics** retails for \$38. If a member buys four bottles during **Super Sale**, the price is reduced to just \$23.63 per bottle. Contains soybeans.



Item #01421

Two softgels of Cognitex Basics provide:

Sharp-GPC™ Active Alpha-Glyceryl 600 mg

Phosphoryl Choline (A-GPC)

Sharp-PS® Phosphatidylserine 100 mg

To order Cognitex Basics, call 1-800-544-4440 or visit www.LifeExtension.com

Sharp-PS[®] and Sharp-GPC[™] Active are trademarks of Enzymotec Ltd.

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The Beneficial OMEGA-6 Fatty Acid



BY KIRK STOKEL

Most health-conscious people already know about the broad-spectrum benefits of **omega-3 fatty acids**, particularly **EPA/DHA** from fish and other sources.

The typical American diet, however, contains too much **omega-6 fatty acids**. Health-conscious individuals try to reduce this type of fat in their diet. Sources of excess omega-6s include most vegetable oils such as corn oil, safflower oil, soybean oil, as well as poultry and eggs.

There is one omega-6, however, called **gamma linolenic acid (GLA)** with an impressive set of disease-fighting powers. New research reveals this nutrient's power to combat chronic inflammation, eczema, dermatitis, asthma, rheumatoid arthritis, atherosclerosis, diabetes, obesity—even cancer!¹⁻⁸

Most people don't obtain sufficient quantities of it owing to dietary deficiency, and also because the enzyme in the body governing its metabolism becomes less active with age.⁹

In this article, we uncover the latest research on **gamma linolenic acid** and provide compelling evidence for its ability to combat a range of chronic age-related disorders—alone and in combination with EPA/DHA. > >

BORAGE

GLA: An Anti-Inflammatory Essential Fat

GLA (gamma linolenic acid) is a plant-derived omega-6 most abundant in seeds of an Eastern flower known as **borage**.^{1,10,11} Although a member of the omega-6 family, it's metabolized differently than other omega-6s.

Our modern Western diet is rife with omega-6 fats and generally *deficient* in omega-3 fats, a fatal imbalance that sets in motion the inflammatory processes implicated in most killer diseases of aging.¹²⁻¹⁴

The threat this poses to aging humans is *compounded by the aging process itself*.

Aging results in defects occurring in human *enzymes* responsible for producing anti-inflammatory molecules from dietary fats. The result is an increased risk for inflammatory conditions of all kinds. Supplemental GLA can *counteract* this acquired enzyme defect, supplying vital biochemical precursors with powerful anti-inflammatory effects.

By converting into beneficial prostaglandins (PGE1s), GLA compensates for this deficiency.^{15,16} The results can be a profound reduction in the impact of inflammation on cardiovascular disease, lung function, autoimmune conditions, and metabolic abnormalities including diabetes.¹⁷⁻²⁰

Another way GLA exerts a beneficial effect is to compete with harmful *arachidonic acid* or AA. When one eats foods like meat or egg yolk, excess levels of arachidonic acid accumulate that is then broken down into toxic byproducts by the enzymes *cyclooxygenase-2* (COX-2) and *lipoxygenase* (LOX). GLA inhibits these destructive enzymes, thus impeding the ability of AA to convert to detrimental inflammatory molecules (like leukotriene B4).¹

GLA plays an important role in modulating inflammation throughout the body, especially when incorporated into the membranes of immune system cells.^{18,21} Early in 2010, a team of Taiwanese researchers discovered that GLA regulates the inflammatory "master molecule" ***nuclear factor-kappaB*** or **NF-**κ**B**, preventing it from switching on genes for inflammatory cytokines in cell nuclei.²²

A separate mechanism by which GLA and other beneficial fatty acids reduce inflammation is by activating the powerful peroxisome proliferator-activated receptor (PPAR) system.²³ PPARs are intracellular receptors that modulate cell metabolism and responses to inflammation. The class of antidiabetic drugs called *thiazolidinediones* (such as **Actos®** or **pioglitazone**) acts by targeting PPARs—but unlike GLA, they can be deadly.²⁴

Novel Cardiac Defense

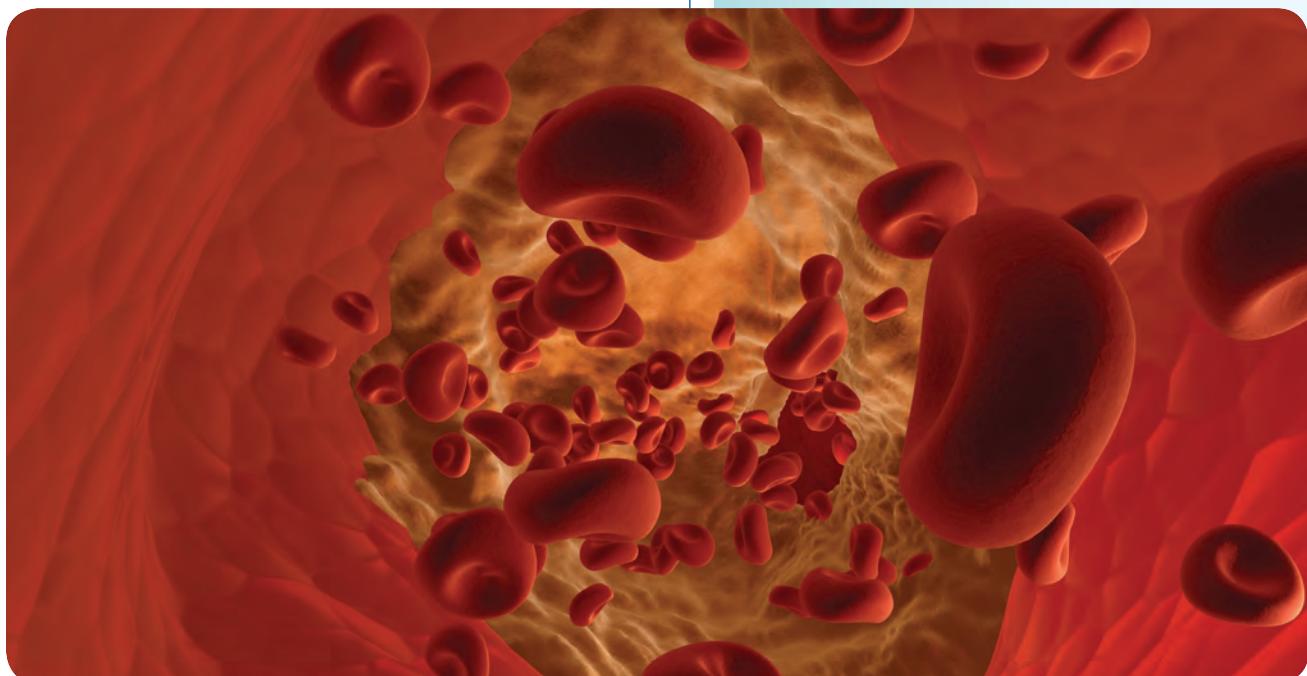
Atherosclerosis is in large part the result of chronic, low-grade inflammation.²⁵ The GLA-producing enzyme delta 6-desaturase (D6D) declines with advancing age and stress. Some experts believe that this may both partially explain the age-related increase in atherosclerosis and indicate GLA as an attractive intervention to reduce arterial disease risk by bypassing this enzymatic defect.²⁶ When incorporated into membranes of platelets, white blood cells, and endothelial cells, GLA works via multiple mechanisms to shift the cardiovascular system back towards its natural, non-inflamed state.²⁷

In both human and animal studies, GLA *reduces* the tendency of platelets to aggregate, or clump together, within small blood vessels.^{28,29} This activity is related to its effect of reducing activity of **thromboxane**, a signaling molecule involved in blood clotting, and may be helpful in reducing the risk of heart attack and strokes.^{19,29} Laboratory research shows that cholesterol-induced stimulation of platelet aggregation, for example, is prevented with the addition of GLA.⁵

GLA also shows promise in lowering **low-density lipoprotein (LDL)** and **triglyceride** levels, while increasing **high-density lipoprotein (HDL)** concentration.^{5,19} GLA supplementation reduced the formation of atherosclerotic plaques in rats fed a high-cholesterol diet, reducing total cholesterol and triglycerides and dramatically inhibiting oxidation of LDL, an important first step in atherosclerosis.³⁰

GLA

- Gamma-linolenic acid (GLA) is an unusual omega-6 fatty acid with powerful implications for human health.
- Adequate GLA is required to maintain a healthy balance of anti-inflammatory signaling molecules in the body.
- The enzyme that produces GLA from dietary fats decreases in activity with aging and in certain chronic conditions.
- Increasing GLA intake overcomes this deficiency and can restore a healthy balance to suppress chronic inflammation.
- GLA also may help to prevent inflammation-related changes implicated in the development of atherosclerosis and cancer.
- GLA has proven benefits in inflammatory diseases such as eczema, asthma, and rheumatoid arthritis.



In the middle stages of atherosclerosis, smooth muscle cells in vessel walls proliferate, stiffening arteries and making them less responsive to blood pressure and flow. Cells from animals supplemented with GLA inhibit that smooth muscle proliferation.³¹ And in atherosclerosis-prone mice, GLA supplementation markedly suppressed proliferation in the aorta, while reducing the size of atherosclerotic lesions.³²

Keep the Weight Off with GLA

While shedding the pounds is hard enough, the struggle to keep from putting them back on can be even harder. Now, new evidence suggests that gamma linolenic acid (GLA) may help prevent weight *regain* following major weight loss.⁶

Fifty formerly obese individuals were randomized in a double-blind fashion to receive either **890 mg** per day GLA (derived from 5 g per day of **borage oil**) or 5 g day olive oil (placebo) for 1 year. Body weight and composition were assessed at 0, 3, and 12 months.

After one year of supplementation, the subjects receiving GLA had regained an average of **just under 5 pounds**, versus **just over 19 pounds** in the placebo group.

This study suggests a role for GLA in reducing weight regain following major weight loss in adults prone to obesity.⁶



These combined, multitargeted effects account for GLA's promise in combating systemic vascular disease. In combination with EPA, GLA has significantly reduced blood pressure in patients with peripheral arterial disease, a painful and potentially crippling set of conditions resulting from restricted blood flow in the extremities. The combination of GLA and EPA also produced a trend towards fewer coronary events.³³

A diet containing a balanced mixture of omega-3s (EPA and DHA) plus GLA was able to lower blood pressure in spontaneously hypertensive rats, while simultaneously enhancing antioxidant status, diminishing platelet aggregation, and lowering plasma lipids.³⁴

Combating Diabetes and Obesity

New research reveals a surprising link between GLA and diabetes.

A defect in the enzyme that converts dietary fatty acids to GLA may predispose people to develop insulin resistance ("pre-diabetes"), suggesting that GLA supplementation may be preventive.⁷ Rapidly accumulating data support this observation.

Animal studies reveal that GLA can prevent chemically-induced diabetes while restoring normal antioxidant status in tissues.³⁵ It can also prevent **diabetic neuropathy**, a painful condition resulting from exposure of nerves to high glucose levels.³⁶ Excitingly, treatment with GLA plus alpha-lipoic acid (ALA) in diabetic rats not only prevents diabetes-induced changes in certain kinds of nerve cells—it partially *reverses* the condition.³⁷

In humans, GLA supplements (**360 mg** per day) for six months significantly improved symptoms of diabetic neuropathy; nerve conduction velocity was also dramatically increased.^{38,39} These effects are most prominent in individuals whose diabetes is well-controlled.⁴⁰

Children with type 1 diabetes display evidence of increased inflammation at an early age; GLA produces significant reductions in the inflammatory prostaglandin PGE2 after 8 months.⁴¹ Adult diabetics supplemented with GLA, EPA, DHA, and vitamin E experienced an improvement in metabolism of platelet-activating thromboxanes, which may reduce the risk of diabetic cardiovascular complications.⁴²

Obesity is a risk factor for diabetes, and worsens diabetic complications by contributing massive amounts of inflammatory

mediators. A fascinating study from the University of California at Davis found that, in formerly obese people who had recently achieved major weight loss, GLA supplementation for one year slashed the amount of weight they regained (just under 5 pounds vs. more than 19 pounds in control patients).⁶

Potent Anticancer Intervention

As early as 1989, it was revealed that GLA could slow the growth of certain cancer cells in culture.⁴³ A blend of omega-3s (EPA and DHA) plus GLA reduced levels of a host of inflammatory cytokines in patients with colon cancer, one of the many cancers that rely on inflammation to stimulate their growth.⁴⁴

In pre-clinical models, prostate cancer growth was slowed with GLA as a result of reduced production of inflammatory prostaglandins.⁴⁵ Growth of a human lung cancer implanted in mice was inhibited by 56% while the animals were on a GLA-enriched diet.⁴⁶ Cell cultures of three human tumor lines completely stopped DNA synthesis (a requirement for continued growth) after GLA treatment.⁴⁷ GLA increases brain cancer cells' sensitivity to being killed by radiation treatments; the supplement also produced direct toxicity to cancer cells, but not to normal tissue.⁴⁸⁻⁵⁰ This could mean greater effectiveness of radiation treatment with fewer distressing side effects such as skin damage.⁵¹

Human results with GLA supplementation have been encouraging. Patients with pancreatic cancer, a malignancy with a uniformly dismal prognosis, experienced longer survival times after intravenous treatment with a lithium salt of GLA.⁸ These changes were shown to be related to a GLA-induced increase in blood flow to cancerous tissue, which may permit larger doses of chemotherapy to reach tumors.⁵²

GLA treatment in breast cancer has had remarkable results, now being included along with tamoxifen as an adjuvant therapy.⁵³ And certain kinds of human leukemia cells can be induced to die by GLA treatment, which turns on the cells' "suicide" enzymes.⁵⁴ Leukemia cells resistant to chemotherapy drugs become vulnerable to drug treatment following exposure to GLA, which changes expression of several genes and causes the drugs to accumulate in high levels in the diseased cells.⁵⁵

We now know that GLA inhibits tumor growth and spread through a host of interrelated mechanisms.⁵⁶ As is always the case, however, the evidence suggests that GLA supplementation is much more effective used as prevention than as treatment after cancer has developed.^{57,58}



Eliminating Eczema and Atopic Dermatitis

Eczema is an inflammatory skin condition characterized by dryness and flaking of the upper skin layers, with redness, itching, and often pain of the skin beneath. Mild in many people, severe eczema sufferers experience chronic misery that can be debilitating, and that may respond only to fairly large doses of steroids, which can produce dangerous side effects. Many people with eczema also suffer from asthma and other conditions related to allergic responses—together these conditions are referred to as *atopic* conditions, which involve an immune response within the body. As with asthma, the global incidence of atopic eczema is rising at an alarming rate.⁵⁹

Studies from 20 years ago first showed that people with eczema may have a defect in their bodies that inhibits their ability to form GLA naturally from the dietary source linoleic acid.^{2,60} Breast milk from mothers of children with newly developed atopic eczema was shown to have low levels of GLA and its metabolites, supporting this notion.⁶¹

Supplementation with GLA was immediately successful. Studies in both children and adults revealed less inflammation, dryness, scaling, and overall eczematic severity compared to controls.^{2,62,63}

In parallel with these beneficial changes, significant changes in plasma fatty acid composition were also noted.^{2,63} Subsequent analyses showed that there was



a positive correlation between improvements in clinical eczema scores and the rise in beneficial fatty acid levels.⁶⁴ In addition, GLA supplementation produced an increase in the immune system “suppressor” cells known as CD8, adding another layer of protection against inflammation.⁶⁵

A Natural Asthma Intervention

Asthma is closely related to eczema in being an inflammatory condition triggered by inflammatory cytokines, particularly leukotrienes.⁶⁶ Inhibitors of leukotrienes and their receptors are in widespread use in asthma management, and since GLA suppresses leukotriene production, it is natural to wonder whether GLA would be helpful in asthma as well.^{21,66}

In a placebo-controlled trial, daily consumption of **750-1,130 mg GLA plus 500-750 mg eicosapentaenoic acid (EPA)** improved self-reported asthma status and reduced reliance on “rescue” inhaler drugs in adults with mild-to-moderate asthma.³ A related study also demonstrated an improved asthma-related quality of life following supplementation.⁶⁷

Rheumatoid Arthritis Relief

GLA shows great promise in managing symptoms of autoimmune conditions such as rheumatoid arthritis (RA) and may prove an attractive alternative to potentially toxic nonsteroidal anti-inflammatory drugs (NSAIDs).^{68,69} In randomized, placebo-controlled studies of RA patients with active symptoms, treatment with GLA (**1,400-2,800 mg** per day) reduced the number of tender and swollen joints and lowered pain and tenderness scores.^{4,70}

Laboratory research reveals that GLA treatment of immune cells from RA patients decreases production of the inflammatory cytokine IL-1beta by about 40% while leaving normal immune function of the cells intact;⁷¹ this finding has also been demonstrated in human research.⁷² GLA from borage oil triggers a pathway that suppresses a different inflammatory cytokine, TNF-alpha.⁷³ Experts have concluded that **“Strong support exists for gamma linolenic acid (GLA) for pain of rheumatoid arthritis.”**⁷⁴ Their findings suggested doses of at least 1,400 mg per day for good results.¹⁴

Summary

Gamma linolenic acid or GLA is an omega-6 essential fatty acid with overlooked potent benefits for human health. Because of an age-related decline in activity of enzymes that naturally produce GLA from precursor fats in our diet, we risk developing GLA deficiency with age. Too little GLA tips the balance of inflammatory factors called cytokines in our bodies towards increasing inflammation, and with it increasing risk for chronic disease. GLA supplementation can overcome this deficiency, providing the anti-inflammatory stimulus we need to control and even prevent diseases such as eczema, asthma, rheumatoid arthritis, and major killers such as cardiovascular disease and cancer. ●

If you have any questions on the scientific content of this article, please call a Life Extension® Health Advisor at 1-866-864-3027.

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Andrographis paniculata has been recognized for its beneficial effect on inflammation.¹ It was shown to provide significant improvement that resulted in **fewer tender and/or swollen joints**.² Arthro-Immune Joint Support contains the superior PARACTIN® *Andrographis* extract which has been used in clinical, animal and *in vitro* studies.

Curcumin, a natural compound known for its ability to reduce inflammation and as an antioxidant, was shown in a yet unpublished study to have a beneficial effect on inflammation.³ The highly bioavailable BCM-95® Bio-Curcumin® is the second component of Arthro-Immune Joint Support.

Just one capsule a day provides a potent serving of PARACTIN® and BCM-95® Bio-Curcumin®. A bottle of 60 vegetarian capsules retails for \$30. When a member buys four bottles during **Super Sale**, the price is reduced to only \$17.55 per bottle.

One capsule provides:

BCM-95® Bio-Curcumin® Extract	250 mg
PARACTIN® Andrographis Extract	150 mg

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CAUTION: Do not take if you have gallbladder problems or gallstones. If you are taking anti-coagulant or anti-platelet medications, or have a bleeding disorder, consult your health care provider before taking this product.

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Another Breakthrough in Antioxidant Defense!

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Today, we introduce an *even more* powerful antioxidant formula. A single capsule of the new **Enhanced Berry Complete with RZD™ Açaí** delivers an antioxidant value equivalent to **more than 100%** of the recommended daily fruit and vegetable intake.

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To measure the antioxidant strength of various foods, scientists use what is known as the ORAC index. While berries score higher than most fruits and vegetables, **açaí** boasts one of the *highest* ORAC values known to modern science.

Unfortunately, most commercial products containing **açaí** do not reflect the full nutritional content of the fruit. Only a *fraction* of its phenolic content survives industrial processing, handling, and storage.

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strawberry polyphenols may provide targeted support for cellular metabolic processes that promote neural and cognitive health in the aging brain.⁶ But you need the *complete* polyphenolic profile to get the benefit.

Each vegetarian capsule of Enhanced Berry Complete with RZD™ Açaí also contains standardized extracts of high-ORAC value foods including:

Blackcurrant	Grape
Blackberry	Cranberry
Elderberry	Prune
Wild blueberry	Strawberry
Wild bilberry	Pomegranate
Sweet cherry	Black soybean hull
Tart cherry	Blue corn
Raspberry	

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Contains soybeans. Contains corn.

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v2



Potential **ARTHRITIS** **TREATMENT ADVANCE** Blocked by FDA

Painful joint deterioration caused by **osteoarthritis** ranks among the most common, debilitating conditions confronting aging individuals today. It is also rapidly on the rise, in both young and old alike due to excess body weight.

An estimated 27 million Americans age 25 or older currently suffer from osteoarthritis.¹ By 2030, a projected **67 million** people will have doctor-diagnosed arthritis.²

A new therapy might reverse this trend. The technology is called **autologous stem cell transplantation**. It involves using undifferentiated cells that can develop into almost any tissue—new cartilage, tendons, ligaments, even bone—to replace damaged, arthritic joints. These cells are taken not from human embryos but from your own body!

At the forefront of this research is Colorado-based regenerative medical expert Dr. Christopher Centeno. His clinical work has already yielded intriguing preliminary results—up to **75% pain reduction** without surgery or side effects in scores of patients.

In this article, the facets of Dr. Centeno's new therapy are detailed. You will then learn of the FDA's *inhumane* attempt to block Dr. Centeno from using this experimental therapy. In this instance, the FDA is erecting a regulatory barrier to deny patients access to their own stem cells—in all likelihood to protect drug company profits. > >

Osteoarthritis: The Scourge of Aging Individuals

Osteoarthritis is a *progressive* condition for which no cure exists. Affected joints undergo gradual degradation of cartilage, the natural slippery, lubricated tissue that allows smooth movement and weight-bearing.³ As the cartilage deteriorates, friction increases, leading to severe pain and ultimate destruction of the joint.⁴

In one of nature's seeming cruelties, cartilage is poorly supplied with blood, making it slow to heal. Worse, damaged cartilage will not regenerate itself under normal circumstances.^{5,6} Since osteoarthritis is common in previously physically active people, it can significantly impair quality of life in those who suffer from it, particularly as they age.⁷⁻⁹

Many modern surgical repair procedures are aimed at disrupting cartilage deeply enough to trigger a natural repair response from the bone underlying the cartilage—but the result is often incomplete and inadequate.^{9,10}

Over the past several decades, surgeons have developed techniques for removing small “plugs” of healthy cartilage from uninvolved areas of joints and transplanting them into the damaged areas, sometimes culturing the cells first to increase their numbers.^{4,6} While these techniques have shown some promise, they have the disadvantages of *damaging* otherwise intact cartilage without adequately restoring joint function.^{5,9}

Another challenge osteoarthritis poses for clinicians has to do with aging itself: in the case of knee replacements—one of the most common procedures—the “repair” *does not last for a long time*, so orthopedists paradoxically delay the first surgery for as long as possible.

For this reason, all too many osteoarthritis sufferers are told to *wait* until the disease becomes severe enough, or they grow old enough, to warrant full-scale artificial knee replacement surgery. Until then, they must rely on pain relievers or periodic injections of anti-inflammatory steroid drugs while they get older in pain.

When they finally do have the procedure performed, they face yet another lengthy period of debilitation: total knee replacement is major surgery, with patients typically advised to count on up to 6 weeks of limited activity, and 6-12 months of gradual rehabilitation to return to normal function.¹¹ That alone explains orthopedists’ keen interest in discovering faster and simpler solutions.



Personalized Therapy Using Your Own Stem Cells

Most people have heard of stem cells—the powerful “precursor” cells that can differentiate, or mature, into virtually every type of tissue in the body. Early work with stem cells involved “harvesting” them from human embryos, which raises a host of ethical issues. Also of concern is the fact that embryonic stem cells, precisely because they are so versatile, carry the risk of transforming into *tumor* cells.¹²

Accordingly, scientific attention has focused of late on alternatives to embryonic stem cell therapies. When it comes to bone and joint regeneration, the most promising approach to emerge in recent years is the use of so-called **mesenchymal stem cells** (MSCs) taken directly *from your own body*.¹³

Unlike embryonic stem cells, *mesenchymal* stem cells have already differentiated to some extent, “committing” themselves to develop into tissues such as bone, muscle, tendon, ligament, and cartilage.^{13,14} They can be found in abundance in your bone marrow.¹⁴ Under the proper conditions, MSCs can be induced to *differentiate* into each of their potential specific tissue types, making them the ideal “seeds” for implanting into damaged joints and bones.

One advantage of using MSCs from your own body (autologous) is there is zero risk of transplant rejection. There is even evidence that transplanted MSC’s

exert *anti-inflammatory, immune-modulating* influences within the joint.^{4,15} This means they can theoretically outperform more traditional transplants, which run the risk of destruction by inflammation.

For years, the burning question among researchers in the field has been: will MSC (mesenchymal stem cell) transplants prove effective in *human* patients with osteoarthritis?

Thanks to the work of Dr. Christopher Centeno, an international expert and specialist in regenerative medicine, the answer may be *yes!*

Dr. Christopher Centeno's Healing Approach

Based at Regenerative Sciences in Westminster, Colorado, Dr. Centeno first became interested in applying what was known about the powers of stem cells to solving problems in orthopedics roughly a decade ago. Because *orthopedics* is the practice of medicine devoted to the health of bone, joint, muscle, and connective tissue, **mesenchymal stem cells** (MSCs) were the obvious choice for his research.

Centeno was aware of the rapidly growing success of MSCs in animal studies, and the failure rate of existing therapies for osteoarthritis and similar diseases.¹⁶ He knew that human bone marrow contained an adequate supply of MSCs that could readily be “harvested” from a patient’s own hip bone. He theorized the patient’s own tissue growth factors, obtained from a “puree” of their own platelets—the clotting factors contained within the blood—could be used to trigger MSCs to develop functional cartilage and bone to repair damaged joints.¹⁶

Once the cells had been “amplified” in culture with activated platelets, they could be injected into a diseased joint. Animal studies had demonstrated that such cells would proceed to further differentiate into the proper cell types based on local tissue factors produced by the surrounding healthy structures.

In two seminal 2008 papers, Centeno presented the results of his first human patient, an individual with a long history of chronic knee pain that proved unresponsive to surgery.^{13,16}

Centeno’s patient underwent successful harvest, expansion (through platelet-derived tissue factors), and transplant of his own MSCs into his damaged knee joint. The results were compelling—just one month after the injection the patient’s cartilage surface had expanded by approximately **20%**, a gain that was maintained at three months. And the meniscus (the lower cartilage that actually bears weight) was nearly **29%** larger in volume at 3 months, indicating vigorous growth and remodeling of previously

Stem Cell Transplantation

- An estimated 27 million Americans 25 and up currently suffer from osteoarthritis—a number expected to rise rapidly in the coming decades.
- An experimental therapy called autologous stem cell transplantation can arrest and *reverse* the progression of osteoarthritis, using stem cells safely drawn from a patient’s own body to grow new cartilage in affected joints.
- Pioneered in part by one researcher, Dr. Christopher Centeno, this novel, non-surgical intervention has yielded up to 75% pain reduction in osteoarthritis patients.
- The FDA has responded to this new therapy by attempting to assume regulatory *control* over these stem cells—and block the use of this therapy.
- Dr. Centeno and his research organization, Regenerative Sciences, hope to defeat the agency’s efforts in court.



damaged tissue. Just as critically, the patient's pain level dropped from 4 out of 10 to less than 1 out of 10, and his range of motion, previously limited, returned close to normal.

Since that time, Dr. Centeno and his colleagues have completed hundreds of autologous MSC transplants in patients with both knee and hip joint disease. Their most recent outcome data shows that for knee pain, more than 60% of their patients report a greater than 50% reduction in pain, and fully 40% report more than a 75% reduction.²⁰ Hip pain patients report greater than 50% relief in about 42% of cases, with more than 75% relief in about 23%. Those numbers are impressive on their own, and much more so in the context of the simplicity and ease of doing the transplant procedures compared with major surgery.

Your Platelets: Master Regulators of Joint Repair

Platelets, best known for their role in blood clotting, also contain key growth factors required for tissue repair. When an injury occurs, platelets become activated by newly-exposed tissue proteins, and release their cargo of growth factors, which become available to all cells involved in the healing process.¹⁶ Among the cells stimulated by these platelet factors are MSCs, which proceed to differentiate into some or all of their potential tissue types following exposure.¹⁷⁻¹⁹ That's how wounds heal naturally, forming tissue that "belongs" in each specific part of the body. So it makes sense to turn to activated platelets to provide growth factors that tell MSCs in culture to "grow up" into the precursors of cartilage, bone, or ligaments.



Centeno has been rigorous in following up with his patients to determine short- and long-term outcomes, both functional and safety-related. He has recently submitted a paper reporting on 339 patients, focusing on those with knee osteoarthritis.^{21,22}

Nearly all of these individuals had been told by their physicians that they would need a total knee replacement. But over the entire observation period, only **4%** of Centeno's patients wound up actually requiring surgery! The rest achieved real, lasting relief after their stem cell procedures.

Centeno also compared his patients' procedure-related complication rates with those of patients undergoing traditional knee replacement surgery. Among his patients, no serious complications were attributed to the procedure. But based on published data for knee replacement surgery, Centeno calculates that in a similar sized group of surgical patients,²³ 29-37 would have had serious surgical complications, including 1-2 deaths, and as many as 16 hospital readmissions for serious infections.²¹

Of course, safety is also a concern in stem cell therapy because of the theoretical risk of tumor development with embryonic stem cells. Dr. Centeno and his group have recently published the largest

safety study to date in patients undergoing autologous bone-marrow-derived stem cell transplants for orthopedic conditions.²² They followed 227 patients for up to 2 years following the procedure, including a large group in whom high-definition MRI scans were available. They found no cancer-like complications at any stem cell transplant site!

You would think these results would enjoy recognition not only within the research and medical communities, but *also* among those regulatory agencies charged with overseeing such innovative therapies.

You would be wrong.

Battling the FDA's Attempt to Hijack Your Own Cells!

The Food and Drug Administration responded to these therapeutic improvements by making it *illegal* for Centeno and all other clinicians to initiate therapy using their patients' own stem cells. The agency is persecuting Centeno's practice *and* prosecuting an entire branch of potentially life-saving medical research.

The FDA argues that since cells taken from the patient's own body can be cultured by the millions in the laboratory, they're somehow equivalent to drugs that can be *manufactured* by the millions in chemical plants. Extending this pretzel logic, the agency contends that each stem cell is the equivalent to a single dose of a drug, just like a pill or a capsule. Therefore the agency asserts it can and should assume regulatory jurisdiction over these cells—cells taken from your own body—just as it does with drugs.

This unconscionable, *insane* effort is likely to cost patients millions of dollars *and* inflict needless suffering on millions of current and future osteoarthritis patients.

"If physician practices and hospitals must now use the same standards as drug manufacturers, expect medical care costs to skyrocket without any measurable impact on safety," says Centeno, who is taking the FDA to court.

"The FDA finally will answer our questions, in court, about their claims and jurisdiction as opposed to doing everything in their power to avoid the issue that we are not a drug manufacturer, but simply a medical practice," says Centeno. "This is an important case for everyone that suffers from any type of illness, not just patients with orthopedic problems. It will decide, once and for all, if the government has the right to restrict a patient and their doctor from using a person's own stem cells to treat disease. Regenerative Sciences believes that stem cells are body parts and not the property of the government or big pharma."

In fact, there's precedent supporting his position. "What we're doing in our medical practice is no different, in principle, than a fertility clinic that uses the in-vitro fertilization technique," says John Schultz, MD, Centeno's colleague and co-founder of the clinic. "The only difference is that we're using the patient's own stem cells and fertility clinics use fertilized eggs."

For the time being, Centeno and his colleagues have been forced to halt all therapies involving cultured cells to enrich the population of MSCs prior to transplantation—the part of the procedure the FDA believes it can regulate.

One small consolation for victims of osteoarthritis: Centeno's team has developed a same-day procedure that involves no cell culture, and therefore can be performed legally. MSCs are harvested from the hip bone marrow space, purified, and directly injected into the damaged joint. This procedure delivers fewer activated MSCs to the site, but it is free of the bureaucratic muddles of the more intensive treatment.

Centeno remains optimistic, confident that he and his colleagues will prevail. He cites David Audley, director of the International Cellular Medicine Society, who has stated, "The Centeno-Schultz Clinic meets our strict criteria for the safe therapeutic use of adult



autologous stem cells. There is more medical and scientific evidence supporting this type of medical therapy for orthopedic conditions, for example, than there is for many approved drugs that the FDA allows to be used in off-label or unconventional applications.”

Summary

An estimated 27 million Americans 25 or older currently suffer from osteoarthritis—a number expected to rise rapidly. Existing treatments—including heavy reliance on drugs and replacement surgery—have proven costly, inadequate, and sometimes dangerous. A novel therapy called **autologous stem cell transplantation** holds the potential to arrest and *reverse* the progression of osteoarthritis, using stem cells safely extracted from the patient’s own body to grow new cartilage in arthritic joints. This non-surgical approach, pioneered in part by one researcher, Dr. Christopher Centeno, has yielded intriguing preliminary results in clinical trials, producing up to 75% pain reduction in osteoarthritis patients. In an unconscionable and flagrant move to protect conventional medicine profits, the FDA has responded to this experimental therapy by attempting to assume regulatory *control* over these stem cells—and block their use. Dr. Centeno and his research organization, Regenerative Sciences, hope to thwart the agency’s efforts in court. ●



Christopher J. Centeno, MD is an international expert and specialist in regenerative medicine and the clinical use of mesenchymal stem cells in orthopedics. He is board certified in physical medicine as well as rehabilitation and in pain management through the American Board of Anesthesia.

If you have any questions on the scientific content of this article, please call a Life Extension® Health Advisor at 1-866-864-3027.

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Higher Potency ArthroMax™

Full-Spectrum Joint Support
Now with Standardized Theaflavins

As we age, structural alterations occur in our joints, leading to painful inflammation, discomfort, and loss of mobility.

ArthroMax™ is a multi-nutrient formula designed to provide broad-spectrum support for aging joints and cartilage. Based on recent scientific findings, **ArthroMax™ has been improved with higher potencies and an exciting new ingredient.**

ArthroMax™ contains more **glucosamine sulfate** along with a special **Boswellia extract** known as **5-LOXIN®**. Glucosamine sulfate provides underlying structural foundation for joints, while 5-LOXIN® inhibits the 5-lipoxygenase enzyme, thereby reducing levels of pro-inflammatory leukotriene B4.*

Key New Ingredient... Black Tea Theaflavins

Inflammatory reactions are regulated by a series of "cytokines" produced in the body. Normal aging results in an unfavorable balance of these **cytokines** that contributes to persistent inflammatory conditions. New studies have shown that a special fraction found in **black tea** suppresses proinflammatory cytokines at the genomic level. Scientists have found that these compounds called **theaflavins** uniquely down-regulate the expression of genes and cytokines associated with inflammatory conditions.

ArthroMax™ formula provides these bioactive **theaflavin** fractions, along with **methylsulfonylmethane (MSM)**, which contains sulfur components

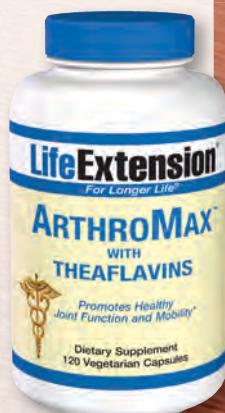
that are critically important in maintaining comfortable joint function.* ArthroMax™ also contains **FruiteX B® OsteoBoron®**, a patented form of boron that is identical to natural plant forms found in food. Considered more bioavailable than other forms of boron, **FruiteX B® OsteoBoron®** also supports healthy bones and joints.*

Four vegetarian capsules of new **ArthroMax™ with Theaflavins** provide the following nutrients in one convenient, joint-protecting formula:

Black tea theaflavins with TF-2a fraction 440 mg
Glucosamine sulfate (from corn)	2000 mg
MSM (methylsulfonylmethane)	1000 mg
5-LOXIN®	100 mg
Boron (as patented FruiteX B® OsteoBoron®)	1.5 mg

ArthroMax™ with Theaflavins has less than 10 mg of caffeine per serving (the amount found in a quarter cup of brewed green tea).

The retail price of a bottle of 120 vegetarian capsules of **ArthroMax™ with Theaflavins** is \$44. If a member buys four bottles during **Super Sale**, the price is reduced to only \$27 a bottle.



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Item #01303

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new **Discover the Plant-Based
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Japanese Women Have
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Skin Restoring Ceramides with Lipowheat™

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Ceramides have been available to Japanese women as a functional food since 2000.⁷ The hydrating action of **Lipowheat™ ceramides** have proven highly effective in clinical trials.

To take one example, after just three months use of **Lipowheat™**, a group of people suffering from dry, flaking skin reported dramatic improvement in the look and feel of their skin. These results were verified by electrochemical analysis showing that **95%** of participants exhibited improved skin hydration. Even better, all subjects who at the onset of the study experienced chronic itching reported sharply decreased itching or **complete elimination** of the problem by the end of the study!⁸

You can now offset the visible impact of the gradual decline in your ability to produce enough ceramides with **Life Extension®'s Skin Restoring Ceramides with Lipowheat™**.

One bottle containing 30-350 mg liquid capsules of **Skin Restoring Ceramides with Lipowheat™** retails for \$25. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$15.53**.

Contains wheat. Contains rice and trace amounts of gluten.
Lipowheat™ is a trademark of LAVIPHARM Group of Companies.

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ASK THE DOCTOR

BY MICHAEL AZIZ, MD



Michael Aziz, MD

WHY TESTING YOUR HORMONES IS IMPORTANT

QI'm a 54-year-old woman experiencing excessive night sweating, fatigue, weight gain, and decreased energy and sex drive. My doctor says it's all a normal part of aging. I'm not so sure. I've asked him if he could check my hormones, but he brushed me off and recommended a multivitamin. What do you think?

AWhile your symptoms may be related to a variety of things, they are likely caused by a decrease in anti-aging hormones (estrogen, progesterone, growth hormone, and testosterone). That's the most likely scenario. Of course, decreased energy and weight gain could also be related to an underactive thyroid.

If your problem is low sex hormones, which is quite probably the scenario based on your age, it can be corrected with proper hormone replacement, and not just a daily multivitamin as your physician suggested. First, you need to decode your deficiency—which hormones are you really missing? You certainly don't want to replace hormones that you already have in adequate amounts.

ASK THE DOCTOR

I suggest consulting with an experienced anti-aging doctor—such as those in the fellowship program of the American Academy of Anti-Aging—who knows how to test for hormones and interpret the results. Let's say your thyroid and growth hormone test results come back normal, but your sex hormones are low. Living with these symptoms as you age does not have to happen. Your sex hormones can be replaced with the right dose of bioidentical hormones or even by taking the right supplements. Bioidentical hormones' structure is identical to human sex hormones (estrogen, progesterone, and testosterone). They are currently used routinely in Europe and have been shown in studies to be safe. Bioidentical hormones are different than the synthetic hormone drugs that doctors use in the US, such as Premarin® and Prempro®, which are quite dangerous.

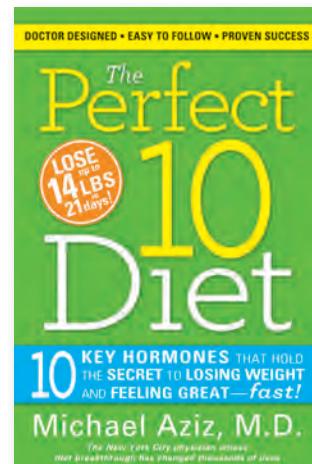
Life Extension® offers an extensive blood test panel for both men and women to test for hormones. They also have multiple supplement formulas that support these important sex hormones. The first step is to have your blood tested using Life Extension's **Female Hormone Blood Panel**. The results will enable you and your doctor to restore your hormones back to youthful ranges.

If your problem is low sex hormones, which is quite probably the scenario based on your age, it can be corrected with proper hormone replacement.

Dr. Aziz is an attending physician at Lenox Hill Hospital in New York City.

He is a member of the American College of Physicians/American Society of Internal Medicine, and a fellow of The Royal Society of Medicine in the United Kingdom. He is a speaker for many distinguished organizations, including the American Academy of Anti-Aging Medicine.

Dr. Aziz has been featured on national TV and radio shows, including The View, The Doctors, 700 Club, and Good Morning America Health. He is a regular contributor to The Mel Robbins Show, a nationally syndicated radio program. He is also the medical director for IBN Sports, a website that reaches millions of students and athletes in California.



For more information on *The Perfect 10 Diet* visit www.Perfect10Diet.com. To participate in The Perfect 10 Diet System in conjunction with Life Extension, please email Perfect10diet@aol.com.

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With research showing that by the time a man is 60 years old, he may produce 60% less testosterone than he did in his 20s, the time is now to add Life Extension's Super MiraForte with Standardized Lignans to your supplement regimen.

Each daily dose of Super MiraForte contains the following testosterone supporting ingredients:

1500 mg	Chrysin
15 mg	Bioperine®
850 mg	Muira puama
282 mg	Nettle root
50 mg	Ginger root
15 mg	Chelated elemental zinc
320 mg	Maca
33.4 mg	HMRlignan™ Norway Spruce lignan extract



Item # 01315

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Overlooked in the effort to support **sexual function** in aging men is the health of the **vascular system**. Blood flow through the delicate lining of the arteries (the *endothelium*) is essential to sexual arousal, so it should come as no surprise that **endothelial function** is closely associated with male sexual capacity.¹

Life Extension® has discovered supportive clinical research for a scientifically validated, *natural* dietary supplement formula to promote **endothelial function and blood flow** to the place men need it most—for maximum performance.

The ingredients found in **Prelox® Natural Sex for Men®** have yielded compelling and highly satisfactory results in **five independent clinical studies.**²⁻⁶

Our analysis also confirms that unlike some performance enhancement supplements marketed as "natural," **Prelox® Natural Sex for Men®** is not adulterated with trace amounts of prescription drugs.

A Powerful Synergy to Support Sexual Health

The patented blend of the following *natural* ingredients positively affects the male physiology in three ways, to provide optimal support:

1. **PYCNOGENOL®** (standardized French maritime pine bark extract) activates **endothelial nitric oxide synthase** (eNO-S),⁷ the enzyme required to make **nitric oxide**. Nitric oxide (NO) relaxes the vessels that enable efficient blood flow—the key to healthy male sexual activity and overall vascular health. Pycnogenol® further amplifies this relaxing effect by extending the amount of time nitric oxide remains in the bloodstream.
2. **L-ARGININE** is the biological precursor to nitric oxide synthesis in the endothelium.⁷ It interacts **synergistically** with Pycnogenol® to sustain nitric oxide levels sufficient for healthy sexual function.
3. **ICARIIN**—a natural plant extract used in traditional Chinese medicine—has been shown to **deactivate** the enzyme normally responsible for winding down male sexual response, further promoting sustained activity.⁸ Prelox® Natural Sex for Men® contains a standardized extract providing a proprietary form of pure, high-quality icariin.

The suggested dose of two Prelox® Natural Sex for Men® tablets each day provides:

Prelox® Proprietary Blend	1440 mg
L-Arginine HCl, Aspartic Acid, Pycnogenol® Dried French Maritime Pine (<i>Pinus pinaster</i>) Extract (bark)	
Natural Sex®	120 mg
Epimedium sagittatum Extract (aerial parts) [providing 60 mg icariin]	



A 60-tablet bottle of **Life Extension® Prelox® Natural Sex for Men®** retails for \$50. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$30.38 per bottle**. **Contains corn.**

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Go Green, Get Healthy



Turns out, the advice you got as a child to “eat your greens” could pay off major dividends as an adult. Scientists have recently identified extracts from green vegetables like broccoli, cabbage, and Brussels sprouts that help maintain healthy hormone levels. Having optimal hormone levels is essential to any anti-aging strategy. In addition, many of these extracts contain *glucosinolates*, *isothiocyanates*, *carnosic acid*, and *carnosol* – bioactive compounds that have a wide variety of favorable effects on estrogen metabolism and cell division.¹⁻⁴

Triple Action Cruciferous Vegetable Extract with Apigenin combines a **broccoli Super Concentrate** with **watercress**, **Indole-3-Carbinol (I3C)**, **rosemary extract**, **cat's claw extract**, **cabbage extract**, **DIM**, and **apigenin**, a powerful plant flavonoid found in plants such as **parsley** and **celery**, to form the most comprehensive cruciferous vegetable supplement available.⁵

For those who don't have the time to consume each of the above vegetables each and every day, **Triple Action Cruciferous Vegetable Extract with Apigenin** is the perfect solution to making sure your body gets the important extracts it needs from these crucial food sources. For those weighing less than 160 pounds, just one vegetarian capsule a day provides optimal potencies. Those weighing over 160 pounds should consider taking two capsules a day. A 60-vegetarian capsule bottle of **Triple Action Cruciferous Vegetable Extract** retails for \$24. If a member buys four bottles during **Super Sale**, the price is reduced to only **\$14.85 per bottle**.

Those who want to obtain the benefits of **resveratrol** can order **Triple Action Cruciferous Vegetable Extract with Resveratrol**. Each capsule provides **20 mg** of **resveratrol** in addition to the **vegetable extracts** and retails for \$32 per 60-capsule bottle. When a member buys four bottles during **Super Sale**, the price is reduced to only **\$19.98 per bottle**.



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Triple Action Cruciferous Vegetable Extract provides the following concentrates in just one vegetarian capsule:

Broccoli Super Concentrate	400 mg
[standardized to 4% glucosinolates (16 mg)]	
Watercress 4:1 extract	50 mg
Indole-3-Carbinol (I3C)	80 mg
Rosemary Extract	50 mg
Cat's Claw Extract	50 mg
Cabbage Extract	25 mg
DIM (di-indolyl-methane)	14 mg
Apigenin	25 mg

Contains yeast and corn.

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ENHANCE Heart Health

Poorly functioning arteries can have fatal consequences. Whether they become blocked or ultimately fail, the end result may be the same: death.

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While both of these components have been clinically shown to help with blood flow and age-related changes in endothelial function, Life Extension has made the best endothelial product on the market even more powerful by adding **Full-Spectrum Pomegranate**.¹⁻⁷

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The unique blend of **pomegranate flower extract and seed oil** in **Endothelial Defense** contains potent polyphenols that provide support for youthful **lipid** and **glucose** metabolism, natural **immunity**, and help with **inflammatory factors**.⁸

The daily serving of 2 softgels of Endothelial Defense™ contains:

Superoxide Dismutase/Gliadin Complex (GliSODin®) [SOD (Superoxide Dismutase) Enzyme Activity = 500 IU]	500 mg
POMELLA® Pomegranate (<i>Punica granatum</i>) Extract (fruit) [std. to 30% punicalagins (120 mg)]	400 mg
Pomegranate (<i>Punica granatum</i>) 5:1 Extract (fruit)	100 mg
PomComplete™ Pomegranate (<i>Punica granatum</i>) Blend [flower extract and seed oil (standardized to 22% [30 mg] punicic acid)]	137.5 mg

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A bottle containing 60 softgels of **Endothelial Defense™ with Full-Spectrum Pomegranate™** retails for \$56. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$35.10** per bottle.

Contains soybeans and wheat. Contains gluten.

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**DON'T LET YOUR LOVED ONES
SUFFER A NEEDLESS**

Heart Attack

GIVE THE HOLIDAY GIFT THAT SAVES LIVES!

Heart disease remains the leading killer of people in civilized societies. The most common culprit is *blockage* of coronary arteries that supply oxygenated blood to the heart muscle. When this happens, a person is said to have had a **heart attack**.

People seldom die of a "sudden" heart attack. Instead, coronary artery blockage represents an accumulation of risk factors that were reversible if detected before the heart attack happened.

Doctors refer to the condition in which fatty material collects along the walls of arteries as **atherosclerosis**. When this fatty material converts to hard plaque, the arteries are then defined as being "calcified." **Coronary calcification** is a strong indicator that one has diseased arteries that feed the heart muscle and are at high risk for suffering a heart attack.

High LDL Levels in Early Life Predict Coronary Calcification

A meticulous study published this year in the *Annals of Internal Medicine* looked at a large group whose blood was initially tested between ages **18-30**. Seven additional **blood tests** were done on each person over a **20-year** period.

The results showed that those with the highest **LDL** (over **160 mg/dL**) were **5.6 times** more likely to have calcium buildup in their coronary arteries by **age 45**.¹

LDL (low-density lipoprotein) transports cholesterol from the liver throughout the vascular system. In the presence of excess **LDL**, too much **cholesterol** saturates the blood and contributes to arterial occlusion. This study in the *Annals of Internal Medicine* showed that over a 20-year period, those with even *moderately* elevated LDL (**100-129 mg/dL**) were **2.4 times** more likely to have coronary calcification.

LDL and Cholesterol Not Only Causes of Atherosclerosis

One can have healthy LDL and cholesterol readings and still suffer a heart attack or stroke if triglycerides, glucose, iron, calcium, and other atherosclerosis-inducers are elevated.

For example, a study of nearly 2,000 men looked at fasting blood **glucose** levels over a 22-year period. The results showed that men with **fasting glucose** over **85 (mg/dL)** had a **40% increased** risk of death from cardiovascular disease.²

In another study involving 1,800 people, impaired fasting glucose significantly increased coronary disease risk in comparison with the normal glucose group.³ The scientists who conducted this study concluded by stating:

"Early control of blood glucose is essential to prevention and control of coronary heart disease."

Urgent Need to Test Blood of Younger People

Scientific studies validate the urgent need for everyone to have their blood tested for LDL, glucose, calcium, and other cardiac risk factors starting no later than age 18.

The inconvenience and high cost of setting up appointments at doctor's offices precludes many younger people from having their blood tested.

The good news is that Life Extension® offers a low-cost **CBC/Chemistry Blood Panel** to assess risks for atherosclerosis, including **LDL, glucose, triglycerides, total cholesterol, calcium, and HDL**. This comprehensive blood test panel also measures kidney and liver function along with counts of immune cells, oxygen-carrying cells, and platelets.

Assess Cardiac Risk Factors for only \$35!

You might pay over **\$100** at commercial labs for the tests included in Life Extension's **CBC/Chemistry Blood Panel**. As a Foundation member, however, you can order these blood tests as **holiday gifts** for only **\$35** each.

After you place your order(s), we can send you or the person(s) you care about a letter explaining the importance of these comprehensive tests along with a list of blood draw stations in their area. They can usually walk in at their convenience for a quick blood draw. Most people do this first thing in the morning in order to obtain a fasting reading. The results will be mailed directly to them shortly thereafter. Life Extension Health Advisors are available to help them understand their test results at no charge.

To order the low-cost CBC/Chemistry Blood Panel for only \$35, call 1-800-208-3444 (24 hours a day) or visit www.lef.org/cbc-sale

Products

AMINO ACIDS

Acetyl-L-Carnitine
Acetyl-L-Carnitine-Arginate
Branched Chain Amino Acids
D, L-Phenylalanine Capsules
GABA Powder
Glycine Capsules
Glycine Powder
Arginine Capsules
L-Arginine Free Base Powder
Arginine/L-Ornithine Capsules
L-Carnitine Capsules
L-Cysteine Capsules
L-Glutathione, L-Cysteine & C
L-Glutamine Capsules
L-Glutamine Powder
L-Lysine Capsules
L-Lysine Powder
L-Tyrosine Tablets
Mega L-Glutathione Capsules
N-Acetyl Cysteine Capsules
Optimized Carnitine with GlycoCarn®
PharmaGABA
Super Carnosine Capsules
Taurine Capsules
Tryptopure® Tryptophan
(Optimized) Tryptopure® Plus

BONE & JOINT HEALTH

ArthroMax™ with Theaflavins
Bone-Up™
Bone Restore™
Bone Strength Formula w/KoAct™
Chondroitin Sulfate
Chondrox
Fast Acting Joint Formula
Glucosamine Chondroitin Capsules

BRAIN HEALTH

Acetyl-L-Carnitine
Acetyl-L-Carnitine-Arginate
CDP Choline Capsules
Cognitex with NeuroProtection Complex
Cognitex with Pregnenolone & NeuroProtection Complex
Cognitex Basics
DMAE
DMAE-Ginkgo
Ginkgo Biloba Certified Extract™
Huperzine A
Lecithin with B5 and BHA
Lecithin Granules
Methylcobalamin Lozenges
Optimized Ashwagandha Extract
Phosphatidylserine Capsules
Rhodiola Extract
Super Ginkgo Extract
Vinpocetine

DIGESTIVE

Agave Digestive-Immune Support
Bromelain Powder
Carnosothe w/PicroProtect
Digest RC™
Enhanced Super Digestive Enzymes
(also available with Probiotics)
Florastor
Intact Digest
Life Flora™
Natural EsoGuard
N-Zimes™
Pancreatin
Primal Defense
Regimint™
Saccharomyces Boulardii+mos

DURK AND SANDY PRODUCTS

Blast™
Dual-C
Inner Power™
Memory Upgrade

EYE CARE

Bilberry Extract
Blackcurrant Freeze Dried Extract
Brite Eyes III

Overcast Polarized Sunglasses
Solarshield Sunglasses
Super Zeaxanthin with Lutein & Meso-Zeaxanthin and C3G
(Plus Astaxanthin also available)
Vision Optimizer

FIBER

Apple Pectin Powder
Fiber Food
Hi-Lignan® Nutri-Flax®
SlimStyles® PGX
WellBetX PGX® Soluble Fiber Blend

FOOD

Asian Cruciferous Vegetable Soup
Cruciferous Vegetable Soup

HAIR CARE

Dr. Proctor's Advanced Hair Formula
Dr. Proctor's Shampoo
Life Extension Shampoo and Conditioner
Super-Absorbable Tocotrienols

HEART HEALTH

Advanced Lipid Control
Cho-Less
D-Ribose Capsules
D-Ribose Powder
Endothelial Defense™ with Full-Spectrum Pomegranate™
Fibrinogen Resist
Forskolin
Homocysteine Resist
Low Dose Aspirin (Enteric Coated)
Natural BP Management
Peak ATP® with GlycoCarn®
Policosanol
Red Yeast Rice
Super Absorbable CoQ10™ with d-Limonene
Super Omega-3 EPA/DHA with Sesame Lignans & Olive Fruit Extract
Super Ubiquinol CoQ10
Super Ubiquinol CoQ10 with Enhanced Mitochondrial™ Support
Strynol™
Theaflavin Standardized Extract
TMG Powder
TMG Tablets

HERBAL/PHYTO PRODUCTS

Artichoke Leaf Extract
Astaxanthin
Berry Complete
Blackcurrant Juice Concentrate
Blueberry Extract
Blueberry Extract w/Pomegranate
Butterbur Extract w/Standardized Rosmarinic Acid
Calcium D-Glucarate
Cilantro Herbal Extract
Citrus Bioflavonoid
Enhanced Berry Complete with RZD™ Acai
Grapeseed Extract with Resveratrol & Pterostilbene
Huperzine A with Natural Vitamin E
Kyolic® Garlic Formula 105
Kyolic® Reserve
Lycopene
Mega Green Tea Extract
Mega Green Tea Extract (Decaffeinated)
Mega Lycopene
Mega Silymarin with Isosilybin B
Nutrim
Optimized Ashwagandha Extract
Pomegranate Extract
(Full-Spectrum) Pomegranate™
Pomegranate Juice Concentrate
ProGreens®
Pure-Gar™
Pycnogenol
Optimized Quercetin
Resveratrol with Synergistic Grape-Berry Actives

Rhodiola Extract
Rosmarinic Acid Extract
Silymarin
SODzyme™ with GluSODin®
Stevia Extract
Super Bio-Curcumin®
Super Curcumin with Bioperine®
Super Ginkgo Extract
Triple Action Cruciferous Vegetable Extract
Venotone
Whole Grape Extract

HORMONES

7-Keto® DHEA
DHEA
DHEA Complete
GH Pituitary Support Day Formula
GH Pituitary Support Night Formula
Melatonin
Melatonin Timed Release
Natural Estrogen with Pomegranate Extract
Pregnenolone
ProFem Cream
Pure IGF
Super Miraforte with Standardized Lignans

IMMUNE ENHANCEMENT

Agave Digestive-Immune Support
AHCC® (Active Hexose Correlated Compound)
Buffered Vitamin C Powder
Echinacea
Enhanced Life Extension Whey Protein
i26 Hyperimmune Egg
Immune Protect with PARACTIN®
Lactoferrin
Lifeshield® Immunity™
Maitake SX-Fraction
Norwegian Shark Liver Oil
Primal Defense™
ProBoost™ Thymic Protein A
Pure Gar™
Sambu® Guard
Theralac Capsules
Thymic Immune Factors
Ultimate Flora Advanced Immunity
Vitamin C with Dihydroquercetin
Zinc Lozenges with Vitamin C

INFLAMMATORY REACTIONS

Arthro-Immune Joint Support
ArthroMax™ with Theaflavins
Barlean's Kids DHA
Boswellia
Boswellia™ Topical Cream
Bromelain (Specially-coated)
Coromega Kids Brain and Body (DHA)
DHA 240
Emulsified Norwegian Cod Liver Oil
Emulsified Super Twin EPA/DHA
Fast Acting Joint Formula
5-LOXIN®
Mega EPA/DHA
Mega GLA with Sesame Lignans
MSM
Natural Relief 1222™ Cream
PhosphOmega™ Krill Oil
Serraflazyme
SODzyme™ with GluSODin® and Wolfberry
Super Omega-3 EPA/DHA with Sesame Lignans & Olive Fruit Extract
Tart Cherry
Udo's Choice Oil
Zyflamend Easy

LIVER HEALTH

Branch Chain Amino Acids
HepatoPro
Mega Silymarin with Isosilybin B
N-Acetyl Cysteine
SAMe
Silymarin

MINERALS

Biosil
Bone Restore
Bone Strength Formula w/KoAct™
Bone-Up™

Products

Boron Capsules
Calcium Citrate with D3
Chromium Ultra
Copper
Dr. Strum's Intensive Bone Formula
Iodoral
Iron Protein Plus
Magnesium
Magnesium Citrate
Mineral Formula for Men
Mineral Formula for Women
Only Trace Minerals
Optimized Chromium w/Crominex® 3+
OptiZinc
Sea-Iodine™
Selenium
Se-Methylselenocysteine
Strontium
Vanadyl Sulfate
Zinc/Vitamin C Lozenges

MISCELLANEOUS

Blood Pressure Monitor Arm Cuff Medium
Cell Sensor Gauss Meter™
(Nutribase) CRWay Edition
Advanced Dietary Software
Empty Gelatin Capsules
The Capsule Filler Machine
The Pill Cutter and Grinder

MITOCHONDRIAL SUPPORT

Acetyl-L-Carnitine
Acetyl-L-Carnitine-Arginate
Mitochondrial Basics w/BioPQQ™
Mitochondrial Energy Optimizer w/BioPQQ™
Optimized Carnitine with GlycoCarn®
Super Absorbable CoQ10™ with d-Limonene
Super Alpha Lipoic Acid with Biotin
Super R-Lipoic Acid
Super Ubiquinol CoQ10 with Enhanced
Mitochondrial™ Support

MOOD RELIEF

L-Theanine
5 HTP
Natural Stress Relief
Optimized TryptoPure™ Plus
Stabilium® 200
SAMe
St. John's Wort Extract
Tryptopure™ L-Tryptophan

MOUTH CARE

Advanced Oral Hygiene
Dr. Tung's Tongue Cleaner
Life Extension Mouthwash w/Pomegranate
Life Extension Toothpaste
MistOral III™ with CoQ10

MULTIVITAMIN

Children's Formula Life Extension Mix
Comprehensive Nutrient Pack
Life Extension Booster
Life Extension Mix™ Capsules
Life Extension Mix™ Powder
Life Extension Mix™ Tablets
Life Extension Mix™ w/o Copper Capsules
Life Extension Mix™ w/o Copper Tablets
Life Extension Mix™ w/Extra Niacin
Life Extension Mix™ w/Extra Niacin w/o Copper
Life Extension Mix™ w/Stevia Powder
Life Extension Mix™ w/Stevia w/o Copper Powder
Life Extension One-Per-Day
Life Extension Two-Per-Day
Super Booster Softgels w/Advanced K2 Complex
Vital Greens Mix

PET CARE

Life Extension Cat Mix
Life Extension Dog Mix

PROSTATE & URINARY HEALTH

BetterWOMAN®
Optimized Cran-Max® with UTIRose™
5-LOXIN®

(Water-Soluble) Pumpkin Seed Extract
Super Saw Palmetto with Beta-Sitosterol
Super Saw Palmetto/Nettle Root Formula
w/Beta-Sitosterol
Ultra Natural Prostate Formula

SKIN CARE

Anti-Aging Mask
Anti-Glycation Serum
Antioxidant Rejuvenating Foot Cream
Antioxidant Rejuvenating Foot Scrub
Antioxidant Rejuvenating Hand Cream
Antioxidant Rejuvenating Hand Scrub
Anti-Redness & Blemish Lotion
Cellulite Suppress™ Formula
Corrective Clearing Mask
Derma Whey
Dual-Action MicroDerm Abrasion
Essential Plant Lipids Reparative Serum
Face Master® Platinum
Face Rejuvenating Antioxidant Cream
Enhanced FernBlock® with Sendara™
Fine Line-Less
Hair Suppress Formula
Healing Formula All-in-One Cream
Healing Mask
Hyaluronic Facial Moisturizer
Hydrating Anti-oxidant Face Mist
Hydroderm®
Lavilin Underarm Deodorant
Life Extension Sun Protection Spray
Lifting & Tightening Complex
Melatonin Cream
Mild Facial Cleanser
NaPCA w/Aloe Vera
Neck Rejuvenating Antioxidant Cream
New Face Solution
Peel Off Cleansing Mask
Pigment Correcting Cream
(Ultra) Rejuvenex®
Rejuvenex® Body Lotion
Rejuvenex® Factor
Rejuvenating Serum
Skin Lightening Serum
Skin Restoring Ceramides w/Lipowheat™
Skin Stem Cell Serum
Total Sun Protection Cream
Triple Action Under Eye Rejuvenator
Ultra Rejuvenex®
Ultra RejuveNight® w/ Progesterone
Ultra RejuveNight® w/o Progesterone
Ultra Lip Plumper
Ultra Wrinkle Relaxer
Under Eye Refining Serum
Under Eye Rescue Cream
Vitamin C Serum
Vitamin D Lotion
Vitamin K Healing Cream

SOY

Natural Estrogen w/Pomegranate
Soy Power Powder
Soy Protein Concentrate
Super Absorbable Soy Isoflavones
Ultra Soy Extract

SPECIAL PURPOSE FORMULA

Anti-Alcohol Antioxidants w/HepatoProtection Complex
Benfotiamine w/Thiamine
Breast Health Formula
Butterbur Extract w/Standardized Rosmarinic Acid
Chlorella
Chlorophyllin w/Zinc
Coriolus Versicolor Super Strength
CR Mimetic Longevity Formula
Derma-Vits™
Cinsulin® w/InSea^{2TM} and Crominex® 3+
EDTA
(European Leg Solution) Diosmin 95
Fem Dophilus
Femmenessence MacaPause®
GlucoFit™
Ideal Bowel Support 299V

Lustre™
Maitake SX-Fraction™
Menopause Solutions
Migra-eeze™
Natural Female Support
Organic Total Body Cleanse
Pecta-Sol®
Potassium Iodide
PQQ Caps with BioPQQ™
Prelox® Natural Sex for Men®
Pyridoxal 5' - Phosphate
Rosmarinic Acid Extract

SPORTS PERFORMANCE

Enhanced Life Extension Protein
DMG (N, N-dimethylglycine)
Inosine
L-Glutamine Capsules
L-Glutamine Powder
Micronized Creatine Capsules
Micronized Creatine Powder
Octacosanol

VITAMINS

Ascorbic Acid Powder
Ascorbyl Palmitate Capsules
B1
B2
B12
Beta-Carotene
Biotin Capsules
Biotin Powder
Buffered Vitamin C Powder
Complete B Complex
Essential Fat-Soluble Nutrient
Folic Acid + B12
Gamma E Tocopherol w/Sesame Lignans
Gamma E Tocopherol/Tocotrienols
Inositol Capsules
Inositol Powder
Mega Lycopene Extract
Methylcobalamin
MK-7
No-Flush Niacin
Optimized Folate
PABA Capsules
Super Ascorbate C Capsules
Super Ascorbate C Powder
Super K w/Advanced K2 Complex
Tocotrienols w/Sesame Lignans
(Interplexus) Vitamin A Nutrisorb
Vitamin B3 (Niacin) Capsules
Vitamin B6
Vitamin B12 Tablets
Vitamin C
Vitamin D
Vitamin D3
Vitamin D3 w/Sea-Iodine™
Vitamins D and K w/Sea-Iodine™
Vitamin E
Vitamin K1

WEIGHT MANAGEMENT

Alli® Refill Pack
Belly Slim & Tone
Calorie Control Weight Management Formula
7-Keto DHEA
DHEA Complete
Fucoxanthin Slim™
HCA
Integra-Lean® Irvingia
LuraLean® Caps Special Propolmannan
Particle Size
Optimized Irvingia w/Phase 3™ Calorie Control Complex
Optimized Saffron with Satireal®
Life Mix
Natural Appetite Control
Natural Glucose Absorption Control
SlimStyles® PGX Natural Weight Loss
Stevia Liquid Extract
Super CLA Blend w/Guarana and
Sesame Lignans
Super CLA Blend w/Sesame Lignans
Udo's Choice Wholesome Fast Food Blend
WellBetX PGX® Soluble Fiber Blend

Buyers Club Order Form

SUPER SALE SAVINGS ON ALL PRODUCTS
To order call: 1-954-766-8433 or 1-800-544-4440

No.		Retail	Member Price	Qty	Total
A					
00449	ACETYL-L-CARNITINE - 500 mg, 100 caps	\$56.00	\$42.00		
	ACETYL-L-CARNITINE - 4 bottles of 100 caps	186.64	139.98		
00788	ACETYL-L-CARNITINE ARGINATE - 100 caps	59.00	44.25		
	ACETYL-L-CARNITINE ARGINATE - 4 bottles of 100 caps	203.96	152.97		
01308	ADVANCED LIPID CONTROL - 60 veg. caps	30.00	22.50		
	ADVANCED LIPID CONTROL - 4 bottles of 60 veg. caps	108.00	81.00		
01300	ADVANCED ORAL HYGIENE - 60 veg. mint lozenges	20.00	15.00		
	ADVANCED ORAL HYGIENE - 4 bottles of 60 veg. mint lozenges	72.00	54.00		
01417	AGAVE DIGESTIVE-IMMUNE SUPPORT - 360 grams of powder	30.00	22.50		
	AGAVE DIGESTIVE-IMMUNE SUPPORT - 4 bottles of powder	108.00	81.00		
00681	AHCC - 500 mg, 30 caps	48.98	36.74		
	AHCC - 4 bottles of 30 caps	174.20	130.65		
46925	ALLI® REFILL PACK - 60 mg, 120 caps	69.95	58.00		
00457	(SUPER) ALPHA-LIPOID ACID W/BIOTIN - 250 mg, 60 caps	37.00	27.75		
	(SUPER) ALPHA-LIPOID ACID w/BIOTIN - 4 bottles of 60 caps	128.00	96.00		
01440	ANTI-ALCOHOL ANTIOXIDANTS W/HEPATOPRO - 100 caps	26.00	19.50		
	ANTI-ALCOHOL ANTIOXIDANTS W/HEPATOPRO - 4 bottles of 100 caps	92.00	69.00		
00105	APPLE PECTIN POWDER - 227 grams of powder	14.75	11.06		
	APPLE PECTIN POWDER - 4 bottles of powder	55.00	41.25		
01012	ARGININE CAPS - 800 mg, 200 caps	26.50	19.88		
	ARGININE CAPS - 4 bottles of 200 caps	93.00	69.75		
01039	ARGININE/ORNITHINE CAPS - 500/250 mg, 100 caps	16.00	12.00		
	ARGININE/ORNITHINE CAPS - 4 bottles of 100 caps	58.00	43.50		
00038	ARGININE/ORNITHINE POWDER - 150 grams of powder	22.95	17.21		
	ARGININE/ORNITHINE POWDER - 4 bottles of powder	76.00	57.00		
01025	(L)-ARGININE FREE-FORM POWDER - 100 grams of powder	15.98	11.99		
	(L)-ARGININE FREE-FORM POWDER - 4 bottles of powder	57.24	42.93		
01303	ARTHROMAX™ w/THEAFLAVINS - 120 veg. caps	44.00	33.00		
	ARTHROMAX™ w/THEAFLAVINS - 4 bottles of 120 veg. caps	160.00	120.00		
01404	ARTHRO-IMMUNE JOINT SUPPORT - 60 veg. caps	30.00	22.50		
	ARTHRO-IMMUNE JOINT SUPPORT - 4 bottles of 60 veg. caps	104.00	78.00		
00919	ARTICHOKE LEAF EXTRACT - 500 mg, 180 veg. caps	28.00	21.00		
	ARTICHOKE LEAF EXTRACT - 4 bottles of 180 veg. caps	101.52	76.14		
00086	(SUPER) ASCORBATE C POWDER - 8 oz of powder	26.99	20.24		
	(SUPER) ASCORBATE C POWDER - 4 bottles of powder	99.48	74.61		
00080	ASCORBIC ACID POWDER - 16 oz of powder vitamin C	38.00	28.50		
	ASCORBIC ACID POWDER - 4 bottles of powder vitamin C	139.72	104.79		
00082	ASCORBYL PALMITATE CAPSULES - 500 mg, 100 caps	22.50	16.88		
	ASCORBYL PALMITATE CAPSULES - 4 bottles of 100 caps	80.00	60.00		
00888	(OPTIMIZED) ASHWAGANDHA EXTRACT - 60 veg. caps	10.00	7.50		
	(OPTIMIZED) ASHWAGANDHA EXTRACT - 4 bottles of 60 veg. caps	36.00	27.00		
01066	(LOW DOSE) ASPIRIN ENTERIC COATED - 81 mg, 300 tablets	6.00	4.50		
	(LOW DOSE) ASPIRIN ENTERIC COATED - 4 bottles of 300 tablets	21.32	16.00		
00708	ASTAXANTHIN - 2 mg, 30 softgels	10.25	7.69		

* These products are not 25% off retail price.

SUB-TOTAL OF COLUMN 1

JANUARY 2011

No.		Retail	Member Price	Qty	Total
B					
01040	BELLY SLIM & TONE - 6 fl oz	\$42.00	\$31.50		
	BELLY SLIM & TONE - 4 bottles of 6 fl oz	152.00	114.00		
00920	BENFOTIAMINE W/ THIAMINE - 100 mg, 120 caps	19.95	14.96		
	BENFOTIAMINE W/ THIAMINE - 4 bottles of 120 caps	74.40	55.80		
00925	(MEGA) BENFOTIAMINE - 250 mg, 120 veg. caps	30.00	22.50		
	(MEGA) BENFOTIAMINE - 4 bottles of 120 veg. caps	108.00	81.00		
01206	BERRY COMPLETE - 30 veg. caps	21.00	15.75		
	BERRY COMPLETE - 4 bottles of veg. caps	74.68	56.00		
01406	(ENHANCED) BERRY COMPLETE w/RZD™ ACAI - 60 veg. caps	29.00	21.75		
	(ENHANCED) BERRY COMPLETE w/RZD™ ACAI - 4 bottles of veg. caps	104.00	78.00		
00664	BETA-CAROTENE - 25,000 IU, 100 softgels	10.98	8.24		
	BETA-CAROTENE - 4 bottles of 100 softgels	39.32	29.49		
00653	BETTERWOMAN - 40 caps	40.00	30.00		
	BETTERWOMAN - 4 bottles of 40 caps	152.00	114.00		
01073	BILBERRY EXTRACT - 100 mg, 100 veg. caps	28.00	21.00		
	BILBERRY EXTRACT - 4 bottles of 100 veg. caps	100.00	75.00		
*01006	BIOSIL™ - 5 mg, 30 veg. caps	18.95	15.16		
*01007	BIOSIL™ - 30 fl ml	29.99	23.99		
00102	BIOTIN CAPSULES - 600 mcg, 100 caps	7.50	5.63		
	BIOTIN CAPSULES - 4 bottles of 100 caps	26.00	19.50		
00145	BIOTIN POWDER - 30 grams of powder	12.50	9.38		
	BIOTIN POWDER - 4 bottles of powder	44.00	33.00		
01037	BLACKCURRANT FREEZE DRIED EXTRACT - 60 veg. caps	21.95	16.46		
01034	BLACKCURRANT JUICE CONCENTRATE - 12 fl. oz	17.95	13.46		
01008	BLAST™ - 600 grams of powder	26.95	20.21		
70000	BLOOD PRESSURE MONITOR-ARM CUFF (medium)	99.95	64.97		
70001	BLOOD PRESSURE MONITOR-WRIST (travel size)	69.95	45.47		
01214	BLUEBERRY EXTRACT - 60 veg. caps	22.50	16.88		
	BLUEBERRY EXTRACT - 4 bottles of 60 veg. caps	80.00	60.00		
01438	BLUEBERRY EXTRACT w/ POMEGRANATE - 60 veg. caps	30.00	22.50		
	BLUEBERRY EXTRACT w/ POMEGRANATE - 4 bottles of 60 veg. caps	108.00	81.00		
01506	(DR. STRUM'S INTENSIVE) BONE FORMULA - 300 veg. caps	56.00	42.00		
	(DR. STRUM'S INTENSIVE) BONE FORMULA - 4 bottles of 300 veg. caps	200.00	150.00		
00811	BONE RESTORE - 150 caps	22.50	16.88		
	BONE RESTORE - 4 bottles of 150 caps	78.00	58.50		
01211	BONE STRENGTH FORMULA w/KOACT™ - 120 caps	42.00	31.50		
	BONE STRENGTH FORMULA w/KOACT™ - 4 bottles of 120 caps	152.00	114.00		
00313	BONE-UP® - 240 caps (hydroxyapatite complex)	24.95	18.71		
	BONE-UP® - 4 bottles of 240 caps	90.00	67.50		
01379	BOOSTER - 60 softgels	48.00	36.00		
	BOOSTER - 4 bottles of 60 softgels	176.00	132.00		
01380	(SUPER) BOOSTER w/ADVANCED K2 COMPLEX - 60 softgels	42.00	31.50		
	(SUPER) BOOSTER w/ADVANCED K2 COMPLEX - 4 bottles of 60 softgels	152.00	114.00		
00621	BORON CAPS - 3 mg, 100 caps	5.95	4.46		
	BORON CAPS - 4 bottles of 100 caps	21.00	15.75		
00202	BOSWELLA - 100 caps	38.00	28.50		
	BOSWELLA - 4 bottles of 100 caps	120.00	90.00		
00258	BOSWELLA TOPICAL CREAM - 4 oz jar	15.00	11.25		
	BOSWELLA TOPICAL CREAM - 4 jars	52.00	39.00		
00253	BRANCHED CHAIN AMINO ACIDS - 90 caps	19.50	14.63		
	BRANCHED CHAIN AMINO ACIDS - 4 bottles of 90 caps	68.00	51.00		

SUB-TOTAL OF COLUMN 2

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN **ADDITIONAL 10% ON ALL PRODUCTS DURING SUPER SALE**

OFFER ENDS JANUARY 31, 2011

To order online visit www.lifeextension.com/SuperSale

No.		Retail	Member Price	Qty	Total
00999	BREAST HEALTH FORMULA - 60 veg. caps	\$34.00	\$25.50		
	BREAST HEALTH FORMULA - 4 bottles of 60 veg. caps	120.00	90.00		
00893	BRITE EYES III - 2 vials, 5 ml each	34.00	25.50		
	BRITE EYES III - 4 boxes	128.00	96.00		
00136	BROMELAIN POWDER - 100 grams of powder	21.00	15.75		
	BROMELAIN POWDER - 4 bottles of powder	75.00	56.25		
01203	(SPECIALY COATED) BROMELAIN - 500 mg, 60 enteric coated tablets	21.00	15.75		
	(SPECIALY COATED) BROMELAIN - 4 bottles of 60 tablets	76.00	57.00		
00884	BUTTERBUR EXT. W/ STANDARDIZED ROSMARINIC ACID - 60 softgels	44.00	33.00		
	BUTTERBUR EXT. W/ STANDARDIZED ROSMARINIC ACID - 4 bottles of 60 softgels	158.40	118.80		
C					
01015	CALCIUM CITRATE - 300 caps	\$24.00	\$18.00		
	CALCIUM CITRATE - 4 bottles of 300 caps	85.00	63.75		
00535	CALCIUM D-GLUCARATE - 200 mg, 60 caps	18.00	13.50		
	CALCIUM D-GLUCARATE - 4 bottles of 60 caps	60.00	45.00		
01493	CALORIE CONTROL WEIGHT MANAGEMENT FORMULA BLUEBERRY-POMEGRANATE FLAVOR - 402 grams powder	56.00	42.00		
	CALORIE CONTROL WEIGHT MANAGEMENT FORMULA BLUEBERRY-POMEGRANATE FLAVOR - 4 bottles of 402 grams powder	192.00	144.00		
	CALORIE CONTROL WEIGHT MANAGEMENT FORMULA BLUEBERRY-POMEGRANATE FLAVOR - 8 bottles of 402 grams powder	352.00	264.00		
00118	CAPSULE FILLER MACHINE FOR "00" CAPSULES	12.00	9.00		
	CAPSULE FILLER MACHINE FOR "00" CAPSULES - 4 machines	45.00	33.75		
00613	CAPSULE FILLER MACHINE FOR "0" CAPSULES	12.00	9.00		
	CAPSULE FILLER MACHINE FOR "0" CAPSULES - 4 machines	45.00	33.75		
00916	(OPTIMIZED) CARNITINE w/ GLYCOCARN® - 60 veg. caps	29.00	21.75		
	(OPTIMIZED) CARNITINE w/ GLYCOCARN® - 4 bottles of 60 veg. caps	104.40	78.30		
01041	L-CARNITINE CAPSULES - 500 mg, 30 caps	15.00	11.25		
	L-CARNITINE CAPSULES - 4 bottles of 30 caps	52.80	39.60		
01258	CARNOSOOTHE w/ PICROPROTECT™ - 60 veg. caps	29.95	22.46		
	CARNOSOOTHE w/ PICROPROTECT™ - 4 bottles of 60 veg. caps	108.00	81.00		
01287	(SUPER) CARNOSINE CAPS - 500 mg, 90 caps	66.00	49.50		
	(SUPER) CARNOSINE CAPS - 4 bottles of 90 caps	240.00	180.00		
01011	CELLULITE SUPPRESS™ FORMULA - 6 fl. oz	58.00	43.50		
	CELLULITE SUPPRESS™ FORMULA - 4-6oz bottles	208.00	156.00		
00390	CDP CHOLINE CAPS - 250 mg, 60 caps	36.00	27.00		
	CDP CHOLINE CAPS - 4 bottles of 60 caps	136.00	102.00		
00998	CELL SENSOR-EMF DETECTION/MEASUREMENT METER	39.95	29.95		
01370	CHILDREN'S FORMULA MIX - 100 chewable tablets	18.00	13.50		
	CHILDREN'S FORMULA MIX - 4 bottles of 100 chewable tablets	64.00	48.00		
00550	CHLORELLA - 500 mg, 200 tablets	23.50	17.63		
	CHLORELLA - 4 bottles of 200 tablets	84.00	63.00		
01548	CHLOROPHYLLIN w/ZINC - 100 softgels	24.00	18.00		
	CHLOROPHYLLIN w/ZINC - 4 bottles of 100 softgels	80.00	60.00		
*01359	CHO-LESS - 90 capsules	32.50	24.38		
00541	CHOLINE CHLORIDE - 16 oz liquid	14.95	11.21		
	CHOLINE CHLORIDE - 4 bottles of 16 oz liquid	56.00	42.00		
00364	CHONDROITIN SULFATE CONCENTRATE - 400 mg, 60 tablets	19.95	14.96		
	CHONDROITIN SULFATE CONCENTRATE - 4 bottles of 60 tablets	72.00	54.00		
01218	CHROMIUM ULTRA - 100 veg. caps	24.00	18.00		
	CHROMIUM ULTRA - 4 bottles of 100 veg. caps	84.00	63.00		
01504	(OPTIMIZED) CHROMIUM W/CROMINEX® 3+ - 500 mcg, 60 veg. caps	9.00	6.75		
	(OPTIMIZED) CHROMIUM W/CROMINEX® 3+ - 4 bottles of 60 veg. caps	32.00	24.00		
00551	CILANTRO HERBAL EXTRACT - 1 oz	12.00	9.00		
	CILANTRO HERBAL EXTRACT - 4 bottles of 1oz	44.00	33.00		

* Not for sale to wholesalers or retail stores.

SUB-TOTAL OF COLUMN 3

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN ADDITIONAL 10% ON ALL PRODUCTS DURING SUPER SALE

Buyers Club Order Form

No.		Retail	Member Price	Qty	Total
01503	CINSULIN® w/INSEA™ AND CROMINEX® 3+ - 90 veg. caps	\$38.00	\$28.50		
	CINSULIN® w/INSEA™ AND CROMINEX® 3+ - 4 bottles of 90 veg. caps	136.00	102.00		
00069	CITRUS BIOFLAVONOID - 100 caps	15.99	11.99		
	CITRUS BIOFLAVONOID - 4 bottles of 100 caps	59.28	44.46		
00818	(SUPER) CLA BLEND W/SESAME LIGNANS - 1000 mg, 120 softgels	36.00	27.00		
	(SUPER) CLA BLEND w/SESAME LIGNANS - 4 bottles of 120 softgels	132.00	99.00		
	(SUPER) CLA BLEND w/SESAME LIGNANS - 10 bottles, 120 softgels	263.30	197.48		
00819	(SUPER) CLA BLEND w/GUARANA & SESAME - 120 softgels	42.00	31.50		
	(SUPER) CLA BLEND w/GUARANA & SESAME - 4 btl of 120 softgels	153.32	114.99		
00050	COD LIVER OIL - 12 fl oz (355 ml) (Emulsified)	14.58	10.94		
	COD LIVER OIL - 4 bottles of 12 fl oz (355 ml)	49.08	36.81		
00293	COD LIVER OIL - 100 softgels (Emulsified)	9.95	7.46		
	COD LIVER OIL - 4 bottles of 100 softgels	37.52	28.14		
00922	COGNITEX w/PREGNENOLONE & NEUROPROTECTION COMPLEX - 90 softgels	74.00	55.50		
	COGNITEX w/PREGNENOLONE & NEUROPROTECTION COMPLEX - 4 btl of 90 softgels	266.40	199.80		
	COGNITEX w/PREGNENOLONE & NEUROPROTECTION COMPLEX - 12 btl of 90 softgels	768.00	576.00		
00921	COGNITEX w/o PREGNENOLONE w/NEUROPROTECTION COMPLEX - 90 softgels	72.00	54.00		
	COGNITEX w/o PREGNENOLONE w/NEUROPROTECTION COMPLEX - 4 bottles of 90 softgels	256.00	192.00		
	COGNITEX w/o PREGNENOLONE w/NEUROPROTECTION COMPLEX - 12 bottles of 90 softgels	744.00	558.00		
01421	COGNITEX BASICS - 60 softgels	38.00	28.50		
	COGNITEX BASICS - 4 bottles of 60 softgels	140.00	105.00		
	COGNITEX BASICS - 12 bottles of 60 softgels	384.00	288.00		
00110	COMPLETE B-COMPLEX - 180 caps	21.50	16.13		
	COMPLETE B-COMPLEX - 4 bottles of 180 caps	72.00	54.00		
01574	COMPREHENSIVE NUTRIENT PACK - 30-day supply	189.00	141.75		
	COMPREHENSIVE NUTRIENT PACK - 120-day supply	684.00	513.00		
00119	COPPER CAPSULES - 2 mg, 100 caps	8.95	6.71		
	COPPER CAPSULES - 4 bottles of 100 caps	32.36	24.27		
00949	(SUPER ABSORBABLE) COQ10™ w/ d-LIMONENE - 50 mg, 60 softgels	25.00	18.75		
	(SUPER ABSORBABLE) COQ10™ w/ d-LIMONENE - 4 bottles of 60 softgels	88.00	66.00		
	(SUPER ABSORBABLE) COQ10™ w/ d-LIMONENE - 10 bottles of 60 softgels	200.00	150.00		
00950	(SUPER ABSORBABLE) COQ10™ w/ d-LIMONENE - 100 mg, 100 softgels	66.00	49.50		
	(SUPER ABSORBABLE) COQ10™ w/ d-LIMONENE - 4 bottles of 100 softgels	240.00	180.00		
	(SUPER ABSORBABLE) COQ10™ w/ d-LIMONENE - 10 bottles of 100 softgels	560.00	420.00		
01226	(SUPER UBIQUINOL) COQ10 - 100 mg, 60 softgels	56.00	42.00		
	(SUPER UBIQUINOL) COQ10 - 4 bot of 60 softgels	208.00	156.00		
	(SUPER UBIQUINOL) COQ10 - 10 bot of 60 softgels	480.00	360.00		
01426	(SUPER UBIQUINOL) COQ10 W/ENH MITOCHONDRIAL SUPPORT™ - 100 mg, 60 softgels	62.00	46.50		
	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 4 bot of 60 softgels	224.00	168.00		
	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 10 bot of 60 softgels	520.00	390.00		
01425	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 50 mg, 100 softgels	58.00	43.50		
	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 4 bot of 100 softgels	212.00	159.00		
	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 10 bot of 100 softgels	500.00	375.00		
01427	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 50 mg, 30 softgels	20.00	15.00		
	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 4 bot of 30 softgels	72.00	54.00		
01431	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 200 mg, 30 softgels	62.00	46.50		
	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 4 bot of 30 softgels	224.00	168.00		
	(SUPER UBIQUINOL) COQ10 w/ENH MITOCHONDRIAL SUPPORT™ - 10 bot of 30 softgels	520.00	390.00		
01053	CORIOLUS VERSICOLOR SUPER STRENGTH - 600 mg, 150 veg. caps	99.95	74.96		
00857	COROMEGA CHILD BRAIN & BODY - (Lemon Lime) 30 packets	25.00	18.75		
	COROMEGA CHILD BRAIN & BODY - (Lemon Lime) 4 boxes of 30 packets	90.00	67.00		

SUB-TOTAL OF COLUMN 4

JANUARY 2011

Buyers Club Order Form

SUPER SALE SAVINGS ON ALL PRODUCTS
To order call: 1-954-766-8433 or 1-800-544-4440

No.		Retail	Member Price	Qty	Total
C CONTINUED					
80118	COSMESIS ANTI-AGING MASK - 2 oz bottle	\$72.00	\$54.00		
	COSMESIS ANTI-AGING MASK - 2-2 oz bottles	126.72	95.04		
80134	COSMESIS ANTI-GLYCATION SERUM - 1 oz bottle w/BLUEBERRY & POMEGRANATE EXTRACTS	33.00	24.75		
	COSMESIS ANTI-GLYCATION SERUM - 2-1 oz bottles w/BLUEBERRY & POMEGRANATE EXTRACTS	62.70	47.02		
80133	COSMESIS ANTI-OXIDANT FACIAL MIST - 2 oz bottle	32.00	24.00		
	COSMESIS ANTI-OXIDANT FACIAL MIST - 2-2 oz bottles	60.80	45.60		
80127	COSMESIS ANTI-OXIDANT REJUVENATING FOOT CREAM - 2 oz jar	45.00	33.75		
	COSMESIS ANTI-OXIDANT REJUVENATING FOOT CREAM - 2-2 oz jar	85.60	64.20		
80128	COSMESIS ANTI-OXIDANT REJUVENATING FOOT SCRUB - 2 oz jar	59.00	44.25		
	COSMESIS ANTI-OXIDANT REJUVENATING FOOT SCRUB - 2-2 oz jar	103.84	77.88		
80117	COSMESIS ANTI-OXIDANT REJUVENATING HAND CREAM - 2 oz jar	64.00	48.00		
	COSMESIS ANTI-OXIDANT REJUVENATING HAND CREAM - 2-2 oz jars	114.98	86.24		
80121	COSMESIS ANTI-OXIDANT REJUVENATING HAND SCRUB - 2 oz jar	58.00	43.50		
	COSMESIS ANTI-OXIDANT REJUVENATING HAND SCRUB - 2-2 oz jars	102.08	76.56		
80105	COSMESIS ANTI-REDNESS & BLEMISH LOTION - 1 oz	74.50	55.88		
	COSMESIS ANTI-REDNESS & BLEMISH LOTION - 2-1 oz bottles	131.12	98.34		
80120	COSMESIS CORRECTIVE CLEARING MASK - 2 oz jar	64.50	48.38		
	COSMESIS CORRECTIVE CLEARING MASK - 2-2 oz jars	113.52	85.14		
80108	COSMESIS ESSENTIAL PLANT LIPIDS REPARATIVE SERUM - 1 oz	74.95	56.21		
	COSMESIS ESSENTIAL PLANT LIPIDS REPARATIVE SERUM - 2-1 oz bottles	131.90	98.92		
80123	COSMESIS FACE REJUVENATING ANTI-OXIDANT CREAM - 2 oz jar	69.50	52.13		
	COSMESIS FACE REJUVENATING ANTI-OXIDANT CREAM - 2-2 oz jars	122.32	91.74		
80107	COSMESIS FINE LINE-LESS - 1 oz	74.50	55.88		
	COSMESIS FINE LINE-LESS - 2-1 oz bottles	131.12	98.34		
80131	COSMESIS HAIR SUPPRESS FORMULA - 4 oz bottle	59.00	44.25		
	COSMESIS HAIR SUPPRESS FORMULA - 2-4 oz bottles	103.84	77.88		
80137	COSMESIS HEALING FORMULA ALL-IN-ONE CREAM - 1 oz jar	53.00	39.75		
	COSMESIS HEALING FORMULA ALL-IN-ONE CREAM - 2-1 oz jars	90.86	68.14		
80115	COSMESIS HEALING MASK - 2 oz bottle	64.50	48.38		
	COSMESIS HEALING MASK - 2-2 oz bottles	113.52	85.14		
80109	COSMESIS HYALURONIC FACIAL MOISTURIZER - 1 oz	58.00	43.50		
	COSMESIS HYALURONIC FACIAL MOISTURIZER - 2 bottles of 1 oz	102.08	76.56		
80110	COSMESIS HYALURONIC OIL-FREE FACIAL MOISTURIZER - 1 oz	58.00	43.50		
	COSMESIS HYALURONIC OIL-FREE FACIAL MOISTURIZER - 2 btl of 1 oz	102.08	76.56		
80138	COSMESIS HYDRATING ANTI-OXIDANT FACE MIST - 4 oz bottle	39.95	29.96		
	COSMESIS HYDRATING ANTI-OXIDANT FACE MIST - 2 bottles of 4 oz	76.00	57.00		
80103	COSMESIS LIFTING & TIGHTENING COMPLEX - 1 oz	74.50	55.88		
	COSMESIS LIFTING & TIGHTENING COMPLEX - 2 bottles of 1 oz	131.12	98.34		
80135	COSMESIS MELATONIN CREAM - 1 oz jar	33.00	24.75		
	COSMESIS MELATONIN CREAM - 2-1 oz jars	54.20	40.65		
80114	COSMESIS MILD FACIAL CLEANSER - 8 oz	59.00	44.25		
	COSMESIS MILD FACIAL CLEANSER - 2 bottles of 8 oz	103.84	77.88		
80122	COSMESIS NECK REJUVENATING ANTI-OXIDANT CREAM - 2 oz jar	64.00	48.00		
	COSMESIS NECK REJUVENATING ANTI-OXIDANT CREAM - 2-2 oz jars	112.64	84.48		
80119	COSMESIS PEEL OFF CLEANSING MASK - 2 oz bottle	64.50	48.38		
	COSMESIS PEEL OFF CLEANSING MASK - 2-2 oz bottles	113.52	85.14		
80111	COSMESIS PIGMENT CORRECTING CREAM - 1/2 oz	74.00	55.50		
	COSMESIS PIGMENT CORRECTING CREAM - 2 bottles of 1/2 oz	130.24	97.68		
80106	COSMESIS REJUVENATING SERUM - 1 oz	74.50	55.88		
	COSMESIS REJUVENATING SERUM - 2 bottles of 1 oz	131.12	98.34		
80112	COSMESIS SKIN LIGHTENING SERUM - 1/2 oz	85.00	63.75		
	COSMESIS SKIN LIGHTENING SERUM - 2 bottles of 1/2 oz	149.60	112.20		

SUB-TOTAL OF COLUMN 5

JANUARY 2011

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN **ADDITIONAL 10%** ON ALL PRODUCTS DURING SUPER SALE

No.		Retail	Member Price	Qty	Total
C CONTINUED					
80130	COSMESIS SKIN STEM CELL SERUM - 1 oz	\$74.00	\$55.50		
	COSMESIS SKIN STEM CELL SERUM - 2 bottles of 1 oz	138.00	103.50		
80116	COSMESIS ULTRA LIP PLUMPER - 1/3 oz	64.00	48.00		
	COSMESIS ULTRA LIP PLUMPER - 2 bottles of 1/3 oz	112.64	84.48		
80101	COSMESIS ULTRA WRINKLE RELAXER - 1 oz	89.95	67.46		
	COSMESIS ULTRA WRINKLE RELAXER - 2 bottles of 1 oz	159.52	119.64		
80113	COSMESIS UNDER EYE REFINING SERUM - 1/2 oz	74.50	55.88		
	COSMESIS UNDER EYE REFINING SERUM - 2 bottles of 1/2 oz	131.12	98.34		
80104	COSMESIS UNDER EYE RESCUE CREAM - 1/2 oz	74.50	55.88		
	COSMESIS UNDER EYE RESCUE CREAM - 2 bottles of 1/2 oz	131.12	98.34		
80129	COSMESIS VITAMIN C SERUM - 1 oz	85.00	63.75		
	COSMESIS VITAMIN C SERUM - 2 bottles of 1 oz	149.60	112.20		
80136	COSMESIS VITAMIN D LOTION - 4 oz	36.00	27.00		
	COSMESIS VITAMIN D LOTION - 2 bottles of 4 oz	67.32	50.49		
80102	COSMESIS VITAMIN K HEALING CREAM - 1 oz	79.50	59.63		
	COSMESIS VITAMIN K HEALING CREAM - 2 bottles of 1 oz	139.92	104.94		
00862	CRAN-MAX® - 500 mg, 60 veg. caps	17.50	13.13		
	CRAN-MAX® - 4 bottles of 60 veg. caps	60.00	45.00		
01424	(OPTIMIZED) CRAN-MAX® with UTIROSE™ - 60 veg. caps	18.00	13.50		
	(OPTIMIZED) CRAN-MAX® with UTIROSE™ - 4 bottles of 60 veg. caps	64.00	48.00		
00609	CREATINE CAPS MICRONIZED - 120 caps	10.95	8.21		
	CREATINE CAPS MICRONIZED - 4 bottles of 120 caps	37.00	27.75		
00610	CREATINE POWDER MICRONIZED - 500 grams of powder	29.00	21.75		
	CREATINE POWDER MICRONIZED - 4 bottles of powder	106.52	79.89		
01096	CREATINE-WHEY-GLUTAMINE POWDER - 1 kg vanilla	45.00	33.75		
	CREATINE-WHEY-GLUTAMINE POWDER - 4 bottles of powder	168.00	126.00		
01089	CRUCIFEROUS VEGETABLE SOUP - 32 oz. pouch	11.95	8.96		
	CRUCIFEROUS VEGETABLE SOUP - 6 - 32 oz. pouch	67.50	50.63		
01090	(ASIAN) CRUCIFEROUS VEGETABLE SOUP - 32 oz. pouch	11.95	8.96		
	(ASIAN) CRUCIFEROUS VEGETABLE SOUP - 6 - 32 oz. pouch	67.50	50.63		
01429	CR MIMETIC LONGEVITY FORMULA - 60 veg. caps	39.00	29.25		
	CR MIMETIC LONGEVITY FORMULA - 4 bottles of 60 veg. caps	144.00	108.00		
*CRWAY (NUTRIBASE) CRWAY EDITION ADVANCED DIETARY SOFTWARE					
		195.00	195.00		
00912	(SUPER) CURCUMIN W/BIOPERINE® - 800 mg, 60 caps	26.00	19.50		
	(SUPER) CURCUMIN W/BIOPERINE® - 4 bottles of 60 caps	96.00	72.00		
00407	(SUPER BIO) CURCUMIN® - 400 mg, 60 veg. caps	35.00	26.25		
	(SUPER BIO) CURCUMIN® - 4 bottles of 60 veg. caps	128.00	96.00		
00064	(L) CYSTEINE CAPSULES - 500 mg, 60 caps	18.95	14.21		
	(L) CYSTEINE CAPSULES - 4 bottles of 60 caps	65.24	48.93		
D					
01063	DERMA-VITS™ - 90 caps	\$14.99	\$11.24		
01313	DERMA WHEY® - 400 mg, 60 caps	65.00	48.75		
	DERMA WHEY® - 4 bottles of 60 caps	236.00	177.00		
00856	(BARLEAN'S KID'S) DHA (Fruit Punch Flavor) - 8 fl. oz	22.00	16.50		
	(BARLEAN'S KID'S) DHA (Fruit Punch Flavor) - 4 bottles of 8 fl. oz	80.00	60.00		
00995	DHA 240 - 240 mg, 60 softgels	19.00	14.25		
	DHA 240 - 4 bottles of 60 softgels	68.00	51.00		
00658	7-KETO® DHEA METABOLITE - 25 mg, 100 caps	28.00	21.00		
	7-KETO® DHEA METABOLITE - 4 bottles of 100 caps	96.00	72.00		
01271	7-KETO® DHEA METABOLITE - 100 mg, 60 veg. caps	40.00	30.00		
	7-KETO® DHEA METABOLITE - 4 bottles of 60 veg. caps	144.00	108.00		
00607	DHEA - 25 mg dissolve in mouth 100 tablets	14.00	10.50		
	DHEA - 4 bottles of 100 tablets	47.00	35.25		
* Not eligible for member discount or member renewal product credit.					
SUB-TOTAL OF COLUMN 6					

* Not eligible for member discount or member renewal product credit.

OFFER ENDS JANUARY 31, 2011

To order online visit www.lifeextension.com/SuperSale

Buyers Club Order Form

No.		Retail	Member Price	Qty	Total
01250	DHEA COMPLETE - 60 veg. caps	\$48.00	\$36.00		
	DHEA COMPLETE - 4 bottles of 60 veg. caps	172.80	129.60		
00335	DHEA - 25 mg, 100 caps	15.00	11.25		
	DHEA - 4 bottles of 100 caps	50.00	37.50		
00454	DHEA - 15 mg, 100 caps	12.00	9.00		
	DHEA - 4 bottles of 100 caps	40.00	30.00		
00882	DHEA - 50 mg, 60 caps	16.00	12.00		
	DHEA - 4 bottles of 60 caps	56.00	42.00		
00883	DHEA - 100 mg, 60 caps	22.50	16.88		
	DHEA - 4 bottles of 60 caps	76.00	57.00		
01358	DIGEST RC - 30 tablets	19.95	14.96		
	DIGEST RC - 4 boxes of 30 tablets	68.00	51.00		
01272	(ENHANCED SUPER) DIGESTIVE ENZYMES - 100 veg. caps	18.95	14.21		
	(ENHANCED SUPER) DIGESTIVE ENZYMES - 4 bottles of 100 veg. caps	64.00	48.00		
01273	(ENHANCED SUPER) DIGESTIVE ENZYMES w/PROBIOTICS - 100 veg. caps	24.00	18.00		
	(ENHANCED SUPER) DIGESTIVE ENZYMES w/PROBIOTICS - 4 bottles of 100 veg. caps	88.00	66.00		
**01042	(EUROPEAN LEG SOLUTION) DIOSMIN95 - 600 mg, 30 veg. tabs	20.00	15.00		
	(EUROPEAN LEG SOLUTION) DIOSMIN95 - 4 bottles of 30 veg. tabs	72.00	54.00		
00034	D,L-PHENYLALANINE CAPSULES - 500 mg, 100 caps	18.75	14.06		
	D,L-PHENYLALANINE CAPSULES - 4 bottles of 100 caps	64.00	48.00		
00257	DMAE BITARTRATE - 150 mg, 200 caps	14.00	10.50		
	DMAE BITARTRATE - 4 bottles of 200 caps	42.00	31.50		
00197	DMAE-GINKGO CAPSULES - 100 caps	36.00	27.00		
	DMAE-GINKGO CAPSULES - 4 bottles of 100 caps	120.00	90.00		
	DMAE-GINKGO CAPSULES - 8 bottles of 100 caps	220.00	165.00		
00059	DMG - 125 mg dimethylglycine, 60 tablets	18.50	13.88		
	DMG - 4 boxes of 60 tablets	68.00	51.00		
01547	DNA PROTECTION FORMULA - 60 veg. caps	30.00	22.50		
	DNA PROTECTION FORMULA - 4 bottles of 60 veg. caps	112.00	84.00		
00321	DR. PROCTOR'S ADVANCED HAIR FORMULA - 2 oz	39.95	29.96		
	DR. PROCTOR'S ADVANCED HAIR FORMULA - 4 bottles	128.00	96.00		
00320	DR. PROCTOR'S HAIR FORMULA SHAMPOO - 8 oz bottle	24.95	18.71		
	DR. PROCTOR'S HAIR FORMULA SHAMPOO - 4 bottles	88.00	66.00		
00376	DR. TUNG'S TONGUE CLEANER	8.45	6.34		
	DR. TUNG'S TONGUE CLEANERS - 4 quantity	32.20	24.15		
00899	DUAL-ACTION MICRODERMABRASION ADV. EXFOLIATE - 2.4 net oz jar	39.95	29.96		
	DUAL-ACTION MICRODERMABRASION ADV. EXFOLIATE - 4 jars of 2.4 net oz	155.80	116.85		
00240	DUAL-C - 90 caps	12.00	9.00		
	DUAL-C - 4 bottles of 90 caps	42.00	31.50		

E

00388	ECHINACEA - 250 mg, 60 caps	\$14.35	\$10.76		
	ECHINACEA - 4 bottles of 60 caps	50.00	37.50		
01024	EDTA - 500 mg, 100 caps	17.50	13.13		
00048	(EMULSIFIED SUPER TWIN) EPA/DHA - 12 fl. oz.	22.45	16.84		
01498	ENDOTHELIAL DEFENSE™ w/FULL-SPECTRUM POMEGRANATE™ - 60 softgels	56.00	42.00		
	ENDOTHELIAL DEFENSE™ w/FULL-SPECTRUM POMEGRANATE™ - 4 bottles of 60 softgels	208.00	156.00		
00997	ENDOTHELIAL DEFENSE™ w/GLISODIN® - 60 veg. caps	52.00	39.00		
	ENDOTHELIAL DEFENSE™ w/GLISODIN® - 4 bottles of 60 veg. caps	184.00	138.00		
00625	(MEGA) EPA/DHA - 120 softgels	19.95	14.96		
	(MEGA) EPA/DHA - 4 bottles of 120 softgels	72.00	54.00		
01428	ESSENTIAL FAT-SOLUBLE NUTRIENTS - 30 softgels	28.00	21.00		
	ESSENTIAL FAT-SOLUBLE NUTRIENTS - 4 bottles of 30 softgels	100.00	75.00		

F

†01054	FACE MASTER® PLATINUM	\$199.00	\$199.00		
00965	FAST-ACTING JOINT FORMULA - 30 caps	39.00	29.25		
	FAST-ACTING JOINT FORMULA - 4 bottles of 30 caps	144.00	108.00		
20053	FEM DOPHILUS® - 30 caps	24.95	18.71		
20055	FEM DOPHILUS® - 60 caps	35.95	26.96		

SUB-TOTAL OF COLUMN 7

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN **ADDITIONAL 10% ON ALL PRODUCTS DURING SUPER SALE**

No.		Retail	Member Price	Qty	Total
01064	FEMMENESSENCE MACAPAUSE® - 120 veg. caps	\$34.99	\$26.24		
*01311	(ENHANCED) FERNBLOCK® w/SENDARA™ - 30 veg. caps	39.00	29.25		
	(ENHANCED) FERNBLOCK® w/SENDARA™ - 4 bottles of 30 veg. caps	140.00	105.00		
00229	FIBER FOOD CAPS - 200 caps	15.00	11.25		
	FIBER FOOD CAPS - 4 bottles of 200 caps	50.00	37.50		
	FIBER FOOD CAPS - 10 bottles of 200 caps	119.00	89.25		
00228	FIBER FOOD - 300 grams of powder	15.00	11.25		
	FIBER FOOD - 4 bottles of powder	50.00	37.50		
	FIBER FOOD - 10 bottles of powder	119.00	89.25		
00718	FIBRINOGEN RESIST FORMULA (NATTOKINASE) - 30 veg. caps	49.00	36.75		
	FIBRINOGEN RESIST FORMULA (NATTOKINASE) - 4 bottles of 30 caps	176.00	132.00		
00873	FLAXSEED POWDER (HI-LIGNAN NUTRI-FLAX) - 16 oz powder	9.95	7.46		
01200	FLORASTOR® - 250 mg, 50 caps	55.15	41.36		
01312	(OPTIMIZED) FOLATE (5-METHYLTETRAHYDROFOLATE) - 100 veg. caps	28.00	21.00		
	(OPTIMIZED) FOLATE (5-METHYLTETRAHYDROFOLATE) - 4 bottles of 100 veg. caps	100.00	75.00		
00347	FOLIC ACID + B12 CAPSULES - 200 caps	10.50	7.88		
	FOLIC ACID + B12 CAPSULES - 4 bottles of 200 caps	38.00	28.50		
00300	FORSKOLIN - 10 mg, 60 caps of elemental forskolin	15.00	11.25		
	FORSKOLIN - 4 bottles of 60 caps of elemental forskolin	50.00	37.50		
00993	FUCOXANTHIN-SLIM™ - 90 softgels	44.00	33.00		
	FUCOXANTHIN-SLIM™ - 4 bottles of 90 softgels	156.00	117.00		
C					
00127	GABA POWDER - 100 grams of powder	\$23.75	\$17.81		
	GABA POWDER - 4 bottles of powder	90.00	67.50		
00559	GAMMA E TOCOPHEROL/TOCOTRIENOLS - 60 softgels	42.00	31.50		
	GAMMA E TOCOPHEROL/TOCOTRIENOLS - 4 bottles of 60 softgels	148.00	111.00		
00759	GAMMA E TOCOPHEROL W/SESAME LIGNANS - 60 softgels	32.00	24.00		
	GAMMA E TOCOPHEROL W/SESAME LIGNANS - 4 bottles of 60 softgels	116.00	87.00		
00117	GELATIN CAPSULES - Set of 1000 empty caps size "00"	19.00	14.25		
	GELATIN CAPSULES - 4 Sets	72.00	54.00		
01301	GH PITUITARY SUPPORT DAY FORMULA - 120 vegetarian tabs	48.00	36.00		
	GH PITUITARY SUPPORT DAY FORMULA - 4 bottles of 120 veg. tabs	176.00	132.00		
01302	GH PITUITARY SUPPORT NIGHT FORMULA - 120 veg. caps	25.00	18.75		
	GH PITUITARY SUPPORT NIGHT FORMULA - 4 bottles of 120 veg. caps	90.00	67.50		
00778	GINKGO BILOBA CERTIFIED EXTRACT™ - 120 mg, 365 caps	46.00	34.50		
	GINKGO BILOBA CERTIFIED EXTRACT™ - 2 bottles of 365 caps	87.00	65.25		
00504	(SUPER) GINKGO EXTRACT - 120 mg, 100 caps	29.00	21.75		
	(SUPER) GINKGO EXTRACT - 4 bottles of 100 caps	106.00	79.50		
01032	(PANAX RED) GINSENG - 60 veg. caps	29.99	22.49		
00756	(MEGA) GLA WITH SESAME LIGNANS - 60 softgels	19.50	14.63		
	(MEGA) GLA WITH SESAME LIGNANS - 4 bottles of 60 softgels	72.00	54.00		
00345	(L) GLUTAMINE CAPSULES - 500 mg, 100 caps	14.95	11.21		
	(L) GLUTAMINE CAPSULES - 4 bottles of 100 caps	54.00	40.50		
00141	(L)-GLUTAMINE POWDER - 100 grams of powder	19.00	14.25		
	(L)-GLUTAMINE POWDER - 4 bottles of powder	67.52	50.64		
00522	GLUCOSAMINE/CHONDROITIN CAPSULES - 100 caps	38.00	28.50		
	GLUCOSAMINE/CHONDROITIN CAPSULES - 4 bottles of 100 caps	128.00	96.00		
00512	GLUCOFIT™ (COROSOLIC ACID) - 100 softgels	28.00	21.00		
	GLUCOFIT™ (COROSOLIC ACID) - 4 bottles of 100 softgels	100.00	75.00		
00113	GLUTATHIONE, C & CYSTEINE - 750 mg, 100 caps	18.00	13.50		
	GLUTATHIONE, C & CYSTEINE - 4 bottles of 100 caps	64.00	48.00		

* Due to license restrictions, this product is not for sale to wholesalers outside of the United States of America and Canada.

** Can only be sold in the United States.

† Member pricing not valid on this item.

SUB-TOTAL OF COLUMN 8

JANUARY 2011

Buyers Club Order Form

SUPER SALE SAVINGS ON ALL PRODUCTS
To order call: 1-954-766-8433 or 1-800-544-4440

No.		Retail	Member Price	Qty	Total
G CONTINUED					
00314	(MEGA) L-GLUTATHIONE - 250 mg, 60 caps	\$35.95	\$26.96		
	(MEGA) L-GLUTATHIONE - 4 bottles of 60 caps	129.44	97.08		
00795	GLYCINE CAPSULES - 1000 mg, 100 caps	12.00	9.00		
	GLYCINE CAPSULES - 4 bottles of 100 caps	43.20	32.40		
00128	GLYCINE POWDER - 300 grams of powder	18.00	13.50		
	GLYCINE POWDER - 4 bottles of powder	64.00	48.00		
01091	(WHOLE) GRAPE EXTRACT w/RESVERATROL - 60 veg. caps	36.00	27.00		
	(WHOLE) GRAPE EXTRACT w/RESVERATROL - 4 bottles of 60 veg. caps	136.00	102.00		
01411	GRAPE SEED EXTRACT w/RESVERATROL & PTEROSTILBENE-100 mg, 60 veg. caps	36.00	27.00		
	GRAPE SEED EXTRACT w/RESVERATROL & PTEROSTILBENE-4 bottles of 60 veg. caps	136.00	102.00		
00953	(MEGA) GREEN TEA EXTRACT - lightly caffeinated - 100 veg. caps	28.00	21.00		
	(MEGA) GREEN TEA EXTRACT - 4 bottles of 100 veg. caps	106.00	79.50		
00954	(MEGA) GREEN TEA EXTRACT - decaffeinated - 100 veg. caps	28.00	21.00		
	(MEGA) GREEN TEA EXTRACT - 4 bottles of 100 veg. caps	106.00	79.50		
H					
01074	5 HTP - 100 mg, 60 caps	\$27.95	\$20.96		
00230	HCA - 90 caps	18.00	13.50		
	HCA - 4 bottles of 90 caps	62.00	46.50		
00656	HEPATOPRO - 900 mg, 60 softgel	49.50	37.13		
	HEPATOPRO - 4 bottles of 60 softgel	188.00	141.00		
00873	HI-LIGNAN NUTRI-FLAX - 16 oz powder	9.95	7.46		
00800	HOMOCYSTEINE RESIST - 100 caps	24.00	18.00		
	HOMOCYSTEINE RESIST - 4 bottles of 100 caps	86.40	64.80		
00067	HOODIA GORDONII - 60 caps	14.00	10.50		
00627	HUPERZINE A W/NATURAL VITAMIN E - 50 mcg, 60 caps	27.95	20.96		
	HUPERZINE A W/NATURAL VITAMIN E - 4 bottles of 60 caps	96.00	72.00		
00661	HYDRODERM® - 1 oz bottle	79.95	59.96		
	HYDRODERM® - 2 - 1 oz bottles	130.66	98.00		
I					
01060	i26 HYPERIMMUNE EGG - 140 grams of powder	\$49.99	\$42.00		
01065	IDEAL BOWEL SUPPORT 299V - 30 veg. caps	21.95	16.46		
00955	IMMUNE PROTECT W/PARACTIN® - 30 veg. caps	29.50	22.13		
	IMMUNE PROTECT W/PARACTIN® - 4 bottles of 30 veg. caps	106.20	79.65		
01049	INNERPOWER™ W/SWEET STEVIA- Tropical Flavor Powder	42.00	31.50		
00155	INOSINE CAPSULES - 500 mg, 60 caps	22.95	17.21		
	INOSINE CAPSULES - 4 bottles of 60 caps	84.00	63.00		
00109	INOSITOL CAPSULES - 500 mg, 100 caps	14.99	11.24		
	INOSITOL CAPSULES - 4 bottles of 100 caps	55.16	41.37		
00410	INOSITOL CAPSULES - 1000 mg, 360 caps	48.00	36.00		
	INOSITOL CAPSULES - 4 bottles of 360 caps	175.00	131.25		
00108	INOSITOL POWDER - 100 grams of powder	18.00	13.50		
	INOSITOL POWDER - 4 bottles of powder	67.52	50.64		
01021	INTACT DIGEST™ - 8 fl oz	35.00	26.25		
	INTACT DIGEST™ - 4 - 8 fl oz bottles	132.00	99.00		
01292	INTEGRA-LEAN® IRVINGIA - 150 mg, 60 veg. caps	34.00	25.50		
	INTEGRA-LEAN® IRVINGIA - 4 bottles of 60 veg. caps	120.00	90.00		
01002	IODORAL - 180 caps	50.00	37.50		
00563	IRON PROTEIN PLUS - 300 mg, 100 caps	24.00	18.00		
	IRON PROTEIN PLUS - 4 bottles of 100 caps	88.00	66.00		
01492	(OPTIMIZED) IRVINGIA W/PHASE 3™ - 120 veg. caps	64.00	48.00		
	CALORIE CONTROL COMPLEX				
	(OPTIMIZED) IRVINGIA w/PHASE 3™ - 4 bottles of 120 veg. caps	240.00	180.00		
	CALORIE CONTROL COMPLEX				

SUB-TOTAL OF COLUMN 9

JANUARY 2011

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN **ADDITIONAL 10%** ON ALL PRODUCTS DURING SUPER SALE

No.		Retail	Member Price	Qty	Total
J, K					
00056	JARRO-DOPHILUS EPS™ - 60 veg. caps	\$19.95	\$14.96		
01224	(SUPER) K WITH ADVANCED K2 COMPLEX - 90 softgels	26.00	19.50		
	(SUPER) K WITH ADVANCED K2 COMPLEX - 4 bottles of 90 softgels	92.00	69.00		
01050	NKO KRILL OIL - 60 softgels	33.95	25.46		
00316	KYOLIC® GARLIC FORMULA 102 - 350 mg, 200 caps	23.95	17.96		
	KYOLIC® GARLIC FORMULA 102 - 4 bottles of 200 caps	82.00	61.50		
00214	KYOLIC® GARLIC FORMULA 105 - 200 caps	22.95	17.21		
	KYOLIC® GARLIC FORMULA 105 - 4 bottles of 200 caps	73.00	54.75		
00789	KYOLIC® RESERVE - 600 mg, 120 caps	24.75	18.56		
	KYOLIC® RESERVE - 4 bottles of 120 caps	85.80	64.36		
L					
00513	LACTOFERRIN (APOLACTOFERRIN) CAPS - 300 mg, 60 caps	\$40.00	\$30.00		
	LACTOFERRIN (APOLACTOFERRIN) CAPS - 4 bottles of 60 caps	144.00	108.00		
00017	LAVILIN UNDERARM DEODORANT - 12.5 grams of cream	15.00	11.25		
	LAVILIN UNDERARM DEODORANT - 4 jars of cream	55.00	41.25		
01003	LIFE EXTENSION CAT MIX - 100 grams of powder	15.00	11.25		
	LIFE EXTENSION CAT MIX - 4 bottles of powder	48.00	36.00		
00544	LIFE EXTENSION DOG MIX - 100 grams of powder	19.50	14.63		
	LIFE EXTENSION DOG MIX - 4 bottles of powder	64.00	48.00		
00010	LIFE EXTENSION HAIR CONDITIONER - 16 oz bottle	6.00	4.50		
	LIFE EXTENSION HAIR CONDITIONER - 4 bottles	18.00	13.50		
00020	LIFE EXTENSION LECITHIN GRANULES - 16 oz. jar	15.00	11.25		
	LIFE EXTENSION LECITHIN GRANULES - 4 jars	50.00	37.50		
00019	LIFE EXTENSION LECITHIN w/B5 AND BHA - 16 oz. jar	15.00	11.25		
	LIFE EXTENSION LECITHIN w/B5 AND BHA - 4 16 oz. 4 jars	50.00	37.50		
01538	LIFE EXTENSION MIX™ - 315 veg. tablets	98.00	73.50		
	LIFE EXTENSION MIX™ - 4 bottles of 315 veg. tablets	344.00	258.00		
	LIFE EXTENSION MIX™ - 10 bottles of 315 veg. tablets	695.00	521.25		
01555	LIFE EXTENSION MIX™ - 315 tablets	98.00	73.50		
	LIFE EXTENSION MIX™ - 4 bottles of 315 tablets	344.00	258.00		
	LIFE EXTENSION MIX™ - 10 bottles of 315 tablets	695.00	521.25		
01557	LIFE EXTENSION MIX™ W/EXTRA NIACIN - 315 tablets	98.00	73.50		
	LIFE EXTENSION MIX™ w/EXTRA NIACIN - 4 bottles of 315 tablets	344.00	258.00		
	LIFE EXTENSION MIX™ w/EXTRA NIACIN - 10 bottles of 315 tablets	695.00	521.25		
01554	LIFE EXTENSION MIX™ - 490 caps	110.00	82.50		
	LIFE EXTENSION MIX™ - 4 bottles of 490 caps	392.00	294.00		
	LIFE EXTENSION MIX™ - 10 bottles of 490 caps	850.00	637.50		
01556	LIFE EXTENSION MIX™ POWDER - 14.81 oz of powder	98.00	73.50		
	LIFE EXTENSION MIX™ POWDER - 4 bottles of powder	344.00	258.00		
	LIFE EXTENSION MIX™ POWDER - 10 bottles of powder	720.00	540.00		
01565	LIFE EXTENSION MIX™ - 315 tablets without copper	98.00	73.50		
	LIFE EXTENSION MIX™ - 4 bottles of 315 tablets without copper	344.00	258.00		
	LIFE EXTENSION MIX™ - 10 bottles of 315 tablets without copper	695.00	521.25		
01567	LIFE EXTENSION MIX™ W/EXTRA NIACIN 315 tablets w/o copper	98.00	73.50		
	LIFE EXTENSION MIX™ w/EXTRA NIACIN 4 bottles of 315 tablets w/o copper	344.00	258.00		
	LIFE EXTENSION MIX™ W/EXTRA NIACIN 10 bottles of 315 tablets w/o copper	695.00	521.25		
01564	LIFE EXTENSION MIX™ - 490 caps without copper	110.00	82.50		
	LIFE EXTENSION MIX™ - 4 bottles of 490 caps without copper	392.00	294.00		
	LIFE EXTENSION MIX™ - 10 bottles of 490 caps without copper	850.00	637.50		
01566	LIFE EXTENSION MIX™ POWDER - 14.81 oz of powder without copper	98.00	73.50		
	LIFE EXTENSION MIX™ POWDER - 4 bottles of powder without copper	344.00	258.00		
	LIFE EXTENSION MIX™ POWDER - 10 bottles of powder without copper	720.00	540.00		

SUB-TOTAL OF COLUMN 10

OFFER ENDS JANUARY 31, 2011

To order online visit www.lifeextension.com/SuperSale

No.		Retail	Member Price	Qty	Total
01279	LIFE EXTENSION MOUTHWASH w/POMEGRANATE - 16 oz bottle	\$18.50	\$13.88		
	LIFE EXTENSION MOUTHWASH w/POMEGRANATE - 4 -16 oz bottle	68.00	51.00		
01501	LIFE EXTENSION ONE-PER-DAY - 60 veg. tablets	19.95	14.96		
	LIFE EXTENSION ONE-PER-DAY - 4 bottles of 60 veg. tablets	72.00	54.00		
00011	LIFE EXTENSION SHAMPOO - 16 oz bottle	6.00	4.50		
	LIFE EXTENSION SHAMPOO - 4 bottles	19.00	14.25		
01278	LIFE EXTENSION TOOTHPASTE MINT FLAVOR - 4 oz	9.50	7.13		
	LIFE EXTENSION TOOTHPASTE MINT FLAVOR - 4, 4 oz tubes	34.68	26.00		
01516	LIFE EXTENSION TWO-PER-DAY - 60 veg. tablets	9.95	7.46		
	LIFE EXTENSION TWO-PER-DAY - 4 bottles of 60 veg. tablets	36.00	27.00		
01515	LIFE EXTENSION TWO-PER-DAY - 120 veg. tablets	18.95	14.21		
	LIFE EXTENSION TWO-PER-DAY - 4 bottles of 120 veg. tablets	68.00	51.00		
00263	LIFE FLORA™ - 300 mg, 120 caps	20.50	15.38		
	LIFE FLORA™ - 4 bottles of 120 caps	75.00	56.25		
01314	LIFESHIELD® IMMUNITY™ - 60 veg. caps	39.95	29.96		
00939	5-LOXIN® - 75 mg, 100 veg. caps	19.50	14.63		
	5-LOXIN® - 4 bottles of 100 veg. caps	69.00	51.75		
01013	L-LYSINE CAPSULES - 620 mg, 100 caps	9.00	6.75		
	L-LYSINE CAPSULES - 4 bottles of 100 caps	32.00	24.00		
00129	L-LYSINE POWDER - 300 grams of powder	16.00	12.00		
	L-LYSINE POWDER - 4 bottles of powder	55.00	41.25		
01470	LURALEAN® CAPS SPECIAL PROPOLMANNAN PARTICLE SIZE - 120 veg. caps	28.00	21.00		
	LURALEAN® CAPS SPECIAL PROPOLMANNAN PARTICLE SIZE - 4 bottles of 120 veg. caps	100.00	75.00		
01017	LUSTRE™ - 90 tablets	17.50	13.13		
	LUSTRE™ - 4 bottles of 90 tablets	62.00	46.50		
01028	LYCOPENE - 10 mg, 60 softgels	24.98	18.74		
00455	(MEGA) LYCOPENE EXTRACT - 15 mg, 90 softgels	35.00	26.25		
	(MEGA) LYCOPENE EXTRACT - 4 bottles of 90 softgels	120.00	90.00		

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01044	MAGNESIUM CAPS - 500 mg, 100 caps	\$9.50	\$7.13		
	MAGNESIUM CAPS - 4 bottles of 100 caps	32.00	24.00		
00502	MAGNESIUM CITRATE CAPS - 160 mg, 100 caps	9.00	6.75		
	MAGNESIUM CITRATE CAPS - 4 bottles of 100 caps	30.00	22.50		
00704	MAITAKE™ SX-FRACTION - 90 veg. tablets	49.95	37.46		
00547	MELATONIN - 300 mcg, 100 caps	5.75	4.31		
	MELATONIN - 4 bottles of 100 caps	20.00	15.00		
01083	MELATONIN CAPSULES - 500 mcg, 200 veg. caps	18.00	13.50		
	MELATONIN CAPSULES - 4 bottles of 200 veg. caps	64.00	48.00		
00329	MELATONIN CAPSULES - 1 mg, 60 caps	5.00	3.75		
	MELATONIN CAPSULES - 4 bottles of 60 caps	18.52	13.89		
00330	MELATONIN CAPSULES - 3 mg, 60 caps	8.00	6.00		
	MELATONIN CAPSULES - 4 bottles of 60 caps	27.52	20.64		
01086	MELATONIN CAPSULES - 3 mg, 60 time-release veg. caps	10.50	7.88		
	MELATONIN CAPSULES - 4 bottles of 60 time-release veg. caps	37.52	28.14		
00331	MELATONIN CAPSULES - 10 mg, 60 caps	28.00	21.00		
	MELATONIN CAPSULES - 4 bottles of 60 caps	96.00	72.00		
00332	MELATONIN LOZENGES - 3 mg, 60 dissolve-in-mouth lozenges	8.00	6.00		
	MELATONIN LOZENGES - 4 bottles of 60 dissolve-in-mouth lozenges	27.52	20.64		
01087	MELATONIN TIME RELEASE - 300 mcg, 100 veg. caps	6.25	4.69		
	MELATONIN TIME RELEASE - 4 bottles of 100 veg. caps	22.52	16.89		

SUB-TOTAL OF COLUMN 11

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN **ADDITIONAL 10% ON ALL PRODUCTS DURING SUPER SALE**

Buyers Club Order Form

No.		Retail	Member Price	Qty	Total
01088	MELATONIN TIME RELEASE - 750 mcg, 60 veg. caps	\$5.75	\$4.31		
	MELATONIN TIME RELEASE - 4 bottles of 60 veg. caps	20.00	15.00		
01009	MEMORY UPGRADE - 600 grams powder	26.95	20.21		
01047	MENOPAUSE SOLUTIONS - 120 tablets	49.95	37.46		
00536	METHYLCOBALAMIN - 1 mg, 60 dissolve-in-mouth lozenges (vanilla)	9.95	7.46		
	METHYLCOBALAMIN - 4 bottles of 60 dissolve-in-mouth lozenges	32.00	24.00		
00537	METHYLCOBALAMIN - 5 mg, 60 dissolve-in-mouth lozenges (vanilla)	32.00	24.00		
	METHYLCOBALAMIN - 4 bottles of 60 dissolve-in-mouth lozenges	100.00	75.00		
	METHYLCOBALAMIN - 10 bottles of 60 dissolve-in-mouth lozenges	230.00	172.50		
00709	MIGRA-EEZE (BUTTERBUR) - 60 softgels	29.50	22.13		
	MIGRA-EEZE (BUTTERBUR) - 4 bottles of 60 softgels	105.32	79.00		
00623	MINERAL FORMULA FOR MEN - 100 caps	15.00	11.25		
	MINERAL FORMULA FOR MEN - 4 bottles of 100 caps	50.00	37.50		
	MINERAL FORMULA FOR MEN - 12 bottles of 100 caps	130.00	97.50		
00624	MINERAL FORMULA FOR WOMEN - 100 caps	15.00	11.25		
	MINERAL FORMULA FOR WOMEN - 4 bottles of 100 caps	50.00	37.50		
	MINERAL FORMULA FOR WOMEN - 12 bottles of 100 caps	130.00	97.50		
01315	(SUPER) MIRAFORTE w/STANDARDIZED LIGNANS - 120 caps	62.00	46.50		
	(SUPER) MIRAFORTE w/STANDARDIZED LIGNANS - 4 bottles of 120 caps	224.00	168.00		
01569	MITOCHONDRIAL BASICS w/BIOPQQ™ - 30 caps	52.00	39.00		
	MITOCHONDRIAL BASICS w/BIOPQQ™ - 4 bottles of 30 caps	184.00	138.00		
01568	MITOCHONDRIAL ENERGY OPTIMIZER w/BIOPQQ™ - 120 caps	94.00	70.50		
	MITOCHONDRIAL ENERGY OPTIMIZER w/BIOPQQ™ - 4 bottles of 120 caps	336.00	252.00		
00803	MISTORAL III w/COQ10 - 2 fl oz bottle	28.00	21.00		
	MISTORAL III w/COQ10 - 4 bottles	101.32	75.99		
00065	MK-7 - 90 mcg, 60 softgels	28.00	21.00		
	MK-7 - 4 bottles of 60 softgels	100.00	75.00		
00451	MSM (METHYL-SULFONYL-METHANE) - 1000 mg, 100 caps	14.00	10.50		
	MSM (METHYL-SULFONYL-METHANE) - 4 bottles of 100 caps	47.80	35.85		
N					
00215	N-ACETYL CYSTEINE CAPSULES - 600 mg, 60 caps	\$14.00	\$10.50		
	N-ACETYL CYSTEINE CAPSULES - 4 bottles of 60 caps	54.00	40.50		
00168	NAPCA W/ALOE VERA - 8 fl oz bottle	10.00	7.50		
	NAPCA W/ALOE VERA - 4 bottles	36.60	27.45		
00066	NATTOKINASE - 60 softgels	24.98	18.74		
00718	NATTOKINASE (FIBRINOPEN RESIST FORMULA) - 30 caps	49.00	36.75		
	NATTOKINASE (FIBRINOPEN RESIST FORMULA) - 4 bottles of 30 caps	176.00	132.00		
00891	NATURAL APPETITE CONTROL - 90 softgels	28.00	21.00		
	NATURAL APPETITE CONTROL - 4 bottles of 90 softgels	100.80	75.60		
00984	NATURAL BP MANAGEMENT - 60 tablets	42.00	31.50		
	NATURAL BP MANAGEMENT - 4 bottles of 60 tablets	151.20	113.40		
00913	NATURAL ESOPHAGUARD - 10 softgels	19.95	14.96		
	NATURAL ESOPHAGUARD - 2 boxes of 10 softgels	38.00	28.50		
00712	NATURAL ESTROGEN w/POMEGRANATE EXTRACT - 60 caplets	38.00	28.50		
	NATURAL ESTROGEN w/POMEGRANATE EXTRACT - 4 bottles of 60 caplets	132.00	99.00		
01221	NATURAL FEMALE SUPPORT - 30 veg. caps	28.00	21.00		
	NATURAL FEMALE SUPPORT - 4 bottles of 30 veg. caps	96.00	72.00		
01471	NATURAL GLUCOSE ABSORPTION CONTROL - 60 veg. caps	39.00	29.25		
	NATURAL GLUCOSE ABSORPTION CONTROL - 4 bottles of 60 veg. caps	144.00	108.00		
00698	NATURAL RELIEF 1222™ - 2 oz tube	28.00	21.00		
	NATURAL RELIEF 1222™ - 4, 2 oz tubes	100.00	75.00		
01084	NATURAL SLEEP - 3 mg, 60 veg. caps	12.99	9.74		
	NATURAL SLEEP - 4 bottles of 60 veg. caps	40.00	30.00		

SUB-TOTAL OF COLUMN 12

JANUARY 2011

Buyers Club Order Form

SUPER SALE SAVINGS ON ALL PRODUCTS
To order call: 1-954-766-8433 or 1-800-544-4440

No.		Retail	Member Price	Qty	Total
N CONTINUED					
01085	NATURAL SLEEP MELATONIN - 5 mg, 60 veg. caps	\$18.00	\$13.50		
	NATURAL SLEEP MELATONIN - 4 bottles of 60 veg. caps	64.00	48.00		
00987	NATURAL STRESS RELIEF - 30 veg. caps	28.00	21.00		
	NATURAL STRESS RELIEF - 4 bottles of 30 veg. caps	96.00	72.00		
01076	NEW FACE SOLUTION - 1.7 oz bottle	54.00	40.50		
	NEW FACE SOLUTION - 4 bottles of 1.7 oz	196.00	147.00		
00096	NIACIN (B-3) CAPSULES - 1000 mg, 100 caps	12.75	9.56		
	NIACIN (B-3) CAPSULES - 4 bottles of 100 caps	48.00	36.00		
00372	NIACIN (B-3) CAPSULES - 500 mg, 100 caps	7.65	5.74		
	NIACIN (B-3) CAPSULES - 4 bottles of 100 caps	26.60	19.95		
00373	NO-FLUSH NIACIN - 800 mg, 100 caps	19.00	14.25		
	NO-FLUSH NIACIN - 4 bottles of 100 caps	68.00	51.00		
01035	NUTRIM POWDER - 170 grams powder	25.95	19.46		
00523	N-ZIMES® - 270 caps	23.90	17.93		
	N-ZIMES® - 4 bottles of 270 caps	88.00	66.00		
O					
00104	OCTACOSANOL - 8000 mcg, 60 caps	\$17.99	\$13.49		
	OCTACOSANOL - 4 bottles of 60 caps	62.96	47.22		
01483	(SUPER) OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT - 60 softgels	18.00	13.50		
	(SUPER) OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT - 4 bottles of 60 softgels	64.00	48.00		
01482	(SUPER) OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT - 120 softgels	32.00	24.00		
	(SUPER) OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT - 4 bottles of 120 softgels	112.00	84.00		
	(SUPER) OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT - 10 bottles of 120 softgels	249.00	186.75		
01484	(SUPER) OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (ENTERIC COATED) - 120 softgels	34.00	25.50		
	(SUPER) OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (ENTERIC COATED) - 4 bottles of 120 softgels	124.00	93.00		
	(SUPER) OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (ENTERIC COATED) - 10 bottles of 120 softgels	280.00	210.00		
00717	ONLY TRACE MINERALS - 90 caps	15.00	11.25		
	ONLY TRACE MINERALS - 4 bottles of 90 caps	50.00	37.50		
00915	OPTIZINC® - 30 mg, 90 veg. caps	5.95	4.46		
	OPTIZINC® - 4 bottles of 90 veg. caps	20.00	15.00		
01070	ORGANIC TOTAL BODY CLEANSE - 14-day supply	34.99	26.24		
00043	L-ORNITHINE CAPSULES - 500 mg, 100 caps	24.95	18.71		
	L-ORNITHINE CAPSULES - 4 bottles of 100 caps	80.00	60.00		
P					
00107	PABA CAPS - 500 mg, 100 caps	\$13.99	\$10.49		
	PABA CAPS - 4 bottles of 100 caps	49.32	36.99		
00073	PANCREATIN - 500 mg, 50 caps	11.99	8.99		
	PANCREATIN - 4 bottles of 50 caps	43.96	32.97		
00923	PEAK ATP® WITH GLYCOCARN® - 60 tablets	59.00	44.25		
	PEAK ATP® WITH GLYCOCARN® - 4 bottles of 60 tablets	224.00	168.00		
00342	PECTA-SOL - One-month supply modified citrus pectin	99.95	74.96		
	PECTA-SOL - Four-month supply modified citrus pectin	382.80	287.10		
01080	PECTA-SOL-C® MODIFIED CITRUS PECTIN - 270 veg. caps	69.95	52.46		
00872	PGX FIBER POWDER (SLIMSTYLES) - 6.4 oz powder	22.95	17.21		
00673	(WELLBETX) PGX SOLUBLE FIBER BLEND -180 caps	34.95	26.21		
00865	PHARMAGABA™ - 60 chewable tablets	29.95	22.46		
	PHARMAGABA™ - 4 bottles of 60 chewable tablets	108.00	81.00		
00368	PHOSPHATIDYLSERINE CAPS - 100 mg, 100 caps	54.00	40.50		
	PHOSPHATIDYLSERINE CAPS - 4 bottles of 100 caps	192.00	144.00		
01050	PHOSPHOMEKA™ KRILL OIL - 60 softgels	33.95	25.46		
00614	PILL CUTTER/GRINDER	11.95	8.96		

SUB-TOTAL OF COLUMN 13

JANUARY 2011

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN **ADDITIONAL 10% ON ALL PRODUCTS DURING SUPER SALE**

No.		Retail	Member Price	Qty	Total
00561	POLICOSANOL - 10 mg, 60 tablets	\$24.00	\$18.00		
	POLICOSANOL - 6 bottles of 60 tablets	108.00	81.00		
01423	(FULL-SPECTRUM) POMEGRANATE™ - 30 softgels	24.00	18.00		
	(FULL-SPECTRUM) POMEGRANATE™ - 4 bottles of 30 softgels	84.00	63.00		
00956	POMEGRANATE EXTRACT - 30 veg. caps	19.50	14.63		
	POMEGRANATE EXTRACT - 4 bottles of 30 veg. caps	70.20	52.64		
00957	POMEGRANATE JUICE CONCENTRATE - 16 oz. liquid	25.95	19.46		
	POMEGRANATE JUICE CONCENTRATE - 4 bottles of 16 oz liquid	96.00	72.00		
00577	POTASSIUM IODIDE - 1 box, 14 tablets	6.95	5.21		
	POTASSIUM IODIDE - 4 boxes, 14 tablets	21.00	15.75		
01500	PQQ CAPS W/BIOPQQ™ - 10 mg, 30 veg. caps	24.00	16.50		
	PQQ CAPS W/BIOPQQ™ - 4 bottles of 30 veg. caps	88.00	66.00		
00302	PREGNENOLONE CAPSULES - 50 mg, 100 caps	24.00	18.00		
	PREGNENOLONE CAPSULES - 4 bottles of 100 caps	76.00	57.00		
00700	PREGNENOLONE CAPSULES - 100 mg, 100 caps	26.00	19.50		
	PREGNENOLONE CAPSULES - 4 bottles of 100 caps	90.00	67.50		
*01373	PRELOX® NATURAL SEX FOR MEN® - 60 tablets	50.00	37.50		
	PRELOX® NATURAL SEX FOR MEN® - 4 bottles of 60 tablets	180.00	135.00		
00571	PRIMAL DEFENSE® - 900 mg, 90 caplets	49.95	37.46		
	PRIMAL DEFENSE® - 4 bottles of 90 caplets	194.00	145.50		
01019	PRIMAL DEFENSE® - 180 caplets	78.95	59.21		
00525	PROBOOST THYMIC PROTEIN A™ - 4 mcg, 30 packets	72.00	54.00		
	PROBOOST THYMIC PROTEIN A™ - 4 boxes	280.00	210.00		
00869	PRO FEM CREAM - 2 fl oz pump, Progesterone Cream	32.00	24.00		
	PRO FEM CREAM - 4, 2 fl oz pumps, Progesterone Cream	116.00	87.00		
01020	PROGREENS® - 15 stick pack	22.50	16.88		
01072	PRO M INTERNAL DEODORIZER - 500 mg, 100 veg. caps	28.00	21.00		
	PRO M INTERNAL DEODORIZER - 4 bottles of 100 veg. caps	100.00	75.00		
*01495	(ULTRA NAT) PROSTATE FORMULA W/ 5-LOXIN® STAND. LIGNANS-60 softgels	38.00	28.50		
	(ULTRA NAT) PROSTATE FORMULA w/ 5-LOXIN® STAND. LIGNANS-4 bot of 60 softgels	140.00	105.00		
	(ULTRA NAT) PROSTATE FORMULA w/ 5-LOXIN® STAND. LIGNANS-12 bot of 60 softgels	384.00	288.00		
01092	(ENHANCED LIFE EXTENSION) PROTEIN (VANILLA) - 1 kg of powder	38.00	28.50		
	(ENHANCED LIFE EXTENSION) PROTEIN (VANILLA) - 4 bot of powder	144.00	108.00		
01093	(ENHANCED LIFE EXTENSION) PROTEIN (CHOCOLATE) - 1 kg of powder	38.00	28.50		
	(ENHANCED LIFE EXTENSION) PROTEIN (CHOCOLATE) - 4 bot of powder	144.00	108.00		
01094	(ENHANCED LIFE EXTENSION) PROTEIN (NATURAL) - 1 kg of powder	38.00	28.50		
	(ENHANCED LIFE EXTENSION) PROTEIN (NATURAL) - 4 bot of powder	144.00	108.00		
01095	(ENHANCED LIFE EXTENSION) PROTEIN (BERRY) - 1 kg of powder	38.00	28.50		
	(ENHANCED LIFE EXTENSION) PROTEIN (BERRY) - 4 bot of powder	144.00	108.00		
00290	(DESIGNER WHEY) PROTEIN - Vanilla 2 lbs of powder	42.49	31.87		
	(DESIGNER WHEY) PROTEIN - 4 bottles of Vanilla powder	154.00	115.50		
00282	(DESIGNER WHEY) PROTEIN - Chocolate 2 lbs of powder	42.49	31.87		
	(DESIGNER WHEY) PROTEIN - 4 bottles of Chocolate powder	154.00	115.50		
00283	(DESIGNER WHEY) PROTEIN - Natural 2 lbs of powder	42.49	31.87		
	(DESIGNER WHEY) PROTEIN - 4 bottles of Natural powder	154.00	115.50		
01056	PURE-GAR® - 200 caps	24.95	18.71		
	PURE-GAR® - 4 bottles of 200 caps	84.00	63.00		
01075	PURE PLANT PROTEIN - Natural Vanilla 450 grams	36.00	27.00		
	PURE PLANT PROTEIN - 4 jar powder	132.00	99.00		
01209	(WATER-SOLUBLE) PUMPKIN SEED EXTRACT - 60 veg. caps	20.00	15.00		
	(WATER-SOLUBLE) PUMPKIN SEED EXTRACT - 4 bottles 60 veg. caps	72.00	54.00		
01210	(WATER-SOLUBLE) PUMPKIN SEED EXT w/SOY ISOFLAVONES - 60 veg. caps	22.00	16.50		
	(WATER-SOLUBLE) PUMPKIN SEED EXT w/SOY ISOFLAVONES - 4 bottles 60 veg.	80.00	60.00		
01031	PYCNOGENOL® - 60 veg. caps	86.95	65.21		

* Product cannot be sold outside the USA.

SUB-TOTAL OF COLUMN 14

OFFER ENDS JANUARY 31, 2011

To order online visit www.lifeextension.com/SuperSale

No.		Retail	Member Price	Qty	Total
P CONTINUED					
01217	PYRIDOXAL 5'-PHOSPHATE - 100 mg, 60 veg. caps	\$22.00	\$16.50		
	PYRIDOXAL 5'-PHOSPHATE - 4 bottles of 60 veg. caps	79.20	59.40		
Q, R					
01309	(OPTIMIZED) QUERCETIN - 250 mg, 60 veg. caps	\$18.00	\$13.50		
	(OPTIMIZED) QUERCETIN - 4 bottles of 60 veg. caps	68.00	51.00		
01030	RED YEAST RICE (Bluebonnet) - 600 mg, 60 veg. caps	16.95	12.71		
00979	RED YEAST RICE (Nature's Plus) - 600 mg, 60 veg. caps	23.20	17.40		
00060	RED YEAST RICE EXTENDED RELEASE (Nature's Plus) - 30 veg. tablets	20.95	15.71		
00605	REGIMINT® - 60 enteric-coated caps	19.95	14.96		
	REGIMINT® - 4 bottles of 60 caps	74.68	56.01		
00448	REJUVENEX® BODY LOTION - 6 oz tube	24.00	18.00		
	REJUVENEX® BODY LOTION - 4 tubes	79.20	59.40		
	REJUVENEX® BODY LOTION - 8 tubes	136.00	102.00		
00918	REJUVENEX® FACTOR - 1.7 oz Airless pump bottle	65.00	48.75		
	REJUVENEX® FACTOR - 2 bottles	120.00	90.00		
	REJUVENEX® FACTOR - 4 bottles	220.00	165.00		
	REJUVENEX® FACTOR - 8 bottles	399.28	299.46		
01220	(ULTRA) REJUVENEX® - 2 oz jar	52.00	39.00		
	(ULTRA) REJUVENEX® - 2 jars	96.00	72.00		
	(ULTRA) REJUVENEX® - 4 jars	176.00	132.00		
	(ULTRA) REJUVENEX® - 8 jars	319.44	239.38		
00676	(ULTRA) REJUVENIGHT (DREAM CREAM) - 2 oz jar	39.95	29.96		
	(ULTRA) REJUVENIGHT (DREAM CREAM) - 4 jars	144.00	108.00		
00706	(ULTRA) REJUVENIGHT w/PROGESTERONE - 2 oz jar	42.00	31.50		
	(ULTRA) REJUVENIGHT w/PROGESTERONE - 4 jars	152.00	114.00		
01413	RESVERATROL w/PTEROSTILBENE - 20 mg, 60 veg. caps	24.00	18.00		
	RESVERATROL w/PTEROSTILBENE - 4 bottles of 60 veg. caps	88.00	66.00		
01410	RESVERATROL w/PTEROSTILBENE - 100 mg, 60 veg. caps	36.00	27.00		
	RESVERATROL w/PTEROSTILBENE - 4 bottles of 60 veg. caps	128.00	96.00		
01430	(OPTIMIZED) RESVERATROL w/SYNERGISTIC GRAPE-BERRY ACTIVES - 250 mg, 60 veg. caps	46.00	34.50		
	(OPTIMIZED) RESVERATROL w/SYNERGISTIC GRAPE-BERRY ACTIVES - 4 bottles of 60 veg. caps	165.32	124.00		
00889	RHODIOLA EXTRACT - 250 mg, 60 veg. caps	11.75	8.81		
	RHODIOLA EXTRACT - 4 bottles of 60 veg. caps	42.32	31.74		
00972	(D) RIBOSE POWDER - 150 grams of powder	27.50	20.63		
	(D) RIBOSE POWDER - 4 jars of 150 grams	99.00	74.25		
01473	(D) RIBOSE CAPS - 100 veg. tabs	32.00	24.00		
	(D) RIBOSE CAPS - 4 bottles of 100 veg. tabs	112.00	84.00		
01208	(SUPER) R-LIPOIC ACID - 300 mg, 60 veg. caps	49.00	36.75		
	(SUPER) R-LIPOIC ACID - 4 bottles of 60 veg. caps	180.00	135.00		
00070	RNA CAPSULES - 500 mg, 100 caps	17.95	13.46		
	RNA CAPSULES - 4 bottles of 100 caps	64.64	48.48		
00917	ROSMARINIC ACID EXTRACT - 60 veg. caps	59.00	44.25		
	ROSMARINIC ACID EXTRACT - 4 bottles of 60 veg. caps	212.00	159.00		
S					
01082	(JARROW) SACCHOROMYCES BOULARDII+MOS - 30 veg. caps	\$9.95	\$7.46		
01067	(JARROW) SACCHOROMYCES BOULARDII+MOS - 90 veg. caps	21.95	16.46		
01432	(OPTIMIZED) SAFFRON w/SATIEREAL - 60 veg. caps	36.00	27.00		
	(OPTIMIZED) SAFFRON w/SATIEREAL - 4 bottles of 60 veg. caps	128.00	96.00		
**00573	SAMBU GUARD - 175 ml	17.49	13.99		
00358	SAME (S-ADENOSYL-METHIONINE) - 200 mg, 20 enteric coated tablets	17.00	12.75		
	SAME (S-ADENOSYL-METHIONINE) - 8 boxes of 20 enteric coated tablets	120.00	90.00		

SUB-TOTAL OF COLUMN 15

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN **ADDITIONAL 10%** ON ALL PRODUCTS DURING SUPER SALE

Buyers Club Order Form

No.		Retail	Member Price	Qty	Total
00453	SAME (S-ADENOSYL-METHIONINE) - 200 mg, 50 enteric coated tablets	\$40.00	\$30.00		
	SAME (S-ADENOSYL-METHIONINE) - 4 bottles of 50 enteric coated tablets	140.00	105.00		
00557	SAME (S-ADENOSYL-METHIONINE) - 400 mg, 20 enteric coated tablets	32.00	24.00		
	SAME (S-ADENOSYL-METHIONINE) - 6 boxes of 20 enteric coated tablets	150.00	112.50		
01055	SAME (S-ADENOSYL-METHIONINE) - 400 mg, 50 tablets	72.00	54.00		
	SAME (S-ADENOSYL-METHIONINE) - 4 bottles of 50 tablets	264.00	198.00		
01043	SEA-IODINE™ - 1000 mcg, 60 veg. caps	8.00	6.00		
	SEA-IODINE™ - 4 bottles of 60 veg. caps	28.80	21.60		
00046	SELENIUM - 2 oz dropper bottle	9.45	7.09		
	SELENIUM - 4 bottles of 2 oz bottle	36.00	27.00		
00567	SE-METHYLELENOCYSTEINE - 200 mcg, 100 caps	12.00	9.00		
	SE-METHYLELENOCYSTEINE - 4 bottles of 100 caps	44.00	33.00		
00318	SERRAFLAZYME - 100 tablets	18.00	13.50		
	SERRAFLAZYME - 4 bottles of 100 tablets	64.00	48.00		
00284	SHARK LIVER OIL (NORWEGIAN) - 1000 mg, 30 softgels	18.00	13.50		
	SHARK LIVER OIL (NORWEGIAN) - 4 bottles of 30 softgels	64.00	48.00		
00184	SILYMARIN - 100 mg, 50 caps	9.25	6.94		
	SILYMARIN - 4 bottles of 50 caps	33.00	24.75		
00702	(MEGA) SILYMARIN WITH ISOSILYBIN B - 100 caps	42.00	31.50		
	(MEGA) SILYMARIN WITH ISOSILYBIN B - 4 bottles of 100 caps	152.00	114.00		
01502	SKIN RESTORING CERAMIDES w/LIPOWHEAT™ - 30 liquid caps	25.00	18.75		
	SKIN RESTORING CERAMIDES w/LIPOWHEAT™ - 4 bottles of 30 liquid caps	92.00	69.00		
00872	SLIMSTYLES PGX® - 6.4 oz powder	22.95	17.21		
00961	SODZYME® w/GLISODIN® AND WOLFBERRY - 90 veg. caps	28.00	21.00		
	SODZYME® w/GLISODIN® AND WOLFBERRY - 4 bottles of 90 veg. caps	96.00	72.00		
00657	SOLARSHIELD SUNGLASSES - 1 pair smoke color	12.99	9.74		
	SOLARSHIELD SUNGLASSES - 2 pair smoke color	23.00	17.25		
01097	(ULTRA) SOY EXTRACT - 150 veg. caps	87.00	65.25		
	(ULTRA) SOY EXTRACT - 4 bottles of 150 veg. caps	312.00	234.00		
00304	SOY POWER POWDER - 300 grams of powder	31.50	23.63		
	SOY POWER POWDER - 4 bottles of powder	114.00	85.50		
00286	SOY PROTEIN POWDER (concentrated soy protein) - 16 oz of powder	12.00	9.00		
	SOY PROTEIN POWDER - 4 bottles of powder	42.50	31.87		
01099	STABILUM® 200 - 30 caps	30.00	22.50		
00432	STEVIA EXTRACT - 100 packets, 1 gram each	9.95	7.46		
	STEVIA EXTRACT - 4 boxes of 100 packets	36.00	27.00		
00351	ST. JOHN'S WORT EXTRACT - 300 mg, 60 caps	10.98	8.24		
	ST. JOHN'S WORT EXTRACT - 4 bottles of 60 caps	40.00	30.00		
00327	ST. JOHN'S WORT EXTRACT (PLANETARY) - 600 mg, 60 tablets	16.75	12.56		
	ST. JOHN'S WORT EXTRACT (PLANETARY) - 4 bottles of 60 tablets	55.40	41.55		
01476	STRONTIUM - 750 mg, 90 veg. caps	20.00	15.00		
	STRONTIUM - 4 bottles of 90 veg. caps	72.00	54.00		
00971	SUN PROTECTION SPRAY W/BETA GLUCAN - SPF30 - 6 oz bottle	14.95	11.21		
	SUN PROTECTION SPRAY W/BETA GLUCAN - SPF30 - 4 bottles, 6 oz	54.00	40.50		
00747	(OVERXCAST POLARIZED) SUNGLASSES - gray color, large	27.00	20.25		
	(OVERXCAST POLARIZED) SUNGLASSES - 2 pairs, gray color	42.00	31.50		
00748	(OVERXCAST POLARIZED) SUNGLASSES - gray color, medium	27.00	20.25		
	(OVERXCAST POLARIZED) SUNGLASSES - 2 pairs, gray color	42.00	31.50		
00758	SUPER ABSORBABLE SOY ISOFLAVONES - 60 caps	28.00	21.00		
	SUPER ABSORBABLE SOY ISOFLAVONES - 4 bottles of 60 caps	100.00	75.00		

** These products are not 25% off retail price.

SUB-TOTAL OF COLUMN 16

JANUARY 2011

Buyers Club Order Form

SUPER SALE SAVINGS ON ALL PRODUCTS
To order call: 1-954-766-8433 or 1-800-544-4440

No.		Retail	Member Price	Qty	Total
S CONTINUED					
01408	SUPER SAW PALMETTO/NETTLE ROOT w/BETA-SITOSTEROL 60 softgels	\$28.00	\$21.00		
	SUPER SAW PALMETTO/NETTLE ROOT W/BETA-SITOSTEROL 4 bottles of 60 softgels	104.00	78.00		
	SUPER SAW PALMETTO/NETTLE ROOT w/BETA-SITOSTEROL One-year supply	288.00	216.00		
01407	SUPER SAW PALMETTO W/BETA-SITOSTEROL - 30 softgels	15.00	11.25		
	SUPER SAW PALMETTO W/BETA-SITOSTEROL - 12 bottles of 30 softgels	144.00	108.00		
00578	SUPER SELENIUM COMPLEX - 200 mcg, 100 caps	12.00	9.00		
	SUPER SELENIUM COMPLEX - 4 bottles of 100 caps	40.00	30.00		
	SUPER SELENIUM COMPLEX - 12 bottles of 100 caps	108.00	81.00		
00674	SYTRINOL™ - 60 softgels	32.00	24.00		
	SYTRINOL™ - 4 bottles of 60 softgels	112.00	84.00		
T					
	TAL • SHIT™ COSMETICS • For information please call 1-800-544-4440 or visit www.lifeextension.com				
01062	TART CHERRY (FRUIT ADVANTAGE) - 600 mg, 60 caps	\$18.95	\$14.21		
00199	TAURINE CAPSULES - 1000 mg, 50 caps	8.95	6.71		
	TAURINE CAPSULES - 4 bottles of 50 caps	32.00	24.00		
00133	TAURINE POWDER - 300 grams, powder	20.00	15.00		
	TAURINE POWDER - 4 bottles of powder	67.52	50.64		
01304	THEAFLAVIN STANDARDIZED EXTRACT - 30 veg. caps	18.00	13.50		
	THEAFLAVIN STANDARDIZED EXTRACT - 4 bottles of 30 veg. caps	64.00	48.00		
00555	(L) THEANINE - 100 mg, 60 caps	24.00	18.00		
	(L) THEANINE - 4 bottles of 60 caps	82.00	61.50		
**01038	ATHERALAC - 30 caps	44.95	33.71		
00224	THYMIC IMMUNE FACTORS - 100 caps	18.00	13.50		
	THYMIC IMMUNE FACTORS - 4 bottles of 100 caps	56.00	42.00		
00668	(METABOLIC ADVANTAGE) THYROID FORMULA - 100 caps	17.95	13.46		
00349	TMG - 50 grams of powder	14.00	10.50		
	TMG - 4 bottles of powder	44.00	33.00		
00359	TMG TABLETS - 500 mg, 180 tablets	18.00	13.50		
	TMG TABLETS - 4 bottles of 180 tablets	62.00	46.50		
00366	TOCOTRIENOLS - 50 mg, 60 softgel caps	39.95	29.96		
	TOCOTRIENOLS - 4 bottles of 60 softgel caps	144.00	108.00		
00781	TOCOTRIENOLS WITH SESAME LIGNANS - 60 softgels	38.00	28.50		
	TOCOTRIENOLS WITH SESAME LIGNANS - 4 bottles of 60 softgels	144.00	108.00		
01400	(SUPER-ABSORBABLE) TOCOTRIENOLS - 60 softgels	30.00	22.50		
	(SUPER-ABSORBABLE) TOCOTRIENOLS - 4 bottles of 60 softgels	112.00	84.00		
01274	TOTAL SUN PROTECTION CREAM W/BETAGLUCANS - SPF 30, 4 oz Tube & PHOTO-AGING RECOVERY COMPLEX	28.00	21.00		
	TOTAL SUN PROTECTION CREAM W/BETAGLUCANS - 4-4 oz Tubes & PHOTO-AGING RECOVERY COMPLEX	100.80	75.60		
01468	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT- 60 veg. caps	24.00	18.00		
	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT-4 bot 60 veg. caps	88.00	66.00		
01469	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT W/RESVERATROL -60 veg. caps	32.00	24.00		
	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT w/RESVERATROL - 4 bottles	118.40	88.80		
01046	TRIPLE ACTION UNDER EYE REJUVENATOR - 0.5 oz pump	24.00	18.00		
	TRIPLE ACTION UNDER EYE REJUVENATOR - 4 boxes	88.00	66.00		
00866	TRYPTOPURE® L-TRYPTOPHAN - 500 mg, 90 veg. caps	38.00	28.50		
	TRYPTOPURE® L-TRYPTOPHAN - 4 bottles of 90 veg. caps	136.00	102.00		
01202	(OPTIMIZED) TRYPTOPURE® PLUS - 90 veg. caps	40.00	30.00		
	(OPTIMIZED) TRYPTOPURE® PLUS - 4 bottles of 90 veg. caps	144.00	108.00		
00326	L-TYROSINE TABLETS - 500 mg, 100 tablets	12.50	9.38		
	L-TYROSINE TABLETS - 4 bottles of 100 tablets	45.68	34.26		

SUB-TOTAL OF COLUMN 17

JANUARY 2011

LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN **ADDITIONAL 10%** ON ALL PRODUCTS DURING SUPER SALE

No.		Retail	Member Price	Qty	Total
U					
* 00310	UDO'S CHOICE® - 17 oz liquid (omega fatty acids)	\$27.49	\$21.99		
* 00311	UDO'S CHOICE® - 1000 mg, 180 caps	33.79	27.03		
* 00322	UDO'S CHOICE® WHOLESOME FAST FOOD - 1 lb bottle	27.49	21.99		
01061	ULTIMATE FLORA ADVANCED IMMUNITY - 30 caps	29.99	22.49		
V					
00213	VANADYL SULFATE - 7.5 mg, 100 tablets	\$15.00	\$11.25		
	VANADYL SULFATE - 4 bottles of 100 tablets	50.00	37.50		
00252	VELVET DEER ANTLER - 250 mg, 30 caps	36.00	27.00		
	VELVET DEER ANTLER - 4 bottles of 30 caps	136.00	102.00		
00408	VENOTONE - 60 caps	18.95	14.21		
	VENOTONE - 4 bottles of 60 caps	64.00	48.00		
00427	VINPOCETINE - 5 mg, 100 tablets	18.00	13.50		
	VINPOCETINE - 4 bottles of 100 tablets	56.00	42.00		
01033	VISION OPTIMIZER - 90 caps	29.95	22.46		
01098	VITAL GREENS MIX - 319.5 grams of powder	48.00	36.00		
	VITAL GREENS MIX - 4 jars of powder	176.00	132.00		
01219	(INTERPLEXUS) VITAMIN A NUTRISORB - 10,000 IU 0.6 fl oz	27.00	20.25		
00091	VITAMIN B1 CAPS - 500 mg, 100 caps	16.99	12.74		
	VITAMIN B1 CAPS - 4 bottles of 100 caps	60.68	45.51		
00093	VITAMIN B2 CAPS - 100 mg, 100 caps	12.99	9.74		
	VITAMIN B2 CAPS - 4 bottles of 100 caps	47.52	35.64		
00096	VITAMIN B3 (NIACIN) - 1000 mg, 100 caps	12.75	9.56		
	VITAMIN B3 (NIACIN) - 4 bottles of 100 caps	48.00	36.00		
00372	VITAMIN B3 (NIACIN) - 500 mg, 100 caps	7.65	5.74		
	VITAMIN B3 (NIACIN) - 4 bottles of 100 caps	26.60	19.95		
00098	VITAMIN B5 CAPS - 500 mg, 100 caps (Pantothenic Acid)	10.50	7.88		
	VITAMIN B5 CAPS - 4 bottles of 100 caps	37.52	28.14		
00556	VITAMIN B6 CAPS - 250 mg, 100 caps	12.50	9.38		
	VITAMIN B6 CAPS - 4 bottles of 100 caps	44.00	33.00		
00361	VITAMIN B12 TABLETS - 500 mcg, 100 dissolve-in-mouth tablets	8.75	6.56		
	VITAMIN B12 TABLETS - 4 bottles of 100 dissolve-in-mouth tablets	29.00	21.75		
00927	VITAMIN C WITH DIHYDROQUERCETIN - 1000 mg, 250 tablets	25.50	19.13		
	VITAMIN C WITH DIHYDROQUERCETIN - 4 bottles of 250 tablets	93.00	69.75		
00084	(BUFFERED) VITAMIN C POWDER - 454.6 grams of powder	23.95	17.96		
	(BUFFERED) VITAMIN C POWDER - 4 bottles of powder	88.00	66.00		
00864	VITAMIN D - 2000 IU, 1 fl oz	28.00	21.00		
	VITAMIN D - 4 bottles of 1 fl oz	100.00	75.00		
00251	VITAMIN D3 CAPS - 1000 IU, 250 caps	12.50	9.38		
	VITAMIN D3 CAPS - 4 bottles of 250 caps	45.00	33.75		
00713	VITAMIN D3 CAPS - 5000 IU, 60 caps	11.00	8.25		
	VITAMIN D3 CAPS - 4 bottles of 60 caps	39.60	29.70		
01418	VITAMIN D3 CAPS - 7000 IU, 60 caps	14.00	10.50		
	VITAMIN D3 CAPS - 4 bottles of 60 caps	50.40	37.80		
01372	VITAMIN D w/SEA-IODINE - 5000 IU, 60 veg. caps	14.00	10.50		
	VITAMIN D w/SEA-IODINE - 4 bottles of 60 veg. caps	50.00	37.50		
01472	VITAMINS D AND K w/SEA-IODINE™ - 60 veg. caps	24.00	18.00		
	VITAMINS D AND K w/SEA-IODINE™ - 4 bottles of 60 veg. caps	88.00	66.00		
00063	VITAMIN E CAPS (NATURAL) - 400 IU, 100 caps	18.75	14.06		
	VITAMIN E CAPS (NATURAL) - 4 bottles of 100 caps	69.00	51.75		
	VITAMIN E CAPS (NATURAL) - 10 bottles of 100 caps	150.00	112.50		

SUB-TOTAL OF COLUMN 18

* These products are not 25% off retail price.

** Due to license restrictions, this product is not for sale to Canada.

OFFER ENDS JANUARY 31, 2011

To order online visit www.lifeextension.com/SuperSale

No.		Retail	Member Price	Qty	Total
01225	(LOW-DOSE) VITAMIN K2 (MK-7) - 45 mcg, 90 softgels	\$18.00	\$13.50		
	(LOW-DOSE) VITAMIN K2 (MK-7) - 4 bottles of 90 softgels	64.00	48.00		
Z					
01585	(SUPER) ZEAXANTHIN W/LUTEIN & MESO-ZEAXANTHIN AND C3G - 60 softgels	\$22.00	\$16.50		
	(SUPER) ZEAXANTHIN W/LUTEIN & MESO-ZEAXANTHIN AND C3G- 4 bottles	79.20	59.40		
01586	(SUPER) ZEAXANTHIN W/LUTEIN & MESO-ZEAXANTHIN - 60 softgels PLUS ASTAXANTHIN AND C3G	42.00	31.50		
	(SUPER) ZEAXANTHIN W/LUTEIN & MESO-ZEAXANTHIN PLUS ASTAXANTHIN AND C3G- 4 bottles of 60 softgels	152.00	114.00		
00061	ZINC LOZENGES WITH VITAMIN C - 75 lozenges	9.50	7.13		
	ZINC LOZENGES WITH VITAMIN C - 4 bottles of 75 lozenges	27.00	20.25		
01051	ZYFLAMEND - 120 softgels	60.95	45.71		
01029	ZYFLAMEND EASYCAPS - 180 caps	31.95	23.96		

SUB-TOTAL OF COLUMN 19

GIVE THE GIFT of HEALTH, with a LIFE EXTENSION GIFT CARD!



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for someone special, call 1-800-544-4440.



LIFE EXTENSION MEMBERS RECEIVE 25% OFF THE RETAIL PRICE OF ALL PRODUCTS

DEDUCT AN ADDITIONAL 10% ON ALL PRODUCTS DURING SUPER SALE



HOW TO JOIN THE LIFE EXTENSION FOUNDATION®

As a member of the Life Extension Foundation®, you have the opportunity to participate in a great scientific endeavor. We are the world's premier organization dedicated to stopping and reversing aging.

Our 30-year track record shows that we have been five to ten years ahead of conventional and alternative medicine in making new life-saving therapies available to our members.

When you join the Life Extension Foundation®, we update you on the latest published medical research by sending you FREE books. Our most impressive publication is the 1,666-page *Disease Prevention and Treatment* protocol book that contains novel therapies to treat 133 common diseases of aging. *Disease Prevention and Treatment* is the only book that combines conventional and alternative therapies in order to implement a treatment regimen for fighting the multiple processes involved in degenerative disease.

Each month, Life Extension Foundation® members receive a magazine packed with the latest medical findings from around the world. Members also can call a toll-free phone number to talk to our knowledgeable health advisors about their health issues.

**If your number one priority is good health and a long life,
please join our not-for-profit organization.**

Four Easy Ways to Join

1. Call toll-free 1-800-544-4440 2. Go to www.lef.org 3. Fax back to 1-866-728-1050 4. Mail to: Life Extension Foundation® • PO Box 407198 Ft. Lauderdale, FL 33340-7198 • Local Number: 954-766-8433

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I want to contribute to your research efforts to extend the healthy human life span. Enclosed is my first year's membership donation of \$75 to join the most elite group of longevity enthusiasts in the world. (Canadians add \$7, all others outside the U.S. add \$35) Item code: MEMB1. Call for multiple year membership rates.

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JANUARY 2011

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33825	THE EMPOWERED PATIENT • by Elizabeth Cohen	2010	\$15.00	\$10.50	
33824	VITAMIN D SOLUTION • by Michael F. Holick, PhD, MD	2010	\$25.95	\$18.17	
33822	BREAKTHROUGH: EIGHT STEPS TO WELLNESS • by Suzanne Somers (paperback)	2010	\$15.00	\$10.50	
33823	WEIGHT LOSS GUIDE • by Steven V. Joyal, MD and William Faloon (hardcover)	2010	\$29.95	\$8.99	
33820	YOUR BLOOD DOESN'T LIE! • by Sergey Dzigan, MD, PhD	2010	\$24.95	\$17.47	
33819	BRAIN SURGEON • by Keith Black, MD	2010	\$24.99	\$18.74	
33816	FDA: FAILURE, DECEPTION, ABUSE • by Life Extension Foundation	2010	\$20.00	\$15.00	
33818	STAY YOUNG & SEXY WITH BIO-IDENTICAL HORMONE REPLACEMENT • by Jonathan Wright, MD	2010	\$19.95	\$14.96	
33815	KNOCKOUT • by Suzanne Somers	2009	\$25.99	\$17.00	
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33813	TIMESHIP • by Stephen Valentine	2009	\$45.00	\$33.75	
33812	LIFE OVER CANCER • by Keith Block, MD (hardcover)	2009	\$25.00	\$17.50	
33800	TEXTBOOK OF BIO-IDENTICAL HORMONES • by Edward Lichten, MD	2007	\$49.95	\$37.46	
33811	THE GREAT AMERICAN HEART HOAX • by Michael Ozner, MD, FACC, FAHA	2009	\$24.95	\$17.47	
33810	THE ULTRAMIND SOLUTION • by Mark Hyman, MD	2009	\$27.50	\$19.25	
33809	TESTOSTERONE FOR LIFE • by Abraham Morgentaler, MD	2008	\$16.95	\$11.87	
33808	BREAKTHROUGH: EIGHT STEPS TO WELLNESS • by Suzanne Somers	2008	\$25.95	\$18.17	
33599	YOUNGER YOU • by Eric Braverman, MD	—	\$24.95	\$15.75	
33598	AGELESS • by Suzanne Somers	2006	\$25.00	\$17.50	
33666	ULTRAMETABOLISM: THE SIMPLE PLAN FOR AUTOMATIC WEIGHT LOSS • by Mark Hyman, MD	2006	\$25.00	\$15.35	
33422	BRAIN LONGEVITY • by Dharma Singh Khalsa, MD, with Cameron Stauth	1997	\$14.95	\$11.21	
33677	DANGEROUS DOSES • by Katherine Eban	2005	\$25.00	\$16.25	
33600	DISEASE PREVENTION AND TREATMENT, EXPANDED FOURTH EDITION (hardcover)	2003	\$49.95	\$37.46	
	Price per book when 4 books purchased	—	\$44.00	\$33.00	
33594	THE EDGE EFFECT • by Eric Braverman, MD (paperback)	2004	\$12.95	\$9.71	
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33488	FEMALE AND FORGETFUL • by Elisa Lottor, PhD, ND, and Nancy P Bruning	2002	\$18.99	\$14.24	
33388	THE FIRST IMMORTAL • by James L. Halperin	1998	\$6.99	\$6.00	
33696	LIFE EXTENSION REVOLUTION • by Philip Lee Miller, MD (paperback)	—	\$16.00	\$12.00	
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33680	PRESCRIPTION FOR DISASTER DVD • by Gary Null	2005	\$18.00	\$12.00	
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33262	SAVE YOUR SIGHT • by Marc Rose, MD/Michael Rose, MD	—	\$13.99	\$8.35	
33804	STAYING YOUNG: THE OWNER'S MANUAL FOR EXTENDING YOUR WARRANTY • by Mehmet Oz, MD	2008	\$26.00	\$18.20	
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33695	WE BECOME SILENT • DVD by Kevin Miller	—	\$24.98	\$18.74	
33803	WHAT YOUR DOCTOR MAY NOT TELL YOU ABOUT DIABETES • by Steven V. Joyal, MD	2008	\$14.99	\$10.49	
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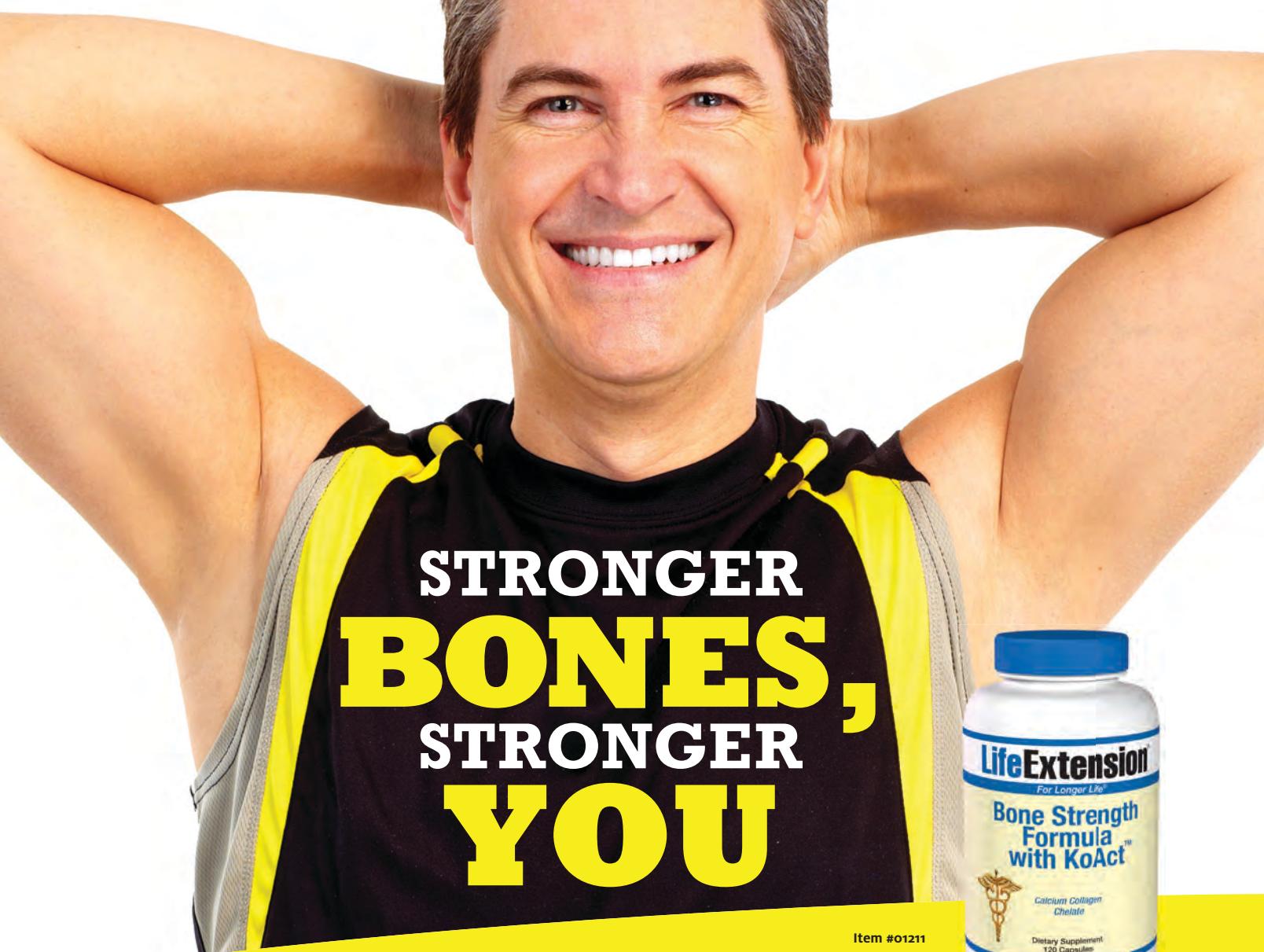
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STRONGER BONES, STRONGER YOU

Item #01211



Weak, brittle bones increase the risk of injury for many aging humans. Bone injuries, such as fractures, splinters, and bruises, can be extraordinarily painful, and may result in months of uncomfortable rehab or long-term disability. In order to protect yourself from potentially life-altering problems, Life Extension® has formulated an exciting product made with chelated **calcium** and **collagen** called **KoAct™** to maintain **bone strength** and **mineral density**.

KoAct™ allows for greater flexibility...so your bones can absorb energy, **reducing the risk of age-related injuries**. Additional plant extracts are included for their bone-protective minerals and polyphenols.

A bottle of **Bone Strength Formula with KoAct™** retails for **\$42**. If a member buys four bottles during **Super Sale**, the price is reduced to **\$25.65** per bottle.

Contains corn.

To order Bone Strength Formula with KoAct™, call 1-800-544-4440 or visit www.LifeExtension.com

Four capsules of Bone Strength Formula with KoAct™ provide:

Collagen	2,700 mg
(from 3,000 mg KoAct™ Calcium Collagen Chelate)	
Calcium	300 mg
(from 3,000 mg KoAct™ Calcium Collagen Chelate)	
Vitamin D3 (as cholecalciferol)	1,000 IU
Magnesium (as magnesium citrate)	100 mg
Silica [from standardized Bamboo (<i>Bambusa vulgaris</i>) extract (stem)]	5 mg
Dried Plum (<i>Prunus domestica</i>) extract (fruit) [standardized to 50% polyphenols (50 mg)]	100 mg
Boron (calcium fructoborate as patented FruiteX B® OsteoBoron®)	3 mg

If you need extra bone support, ask your health care professional how Bone Strength Formula with KoAct™ can be part of a comprehensive nutritional program in conjunction with proper resistance exercise. Life Extension offers many mineral formulas that may complement Bone Strength Formula with KoAct™ to ensure optimal mineral intake.

KoAct™ is a trademark of AIDP, Inc. FruiteX B® is a registered trademark of VDF FutureCeuticals, Inc., U.S. Patent #5,962,049. OsteoBoron® is a registered trademark of VDF FutureCeuticals, Inc.

THE POWER OF MAGNESIUM

MOST AMERICANS DO NOT OBTAIN SUFFICIENT MAGNESIUM FROM THEIR DIET.

According to the National Institutes of Health, magnesium is required for more than 300 biochemical reactions in the body. Magnesium "helps maintain normal muscle and nerve function, keeps heart rhythm steady, supports a healthy immune system, and keeps bones strong. Magnesium also helps regulate blood sugar levels, promotes normal blood pressure, and is known to be involved in energy metabolism and protein synthesis."^{1,2}

With so many of our body's critical functions dependent upon magnesium, supplementation can help ensure that you obtain healthy levels of this vital mineral. The recommended intake of magnesium to maintain vascular health is 300-800 mg a day. With Life Extension®'s **Magnesium Capsules** you can easily obtain 500 mg of elemental magnesium in each capsule.

The retail price of a bottle containing 100 500 mg **Magnesium Capsules** is **\$9.50**. If a member buys four bottles during **Super Sale**, the price is reduced to just **\$5.40** per bottle.



Item #01044

To order **Magnesium Capsules**,
call 1-800-544-4440 or
visit www.LifeExtension.com

References:

1. *Am J Clin Nutr.* 1987;45:1305-12.
2. *Clinica Chimica Acta.* 2000;294:1-26.



ULTIMATE eye HYDRATION

Eye support is essential to preventing age-related vision problems.

The older eyes get, the more susceptible they become to an array of debilitating issues that can hamper eyesight and cripple quality of life. With just a few drops of the proper eye lubricant, **eye irritation** stemming from **dryness** or **structural dysfunctions** may be alleviated.

Brite Eyes by Life Extension® provides a powerful dose of two well-established lubricants in every drop, soothing eye discomfort without irritation. **Hydroxymethylcellulose** and **glycerin** are FDA-approved for ophthalmic use and are uniquely preserved with potent **antioxidants** and **anti-glycating** agents.

The **Brite Eyes** formula is buffered in a way to make it **soothing to the eye**. The suggested use of **Brite Eyes III** is to apply 1 to 2 drops in each eye every day.

Each box of **Brite Eyes III** contains two individual vials that provide 5 mL each. The reason for putting **Brite Eyes** into individual vials is to reduce the risk of bacterial contamination. Having small vials also makes it convenient for consumers to keep **Brite Eyes** readily accessible at home, the office, in one's purse or pocket, and other places where access to a soothing eye drop is needed.



ITEM #00893

The retail price for a box containing two 5-mL vials of **Brite Eyes III** is \$34. If a member buys four boxes during **Super Sale**, the price is reduced to **\$21.60 per box**.

**To order Brite Eyes III,
call 1-800-544-4440
or visit www.LifeExtension.com**

The better Curcumin

For Optimal Absorption



In 2010, there were more than 160 published studies on curcumin. Every week, scientists discover new benefits of curcumin such as reducing inflammation and promoting healthy DNA function.

Unfortunately, not all forms of curcumin are readily absorbed into the bloodstream. As a result, you may not be achieving peak blood levels of this vital nutrient.

Super Bio-Curcumin® is absorbed up to **seven times more** than regular curcumin.^{1,2}

The graphs on this page illustrate that just **one 400 mg** capsule of **Super Bio-Curcumin®** can provide curcumin levels equivalent to ingesting **2,500-2,800 mg** of other curcumin supplements.

Additionally, **Super Bio-Curcumin®** can stay in the bloodstream almost twice as long as other curcumin supplements.

Life Extension®'s **Super Bio-Curcumin®** contains the newly patented BCM-95® turmeric compound. A bottle containing 60 **Super Bio-Curcumin® with BCM-95®** capsules retails for \$35. If a member buys four bottles during

Super Sale, the price is reduced to just **\$21.60** per bottle. Each bottle will last most members two months. Contains rice.

References:

1. Spice India. 2006 Sept;19(9):11-5.
2. Ind J Pharm Sci. 2008 Jul-Aug:445-9.
3. Bioavailability study of BCM-95® in rats. Orcas International Inc. 2006.

To order Super Bio-Curcumin® with BCM-95®, call 1-800-544-4440 or visit www.LifeExtension.com



Item #00407

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How Much Curcumin Are You Absorbing?

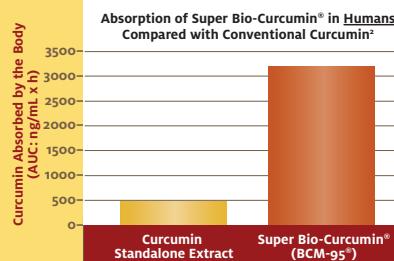


Chart 1. Super Bio-Curcumin® (BCM-95®) showed 6.9 times greater bioavailability (absorption and sustainability over 8 hours) in humans compared with conventional curcumin (as measured by the area under the curve [AUC] in a plot of blood levels against time, that is, the total amount of curcumin absorbed by the body over 8 hours).

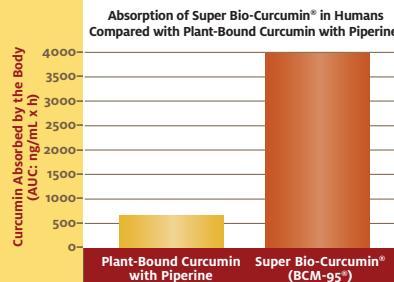


Chart 2. Super Bio-Curcumin® (BCM-95®) showed 6.3 times greater bioavailability (absorption and sustainability over 8 hours) in humans compared with plant-bound curcumin with piperine (as measured by the area under the curve [AUC] in a plot of blood levels against time, that is, the total amount of curcumin absorbed by the body over 8 hours).

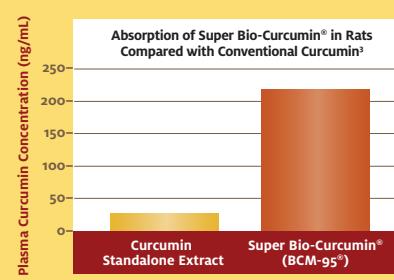


Chart 3. Bioavailability in rats fed with BCM-95® is 7.8 times higher than conventional curcumin.



WHAT'S INSIDE

LifeExtension® Magazine



THE SILENT KILLER (Page 7)

The deadly effects of even *slightly* elevated **glucose** levels continue to be fatally misunderstood. Find out how easy it is to *optimize* blood glucose and slash your degenerative disease risk.



CARNOSINE EXTENDS LIFE SPAN (Page 34)

A new experimental study shows that **carnosine** boosts longevity up to **36%**. Learn how carnosine functions via multiple pathways to protect against age-related disorders.



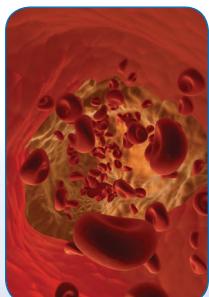
GAMMA TOCOPHEROL OVERLOOKED (Page 44)

High blood levels of *gamma tocopherol* dramatically reduce prostate cancer risk and other degenerative processes. The problem is that too many people rely *only* on alpha tocopherol and are missing key benefits of the *gamma* form of vitamin E.



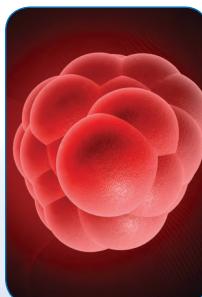
ARE YOU STARVING YOUR BRAIN? (Page 58)

People are avoiding saturated fats and cholesterol to protect against atherosclerosis, but are unwittingly starving their brain of two critical nutrients required to protect **neuronal structure** and **cognitive function**.



THE BENEFICIAL OMEGA-6 (Page 68)

Most people know **omega-3** (**EPA/DHA**) is crucial to good health. Less well known is **GLA**, an **omega-6 fatty acid** that combats eczema, arthritis, heart disease, and diabetes.



FDA BLOCKS NEW ARTHRITIS TREATMENT (Page 80)

Over **27 million** Americans suffer debilitating osteoarthritis, for which there is no cure. The FDA is blocking a non-surgical stem cell therapy shown to safely *eliminate* pain in up to **75%** of treated patients.