

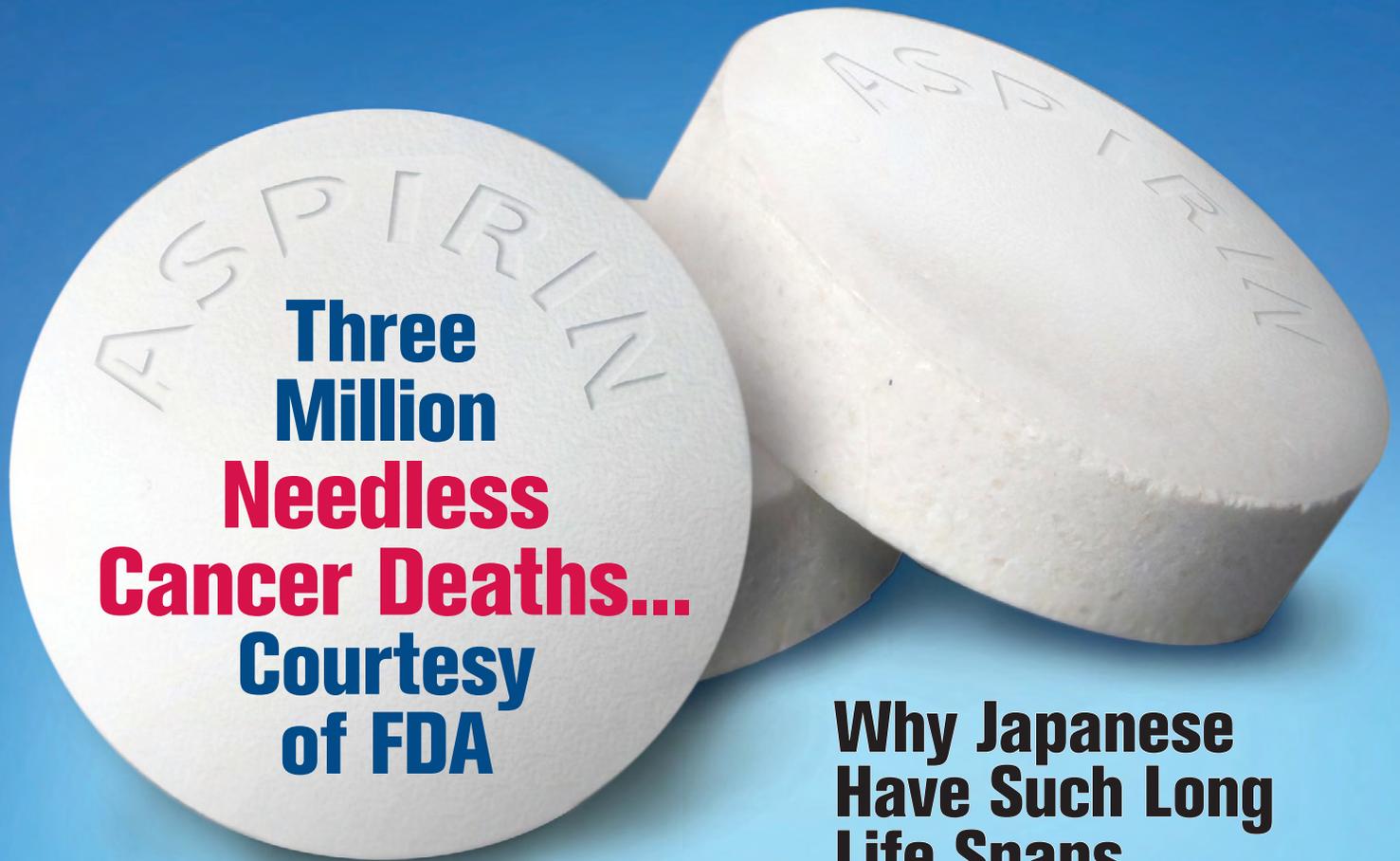
Egregious Hospital Ineptitude

LifeExtension®

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May 2011



**Three
Million
Needless
Cancer Deaths...
Courtesy
of FDA**

**Why Japanese
Have Such Long
Life Spans**

**Heart Disease-Related
Costs Expected to
Triple By 2030**

**New Blood Test
Helps Optimize
Sex Hormones**

PLUS-

**Greater Than 90% of Adults Risk Hypertension
Branched Chain Amino Acids Grow Mitochondria
Protect Against Hospital-Acquired Infections**



Restore
Cellular
Energy
with...

NEXT-GENERATION

CoQ10

Since **Life Extension**® introduced CoQ10 in 1983, our scientists have continued to develop increased potency and absorbability.

Super Ubiquinol CoQ10 with Enhanced Mitochondrial Support™ contains **PrimaVie**® **shilajit** that **doubles** levels of CoQ10 in the mitochondria.¹

Combining CoQ10 and **shilajit** produced a **56%** increase in cellular energy production in the **brain**, and in muscle there was a **144%** increase in cellular energy production.²

Shilajit boosts CoQ10's beneficial effects by stabilizing CoQ10 in the superior ubiquinol form, which *prolongs* its action at the cellular level.^{3,4} Additionally, **shilajit** facilitates the more efficient *delivery* of CoQ10 into the mitochondria, which results in enhanced cellular energy.⁵⁻⁹

Shilajit helps the mitochondria convert fats and sugars into the body's main source of energy, ATP (adenosine triphosphate).⁵⁻⁹

Super Ubiquinol CoQ10 with Enhanced Mitochondrial Support™

Combining **ubiquinol** CoQ10 with **shilajit** generates a powerful *synergy* that supports more youthful cellular energy production than CoQ10 alone.^{2,4,5}

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PrimaVie® is a registered trademark of Natreon, Inc. Kaneka QH® is a registered trademark of Kaneka Corporation.



The retail price for 60 100 mg softgels of **Super Ubiquinol CoQ10 with Enhanced Mitochondrial Support**™ is \$62. If a member buys four bottles, the price is reduced to \$42 per bottle. **Item # 01426**



The retail price for 100 50 mg softgels of **Super Ubiquinol CoQ10 with Enhanced Mitochondrial Support**™ is \$58. If a member buys four bottles, the price is reduced to \$39.75 per bottle. **Item # 01425**



The retail price for 30 200 mg softgels of **Super Ubiquinol CoQ10 with Enhanced Mitochondrial Support**™ is \$62. If a member buys four bottles, the price is reduced to \$42 per bottle. **Item # 01431**

To order **Super Ubiquinol CoQ10 with Enhanced Mitochondrial Support**™
call 1-800-544-4440 or visit www.LifeExtension.com

REPORTS



30 OPTIMIZE YOUR SEX HORMONE STATUS

Hundreds of published studies link imbalances of **testosterone** and **estrogen** (in men and women) with the onset of age-related pathologies. A little-known blood marker of hormonal balance is **sex hormone-binding globulin** or **SHBG**. Newly published studies reveal how **SHBG** interacts with testosterone and estrogen—and how maturing individuals can use this blood test to optimize their sex hormone status.



40 THE LONGEVITY FACTOR IN THE JAPANESE DIET

The Japanese are amongst the longest-lived people in the world, with those residing in Okinawa achieving incredible healthy life spans. Scientists are zeroing in on native **seaweeds** in traditional Japanese diets whose constituents induce **anti-aging benefits** that go *beyond* anything used in Western societies.



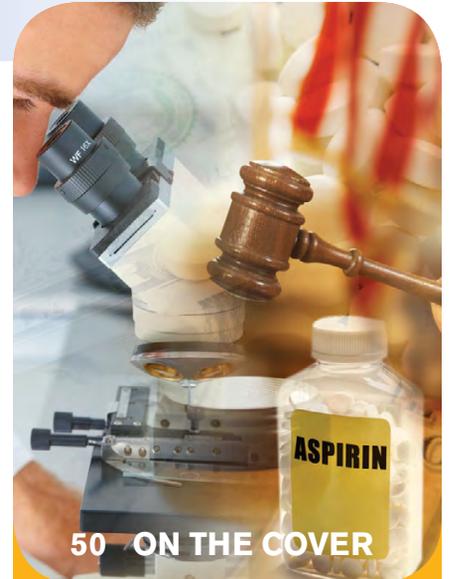
62 NATURAL WAYS TO PREVENT A STEALTH KILLER

The lifetime risk of developing high blood pressure is **greater than 90%** in adults 55 years and older. Left undetected and untreated, this stealth killer can culminate in **stroke, kidney damage, and heart attack**. A Cambridge research team recently made a discovery validating the power of certain nutrients to combat chronic hypertension.



74 BRANCHED CHAIN AMINO ACIDS GROW NEW MITOCHONDRIA

Fitness enthusiasts have long prized **branched chain amino acids** (BCAAs) for their power to boost strength and performance. A newly published study may now give *longevity* enthusiasts a reason to as well: in an animal model, BCAAs increased life span in part through *mitochondrial biogenesis*—the spontaneous growth of new mitochondria.



50 ON THE COVER

THREE MILLION NEEDLESS CANCER DEATHS

Back in **1983**, **Life Extension®** strongly advised aging people to take **aspirin** each day. The **FDA** responded by threatening criminal charges. A new **Oxford University** analysis *conclusively* shows that **low-dose aspirin slashes** overall cancer death risk by **20%**. The result of FDA censorship is that millions of Americans died *needlessly* of **cancer and vascular diseases**.

DEPARTMENTS

7 AS WE SEE IT EGREGIOUS HOSPITAL INEPTITUDE

William Faloon was recently hospitalized and witnessed egregious *inefficiency* and *ineptitude*...so much so that he made some major lifestyle changes. This article also discusses simple ways to protect against hospital-acquired infections.

23 IN THE NEWS

Heart disease-related costs projected to triple by 2030; more Americans using supplements; broccoli's anti-cancer mechanisms revealed; and more.

85 ASK THE DOCTOR

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

89 PROFILE: HARLAN BIELEY, MD

In the quest to improve the lives of his patients and effectively treat their conditions, Dr. Harlan Bieley had a major revelation while treating a most unlikely patient: himself. Here he reveals how his personal experience with illness transformed his medical practice.

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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**.

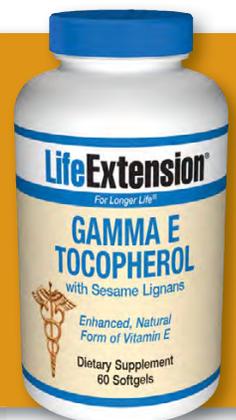
WORLD'S MOST COMPREHENSIVE VITAMIN E FORMULA!

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, the price is reduced to only **\$21.75 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	



Item #00759

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.

Note: Those taking Super Booster do not usually require additional gamma tocopherol.

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To order Gamma E Tocopherol with Sesame Lignans, 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.

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Peter H. Langsjoen, MD, FACC, is a cardiologist specializing in congestive heart failure, primary and statin-induced diastolic dysfunction, and other heart diseases. A leading authority on coenzyme Q10, Dr. Langsjoen has been involved with its clinical application since 1983. He is a founding member of the executive committee of the International Coenzyme Q10 Association, a fellow of the American College of Cardiology, and a member of numerous other medical associations.



Ralph W. Moss, PhD, is the author of books such as *Antioxidants Against Cancer*, *Cancer Therapy*, *Questioning Chemotherapy*, and *The Cancer Industry*, as well as the award-winning PBS documentary "The Cancer War." Dr. Moss has independently evaluated the claims of various cancer treatments and currently directs The Moss Reports, an updated library of detailed reports on more than 200 varieties of cancer diagnoses.



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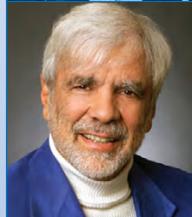
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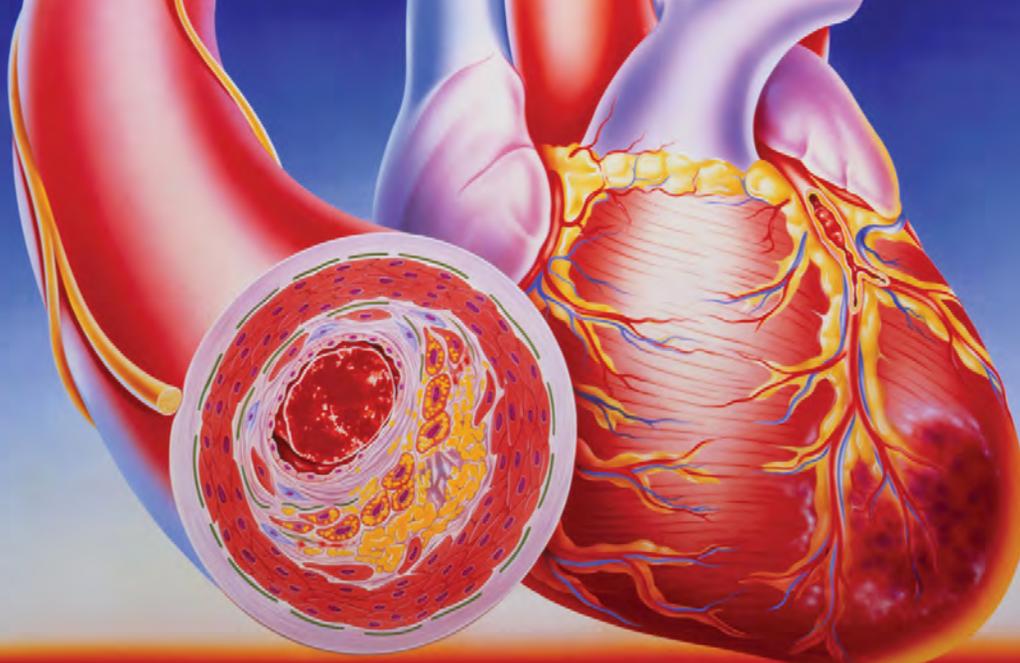
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ENHANCE Heart Health

The reason for many circulatory problems is the breakdown of endothelial function and structure.

Today, there are nutrients that have been clinically shown to help maintain healthy endothelial function and arterial circulation. **Endothelial Defense™ with GliSODin®** provides potent nutrients to support endothelial health: *standardized pomegranate* and an orally active form of **superoxide dismutase**.

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

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

Superoxide Dismutase/Gliadin Complex 500 mg
(GliSODin®) [SOD (Superoxide Dismutase)
Enzyme Activity = 500 IU]

POMELLA® Pomegranate (*Punica granatum*) 400 mg
Extract (fruit) [std. to 30% punicalagins (120 mg)]

Pomegranate (*Punica granatum*) 100 mg
5:1 Extract (fruit)

PomComplete™ Pomegranate (*Punica granatum*) 137.5 mg
Blend [flower extract and seed oil
(standardized to 22% (30 mg) punicalic acid)]

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Contains soybeans and wheat. Contains gluten.

Next-Generation Pomegranate Power

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

A bottle containing 60 softgels of **Endothelial Defense™ with Full-Spectrum Pomegranate™** retails for \$56. If a member buys four bottles, the price is reduced to just **\$39** per bottle.



Item #01498

**To Order Endothelial Defense™
with Full-Spectrum Pomegranate™,
call 1-800-544-4440 or
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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.

My Recent Life-Altering Event



BY WILLIAM FALOON



I suspect everyone reading this column has experienced harsh real-world events that resulted in their making personal lifestyle changes.

You may have seen a loved one suffer and die from a horrific disease and responded by initiating programs to reduce your risk of encountering the same fate.

In other cases, you are the victim of a preventable illness—and turn your life around afterward to minimize the odds of it recurring.

I had a personal scare recently that put me in the hospital for a brief time. It terrorized me enough, however, to make some major lifestyle changes. I did this not only out of fear of the disease, but also the miseries of being confined to a hospital setting.

Egregious Hospital Ineptitude

In the August 2006 issue of this magazine, we published an in-depth article titled “**Death by Medicine.**”¹ That article reported stunning statistics showing that conventional medicine kills hundreds of thousands of Americans each year, making it a leading cause of death in the United States.^{2,3}

Many of us know of family or friends who encountered serious adverse events in a medical setting. In most cases, however, hospital-inflicted deaths are covered up by doctors who list the cause of death as the disease they were treating, as opposed to the real culprit of *incompetently* administered hospital procedures.

In several instances, we at **Life Extension**® have been involved in forcing death certificates to be amended because doctors fraudulently list a cause of death as something other than their own mistakes. We do this to help tear down the wall of deception erected by conventional medicine regarding the numerous errors they commit.

My Ordeal Begins...

For the first time in my life, I developed rather severe chest pains. I did not at first take this seriously, but shortly thereafter visited my local physician for an EKG (electrocardiogram).

To my surprise, the EKG results indicated I might be suffering coronary artery blockage and having a heart attack. The doctor suggested that I go to the local emergency room to get a blood test that measures markers such as *troponin*, which is a type of protein released by the heart when damaged. Troponin and enzymes like *creatine kinase* are elevated in the blood if there is damage to the heart muscle.

A hospital can perform these blood tests and have the results back in an hour, which is why I had to go to the ER to get them. The hospital did another EKG and the computerized reading indicated probable *acute myocardial infarction*, which means they thought I may be suffering a heart attack.

So here I was suffering rather intense chest pain with an EKG reading suggesting I was having

a heart attack. During that hour waiting for the troponin/creatine kinase blood test results to come back, a lot went through my mind. I thought about the atherogenic diet I consumed in my early years because I did not have affordable access to healthy foods. The enormous amount of thoracic radiation I was needlessly exposed to at an early age also weighed on my mind as a factor that could cause coronary atherosclerosis, even though I have taken good care of my arterial system in later years.

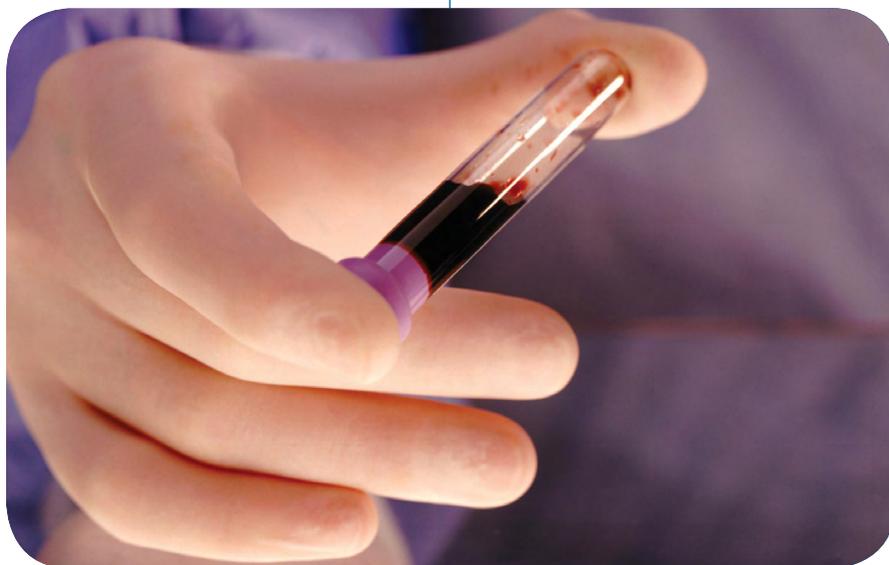
There was a sense of relief when the troponin blood test came back negative, indicating that I had not sustained heart muscle damage. The ER doctor, however, made it clear that troponin levels don't always elevate right away and that I needed follow-up troponin blood tests eight and sixteen hours later. The only way of having these tests done on an immediate (STAT) basis was to be “admitted” to the hospital.

I recalled some brilliant medical specialist friends of mine in the past who hated hospitals so much that they died rather than capitulate to hospital confinement—despite their intense chest pains. As bad as hospital confinement is, it was better than suffering fatal heart attacks like my friends did.

Like Going Back to the Days of the Soviet Union

If there is a word to describe why the old Soviet Union collapsed, it might be “inefficiency.” Back in the Soviet days, the central Russian government controlled every aspect of the economy and the result was *inefficiencies* of unparalleled magnitudes.

I knew about the inherent *inefficiencies* of modern-day hospitals



and was gratified that one of our Life Extension doctors brought me my laptop computer so that I could productively occupy my time while the hospital staff bumbled through the “admissions” process.

It took an outrageous number of hours to be transferred from the ER to a hospital room, but I kept myself busily occupied writing and editing articles for what was the next edition of this magazine, so the wait was not an annoyance.

The ER doctor promised me that the hospital would assign a *cardiologist* who would monitor me throughout the night in case my condition worsened. I began to question the competence of the so-called cardiologist when certain medications I expected to be prescribed were not. I became even more apprehensive when the so-called cardiologist did not seem to understand why I insisted on particular medications. I found out the next day that the hospital had erroneously called a *general practitioner* instead of the *cardiologist* to oversee me.

Delayed Medications

I told the ER doctor around **6:00 PM** the first day that I needed certain heart medications, and he said they had been ordered from the hospital pharmacy. At **11:00 PM** that night the drugs I requested still had not arrived.

When a nurse finally brought them, some were the wrong ones. Each and every time the drugs were mixed up, the supposed cardiologist had to be called to confirm that I could safely take what I was requesting. Fortunately, the general practitioner acquiesced to my requests and I finally got my meds—six hours after I needed them!



At midnight, they did another EKG and the result came back the same, i.e., possible acute myocardial infarction. My chest pains were still severe, but I recalled that the pain had subsided earlier in the day in response to ibuprofen or aspirin. I knew that if I was really suffering coronary artery blockage, that ibuprofen would not alleviate the pain. I again called the so-called cardiologist and asked for a high dose (800 mg) of ibuprofen. It finally arrived and within an hour I was chest pain-free.

A Sleepless Night

Sleeping is so important to maintaining immune function, yet many people find it impossible to sleep in a hospital setting. I am one of those who cannot sleep in a hospital bed.

I spent a long night reflecting on what I could have done to prevent a coronary blockage, if indeed this is what I had.

I knew from my previous blood test readings and preventive interventions that I was at low risk for coronary artery disease. Yet I dwelled on the fact that my last **LDL** reading was **101 mg/dL** and I knew it should ideally be kept below **80**. I also suffer genetically elevated **homocysteine** levels,

typically over **11 μmol/L**, even though it should be below **8 μmol/L**.

I take a lot of nutrients, drugs, and hormones to keep my cardiac markers at optimal ranges, but I recalled days when only a half dose was taken because of too many distractions. I made a vow that sleepless night to curtail other activities in order to have time to take every single nutrient, drug, and hormone I needed every single day. I told myself, *If I am ever diagnosed with vascular disease, I want to know it is because the comprehensive program I follow failed, rather than because I failed to follow the comprehensive program.*

I promised myself that even if every other cardiac risk marker was perfect, if there were a slight elevation of even one other marker (such as LDL), that I would double my efforts to suppress it.

The Next Morning

I was greeted early in the morning by the general practitioner, who apologized for the hospital confusing her as a cardiologist. I thanked her for prescribing the medications I requested even though she was not familiar with my rationale for wanting them. She told me the cardiologist I was supposed to have been assigned to would visit me shortly.

AS WE SEE IT



Within a half hour, the cardiologist arrived and impressed me with his capability. When I explained my hypothesis that I did not have coronary artery blockage because high-dose ibuprofen completely suppressed the chest pain, he concurred that I was probably suffering from *pericarditis*, which is an inflammation of the sack surrounding the heart muscle. It sounds serious, but is treatable with anti-inflammatory drugs. It is often caused by a virus or some unknown factor.

The cardiologist explained that my particular EKG readings meant one of two things. Either I was suffering such a severe heart attack that I would not be sitting up talking, or I had pericarditis. Since I suffered no other symptoms, the cardiologist told me that he would order more tests in the hospital and that I should stay another night.

I agreed to more tests but made it clear that I would bolt as soon as the tests were completed. He defined my leaving the hospital that day as “against medical advice” and strongly warned against it. I responded that another night of no sleep was more dangerous than the slight risk of *arrhythmia* (a heart rhythm disturbance that can be caused by pericarditis in some circumstances).

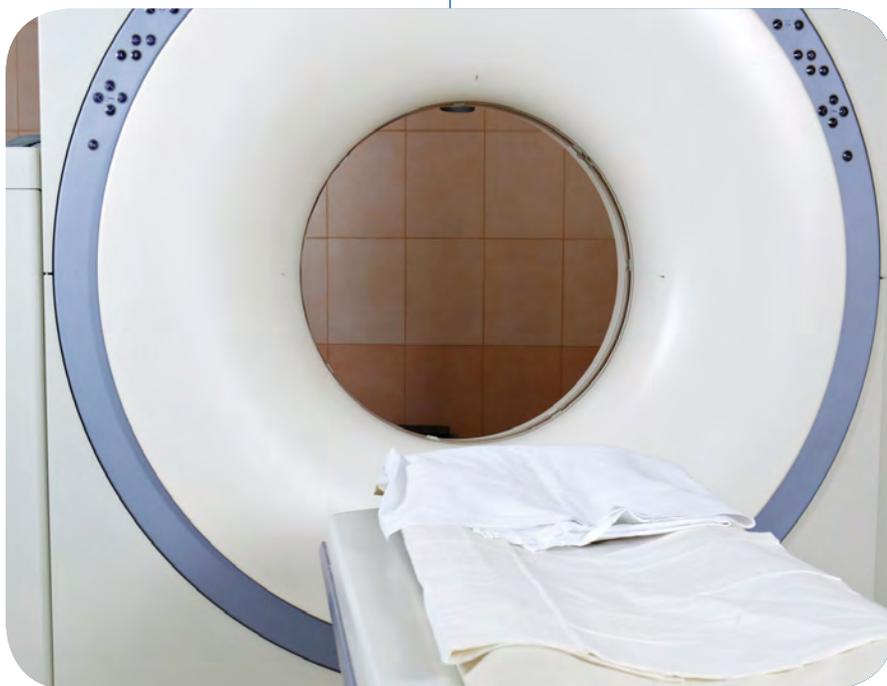
A Long Day

An echocardiogram was performed early that morning. I rejected the CAT scan the doctor ordered, and he compromised on an MRI instead. I did not get any push back on the CAT scan rejection, as an increasing number of patients seem to be heeding Life Extension’s advice to say NO to unnecessary CAT scans because of the high levels of cancer-causing radiation they emit.

The MRI should have been done mid-afternoon, but another communication error caused it to be delayed till the late evening. The MRI staff wanted my acknowledgment that while the MRI could diagnose **pericarditis**, it would not rule out **pulmonary embolism**. I told my nurse that I was not concerned with pulmonary embolism and to proceed immediately with the MRI. The nurse forgot to tell the MRI staff this.

The MRI staff spent most of the day doing nothing but wait around for the nurse to call them back. I spent most of the day asking the nurse when the MRI staff would be ready to perform the diagnostic as I was anxious to escape hospital confinement. I jokingly told people that the hospital was intentionally delaying the MRI test just to force me to stay another night.

It was not until after **8:00 PM** that the MRI staff called the nurse to find out if I wanted the MRI. The failure of the afternoon nurse to make **one phone call** resulted



in the MRI staff and me waiting around an **extra six hours**—typical hospital inefficiency. I finally escaped the miseries of hospital confinement around **10:00 PM** that night—which equated to about 31 total hours of jail time from my perspective.

Having written dozens of articles exposing why healthcare costs are needlessly bankrupting the United States, I realized that I had not done enough to uncover hospital *inefficiency* that results in prohibitive costs combined with mediocre-to-disastrous results.

New Study Uncovers More Hospital Errors Than Previously Thought

An encyclopedia could be written about the errors that routinely occur in the hospital setting.

A recent study published in the peer-reviewed journal *Archives of Surgery* uncovered unthinkable mistakes by doctors and surgeons⁷—such as amputating the wrong leg or removing organs from the wrong patient.

This study revealed how doctors in Colorado over a period of 6.5 years operated on the wrong patient at least 25 times and on the wrong part of the body in another 107 patients. Although these serious errors are rare overall, the numbers seen in the study were “*considerably higher*” than previous estimates.

According to the lead researcher of this study, the surgical blunders uncovered are probably “the tip of the iceberg” and the actual number of patient and surgical site mix-ups is likely much higher.

This particular study analyzed over 27,000 records from a database of medical errors maintained

by a company that provides malpractice insurance to about 6,000 physicians in Colorado. This database relied on the physicians themselves reporting the incidents. The errors were caused by a range of slip-ups, including mixing up patient medical records, X-rays, and biopsy samples. All of the mistakes could be traced back to some form of **miscommunication**.

Some examples of wrong-site errors included removing the wrong ovary or irradiating the wrong organ. Specifically, mix-up of tissue specimen samples in the pathology laboratory occurred on 6 occasions, which led to the unnecessary prostatectomy (prostate gland removal) in a healthy patient in 3 distinct cases. Doctors mixed up the samples and the patients

Protecting Against Hospital-Acquired Infections

Hospital confinement exposes one to increased risk of contracting bacterial infections that are sometimes antibiotic-resistant. What few people understand is that the infectious bacterium does not always emanate from the hospital. It is often a bacterium that is in you already, but is kept in check by your healthy immune system.

In many cases, a *Staphylococcus* (staph) bacterium called *S. aureus* inhabits your nasal passages, and if the hospital swabs this area with an anti-microbial product called **mupirocin** upon admitting you, your risks of developing infection arising from nasal colonization with *S. aureus* are markedly reduced.

After I was admitted to the hospital, I recalled a **2010** report published in the *New England Journal of Medicine* that referenced three studies (published in 1959, 2001, and 2004) that showed **80%** of staph infections acquired in the hospital are endogenous, which means that these infections were caused by the patient’s own bacterial contamination. This study showed that if a patient’s nasal passages were decolonized with **mupirocin** applied twice daily for 5 days, combined with a **chlorhexidine** body wash, the risk of staph infection was reduced by nearly **60%**.⁴

I asked my nurse about the antiseptic nasal swabs and the response was “we do that,” but he never came back to do it to me. This was how many of my requests were handled—i.e., Soviet Union-style.

We at **Life Extension** now strongly believe that the lethal combination of **insufficient vitamin D** (due to no sunlight exposure and no supplements given), **lack of sleep** (due to chronic hospital staff disturbance), and **nutrition deficit** (due to micronutrient-depleted food and stress-inducing commotion) conspires to rob hospitalized patients of immune function required to suppress bacteria carried in their own bodies.

It does not matter how many sanitary procedures an institution performs if the patient’s **immune function** is being compromised by standard hospital practices. Anyone hospitalized for an extended period should take assertive measures to maintain immune function as most hospitals fail to pay attention to it. At a minimum, every hospitalized patient should immediately be given enough **vitamin D** to achieve optimal blood levels of over **50 ng/mL** of *25-hydroxyvitamin D*.

A number of studies confirm the potent **anti-microbial** effects of **vitamin D**, making it essential for hospital-confined patients.^{5,6}

AS WE SEE IT

without cancer had unnecessary **radical prostatectomies** (painful surgeries often with lifetime complications).

The study showed that one-third of the mistakes led to long-term negative consequences (including death) for patients.

Striking a Balance

At the same time we report on these horrific surgical errors, it is important to acknowledge that hospitals save millions of lives each year, despite their inherent inefficiency and incompetence.

The hospital I went to is in a mid-size town and provided far better service than what I have observed in big-city behemoths. I would go back to this same hospital if need be as I perceive they made fewer errors than other institutions may have.

In the *Archives of Surgery* study that uncovered so many hospital errors,⁷ practical approaches to preventing these kinds of mix-ups were proposed that could slash these risks, so there is hope that these types of catastrophes can be prevented in the future.

I Have Finally Started Exercising

I know many of you enjoy physical activity and even get a nice endorphin release in response to heavy workouts or aerobic exercise. I am one of those who fall into the opposite category. I absolutely detest regular exercise of any kind and get no pleasure from it whatsoever.

The frustrating experiences I underwent in the hospital setting succeeded in doing what reading thousands of positive studies about



Our Early Attempt to Establish a Life Extension Hospital

In the **May 1998** issue of *Life Extension Magazine*[®], we proposed to radically improve the efficacy of medical treatment by establishing a **hospital** that would treat diseases based upon science rather than politics.

We noted that information is expanding at a faster pace than mainstream medicine can keep up with, and there is a need to apply scientific findings faster in the practice of medicine. We discussed the resistance most doctors have about accepting new ideas and how this intransigence slows the pace at which innovative treatments are used to benefit patients. We also discussed the role of pharmaceutical companies and regulatory agencies such as the Food and Drug Administration in blocking the availability of innovative medical therapies.

The solution we proposed was the creation of a **Life Extension Medical Center** that would make the latest scientific breakthroughs available directly to patients, without the interference of the government, private industry, and overly conservative physicians. In keeping with the Life Extension Foundation's long-standing policy, a Life Extension Medical Center would offer treatments based only upon solid research published in established peer-reviewed medical journals.

The initial capital for establishing (and defending) such an innovative medical center was estimated to be \$5 million. We asked **Life Extension Foundation**[®] members if they would consider investing or contributing to such a Life Extension Medical Center, upon presentation of an acceptable business plan. We had firm pledges of over **\$2.3 million** plus a commitment to raise another **\$4.5 million** from private investors.

After further evaluation of this ambitious proposal, we felt that the power of state licensing boards to revoke physicians' licenses would result in us not being able to retain the competent staff we needed. We knew if we were successful that conventional hospitals losing patients to us would seek to use licensing boards to take away professional licenses, thus crippling our ability to deliver the high-caliber treatments that were the basis for initiating this monumental project.

We notified members who had made financial pledges that it was not feasible to initiate a **Life Extension** hospital facility at that time.

the benefits of physical activity failed to do. All I have to do when I don't want to exercise is recall the gross incompetence and inefficiencies exhibited during my brief hospital visit.

One fear is that if I had something seriously wrong that required a coronary bypass or stent procedure, I would be at the mercy of a hospital staff that did not even have the common sense to initially find the right doctor.

The thought of my existence being contingent on the medical establishment was frightening enough to adjust my social schedule to make room for 30 minutes of aerobic bicycling (sitting at an angle to minimize damage to my hips and prostate) several times a week and lots more regular activity.



All My Blood Markers Now Have To Be Optimal

I have my blood tested throughout the year. As I have written in the past, this has already saved my life several times by identifying serious problems early when they were reversible (such as kidney damage inflicted by overuse of the drug ibuprofen).

As you can see by my latest blood test result reprinted on page 18 of this issue, I have achieved optimized status on most of my cardiac risk factors.

After my scare in the hospital, I am determined to move every cardiac marker into optimal ranges. This is challenging because of certain genetic factors that predispose me to having higher than desirable levels of glucose and homocysteine.

This means I have to take extra time and make some social sacrifices to accomplish this. For me, however, the priority is following through with correcting every vascular risk factor.

Critical Importance of Annual Blood Testing

No one has been a stronger proponent of regular blood testing than the **Life Extension Foundation®**.

In the early 1980s, we recommended that all members have their blood tested for a wide range of cardiovascular risk markers. The problem back then was that conventional doctors did not always order the needed tests, the costs were prohibitively high, and people had to schedule another appointment with the doctor's office for the blood draw.



AS WE SEE IT

In 1996, we rectified these failings by offering comprehensive blood testing to Life Extension members nationwide that was affordable and convenient.

While some conventional physicians today recommend blood tests to check glucose, cholesterol, and triglycerides, they rarely check their patients' levels of C-reactive protein, homocysteine, DHEA, and other cardiac markers.

As a member of the Life Extension Foundation, you don't have to be victimized by medical ignorance, high prices, or insurance company indifference.

Take Control Over Your Future Health

When looking at the number of diseases that can be detected early through the proper utilization of blood testing, it becomes strikingly apparent that a significant number of heart attacks, strokes, bone fractures, end-stage kidney/liver failure and other degenerative diseases are preventable.

During my recent hospital ordeal, I would have hated to think that I neglected to have annual blood tests done, and as a result,



my heart might be slowly dying from oxygen starvation because I failed to take preventive measures.

At least I knew that I did almost everything I should have to prevent it. In other words, if I needed bypass surgery, I had the peace of mind of knowing it was probably not through the fault of my own negligence.

Low-Cost Convenient Blood Testing

Commercial labs charge high prices for comprehensive blood testing. This precludes most people from having critical tests done that can identify correctable cardiac risks before angina or full-blown heart attack emerges.

Life Extension long ago broke down high cost barriers by offering comprehensive **Male and Female Blood Test Panels** at the lowest prices anywhere. Once a year, we discount these popular panels down to only **\$199**—about **80%** less than what commercial labs charge.

Instead of having to make a doctor's appointment, we send you a prepared requisition form and list of drawing stations in your area where you can go at your convenience.

The **Blood Test Super Sale** lasts only two months, so please order your requisition kit soon to take advantage of these extra discounted prices. You can have your blood drawn anytime after receiving your requisition kit. The results of your blood tests are mailed directly to you. If you have any questions when your results come back, you are welcome to call our Health Advisor helpline.

The description on the next page details what's included in the **Male and Female Blood Test Panels** and how easy it is to order them.

This year we have added a new test called **sex hormone-binding globulin (SHBG)** at no extra charge to the **Male and Female Panels**. By measuring **SHBG** levels in the blood, we are better able to ascertain how much testosterone and other hormones are **biologically available** to tissues in the body.

Annual blood testing is the single most effective method of detecting abnormalities that can be corrected before they lead to serious illness or death. A call to **1-800-208-3444** is all you have to do to order these comprehensive tests at extra-discounted prices.

For longer life,

William Faloon

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MALE AND FEMALE BLOOD TEST PANELS

Unlike commercial blood tests that evaluate only a narrow range of risk factors, Life Extension's **Male and Female Blood Test Panels** measure a wide range of blood markers that predispose people to common age-related diseases. Just look at the **huge** numbers of parameters included in the **Male and Female Blood Test Panels**:

MALE PANEL

LIPID PROFILE

Total Cholesterol
LDL (low-density lipoprotein) calculated
HDL (high-density lipoprotein)
Triglycerides

CARDIAC MARKERS

C-Reactive Protein (high sensitivity)
Homocysteine

HORMONES

DHEA-S
Free Testosterone
Total Testosterone
Estradiol (an estrogen)
TSH (thyroid function)
Sex Hormone-Binding Globulin (SHBG)

**NEW
&
IMPROVED
.....
NOW
INCLUDES
SHBG!**

METABOLIC PROFILE

Glucose
Kidney function tests: creatinine, BUN, uric acid, BUN/creatinine ratio
Liver function tests: AST, ALT, LDH, GGT, bilirubin, alkaline phosphatase
Blood minerals: calcium, potassium, phosphorus, sodium, chloride, iron
Blood proteins: albumin, globulin, total protein, albumin/globulin ratio

COMPLETE BLOOD COUNT (CBC)

Red Blood Cell count including: hemoglobin, hematocrit, MCV, MCH, MCHC, RDW
White Blood Cell count including: lymphocytes, monocytes, eosinophils, neutrophils, basophils
Platelet count

CANCER MARKER

PSA (Prostate Specific Antigen)

FEMALE PANEL

LIPID PROFILE

Total Cholesterol
LDL (low-density lipoprotein) calculated
HDL (high-density lipoprotein)
Triglycerides

CARDIAC MARKERS

C-Reactive Protein (high sensitivity)
Homocysteine

HORMONES

Progesterone
DHEA-S
Free and Total Testosterone
Estradiol (an estrogen)
TSH (thyroid function)
Sex Hormone-Binding Globulin (SHBG)

**NEW
&
IMPROVED
.....
NOW
INCLUDES
SHBG!**

METABOLIC PROFILE

Glucose
Kidney function tests: creatinine, BUN, uric acid, BUN/creatinine ratio
Liver function tests: AST, ALT, LDH, GGT, bilirubin, alkaline phosphatase
Blood minerals: calcium, potassium, phosphorus, sodium, chloride, iron
Blood proteins: albumin, globulin, total protein, albumin/globulin ratio

COMPLETE BLOOD COUNT (CBC)

Red Blood Cell count including: hemoglobin, hematocrit, MCV, MCH, MCHC, RDW
White Blood Cell count including: lymphocytes, monocytes, eosinophils, neutrophils, basophils
Platelet count

Non-member retail price: \$400 • Everyday member price: \$269

Blood Test Super Sale member price: \$199 • Enjoy these savings until June 6, 2011

To obtain these comprehensive **Male** or **Female** Panels at these **low prices**,
call 1-800-208-3444 to order your requisition forms.

Then—at your convenience—you can visit one of the blood-drawing facilities provided by LabCorp in your area. (Restrictions apply in NY, NJ, RI, MA)

If you plan to use the result of these blood tests to assist in a medically supervised weight loss program, consider ordering the **Male or Female Weight Loss Panel** for the blood test super sale member price of \$224.25 through June 6, 2011. These panels were designed to offer additional hormones for those desiring assistance with weight loss.

William Faloon's Blood Test Results as of March 4, 2011

As we age, it becomes increasingly difficult to achieve optimal blood test readings.

For example, aging can cause **glucose-insulin** levels to spike, along with **C-reactive protein (CRP)**, **homocysteine**, and lipids (**LDL**, **triglycerides**, and **total cholesterol**).

To protect against deadly **atherosclerosis**, aggressive *individualized* interventions are often required.

I am genetically predisposed to develop atherosclerosis at a relatively early age. When I was 35 years old, my **LDL** was **160** (mg/dL). I took steps at age 35 to reduce it. As you can see on the next page, I got my **LDL** down to **62** on my last blood draw. I plan to keep it in this low range for the next few years with the objective of *reversing* atherosclerotic plaque that might have built up in my younger years. I am **56** years old now, by the way.

Despite taking many homocysteine-lowering agents, my homocysteine reading on the last test was **10** ($\mu\text{mol/L}$). Ideally it should be below **8**, but I have never gotten mine below **9**. When conventional doctors tell me not to worry about homocysteine, I quickly respond by stating that if I did not aggressively try to lower my homocysteine it would be over **22** right now. I know this based on my father's high homocysteine levels. (He suffered his first heart attack at age **52**.)

I have been keeping my **glucose** under **90** (mg/dL) recently,

but this particular test showed it at **92**—a higher than desired level. We know that for optimal protection against vascular disease, glucose should be kept between 70-85. Considering that I take 850 mg of the anti-diabetic drug **metformin** 2 to 3 times a day, 50 mg of the drug **acarbose** before carbohydrate-containing meals, and the **Calorie Control Weight Management Formula** before the two heaviest meals of the day, you would think that I could push glucose down to perfect ranges. A lot of people who follow this program do achieve these low glucose levels, but my body does not respond the same way. I remind conventional critics that if I was not taking these aggressive steps to keep glucose levels in check, I might be diabetic by now.

My **HDL** of **52** mg/dL is not as high as it usually is, but considering how low my **total cholesterol** and **LDL** are, it is satisfactory for now.

One genetic factor favoring me is a virtually nonexistent level of **C-reactive protein**. It has always been low and seems to be going down as I age (instead of the reverse that happens to most people.).

My **estradiol** level dropped too low on a previous test, so I stopped taking Arimidex®. As you can see, my estradiol shot up to **43.8** (pg/mL), which I will suppress by taking about 1 mg of Arimidex® each week. **DHEA** is too high and reflects the 25 mg capsule I took right before my blood was drawn.

(Ideally, one should take any hormones approximately 2 hours before the blood test. My **DHEA** likely did not have time to be converted into its other metabolites and was thus too high.)

My **creatinine** level moved just over 1.00 mg/dL, which indicates some kidney dysfunction in response to taking a few doses of ibuprofen a few days before my blood was drawn. My creatinine has historically dropped upon cessation of ibuprofen. There should be a warning about kidney toxicity on ibuprofen bottles, but the FDA does not require it.

My **PSA** of **0.6** ng/mL is desirably low for my age and reflects aggressive measures I have taken for almost a decade to suppress it. (It had been higher in the past.) We know from previous studies that **PSA** itself can facilitate prostate cancer by breaking down anatomical barriers in the prostate gland that block isolated prostate cancer cells from expanding.

You may notice my **iron** level is high on the basic test, but I was able to have the lab use the retained blood sample to test for **ferritin**, which is a much more reliable indicator of one's body iron stores. Due to the uniqueness in my biochemistry it appears I have higher blood iron, but lower body stores of iron.

My **free testosterone** level is in the ideal range of **20-25** pg/mL because I use a topical testosterone gel several days a week. At age **43** it was below **8** pg/mL, and I suffered the outward symptoms

of testosterone deficiency (such as low energy, abdominal weight gain, and brain fog). I have been on testosterone replacement for the past 12 years and enjoy no longer having symptoms of testosterone deficiency!

My **25-hydroxyvitamin D** of **55.8 ng/mL** is in the optimal range of 50-80 ng/mL that we suggest at Life Extension. It reflects the **7,000 IU of vitamin D** I take each day.

Based on my 30-year medical history of blood testing, I would be very ill or dead now if I had not taken aggressive steps to *reverse* my individual markers of impending diseases. Blood testing in the past has uncovered **elevated PSA and serum calcium; high LDL, triglycerides, glucose, and cholesterol; kidney damage; high homocysteine and estradiol; along with low free testosterone**. I took corrective actions, and as you can see by the results on the next page, I have achieved *optimal* levels of virtually every marker of degenerative disease.

For longer life,



William Faloon

**Turn to next page
to review William
Faloon's complete
blood results.**

Why Some Doctors Are Confused About Hormones

It should be noted that the hormone reference ranges provided by most labs are **age-adjusted** ranges, meaning that as we get older, the labs keep lowering the reference range. That is why people who take hormones to restore their levels to what they were when they were young may get back blood results marked high. This can be disconcerting for doctors who are not familiar with the idea of restoring youthful hormone levels. They often end up telling patients to stop taking the hormones without understanding the concept that higher values on blood tests are possible when restoring youthful hormone levels. If you are working with a doctor knowledgeable in hormone restoration, he/she will likely expect to see some higher values above the lab's age-adjusted reference ranges, depending on the age of the person and the treatment given.



Patient Name FALON, BILL **Sex** M **Age** 56 **LifeExtension/Natl Diagnostic** 1100 W. Commercial Blvd. Ft. Lauderdale, FL 33309

Control # 09134075014 **Draw** 03/04/11 **Entered** 03/04/11 **Last Report** 03/09/11

ACC: 0913407501482244 PID: General Comments

Tests	Results	Units	Reference Interval	Lab
CMP14+LP+4AC+CBC/D/Plt				
Chemistries				01
Glucose, Serum	92	mg/dL	65-99	01
Uric Acid, Serum	4.9	mg/dL	2.4-8.2	01
Please note reference interval change				
BUN	20	mg/dL	6-24	01
Creatinine, Serum	1.01	mg/dL	0.76-1.27	01
eGFR	>59	mL/min/1.73	>59	
eGFR AfricanAmerican	>59	mL/min/1.73	>59	
Note: Persistent reduction for 3 months or more in an eGFR <60 mL/min/1.73 m2 defines CKD. Patients with eGFR values >/=60 mL/min/1.73 m2 may also have CKD if evidence of persistent proteinuria is present. Additional information may be found at www.kdoqi.org.				
BUN/Creatinine Ratio	20		9-20	
Sodium, Serum	139	mmol/L	135-145	01
Potassium, Serum	4.2	mmol/L	3.5-5.2	01
Chloride, Serum	103	mmol/L	97-108	01
Carbon Dioxide, Total	26	mmol/L	20-32	01
Calcium, Serum	9.4	mg/dL	8.7-10.2	01
Phosphorus, Serum	3.1	mg/dL	2.5-4.5	01
Protein, Total, Serum	7.2	g/dL	6.0-8.5	01
Albumin, Serum	4.6	g/dL	3.5-5.5	01
Globulin, Total	2.6	g/dL	1.5-4.5	
A/G Ratio	1.8		1.1-2.5	
Bilirubin, Total	0.6	mg/dL	0.0-1.2	01
Alkaline Phosphatase, S	44	IU/L	25-150	01
LDH	127	IU/L	100-250	01
AST (SGOT)	29	IU/L	0-40	01
ALT (SGPT)	28	IU/L	0-55	01
Iron, Serum	225	H ug/dL	40-155	01
Lipids				01
Cholesterol, Total	128	mg/dL	100-199	01
Triglycerides	69	mg/dL	0-149	01
HDL Cholesterol	52	mg/dL	>39	01
Comment				01
According to ATP-III Guidelines, HDL-C >59 mg/dL is considered a negative risk factor for CHD.				
VLDL Cholesterol Cal	14	mg/dL	5-40	
LDL Cholesterol Calc	62	mg/dL	0-99	
T. Chol/HDL Ratio	2.5	ratio units	0.0-5.0	
Estimated CHD Risk	< 0.5	times avg.	0.0-1.0	
T. Chol/HDL Ratio				
Men Women				
1/2 Avg.Risk	3.4	3.3		
Avg.Risk	5.0	4.4		
2X Avg.Risk	9.6	7.1		
3X Avg.Risk	23.4	11.0		

The CHD Risk is based on the T. Chol/HDL ratio. Other factors affect CHD Risk such as hypertension, smoking, diabetes, severe obesity, and family history of premature CHD.

Tests	Results		Units	Reference Interval	Lab
CBC, Platelet Ct, and Diff					01
WBC	4.1		x10E3/uL	4.0-10.5	01
RBC	4.63		x10E6/uL	4.10-5.60	01
Hemoglobin	14.4		g/dL	12.5-17.0	01
Hematocrit	43.0		%	36.0-50.0	01
MCV	93		fL	80-98	01
MCH	31.1		pg	27.0-34.0	01
MCHC	33.5		g/dL	32.0-36.0	01
RDW	13.3		%	11.7-15.0	01
Platelets	166		x10E3/uL	140-415	01
Neutrophils	54		%	40-74	01
Lymphs	23		%	14-46	01
Monocytes	19	H	%	4-13	01
Eos	2		%	0-7	01
Basos	2		%	0-3	01
Neutrophils (Absolute)	2.3		x10E3/uL	1.8-7.8	01
Lymphs (Absolute)	0.9		x10E3/uL	0.7-4.5	01
Monocytes(Absolute)	0.8		x10E3/uL	0.1-1.0	01
Eos (Absolute)	0.1		x10E3/uL	0.0-0.4	01
Baso (Absolute)	0.1		x10E3/uL	0.0-0.2	01
Immature Granulocytes	0		%	0-1	01
Immature Grans (Abs)	0.0		x10E3/uL	0.0-0.1	01
PSA Total+% Free (Serial)					
Prostate Specific Ag, Serum	0.6		ng/mL	0.0-4.0	01
Roche ECLIA methodology.					
Testosterone, Free and Total					
Testosterone, Serum	561		ng/dL	193-740	01
Free Testosterone (Direct)	20.0		pg/mL	7.2-24.0	02
Estradiol					
Estradiol	43.8	H	pg/mL	7.6-42.6	01
Roche ECLIA methodology					
Dehydroepiandrosterone Sulfate					
DHEA-Sulfate	698.9	H	ug/dL	51.7-295.0	01
Vitamin D, 25-Hydroxy					
Vitamin D, 25-Hydroxy	55.8		ng/mL	32.0-100.0	01
Recent studies consider the lower limit of 32.0 ng/mL to be a threshold for optimal health.					
Hollis BW. J Nutr. 2005 Feb;135(2):317-22.					
C-Reactive Protein, Cardiac					
C-Reactive Protein, Cardiac	0.22		mg/L	0.00-3.00	01
Relative Risk for Future Cardiovascular Event					
Low	<1.00				
Average	1.00 - 3.00				
High	>3.00				
Homocyst(e)ine, Plasma					
Homocyst(e)ine, Plasma	10.0		umol/L	0.0-15.0	01
Insulin	6.2		uIU/mL	0.0-24.9	01
Sex Horm Binding Glob, Serum	35.8		nmol/L	14.5-48.4	01
Ferritin, Serum	26	L	ng/mL	30-400	01

NEW ADVANCED FORMULAS!

Restore Restful Sleep and
Youthful Radiance with

Enhanced Natural Sleep®

The consequences of **sleep deprivation** go far beyond the miseries of fatigue and diminished performance.

Decades of clinical research document that a good night's rest supports nearly all systems of the body, including:

- Skin health and youthful appearance¹⁻⁴
- Healthy collagen formation⁵⁻⁸
- Insulin levels already within normal range⁹⁻¹¹
- Healthy body weight^{12,13}
- Glucose levels already within normal range^{14,15}
- Blood pressure already within normal range^{16,17}
- Healthy cell division¹⁸⁻²⁰
- Cardiovascular health²¹⁻²⁴
- Good mood²⁵⁻²⁷

Scientists attribute sleep-related difficulties to the unprecedented levels of *stress* most of us endure in today's fast-paced world.

To add insult to injury, sleep quality and duration decline as we grow older—at a time when we need the health benefits of a good night's rest more than ever.

Three Proven Ways to Restore Relaxation and Restful Sleep

To combat the profound impact of chronic sleep debt on health and youthful appearance, Life Extension® now offers **Enhanced Natural Sleep® with Dual-Action Melatonin**.

This new formula brings together three clinically validated, natural compounds that have been shown to support **healthy, restful sleep**, promote **healthy response to stress**, while targeting sleep debt-related factors associated with **skin aging**. The three ingredients are:

1. Bioactive Milk Peptides (Lactium®), a cutting-edge nutrient complex consisting of patented **bioactive peptides** found naturally in milk. Used widely in **Europe** to promote sustained and restful sleep patterns, published studies reveal that these **bioactive milk peptides** also promote relaxation, help with stress, and support daytime cognition.

A group of 60 women reporting a variety of sleep-related difficulties experienced as much as **65.6%** improvement in their symptoms with **150 mg** per day of these **bioactive milk peptides**.²⁸ In another study, the same **150 mg** dose induced substantial improvements across **27 markers of sleep quality** and **stress response** in 165 healthy adults.²⁹ And in a third study, a group of healthy men and women taking 150 mg per day of these **bioactive milk peptides** for one month experienced a **50%** improvement in **sleep quality** after two weeks and needed **30%** less time to *fall* asleep after 4 weeks.³⁰

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.

2. Melatonin (very low dose). Melatonin levels naturally *decline* with age and adversely affect sleep patterns in many people. Both **immediate** and **time-release** melatonin has been shown to support restful sleep. So much so that time-release melatonin has been licensed since **June 2007** in Europe and other countries for the short-term treatment of **sleep disorders**.³¹

3. Sendara™. A proprietary nutrient complex consisting of **ashwagandha** and **Indian gooseberry** extracts. Prized in traditional cultures for their ability to promote healthy skin function and appearance, these plant-based compounds have since gained substantial *clinical* validation. Indian gooseberry provides broad-spectrum antioxidant support and has been used to preserve youthful skin health and appearance in many skin care products.³²⁻³⁵ Ashwagandha promotes a healthy response to stress, yielding **62% reductions in anxiety** compared to placebo with just **125 mg** per day in one clinical study.³⁶

Customized Formulas for Optimal Sleep and Stress Support

Enhanced Natural Sleep® with Dual-Action Melatonin should be taken 30-60 minutes before bedtime to help with sleep. The suggested daily serving size of just one capsule supplies:

Bioactive milk peptides (Lactium®)	150 mg
Melatonin (immediate release)	750 mcg
Melatonin (time-release)	750 mcg
Sendara™	200 mg

A bottle containing 30 capsules of **Enhanced Natural Sleep® with Dual-Action Melatonin** retails for \$22. If a member buys four bottles, the price is reduced to just **\$15** per bottle.



Item #01507

To order any of these ADVANCED SLEEP AND STRESS RELIEF FORMULAS, call 1-800-544-4440 or visit www.LifeExtension.com

If you find you don't sleep well with melatonin—or are already taking one of **Life Extension®**'s standalone melatonin formulas at a different dose that works for you—we also offer **Enhanced Natural Sleep® without Melatonin**.

The suggested daily serving of one capsule supplies:

Bioactive milk peptides (Lactium®)	150 mg
Sendara™	200 mg

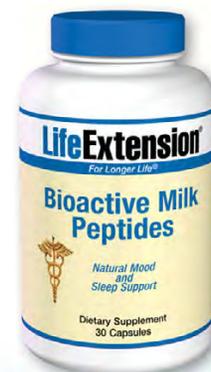
A bottle containing 30 capsules of **Enhanced Natural Sleep® without Melatonin** retails for \$20. If a member buys four bottles, the price is only **\$13.50** per bottle.



Item #01511

To help you deal with the stress of everyday life, you may also choose **Bioactive Milk Peptides** in standalone form, for daytime use to help with stress or before bedtime to support relaxation. Each capsule contains **150 mg** of the same patented formula Europeans have used for years to help with sleep and stress-related issues.

A bottle containing 30 capsules of **Bioactive Milk Peptides** retails for \$18. If a member buys four bottles, the price is only **\$12** per bottle.



Item #01512

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Contains milk.

Lactium® is used under license. Sendara™ is a trademark of Nutragenesis, LLC.

Caution: Consult your healthcare provider before taking this product if you are being treated for a medical condition (especially autoimmune or depressive disorders). Use caution if combining with alcohol. This product is not intended for children, pregnant or lactating women, or women trying to become pregnant. Do not attempt to drive or operate heavy machinery after taking this product.

SUPPORT ENDOTHELIAL HEALTH FOR MAXIMUM SEXUAL PERFORMANCE

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® Epimedium sagittatum Extract (aerial parts) providing 30 mg icariin	60 mg
--	--------------

A 60-tablet bottle of **Life Extension® Prelox® Natural Sex for Men**® retails for \$50. If a member buys four bottles, the price is reduced to just **\$33.75 per bottle**.

Contains corn.

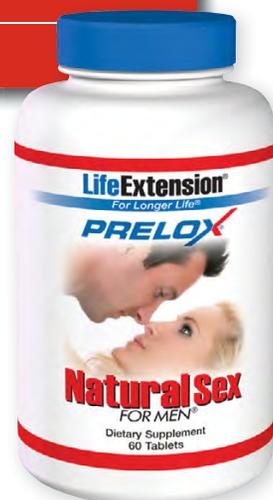
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CAUTION: If you have significant liver disease, please consult with your healthcare practitioner before using this product.

Prelox® and Pycnogenol® are registered trademarks of Horphag Research Ltd. Prelox® is protected by U.S. patent #6,565,851B2. Pycnogenol® is protected by U.S. patents #5,720,956 and #6,372,266 and other international patents. Cannot be sold outside the USA.

To order Prelox® Natural Sex For Men®,
call 1-800-544-4440 or visit www.LifeExtension.com



Item# 01373



IN THE NEWS

Heart Disease Costs Expected to Triple by 2030

A statement by the American Heart Association claims that the costs of treating heart disease are expected to increase three-fold in the next twenty years, sparking an “enormous financial burden” for millions of Americans.*

“The burden of heart disease and stroke on the US health care system will be substantial and will limit our ability to care for the US population unless we can take steps now to prevent cardiovascular disease,” said Dr. Paul Heidenreich, an associate professor of medicine at Stanford Medical School and chair of the American Heart Association panel issuing the policy statement.

In addition, American Heart Association CEO Nancy Brown said in a news release that “unhealthy behaviors and unhealthy environments have contributed to a tidal wave of risk factors among many Americans. Early intervention and evidence-based public policies are absolute musts to significantly reduce alarming rates of obesity, hypertension, tobacco use and cholesterol levels.”

Fortunately, there are a number of low-cost, high-value cardiovascular protective therapies that are available to potentially ward off this oncoming epidemic. Many of these are familiar to *Life Extension* readers, including keeping blood pressure and cholesterol under control, not smoking, and maintaining a healthy lifestyle, which means eating a healthy diet, getting exercise and keeping your weight down. These strategies have been proven to substantially reduce the risk of heart disease.

—J. Finkel

* http://www.nlm.nih.gov/medlineplus/news/fullstory_108025.html. Accessed February 21, 2011.

Basis for Broccoli’s Cancer-Fighting Ability Revealed

A recent report in the American Cancer Society’s *Journal of Medicinal Chemistry* brings to light the discovery of a potential biochemical basis for broccoli’s perceived ability to fight cancer.* For the first time, scientists uncovered that certain substances in the vegetable target and block one of the defective genes associated with cancer.

Substances called isothiocyanates (ITCs), found in broccoli, cauliflower, watercress, and other cruciferous vegetables, appear to stop the growth of cancer. For many years, scientists weren’t sure how this substance worked, but Fung-Lung Chung and colleagues showed in experiments that the tumor suppressor gene p53 appears to play a key role in keeping cells healthy and preventing them from mutating into cancer cells.

The study involved observing the effects of certain naturally occurring ITCs on several cancer cells, including colon cancer, breast cancer, and lung cancer. The scientists believe that drugs based on natural or custom-engineered ITCs could improve the effectiveness of existing cancer treatments or lead to new strategies for fighting and preventing the insidious disease.

Editor’s Note: To get these anti-cancer compounds in broccoli, it should be lightly steamed. Raw broccoli can bind these compounds and heavily cooked broccoli destroys most of them.

—J. Finkel

* <http://pubs.acs.org/doi/abs/10.1021/jm101199t>. Accessed February 7, 2011.



Consuming More Flavonoid-Rich Foods Could Offer Protection Against Parkinson's

The results of a study reported at the American Academy of Neurology's 63rd Annual Meeting suggest that eating more foods that contain high amounts of flavonoids could help protect against the development of Parkinson's disease.*

Xiang Gao, MD, PhD, and colleagues evaluated data from 49,281 men enrolled in the Health Professional Follow-up Study and 80,336 women who participated in the Nurses' Health Study.

Men whose intake of flavonoids was among the top 20% of participants had a 40% lower risk of developing Parkinson's disease compared to men whose intake was among the lowest 20%. While no significant association with total flavonoid intake was observed for women, a lower risk of developing Parkinson's disease was observed in association with greater intake of anthocyanins and anthocyanin-rich foods among both women and men.

"Our findings suggest that flavonoids, specifically a group called anthocyanins, may have neuroprotective effects," Dr. Gao concluded.

Editor's note: Flavonoids are a class of compounds that include flavanones, anthocyanins, flavan-3-ols, flavonols, flavones, and polymers, and are abundant in berries, tea, and other plant foods.

—D. Dye

* *American Academy of Neurology's 63rd Annual Meeting, April, 2011.*

More Fiber Intake Associated with Lower Risk of Death Over Nine-Year Period

An article published in the *Archives of Internal Medicine* reveals the outcome of a study that found a lower risk of dying over a nine year average follow-up period among men and women who consumed a high fiber diet.*

Yikyung Park, ScD, and associates evaluated data from 219,123 men and 168,999 women enrolled in the National Institutes of Health-AARP Diet and Health Study. Over a nine-year average, there were 20,126 deaths among the men and 11,330 among the women participating in the study. Subjects whose intake of fiber was among the top 20% of participants at 29.4 grams per day for men and 25.8 grams for women had a 22% lower risk of dying than those who consumed the least amount.



The authors concluded that "A diet rich in dietary fiber from whole plant foods may provide significant health benefits."

Editor's note: When fiber intake was analyzed according to its source, fiber from grain was associated with a reduction of death from all causes as well as cancer, cardiovascular disease, and respiratory disease.

—D. Dye

* *Arch Intern Med.* 2011 Feb 14.

Review Concludes Effectiveness of Zinc Against Common Cold

The results of a meta-analysis published in the *Cochrane Database of Systematic Reviews* reveal that supplementing with zinc reduces the severity of common cold symptoms as well as the length of colds.*

Dr. Meenu Singh and colleagues reviewed 13 trials that evaluated five or more days of zinc supplementation as a treatment for cold in a total of 966 participants, and two trials that tested zinc supplements as a cold preventive among 394 participants. They concluded that zinc preparations including syrup or lozenges initiated within one day of symptom onset decreased the severity and length of the common cold. As a preventive, five months of treatment with zinc syrup or lozenges in children resulted in 36% fewer colds and less time lost from school compared to those who did not use zinc. The study included several kinds of zinc, including zinc gluconate or zinc acetate lozenges and zinc sulfate syrup.

Editor's note: Dr. Singh remarked that, "It would be interesting to find out whether zinc supplementation could help asthmatics, whose asthma symptoms tend to get worse when they catch a cold." For zinc to be effective when cold symptoms manifest, it should be in a form (lozenges or syrup) that has direct contact with the throat. While zinc in capsule or tablet form can help boost immune function, it seems to kill viruses in the back of the throat by direct contact.



—D. Dye

* *Cochrane Database Syst Rev.* 2011 Feb 16;2:CD001364.



Researchers Recommend Greater Intake of Vitamin D to Lower the Risk of Serious Diseases

Cedric Garland, DrPH, of the University of California, San Diego School of Medicine and his colleagues recently revealed that significantly higher amounts of vitamin D than what are currently recommended are needed to raise levels to those that help prevent breast cancer and other diseases. The findings appear in the journal *Anticancer Research*.*

Dr. Garland and his associates analyzed data from a survey of 3,667 men and women whose average age was 51. The researchers compared supplemental vitamin D intake reported at the beginning of the study with baseline serum vitamin D levels. "We found that daily intakes of vitamin D by adults in the range of 4,000-8,000 IU are needed to maintain blood levels of vitamin D metabolites in the range needed to reduce by about half the risk of several diseases—breast cancer, colon cancer, multiple sclerosis, and type 1 diabetes," Dr. Garland stated.

Editor's note: Dr. Garland remarked that 4,000 IU vitamin D per day, "is comfortably under the 10,000 IU/day that the IOM Committee Report considers as the lower limit of risk."

—D. Dye

* *Anticancer Res.* 2001;31(2):607-11.

More Americans Are Using Supplements

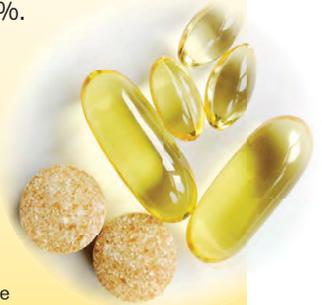
A report published in the *Journal of Nutrition* reveals widespread use of dietary supplements among Americans, particularly among older individuals.*

Researchers from the National Institutes of Health, Office of Dietary Supplements and the National Center for Health Statistics, Centers for Disease Control and Prevention utilized data obtained from 18,758 participants in the National Health and Nutrition Examination Survey (NHANES) 2003-2006. Infants under the age of one were excluded.

Forty-four percent of males and 53% of females reported using supplements, which is an increase from the percentages reported in earlier NHANES surveys beginning in 1971. For those aged 71 and older, supplement use was reported by 70%. Multivitamin/mineral formulas were the most common form of supplementation. While 56% of those of normal weight were supplement users, this number declined to 48% among those who were obese, a finding that is consistent with that of other analyses.

Editor's note: The authors conclude that, "Given the widespread use of supplements, data should be included with nutrient intakes from foods to correctly determine total nutrient exposure."

—D. Dye



* *J Nutr.* 2011 Feb; 141(2):261-6.

Vitamin D Deficiency Impairs Lung Development

A report published in the *American Journal of Respiratory and Critical Care Medicine* describes an association between vitamin D deficiency in mice and reduced lung structure and function.*

Graeme Zosky, PhD, and colleagues compared lung responses of two-week-old mice born to mothers that were deficient or replete in vitamin D. They found a reduction in lung volume in the absence of a significant decrease in body length and weight, accompanied by functional deficits not entirely explained by the observed reduction in the volume of the lungs of animals in the vitamin deficient group.

"For the first time, we have demonstrated a direct role for vitamin D in causing decreased lung function in the absence of known confounders such as physical inactivity, confirming the assertion by epidemiological studies that there is a relationship between vitamin D deficiency and lung function," Dr. Zosky announced.

Editor's note: "The differences we observed in lung volume and lung mechanics, which were substantial and physiologically relevant, raise serious concerns regarding the increased prevalence of vitamin D deficiency in communities around the world," Dr. Zosky commented.

—D. Dye

* *Am J Resp Critical Care Med.* 2011 Jan 28.



Free Radicals Implicated in Common Eye Disease

The *American Journal of Pathology* reported the outcome of research conducted by Ula V. Jurkunas, MD, and colleagues that implicates free radical damage in the development of Fuchs endothelial corneal dystrophy (FECD), a potentially blinding disease characterized by the programmed cell death of epithelial cells in the eye's cornea.*

Dr. Jurkunas and her associates compared corneal epithelial tissue samples from FECD patients who received corneal transplants to samples derived from subjects who did not have the disease. They discovered a reduction in the level of antioxidants in the majority of FECD specimens and increased DNA damage.

"Our discovery is significant, because it gives us the first hope for slowing the progression of the disease," stated Dr. Jurkunas. "If we can identify how free radicals are involved in this and what antioxidants can fight them, we can create a regimen that can help protect the cornea."

Editor's note: In addition to supplementing with a multivitamin, Dr. Jurkunas suggests that patients at risk for the disease consume more leafy green vegetables and wear ultraviolet protection.

—D. Dye

* *Am J Pathol.* 2010 Nov;177(5):2278-89.



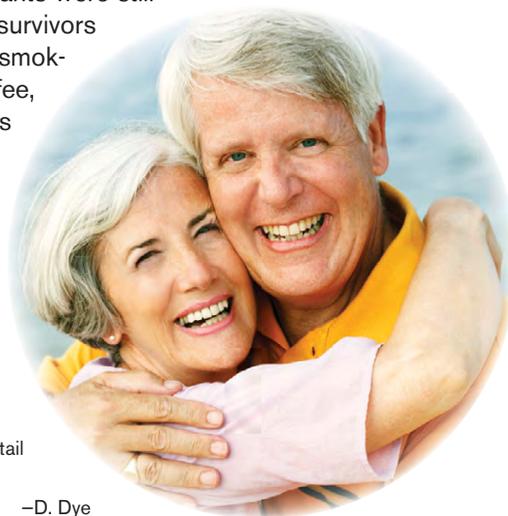
Lifestyle Beats Genes in Longevity Race

An article published in the *Journal of Internal Medicine* reveals that our own actions may be more important in dictating how long we live than inherited factors.*

For the current investigation, Lars Wilhelmsen and colleagues at the University of Gothenburg evaluated data from the 1913 Men Epidemiological Study, which enrolled 855 fifty-year-old men in 1963. Subjects provided anthropomorphic, parental, and lifestyle data, and were examined for cardiovascular health and other functions.

Thirteen percent of the participants were still living at 90 years of age. These survivors were likelier at age 50 to be nonsmokers, drink moderate amounts of coffee, have higher socio-economic status and have lower serum cholesterol levels compared with men who failed to reach this age, yet the number of years attained by the men's parents did not appear to influence their own longevity.

Editor's note: "The study clearly shows that we can influence several of the factors that decide how old we get," Dr. Wilhelmsen commented. "This is positive not only for the individual, but also for society as it doesn't entail any major drug costs."



—D. Dye

* *J Int Med.* 2010 Dec 22.

Higher Vitamin D Levels Equal Lower Risk of Multiple Sclerosis

The journal *Neurology* reports a protective effect for high vitamin D levels and sun exposure against the risk of developing multiple sclerosis (MS).*

Robyn Lucas, PhD, of Australian National University and colleagues compared 216 men and women who had experienced their first event to 395 individuals who had no symptoms of the disease. The subjects were matched for age, gender, and region of residence. Dr. Lucas' team discovered that the risk of having a first demyelinating event, which was estimated to be between two to nine cases per 100,000 people per year, was reduced by 30% for every 1,000 kilojoule increase in ultraviolet light exposure. Additionally, those with the most sun damage to their skin were 60% less likely to have a first event compared to participants with the least damage. Having a high level of serum vitamin D also proved to be protective.

Editor's note: Despite the study's finding concerning the protective benefit of sun exposure, Dr. Lucas cautioned that sunbathing and tanning beds have risks that outweigh their benefits, and sun exposure has not been shown to help people who already have multiple sclerosis. "Further research should evaluate both sun exposure and vitamin D for the prevention of MS," she said.

—D. Dye

* *Neurol.* 2011 Feb 8; 76(6):540-8.



Go Green, Get Healthy,

Turns out, the advice you got as a child to “eat your greens” could pay 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*, *carosic acid*, and *carosol* – 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, the price is reduced to only **\$16.50 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, the price is reduced to only **\$22.20 per bottle**.



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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4. *Carcinogenesis*. 1995 Sep;16(9):2057-62.
5. *J Clin Biochem Nutr*. 2009 May;44(3):260-5.

To order Triple Action Cruciferous Vegetable Extract, call 1-800-544-4440 or visit www.LifeExtension.com

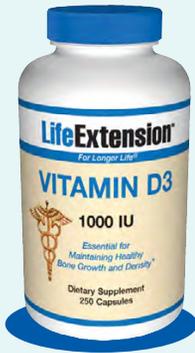
Which VITAMIN D is Right for You?



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.



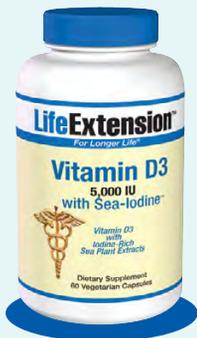
Vitamin D3 1,000 IU 250 capsules

Retail: \$12.50

Four-bottle Member Price: \$8.44 ea.

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

Please refer to website for allergen information.



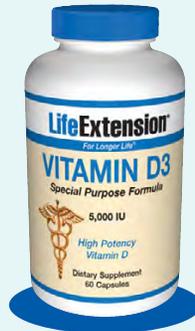
Vitamin D3 5,000 IU with Sea-Iodine™* 60 vegetarian capsules

Retail: \$14

Four-bottle Member Price: \$9.38 ea.

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

Please refer to website for allergen information.



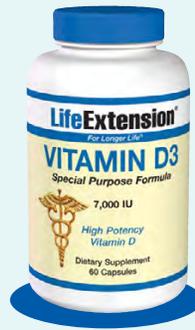
Vitamin D3 5,000 IU 60 capsules

Retail: \$11

Four-bottle Member Price: \$7.43 ea.

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.



Vitamin D3 7,000 IU 60 capsules

Retail: \$14

Four-bottle Member Price: \$9.45 ea.

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

Please refer to website for allergen information.



Vitamin D3 Liquid Emulsion 2,000 IU 1 ounce

Retail: \$28

Four-bottle Member Price: \$18.75 ea.

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

**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.

Assert **Control** over the Calories You Eat!

Would you spend hours at the beach *without* wearing sunglasses and sun protection lotion? The answer should be a resounding no!

Yet most aging individuals do little to protect their bodies against the excess calories they ingest each day.

Few of us realize the deadly impact that large meals inflict. For instance, chronic overeating results in our bloodstreams being bloated with **glucose, insulin, and triglycerides** long after a meal is finished. This occurs not only because we *absorbed* too many calories, but also from the age-associated impairment to our internal regulators of carbohydrate and fat metabolism. This helps explain why, with advancing age, we tend to accumulate unwanted body weight even as we try to cut down on food intake and exercise more.

The good news is that scientists have identified documented methods to reduce the toxic damage from excess calorie intake by taking the proper nutrients before heavy meals.

Comprehensive Calorie Management

The **Calorie Control Weight Management Formula** is designed to be taken before the two heaviest daily meals to help neutralize the dangers of caloric excess. The ingredients were chosen based on scientific findings that age-associated fat accumulation is at least partially caused by the loss of one's metabolic capacity to utilize ingested calories. Each scoop of this good-tasting powdered drink mix contains:

1. A proprietary fiber called **LuraLean**® that swells in the stomach after ingestion with water to help reduce calorie consumption. LuraLean® binds to **bile acids** in the small intestine and helps transport them out of the body. These bile acids otherwise facilitate the digestion and assimilation of **dietary fat** into the bloodstream. LuraLean® also slows the rapid emptying of ingested food into the small intestine, thereby reducing the surge of **glucose** entering the bloodstream. LuraLean® works better than other fibers because its own enzymes have been removed, thus sparing it from degradation in the digestive tract. 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® has induced weight loss along with significant reductions in fasting lipid and post-meal glucose/insulin levels.
2. A white kidney bean extract called **Phaseolus vulgaris** that inhibits the *amylase* enzyme in the digestive tract. *Amylase* breaks down carbohydrates that are then absorbed into the bloodstream as glucose. *Phaseolus vulgaris* has produced weight loss and abdominal fat reductions, along with significant reductions of triglycerides, in placebo-controlled trials.
3. An African plant extract called **Irvingia gabonensis** that favorably regulates **leptin** to decrease appetite and facilitate triglyceride removal from adipocytes; inhibits **glycerol-3-phosphate dehydrogenase** to reduce fatty acid storage in adipocytes; and up-regulates **adiponectin** to facilitate insulin sensitivity. Irvingia has demonstrated favorable weight loss results in placebo-controlled trials.
4. A proprietary **green tea phytosome** that absorbs much better into the bloodstream to boost *resting metabolic rate*. In a controlled clinical study, this green tea phytosome induced **30.1 pounds** of weight loss on average in 90 days when combined with a reduced calorie diet.

Life-Saving Importance of Taking Calorie Control Weight Management Formula Before Heavy Meals

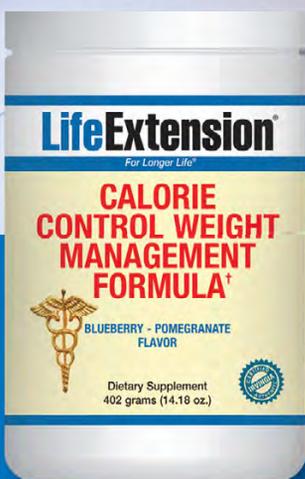
Once we accept the danger that each surplus calorie poses to our aging body, it becomes easy to understand the critical need to impede the absorption and effects of ingested foods by taking the **Calorie Control Weight Management Formula** before the two heaviest meals of the day.

The retail price for a one month (60-serving) supply of **Calorie Control Weight Management Formula** is \$56. If a member buys four jars, the price is reduced to **\$36**. If eight jars are purchased the member price is slashed to only **\$33** per jar.

Contains soybeans, tree nuts, and corn.
LuraLean® is a registered trademark of AHD International LLC.
This supplement should be taken in conjunction with a healthy diet and regular exercise. Results may vary.

CAUTION: Take at least two hours apart from medications. Because this product may lower blood glucose, consult with your healthcare provider before taking this product if you are taking blood glucose lowering medication. Consult your healthcare provider before taking this product if you have difficulty swallowing or have esophageal narrowing.

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



Item #01493

A smiling woman with long brown hair is the central focus. In the background, a doctor in a white coat is partially visible. The image is overlaid with a semi-transparent medical chart showing an ECG and a hand holding an orange pen pointing to it. In the foreground, there are several orange pill containers. The text is centered over the woman's face and chest.

**DO YOU KNOW
YOUR
SEX HORMONE
STATUS?**

A man in a white lab coat is shown in profile, looking towards the right. In the background, there are several glass test tubes on a lab bench. One of the test tubes has a blue label with a black male symbol (♂) on it. The scene is brightly lit, suggesting a laboratory or clinical setting.

BY ZACH WHITE

Life Extension® has long emphasized the importance of maintaining a **balanced** and **robust sex hormone profile** as a core anti-aging strategy.

Hundreds of published studies link improper **testosterone** and **estrogen** balance (in men and women) with the onset of age-related pathologies such as **coronary artery disease, stroke, osteoporosis, and bone fracture**.¹⁻⁵

But in order for you to *optimize* your **sex hormone** status, precise and accurate measurement is of paramount importance.

In this article you will learn of a critical blood marker of hormonal balance called **sex hormone-binding globulin** or **SHBG**. Newly published studies reveal that the interaction of **SHBG** with testosterone and estrogen affects overall hormonal balance—yet very few doctors test for it.

As you will read, sex hormone *imbalances* precipitated by **SHBG abnormalities** are associated with multiple diseases of aging in both sexes. These include **cardiovascular disease** (especially in women), **cancer, type 2 diabetes, metabolic syndrome, and sleep apnea**.⁶⁻¹⁰ > >

SHBG: The Master Regulator for Testosterone and Estrogen

SHBG is a protein produced primarily in the liver, although the testes, uterus, brain, and placenta also synthesize it. It serves as a transport carrier, shuttling **estrogen** and **testosterone** to sex hormone receptors *throughout* your body.^{11,12} SHBG also safeguards these vital hormones from degrading too rapidly and prevents their clearance from the body.

It thus acts as the **master regulator** of your sex hormone levels, maintaining the delicate balance between estrogen and testosterone *critical* to overall health in aging humans.

New evidence further indicates that the SHBG molecule itself plays another key role in the body: conveying essential signals to the **heart**, the **brain**, and **adipose** (fat) **tissue** that ensure their optimal function.¹³ There's even a special **SHBG receptor molecule** on cell surfaces that functions much like the ubiquitous vitamin D receptor protein, helping cells communicate with one another.^{14,15} In other words, *SHBG itself functions much like a hormone*.

Knowing your SHBG levels, along with testosterone and estrogen, thus gives you and your doctor a more *precise* picture of your overall health—and enables you to take preventive measures against life-threatening conditions for which you may be at greater risk.

Aging Humans and Increasing SHBG: An Overlooked Threat

As you age, SHBG levels may steadily *rise*, even though your production of sex hormones continues to *decline*.^{8,16} The result? SHBG binds to what few sex hormones you have remaining and reduces their bio-availability to cells in your body.

With elevated SHBG in the blood, too much testosterone may be sequestered and thus functionally unavailable to healthy tissues. Because testing for SHBG is largely overlooked, many older men (and their doctors) may be led to believe through *standard* testing that they have “normal” total testosterone levels—but since most of it may be bound to elevated levels of SHBG, in actuality they may be *testosterone deficient*.¹⁶

Why? Testosterone, like all steroid hormones, is derived from *cholesterol*, a fat molecule.¹⁶ Fats don't dissolve in water, so the amount of testosterone floating freely in your bloodstream is small (about 0.5-2% of the total amount).^{16,17} Most of the circulating testosterone in your blood is either bound to the protein **albumin** or to **SHBG**.¹⁸⁻²⁰

It is the *combination* of free and albumin-bound testosterone that ultimately determines your bio-available testosterone status.^{16,21-24}

As a result of imprecise testosterone measurement, aging men may experience signs of **feminization** as their increased SHBG binds testosterone, preventing testosterone from exerting its effects and leaving estrogen's physiological impact on the male physiology unchecked.¹⁶ These may include **gynecomastia** (the development of fatty breast tissue in men), **diminished libido** and **poor sexual performance**, **cognitive decline**, and **chronic fatigue**.

Combating Metabolic Syndrome

While excess SHBG creates problems with sex hormone balance, having SHBG levels that are too low is associated with other disorders. Nowhere is the impact of low SHBG so profound as in the cluster of conditions known as the **metabolic syndrome**, which encompasses **obesity**, **insulin resistance**, **lipid abnormalities**, and **chronic high blood pressure**.⁹

In men, low total testosterone and low SHBG are predictors for a higher incidence of metabolic syndrome and many of its components.^{9,25-29}



In late postmenopausal *women*, low SHBG and high estrogen levels correlate with the inflammatory state associated with metabolic syndrome.³⁰ SHBG abnormalities have *also* been linked to an increased risk of **acne, infertility, polycystic ovary syndrome, and uterine cancer** in overweight women.^{6,31-33}

The high insulin levels found in people stricken with metabolic syndrome have also been shown to *suppress* SHBG, creating a vicious cycle of abnormal SHBG activity.^{34,35}

The good news is that testosterone supplementation for men, and bioidentical hormone replacement for women, may safely and effectively *reverse* many of these adverse, age-related metabolic changes.^{36,37} Obtaining accurate measurement of sex hormone levels through SHBG blood testing thus enables you and your doctor to prevent or combat common medical disorders.

Low SHBG Is a Key Marker of Cardiovascular Disease

SHBG levels have an important relationship with nearly every biomarker of cardiovascular disease, from **C-reactive protein (CRP)** to **arterial calcification**.^{38,39} Low SHBG is also associated with **elevated triglycerides** and low-density lipoprotein (**LDL**).⁴⁰

Calcification of blood vessels, an early finding in cardiovascular disease, is also associated with lower SHBG levels, especially in women.^{10,38} Low SHBG in women is associated with *higher* levels of C-reactive protein (CRP), an important marker of inflammation and cardiovascular risk.³⁹ In men, low SHBG indicated an increased risk of death from cardiovascular disease.³⁵ In both men and women, low SHBG levels are strongly correlated with obesity.⁴¹

SHBG, alone and in the context of specific sex hormone levels, thus constitutes an *integral* predictor of a major chronic age-related condition. Some experts are now recommending SHBG measurements as another means of evaluating cardiovascular and metabolic risk.⁴²

Protection from Cancer

Many kinds of cancers of the breast and prostate are stimulated by the sex hormones estrogen and testosterone. However, SHBG interpretations differ for men and women, which is why the SHBG test requires professional interpretation for accurate application.

For example, in human breast cancer cells, higher levels of SHBG inhibit cell proliferation and promote



What You Need to Know

Sex Hormone-Binding Globulin

- Optimal sex hormone status, including a healthy balance of testosterone and estrogen, is a core component of any anti-aging strategy.
- New scientific evidence has revealed the crucial importance to hormone balance of a widely overlooked active protein called sex hormone-binding globulin or SHBG.
- SHBG is an important regulator of your testosterone and estrogen levels, responsible for distributing sex hormones throughout your body—yet few doctors test for it.
- SHBG abnormalities are associated with multiple killer diseases of aging in both sexes, including cardiovascular disease (especially in women), cancer, type 2 diabetes, metabolic syndrome, sleep apnea, and osteoporosis.

programmed cancer cell death (*apoptosis*), by blocking the estrogen-related survival mechanisms that most breast cancer cells exploit.⁴³⁻⁴⁶

For men, it is the opposite. Higher SHBG levels predict more severe and invasive tumor growth in men with prostate cancer.⁴⁷ The association is so strong that some urologists have suggested using SHBG levels as a standard pre-operative measurement to identify patients at high risk of invasive cancers who should undergo a more aggressive surgical procedure.⁴⁸

Optimizing Bone Health

It has long been known that declining estrogen levels in both sexes are significant contributors to **bone mineral loss** with aging. Experts now recognize that the steady rise in SHBG with aging is directly correlated with bone loss and osteoporosis in both men and women.⁴⁹⁻⁵⁶ As a general rule the higher the SHBG level, the *less* estrogen is available to contribute favorably to bone health.

New studies, however, are finding a direct role for SHBG and its cell surface receptor in bone loss.⁵⁷ That suggests an effect that may be independent of estrogen levels. The association is so strong that some experts are now suggesting routine measurement of SHBG as a useful new marker for predicting severity of osteoporosis.⁵⁷



Understanding Sex Hormone Levels

The terminology for the different measurements of sex hormones in your blood can be confusing, but it needn't be. Here's a simple way to think about the levels, using testosterone as an example:¹⁶

Total Testosterone (T) is just that—a measurement of all of the testosterone in a given blood sample. It includes free T, T bound to SHBG, and T bound to albumin.

Free Testosterone is equally simple in concept, though harder to measure. Free T is that small proportion (0.5-3%) of testosterone not bound to SHBG or to albumin.¹⁷

Bioavailable Testosterone (bioT) is simply the combination of the small amount of free T, plus the much larger amount of T that is loosely bound to albumin. You can also think about bioT as the amount of T that is *not* bound to SHBG, and some scientists refer to it that way.^{22,24,61} In general, higher SHBG will mean there's less T that is bioavailable, while lower SHBG means there's more bioavailable T, though that is a bit of an oversimplification.

The test for SHBG is useful for understanding and optimizing your sex hormone levels in combination with your other test results. When you receive your blood test results back, if you have any questions about your sex hormone status (including SHBG levels), please reach out to a Life Extension Health Advisor at 1-866-864-3027.

Detecting Obstructive Sleep Apnea

Sex hormone-binding globulin may provide an important clue that an individual is affected by obstructive sleep apnea,^{7,58} a relatively common condition that increases the risk of heart disease and stroke.⁵⁹

Obstructive sleep apnea occurs when breathing repeatedly stops and starts during sleep due to blockage of the upper air passages. Frighteningly, many people are unaware that they suffer from this disorder. Sleep apnea often manifests with loud snoring, waking up feeling unrested, morning headaches, daytime sleepiness, fatigue, and unexplained high blood pressure. An overnight sleep study (polysomnography) is essential in order to definitively diagnose the condition.⁶⁰



Scientists have found that obstructive sleep apnea is associated with disruptions in the endocrine system in men, including decreased levels of SHBG as well as free and total testosterone.^{7,58} Lower levels of SHBG, free testosterone, and total testosterone correlate with more severe sleep apnea.^{7,58} In one study, men's SHBG and total testosterone rose significantly following 3 months of sleep apnea treatment with continuous positive airway pressure (CPAP).⁷

Low SHBG combined with low testosterone may represent a novel marker for sleep apnea in men and may provide helpful information regarding which individuals should consider having a sleep study to diagnose the condition.

Summary

Maintaining optimal sex hormone status, including a healthy balance of testosterone and estrogen, is a core component of any anti-aging strategy. New scientific evidence has revealed the crucial importance to hormone balance of a widely overlooked active protein called sex hormone-binding globulin or SHBG. It is an important regulator of your testosterone and estrogen levels, responsible for distributing sex hormones throughout your body—yet few doctors test for it.

SHBG abnormalities are associated with multiple killer diseases of aging in both sexes, including cardiovascular disease (especially in women), cancer, type 2 diabetes, metabolic syndrome, sleep apnea, and osteoporosis. ●

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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VC 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 overstated. 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

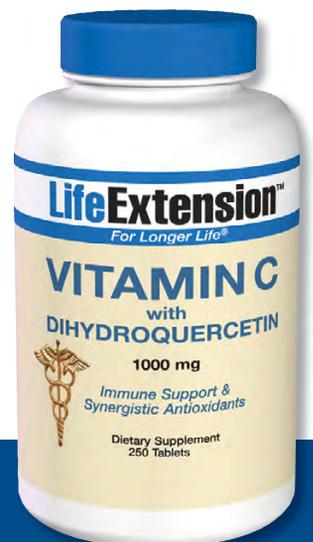
Fortunately, a *flavonoid* antioxidant known as *dihydroquercetin* functions as a **vitamin C** "supercharger." Studies demonstrate that *dihydroquercetin* acts to inhibit the oxidation of **vitamin C**, thereby helping to maintain its concentration and to recycle **vitamin C** throughout the body.^{2,3} 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, the price is reduced to just **\$17.44 per bottle**. Contains corn.

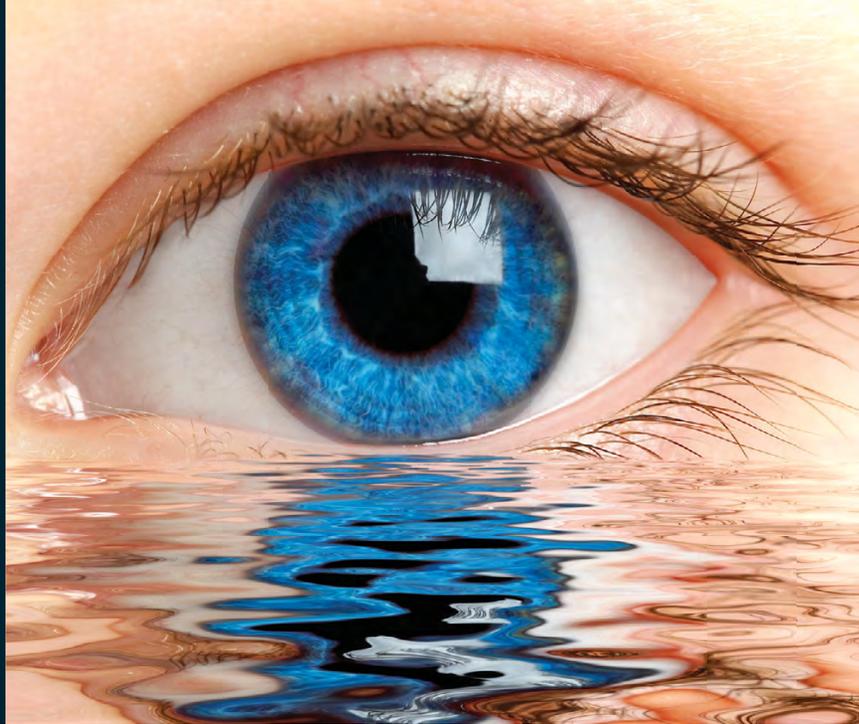
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To order **VITAMIN C with Dihydroquercetin**, call 1-800-544-4440 or visit www.LifeExtension.com

C3G is now in your EYE PROTECTION FORMULA



Most **Life Extension**® members take a supplement containing zeaxanthin, lutein, meso-zeaxanthin, and astaxanthin to protect their vision.

With new findings that **C3G** (*cyanidin-3-glucoside*) can **enhance night vision**, it makes sense to add this unique berry extract to the **Super Zeaxanthin** formula. This enables members to obtain the **optimal amount** of **C3G** without having to swallow another capsule.

Maintain Macular Density

The **macular pigment** is composed of lutein, zeaxanthin, and meso-zeaxanthin. The **density** of the macula is essential to proper vision. Macular density declines naturally over time.

Eating lots of lutein- and zeaxanthin-containing vegetables can help maintain the structural integrity of the macula. However, since **meso-zeaxanthin** is not part of the typical diet, it cannot be easily replaced. Young people convert lutein into meso-zeaxanthin inside their macula. Some aging people, however, lose their ability to convert lutein into **meso-zeaxanthin**.

The **Super Zeaxanthin** formula provides **zeaxanthin, lutein and meso-zeaxanthin** to help maintain macular density.

Combat “Eye Fatigue”

Staring at a fixed-distance object such as a computer screen for a long period of time can cause the muscles that focus your eyes (called the ciliary body) to tire or go into spasm. This can result in physical symptoms such as head discomfort, sensitivity to glare, tiredness, soreness, dryness, and blurry vision.

Super Zeaxanthin contains a potent dose of **astaxanthin**, a carotenoid found in red algae. Studies show that taking astaxanthin with other carotenoids protects against free radical induced DNA damage, repairs UVA-irradiated cells, and inhibits inflammatory cell infiltration.¹⁻⁴ Astaxanthin also helps support vascular health within the eye and improves visual acuity.³ Its fat-soluble nature offers protection to sensitive cells inside the eye.⁵

Enhanced Night Vision!

Falling down is responsible for **70%** of accidental deaths in older people.⁶ Poor lighting conditions are often the culprit.

Fortunately, **C3G** derived from **black currant** supports eyesight in **dark** conditions by promoting the healthy function of delicate structures within the retina that support **night vision**.⁷

Super Zeaxanthin now contains a potent dose of **C3G** to nourish cells throughout the body.

Comprehensive Ocular Protection in One Daily Capsule

The new **Super Zeaxanthin** formula provides natural plant extracts that have been shown to promote healthy eyesight. Just **one** softgel of **Super Zeaxanthin with Lutein, Meso-Zeaxanthin Plus Astaxanthin and C3G** provides:

OptiLut® , Lutein Plus® and MZ®	38 mg
Marigold (<i>Tagetes erecta</i>) Extract (flower) [free lutein equivalent 10 mg]	
Zeaxanthin & Meso-zeaxanthin blend	3.75 mg
(micronized zeaxanthin, OptiLut® , Lutein Plus® and MZ® Marigold Extract)	
Natural Astaxanthin	6 mg
(AstaREAL® and Zanthin® CO2 extracts of <i>Haematococcus pluvialis</i> algae)	
C3G (Cyanidin-3-glucoside)	2.2 mg
[from European black currant (<i>Ribes nigrum</i>) extract (fruit)]	

The retail price for a bottle containing 60 softgels of **Super Zeaxanthin with Lutein, Meso-zeaxanthin Plus Astaxanthin and C3G** is \$42. If a member buys four bottles, the price is reduced to just **\$28.50** per bottle.



Item # 01586

To order **Super Zeaxanthin with Lutein, Meso-zeaxanthin Plus Astaxanthin and C3G**, call **1-800-544-4440** or visit **www.LifeExtension.com**

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Advanced Exfoliant Formula!

Unlock the Skin Renewal Power of *Amber Crystals*

If **exfoliation** isn't a regular part of your skin care regimen, it should be. Your skin's dead, hardened outer layer not only *worsens* the appearance of wrinkles, age spots, scars, and blemishes—it *also* gradually destroys skin health, clogging pores and preventing the release of natural oils that normally preserve natural softness and luster as you age.

That's why **microdermabrasion** is one of today's most popular non-surgical exfoliation procedures. Under the supervision of a certified dermatologist, a spray of micro-fine crystals continuously removed by vacuum scours away dead skin cells and restores your skin's youthful glow.

Unfortunately, the outlandish cost for **medically safe** results causes microdermabrasion to be impractical for budget-conscious individuals. And if you're pregnant or breastfeeding, or suffer from a variety of health conditions including acne, rosacea, eczema, psoriasis, or diabetes, microdermabrasion poses significant risks. Even healthy individuals may suffer infections from **improperly sanitized equipment**.

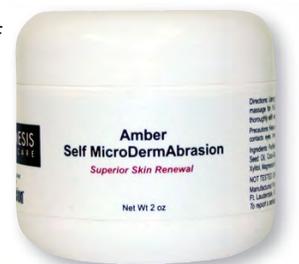
The solution is a low-cost, at-home alternative called **Amber Self MicroDermAbrasion**.

This cutting-edge exfoliant formula features ultra-fine **amber crystals**. A precious organic substance, **amber** derives from fossilized resins that trees release to heal themselves after physical injury and environmental stress. Amber is rich in compounds that form a basic building block for nearly all living organisms.

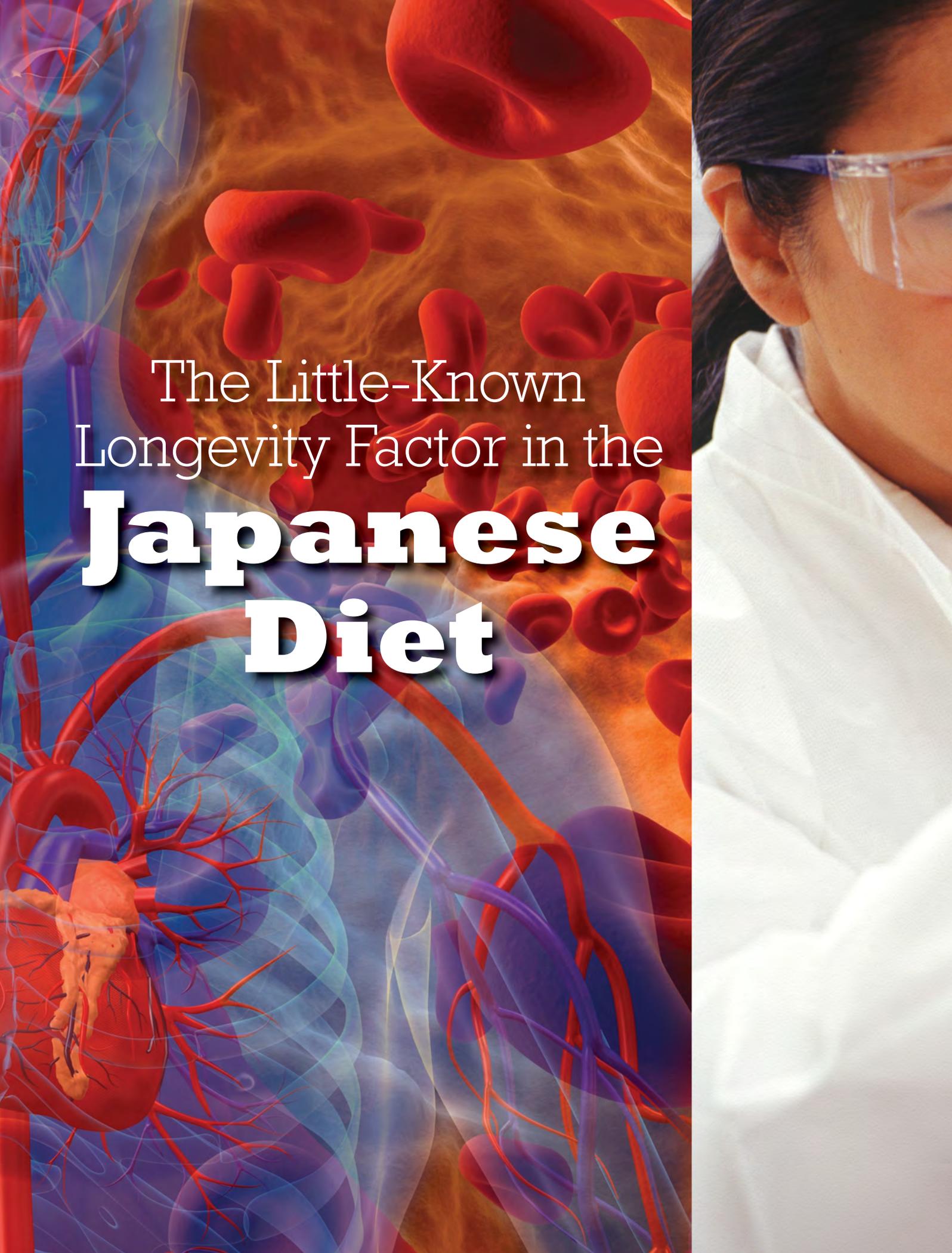
Amber Self MicroDermAbrasion puts these unique properties to work for you, gently removing dead skin cells and smoothing away unsightly wrinkles, lines, and other cosmetic imperfections. In dermatologist test cases, it has been shown to improve the appearance of aging skin by as much as **75%**. It's also safe for daily use.

Now you can enjoy these beautifying, age-defying effects at home, at a fraction of the cost of microdermabrasion or other costly exfoliation procedures.

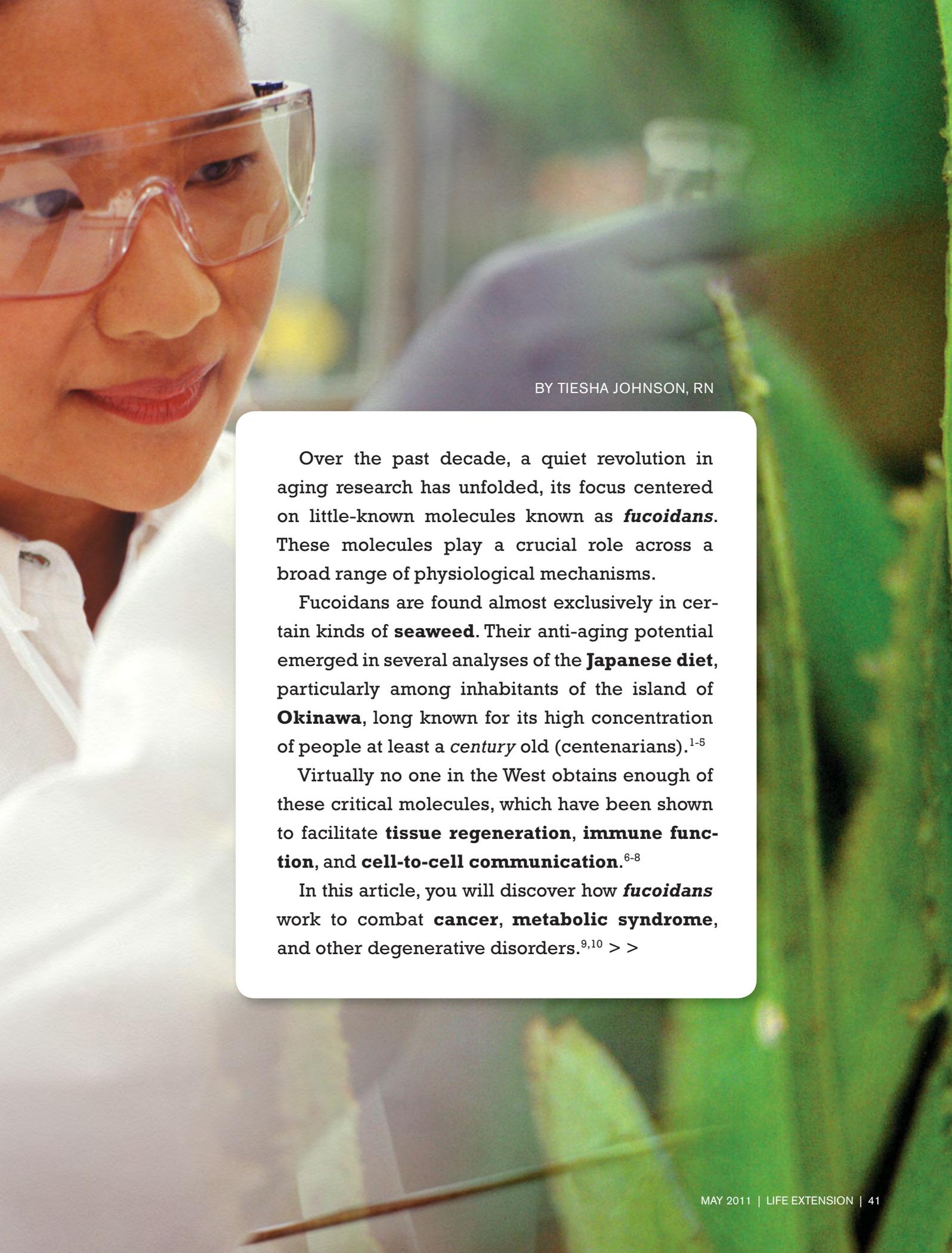
A 2 oz jar of **Amber Self MicroDermAbrasion** retails for \$49. If a member buys two jars, the price is just **\$31.50** per jar.



Item #80139



The Little-Known
Longevity Factor in the
**Japanese
Diet**



BY TIESHA JOHNSON, RN

Over the past decade, a quiet revolution in aging research has unfolded, its focus centered on little-known molecules known as ***fucoidans***. These molecules play a crucial role across a broad range of physiological mechanisms.

Fucoidans are found almost exclusively in certain kinds of **seaweed**. Their anti-aging potential emerged in several analyses of the **Japanese diet**, particularly among inhabitants of the island of **Okinawa**, long known for its high concentration of people at least a *century* old (centenarians).¹⁻⁵

Virtually no one in the West obtains enough of these critical molecules, which have been shown to facilitate **tissue regeneration, immune function, and cell-to-cell communication**.⁶⁻⁸

In this article, you will discover how ***fucoidans*** work to combat **cancer, metabolic syndrome, and other degenerative disorders**.^{9,10} > >



Filling the Nutritional Gap

The Japanese enjoy a long life expectancy that is among the highest in the world.^{3,11} For many years, life expectancy at birth on the islands that comprise the Okinawa prefecture was even *higher* than on the mainland.¹⁻⁵ At the same time, the Japanese enjoy far *lower* incidence of most chronic, age-related diseases than Western populations.^{5,12,13} Multiple factors contribute to their successful aging and healthy life span, including a diet low in calories and rich in fruits, vegetables, and fish.^{2,5} In addition, in Japan, there is a widely held cultural belief that “food is medicine.”¹ However, one dietary factor stands out that is virtually unique to the Japanese diet: regular consumption of seaweed, as much as **4-6 grams per day**.¹⁰

There are many varieties of edible seaweed, which in Japan go by the common names of wakame, mekabu, and kombu, among others. Strictly speaking, “seaweed” is not a plant but rather an amalgam of **algae**, or single- and multi-cellular marine organisms that group into clumps or mats.¹⁴ These particular species contain high concentrations of long chain molecules collectively known as **fucoidans**.¹⁵

Scientists have discovered that fucoidans are a source of necessary components of cell-surface molecules that facilitate cell-to-cell signaling, the core regulatory process responsible for everything from immunity and cardiovascular function to healthy cellular proliferation.^{6,16-19} Researchers believe that the

shorter life and health spans observed in Western populations result in part from the near-total *absence* of dietary **fucoidans**.^{1,2}

How Fucoidans Work

Much of the world’s literature on fucoidans originates in Japan, given their abundance in the Japanese diet. Even some drug companies are investigating their therapeutic potential.¹⁵

The strongest scientific evidence on fucoidans is derived from studies of the species *Undaria pinnatifida*.²⁰ It has been shown that fucoidan-rich *Undaria*, once ingested, can bind to toxins such as dioxin within the mammalian body and facilitate its excretion. The effect is noteworthy enough that some clinicians believe it could hold promise as a therapeutic intervention in humans exposed to dioxin.²¹

Laboratory and animal studies further reveal that fucoidans prevent certain infectious diseases, and block cancer cells from spreading and trigger their early death.^{9,10}

Fucoidans also modulate growth factors required for healing and tissue regeneration, while *blocking* those associated with visible aging.^{22,23} This is largely the result of their immune-modulating capabilities: they simultaneously downregulate inflammation while boosting appropriate recognition and destruction of invaders.^{7,24}

Immune Modulator, Cancer Fighter

Through their beneficial interaction with cell surface proteins, fucoidans exert beneficial effects on cells within the immune system, where *glycoproteins* serve as vital receptors and detectors of changes in the internal environment. *Undaria* extracts stimulate beneficial immune responses while *suppressing* those that could lead to tissue damage.

Immune stimulation by fucoidans enhances activity of both the cellular and the antibody-based components of the immune system, boosting protection not only against bacteria and viruses, but also against many nascent cancers.²⁵⁻²⁹ In one animal model, *Undaria* fucoidans enhanced survival and inhibited tumor growth in experimentally induced cancer; the result of enhanced activity of cancer-destroying natural killer cells.^{14,30}

In early stage, experimental cell studies, fucoidans demonstrated potential for preventing infection with numerous malevolent microorganisms, including the **malaria** parasite and **herpes viruses**. In laboratory studies, they block cell surface receptors those invaders need in order to attach themselves and enter human cells, preventing infection from taking hold.^{31,32} Viruses in particular can attach to a cell membrane receptor and then enter the cell interior, where their genetic material replicates and produces destructive effects on host cells.

Undaria fucoidan extract has been shown to inhibit replication of herpes by stimulating ingestion of the virus by macrophage cells and boosting numbers of antibody-producing B cells.^{33,34} All of these experiments show great promise for future applications of fucoidans in protecting against various pathogens.

In an early phase, open-label trial, oral *Undaria* fucoidan was administered to 15 individuals of various ages (from under age 10 to age 72) suffering from herpetic infections including herpes type 1 (cold sores), herpes type 2 (genital herpes), herpes zoster (chicken pox; shingles), and Epstein-Barr virus (mononucleosis). The *Undaria* dosage approximated typical daily seaweed intake in Japan. *Undaria* increased the healing rates of active herpes virus infections in all 15 subjects. Individuals with chicken pox and shingles noted reduced pain and more rapid resolution of skin lesions. In the laboratory, scientists found that the *Undaria* extract increased the growth of infection-fighting T-cells in cell culture. The scientists postulated that *Undaria's* ability to increase T-cell growth in the laboratory may be related to its ability to enhance immunity in human subjects.²⁰



Fucoidans

- Over the past decade, a quiet revolution in the science of anti-aging has unfolded, centered on the discovery of beneficial molecules that facilitate core physiological mechanisms and ward off degenerative disease.
- The study of their effects has given rise to the field of **glycobiology**.
- **Fucoidans** are long-chain molecules found primarily in **seaweed**.
- Researchers believe that fucoidans are partly responsible for the extraordinary longevity observed in Japanese populations, where organic, unpolluted seaweeds form a significant dietary component.
- Fucoidans enhance immune function, combating infectious diseases and cancer.
- Fucoidans show great promise in thwarting viral infection by preventing binding to host cells and blocking viral replication in laboratory research.
- Fucoidans also combat metabolic syndrome and cardiovascular disease by modulating glucose and insulin levels, disrupting formation of advanced glycation end products (AGEs), and lowering triglycerides.



UNDARIA PINNATIFIDA

Laboratory studies of the same fucoidan preparation revealed potent antiviral activities against human herpes virus types 1 and 2, and against *cytomegalovirus*, a common infection in individuals with compromised immune systems.^{31,35} Animal studies reveal that *Undaria* fucoidans prevent virus binding with host cells and inhibit viral replication, while simultaneously stimulating host-defensive immune responses.^{36,37}

Undaria extracts have also been shown to enhance the natural cancer cell-destroying activity of immune cells in experimental animals, while increasing survival rates.^{14,19,30} In one animal model, it suppresses proliferation of tumors of the breast—a telling finding given that breast cancer rates in humans are substantially lower in Japan than in US populations.^{38,39} Importantly, while the extracts induce apoptosis in cancer cells in the lab, they have no such cell-destructive effects on healthy human mammary tissue.³⁹

Combating Cardiovascular Disease and Metabolic Syndrome

Incidence of metabolic syndrome is on the rise around the world, though its prevalence lags behind in some Asian countries that consume a traditional diet rich in seaweed. This phenomenon has recently

been attributed in part to the high dietary intake of *Undaria* and other brown seaweeds.¹⁰ Metabolic syndrome, triggered by—and also a cause of—accumulated *advanced glycation end products* (AGEs), is associated with type 2 diabetes and high cardiovascular disease risk.⁴⁰⁻⁴³ Fucoidans hold tremendous promise in *disrupting* the processes that lead to metabolic syndrome and its cardiovascular consequences.¹⁰

Undaria exerts anti-diabetic effects by stabilizing and *slowing* the digestion of starch from processed carbohydrates, which may reduce the likelihood of dangerous postprandial glucose and insulin spikes.⁴⁴

Diabetic patients also suffer from diminished peripheral blood flow, leading to skin ulceration and poor wound healing. In one compelling study, researchers discovered that fucoidan supplementation could restore normal control of capillary blood flow in diabetic animals.⁴⁵ Some of this benefit may arise from the fact that fucoidans can inhibit binding of AGEs to the cellular receptors that trigger many of their damaging effects.⁴⁶

Undaria also defuses cardiac risk factors by stimulating enzymes that break down fats in the liver and lower triglyceride levels.⁴⁷ *Undaria* operates *synergistically* with fish oils to protect cardiovascular health.⁴⁸

Cardiovascular disease risk is directly related to blood pressure. In a landmark 2009 study, consumption of dried *Undaria* at **4-6 grams per day** (typical for the Japanese diet) significantly reduced systolic blood pressure in all patients. Individuals who consumed 4 grams of *Undaria* daily for 1 month, followed by 6 grams of *Undaria* for an additional month, saw their systolic blood pressure **decrease by 10.5 mmHg**. This effect occurred primarily in those who had high-normal baseline blood pressure levels.¹⁰

Relieving Arthritis Pain

Fucoidans may also prove a potent intervention to combat arthritis. There are many different kinds of arthritis, with a variety of causes. Their unifying characteristic is painful joint swelling with inflammation and increased production of pro-inflammatory cytokines (cell-signaling molecules).

Fucoidan treatment reduces cytokine production and infiltration of white blood cells in experimental arthritis, thereby reducing overall severity.⁴⁹⁻⁵¹ Fucoidans also reduce pain perception.⁵² Selectin inhibition by fucoidans also reduces the severity of early bacterially induced arthritis.⁵³ Together these properties make fucoidans tremendously promising in the management of painful arthritis.⁵¹



Summary

Researchers believe fucoidans are partly responsible for the extraordinary longevity observed in Japanese populations, where organic, unpolluted seaweeds form a significant dietary component.

Fucoidans enhance immune function, combat infectious diseases, and support defense against cancer. Fucoidans also combat metabolic syndrome and cardiovascular disease by modulating glucose and insulin, disrupting formation of advanced glycation end products, and lowering triglyceride levels. In human studies, **fucoidans** (extract from seaweed) demonstrate beneficial effects at doses of **75-300 mg daily**.^{20,54} ●

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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GREEN TEA EXTRACT

Large volumes of published **scientific findings** validate the multiple health benefits of **green tea**.

The active constituents in green tea are **polyphenols**, with **epigallocatechin-3-gallate (EGCG)** being the most powerful. The antioxidant activity of **EGCG** is about **25-100 times** more potent than **vitamins C and E**.

When Life Extension® introduced the first **standardized green tea extract** in **1993**, the supplement was very expensive. As more research was published about green tea's multifaceted benefits, more companies competed to make **higher-potency** extracts at **lower** prices.

The good news for consumers is that they can obtain **high-potency standardized** green tea extract capsules at a fraction of the prices charged just five years ago.

The Life Extension Foundation Buyers Club offers **98% green tea extracts** in either a **lightly caffeinated** or **decaffeinated** form. These **98%** extracts are **standardized** to provide high potencies of critical **EGCG**, the most important **polyphenol** found in green tea. Each capsule of **Mega Green Tea Extract** provides **more** polyphenols than are found in three cups of green tea.

These highly concentrated **Mega Green Tea Extract Caps** contain **725 mg** of either **lightly caffeinated** or **decaffeinated 98% standardized** green tea extracts. The retail price for a **100-capsule bottle of Mega Green Tea Extract** is **\$28**.

If a member buys four bottles of 725-mg **Mega Green Tea Extract** capsules, the price is reduced to **\$19.88 per bottle**.

Contains rice.



Item #00953

Item #00954

To order Mega Green Tea Extract, call 1-800-544-4440 or visit www.LifeExtension.com

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 toward 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.

Item #01482



Item #01484

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, the price is reduced to just **\$21** per bottle. If **10 bottles** are purchased, the cost is just **\$18.68** 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 [std. to 6.5% polyphenols (39 mg), 1.73% hydroxytyrosol/tyrosol (10.4 mg), 0.5% verbascoside/oleuropein (3 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, the price is reduced to **\$23.25** per bottle. If **10 bottles** are purchased, the cost is just **\$21** 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.

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● INTRODUCING Optimized FUCCOIDAN

The Japanese Dietary Longevity Factor!

In recent years, scientific interest has intensified around **fuccoidan**, a little-known molecule found *primarily* in edible **seaweeds** native to the Japanese diet. Nearly **900** published studies indicate its power to promote healthy immune function, cell-to-cell communication, and tissue repair.¹⁻³

The "Okinawan Secret"

Many experts now believe that **fuccoidan** is one of the key nutrients responsible for the exceptionally long, healthy lives enjoyed in **Okinawa**, which for decades boasted the world's highest concentration of **centenarians** (individuals at least a *century old*).⁴⁻⁸

Maritech® 926 fuccoidan is sourced from hand-harvested, wild seaweed exclusively from pristine ocean waters. A cutting-edge water extraction process ensures **fuccoidan's** delicate molecular structure is delivered intact, to provide the critical nutritional benefit of *Undaria pinnatifida*, which is the species of seaweed used in a majority of scientific studies on **fuccoidan**.

A Full Day's Supply . . . In Just One Capsule

A single vegetarian capsule of **Optimized Fuccoidan with Maritech® 926** provides **88.5 mg** of standardized *Undaria pinnatifida* extract, equaling the amount of fuccoidan typically consumed daily in the traditional Japanese diet. Most people require only one capsule daily, though aging individuals seeking to enhance the benefit may choose to take two per day.

A bottle containing **60** vegetarian capsules of **Optimized Fuccoidan with Maritech® 926** retails for **\$36**. If a member buys four bottles, the price is reduced to just **\$24.75** per bottle.

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Item #01513

To order **Optimized Fuccoidan**
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or visit **www.LifeExtension.com**



WF 16X



ASPIRIN

Three Million Needless Cancer Deaths... Courtesy of the FDA

Misguided government actions result in countless numbers of human beings dying needlessly.

The FDA exacerbates this tragedy by suppressing the truth about a low-cost drug that Life Extension® has recommended people take since 1983.

The report you are about to read documents how daily use of **low-dose aspirin** could have saved **112,000 Americans** from agonizing **cancer** death **each year**. Multiply that carnage by the 27 years **Life Extension** has battled the FDA on the aspirin issue and the total comes to three million unnecessary cancer deaths!

Since it is illegal to promote aspirin as a cancer preventive, and the FDA dilutes what can be said about its heart attack-reducing effects, most Americans will not find out what **Life Extension members** did in the early 1980s, which is to take **81 milligrams of aspirin** every day.

The Everyday Drug That Prevents

CANCER DEATH

BY EDWARD KORLOV

Imagine you could readily obtain a safe, low-cost drug that could reduce your overall risk of cancer death by **20%**. Or *slash* your risk of colorectal cancer—the third most common cause of cancer mortality in the US for both men and women¹—by up to **40%**.

No pharmaceutical giant could hold a patent on it, and you wouldn't need a prescription to get it. All you'd have to do to benefit from its anti-cancer power is reach into your own medicine cabinet.

In an important scientific development, this unlikely scenario is now a medical reality.

After analyzing data drawn from over **25,000** human subjects, a team of researchers at Oxford University has conclusively demonstrated that long-term, low-dose aspirin therapy (**75 mg per day**) effectively combats multiple forms of cancer—and prevents cancer death.²

In this article, the results of their work are detailed. You will discover the precise mechanisms of action by which aspirin impedes cancer cell development. You will find out how pharmaceutical giants are acting on these findings to reap extraordinary profits at the expense of the public health. You will also learn what you can do to *optimize* aspirin's chemopreventive capabilities, naturally minimize its potential side effects—and possibly save your life. > >



Cardiovascular and Anti-Cancer Research: A Lifesaving Link

At the forefront of the growing field of research into aspirin's role as a cancer fighter is Professor Peter Rothwell of **Oxford University**. Having specialized primarily in **cardiovascular medical research**, he and his colleagues had at their disposal a trove of information compiled from **eight massive studies** examining the effect of aspirin therapy on cardiovascular health.

Rothwell and his team had previously observed that aspirin treatment for longer than five years appeared to significantly reduce risk for **colorectal cancer**, one of the most common malignancies in older adults.^{3,4} On the basis of this insight, they decided to re-examine these eight studies to find out if daily aspirin intake afforded an even greater *overall* anti-cancer benefit. Their results were published online in December 2010.

Cumulatively, these studies provided solid and detailed medical data on nearly **26,000** patients who either took aspirin daily, or took no aspirin, for 5 years or longer. Thanks to meticulous recordkeep-

ASPIRIN: WORDS OF CAUTION

Some people should consult a physician before taking daily low-dose aspirin. Individuals with certain heart, kidney, and other medical conditions may not be suitable candidates for low-dose aspirin therapy. Children or teenagers who have a fever should not take aspirin.

Aspirin has been linked with acute kidney injury.⁴² Long-term use of more than one type of analgesic such as aspirin may cause analgesic nephropathy.⁴³ Individuals with chronic kidney disease may experience an increased risk of end stage renal disease with aspirin usage.⁴⁴

ing, they were able to determine both the timing and the cause of death for each and every subject under study—including those who had died of cancer. Three of these studies also included follow-up information on subjects **over the course of 20 years**.²

Among the most compelling of their findings:

- Aspirin reduced the overall risk of death from cancer by approximately **20%**.
- Most of that benefit was due to a **30-40%** reduction in deaths occurring after **5 years** of daily aspirin intake.

- The reduction in deaths due to solid cancers was maintained for **20 years** in studies in which data was available for that period of time.
- These effects were consistent across all populations studied—despite their diversity in health histories.
- A dose of just **75 mg** daily was all that was required for the protective effect—higher doses did not increase the benefit.
- The reduction in cancer deaths increased with age: peak effects were observed in people aged **55-64** and remained high in those **65 years or older**.
- The effect of aspirin on reducing risk of fatal cancers was powerful enough to contribute to **a significant reduction in mortality rates from all causes**.

The data correlating aspirin therapy with **colon cancer** prevention proved particularly compelling. Rothwell's team saw a **24%** reduction in the risk of developing colon cancer over a 20-year period in patients who took aspirin daily⁴ and a **35%** reduction in the risk of *dying* from colon cancer. The most potent preventive benefit was observed in cancers of the **upper colon** (the ascending and transverse colon).⁴

Rothwell's team made two more important discoveries.

First, while a minimum **5 years** of low-dose aspirin intake is required to enjoy its chemopreventive effect, it may take **10 years or longer** after the start of therapy to realize aspirin's full beneficial potential. In other words, the sooner you start on a daily low-dose aspirin regimen, the better your chances of maximizing aspirin's cancer-fighting effect.³

Second, their findings indicate that you need to take aspirin *every day* in order to get the cancer-preventive benefit.² In one particularly noteworthy controlled trial, a large cohort of more than 19,000 women taking low-dose aspirin (100 mg) only every *other day* exhibited no protective effect.⁵

The results of Rothwell's analysis corroborated existing evidence indicating that regular aspirin intake might protect against a constellation of common cancers. Large epidemiological analyses have shown that people who take daily doses of aspirin enjoy a preventive effect against most types of colorectal cancer,^{6,7} as much as **40%** by consensus estimates.^{8,9} In people with known **adenomatous polyps**—small, fleshy, protuberant precursors to malignancy—short-term aspirin therapy reduces the risk of *recurrence*.³

Aspirin's Anti-Cancer Power

- Researchers at Oxford found that daily low-dose aspirin therapy slashes overall risk of cancer death by **20%** and colorectal cancer death risk by nearly **40%**.
- This cancer-preventive benefit increased with age, proving especially effective in populations **55 and older**.
- Its cancer-fighting power increases over time, requiring a minimum of **5 years** for the benefit to manifest, and reaching peak power at **10 years**.
- Aspirin combats cancer by beneficially modulating or suppressing the activity of the pro-inflammatory enzyme **cyclooxygenase-2** (COX-2) and the “master switch” protein complex **nuclear factor-kappaB** (NF-kB).
- Although its side effect profile is relatively limited, natural interventions to minimize aspirin's potential side effects are also indicated, including zinc carnosine as **polaprezinc** and extracts of **cranberry** and **licorice**.
- Drug companies are already developing pharmacologically similar drugs no more effective than aspirin and far more costly and dangerous, including COX-2 inhibitors (**coxibs**) and **nitric oxide-donating aspirins**.



Separate observational studies have suggested a preventive effect for cancers of the **esophagus, stomach, lung, breast, and ovaries**.^{8,10,11} A 2010 study revealed that men taking regular aspirin supplements attained a 10% reduction in prostate cancer risk compared to men who took no aspirin.¹² Another study showed a risk reduction of **24%** in long-term users (greater than 5 years), and **29%** in daily aspirin users.¹³

Although those studies were encouraging, they were small, and some of their results were conflicting. Furthermore, observational studies can sometimes be inconclusive at determining risks and benefits of medications, because they do not (by definition) include any controls such as a placebo group. So Rothwell and his group made certain that their study design was robust enough to deliver definitive answers to these lingering questions.



How Aspirin Beats Cancer: Suppressing COX-2 and the “Master Switch”

Salicylic acid, which is closely related to **aspirin** (chemical name: *acetylsalicylic acid*), occurs naturally in the bark of the white willow tree and other plants. Its use dates back to the origins of medicine itself. Hippocrates, widely regarded as the godfather of modern medical science, documented its efficacy in combating pains, aches, and fever in the fourth century BCE.¹⁴⁻¹⁶

In recent years, aspirin’s emerging centrality in cancer prevention has led some experts to theorize that cancer victims may suffer from a “salicylate deficiency.”¹⁷

Aspirin’s anti-cancer power stems in part from its capacity to *inhibit* the action of **cyclooxygenase-2** (COX-2), an enzyme first discovered in 1991¹⁸ that has since been shown to play a central role in onset of most cancers.¹⁹⁻²⁴

Released in response to infection, cellular stress, and other pathological states, COX-2 and its **enzymatic byproducts** accelerate cancer development via five key pathways:

- They trigger the formation of new blood vessels (**angiogenesis**) that tumors rely on to nourish themselves and grow.^{21,22}
- They halt **apoptosis**, the normal process of “programmed cell death” that keeps early malignancies from developing.^{21,22}
- They inflict **DNA damage**, increasing the risk of cancer-causing cellular mutation.²⁵

- They stimulate **metastasis** (cancer cell proliferation).²³
- They suppress healthy **immune surveillance** that would otherwise destroy cancer cells before they take hold and proliferate.²³

Aspirin powerfully suppresses these carcinogenic processes.

Aspirin also beneficially modulates activity of the protein complex **nuclear factor-kappa B** (NF-kB), the so-called “master switch” that stimulates pro-inflammatory cytokine production.²⁶ (In addition to cancer, NF-kB has been linked to inflammatory and autoimmune diseases.)²⁷⁻²⁹

NF-kB is a core regulatory complex that enters the cell nucleus to control expression for a host of genes regulating your immune system’s response to infection.³⁰ As with COX-2, *pathologic* NF-kB activity launches a storm of cellular coactivators, signaling molecules, and transcription factors that drive tumor growth, angiogenesis, and lethal metastasis.³¹

NF-kB also maintains the balance between cell death and survival. Cancer cells with high levels of active NF-kB are generally resistant to cell death and thus enjoy a significant survival advantage over normal cells (and killer immune cells).³⁰ Aspirin counteracts and suppresses NF-kB activity, effectively thwarting cancer cell function and development *at the molecular level*.

“Aspirin-Like” Drugs: Barefaced Big Pharma Profiteering?

In response to the release of Professor Rothwell’s recent landmark findings, the highly regarded British newspaper *The Guardian* reported, “If Big Pharma had unveiled a brand new drug that would stop 20% of cancer deaths, the hype would be enormous and the pressure to buy it, at an inevitably high cost, huge.”³²

A prescient observation: it turns out efforts are already underway to exploit Rothwell’s findings in order to reap profits while *downplaying* aspirin’s anti-cancer efficacy.

Studies of *pharmacologically* similar compounds, like selective COX-2 inhibitors (the **coxibs**), are now appearing that demonstrate anti-cancer effects almost identical to those of aspirin itself.^{23,33-35} The problem? Coxibs are not only much more expensive than aspirin; they’re relatively dangerous. In fact, the coxibs have been linked with an increased risk of adverse cardiovascular events such as heart failure, myocardial infarction (heart attack), and stroke.³⁶⁻³⁸ Why investigate their anti-cancer efficacy if they’re no better, cheaper, or safer than aspirin? In all likelihood because many coxibs remain under **patent protection**, and thus represent a potential windfall for the pharmaceutical industry.



Methods to Minimize Potential Side Effects

Aspirin does come with a few side effects, primarily of the stomach, where it can cause local irritation and, in a small number of cases, gastric bleeding or ulcers.^{45,46} For those who decide to use aspirin, the best protection is to stick with **75 to 81 mg per day**—the lowest possible therapeutic dose, far less likely to induce any unwanted effects.

Some evidence suggests that using **enteric-coated aspirin** may reduce the risk of ulcers and gastric bleeding.^{47,48} Antacid proton pump inhibitors (PPIs) may also help prevent gastric ulcers or promote their healing if they do occur.^{49,50} A study of the proton pump inhibitor *esomeprazole* (**Nexium**®) with aspirin is underway to determine its ability to offset its side effects.⁵¹ Concerns about long-term use of proton pump inhibitor drugs has been raised in the alternative community, so they should not be used unless necessary (normally to treat esophageal reflux). Lower-cost generic proton pump inhibitors (like omeprazole) are available over the counter and work the same way as does prescription Nexium®.

You may also choose to obtain natural protection using the following nutrients, all of which are clinically proven to support stomach health:

- **Zinc carnosine.** Zinc has gastroprotective effects. The essential nutrient carnosine has been shown to amplify zinc’s beneficial effects. Sold as **polaprezinc**, this zinc-carnosine compound is a **prescription anti-ulcer drug** in Japan, but is readily available as a supplement in the US.⁵²⁻⁵⁶
- **Cranberries.** Rich in antioxidant polyphenols and other protective nutrients that promote stomach health, there is some evidence that cranberries may prevent **esophageal cancer**.⁵⁷ Cranberry extracts can also thwart infection by ***Helicobacter pylori***—the bacterium conclusively linked to cancers of the gastrointestinal tract (and also the culprit behind the vast majority of **gastric ulcers**).⁵⁸⁻⁶²
- **Licorice extracts.** Like cranberry, licorice is rich in compounds that combat inflammation and block *H. pylori* infection.⁶³⁻⁶⁷

Newer drugs “based” on aspirin, called *nitric oxide-donating aspirins*, are also in development, even though they have yet to prove themselves in any way superior to aspirin.³⁹⁻⁴¹ This is yet another instance of a widespread drug company practice: synthetically alter a safe, inexpensive and readily available compound by attaching a molecule to it, thereby creating an entirely “new” patentable drug, one that holds enormous profit-making potential at the expense of the public health.

So if you find yourself reading headlines in the near future announcing coxibs’ newfound power to fight cancer, or celebrating a “new kind of cancer-fighting aspirin,” you may safely ignore them. Stick with regular aspirin instead.

Summary

In a meta-analysis involving over **25,000** human subjects, a team of Oxford researchers has conclusively demonstrated that daily low-dose aspirin therapy slashes overall risk of cancer death by **20%** and colorectal cancer death risk by nearly **40%**. This cancer-preventive benefit increases with age, proving especially effective in populations **55 and older**. It also increases over time, requiring a minimum of 5 years for the chemopreventive benefit to fully manifest, and reaching peak power at 10 years. This means the earlier you start on a low-dose aspirin regimen, the greater your cancer risk reduction. Aspirin combats cancer at the molecular level by beneficially modulating or suppressing the activity of the pro-inflammatory enzyme *cyclooxygenase-2* (COX-2) and the “master switch” protein complex *nuclear factor-kappaB* (NF-kB). Natural interventions to minimize aspirin’s potential side effects are also indicated, including zinc carnosine as *polaprezinc* and extracts of **cranberry** and **licorice**. Meanwhile, drug companies are already attempting to capitalize on these findings by developing pharmacologically similar drugs no more effective than aspirin and far more costly and dangerous, including COX-2 inhibitors (*coxibs*) and *nitric oxide-donating aspirins*. ●

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

FDA Versus LEF: Succinct Review of Aspirin Wars

Back in **1983**, the **Life Extension Foundation**® analyzed findings from published studies indicating that low-dose aspirin can reduce the risk of a **heart attack** by about **40%**.⁶⁸ Life Extension members were urged to take low-dose aspirin every day to protect against heart attacks.

The **FDA** and medical establishment were harshly critical of Life Extension’s recommendation, even though peer-reviewed scientific studies substantiated it. The FDA issued an edict that any company that promoted the sale of aspirin to prevent heart attacks would be subject to civil and criminal penalties. According to the FDA, making a health claim for aspirin turned it into an “unapproved drug.”

In response to the FDA’s censorship of health claims about aspirin, Life Extension developed a product called “**First Amendment Aspirin**.” On the label of this product was a quote from a published study indicating that aspirin reduces heart attack risk.

The FDA demanded that the sale of this product cease, but Life Extension refused, citing the First Amendment guarantee of free speech, i.e., the right to communicate that a published scientific study found that aspirin reduces heart attack risk. Realizing that they could not get around the US Constitution, the FDA went to the manufacturer of the product and demanded that they stop making “First Amendment Aspirin” or face intrusive daily inspections. The manufacturer capitulated and stopped making the product.

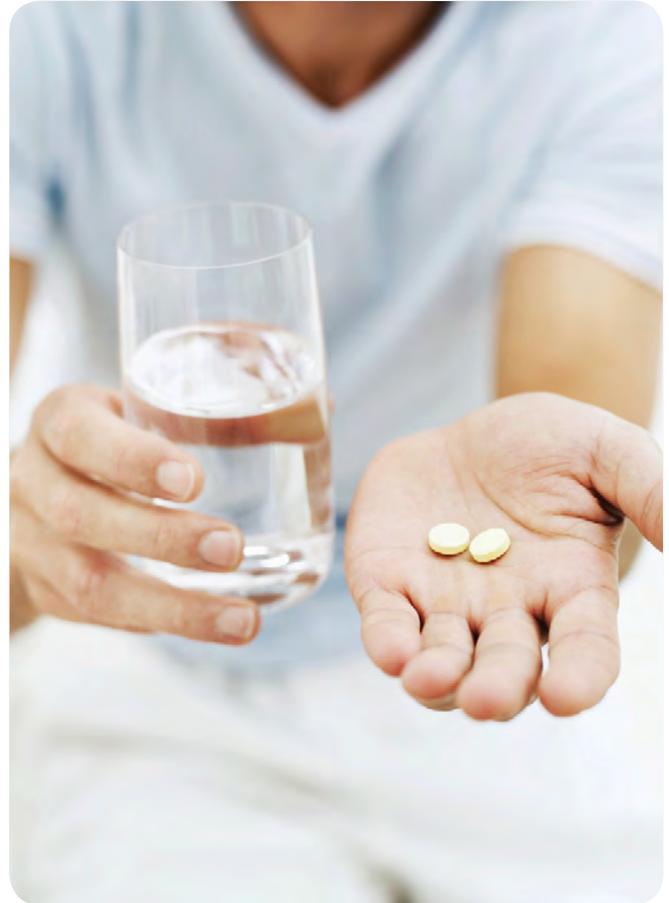
As new studies continued to verify aspirin’s cardioprotective effect, FDA rulings starting in **1998** allowed companies to advertise the cardiovascular benefits of aspirin on a very **limited** basis. The FDA added so much bureaucratic red tape about who the agency thinks should take aspirin that most people don’t find out they need it until it is too late.

It took the FDA **15 years** to acknowledge what was clearly established in **1983** about aspirin’s ability to reduce heart attack risk. To this day, the FDA continues to censor what aspirin manufacturers are permitted to say about its effects in reducing cardiac and ischemic stroke events.

In preparing this article, we found studies indicating anti-cancer mechanisms of aspirin dating back to the year **1972**,⁶⁹⁻⁷¹ with significant human data published in **1991**.^{72,73} The failure of the FDA to allow widespread promotion of low-dose aspirin for prevention has clearly resulted in millions of premature deaths.

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All the **K**... One a Day

There are **three forms** of **vitamin K** that the human body can utilize to promote **arterial health** and **bone support**.¹⁻⁸

Life Extension®'s Super K with Advanced K2 Complex provides the *dynamic trio* of vitamin K forms in **one** softgel, including **vitamin K1**, **vitamin K2 (MK-4)**, and **vitamin K2 (MK-7)**.

Vitamin K1 is the form of vitamin K that is found in green vegetables. **K1** is tightly bound to plant fiber, so only a fraction is *absorbed* into the bloodstream. Supplementation ensures ample **K1** blood levels.

Vitamin K2 is usually found in meats, dairy, and egg yolks. Since you may be avoiding these foods for health reasons, ingesting a **K2** supplement is *essential*. **MK-4** is the most *rapidly absorbed* form of **K2**, and **MK-7** boasts a very *long half-life* in the body, making both forms the *perfect complement* to any **vitamin K** regimen.⁹

The retail price for a bottle containing **90 softgels** (three-month supply) is \$26. If a member buys four bottles, the price is reduced to just **\$17.25 per bottle**.

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 same **Super K** formula consisting 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).

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

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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.

Q: & A:



WHAT DO THESE TWO DHEA STUDIES HAVE IN COMMON?

1 STUDY

“DHEA enhances effects of weight training on muscle mass and strength in elderly women and men”

*American Journal of Physiology
Endocrinology Metabolism*
2006 Nov;291(5):E1003-8

2 STUDY

“Effect of DHEA on abdominal fat and insulin action in elderly women and men: a randomized controlled trial”

*Journal of the American
Medical Association*
2004 Nov;292(18):2243-8

LIFE EXTENSION[®] DHEA WAS USED IN BOTH STUDIES!

DHEA (*dehydroepiandrosterone*) has demonstrated many benefits, including positive effects on body composition. Regrettably, our natural production of this hormone diminishes by about **80%** between the ages of 25 and 75 years.¹ This has been associated with a decrease in muscle mass and strength and an increase in abdominal girth.

In the first of the two studies sponsored in part by the National Institutes of Health, researchers sought to determine the effect of DHEA replacement in DHEA-deficient elderly individuals. They randomized 56 men and women to receive either 50 mg/day of **Life Extension's DHEA** before bedtime or a placebo. Both groups then underwent a program of resistance training for four months. At the end of the study, DHEA replacement produced a significantly greater effect in enhancing the benefits of weight training on muscle mass and strength in both men and women compared with the placebo group.¹

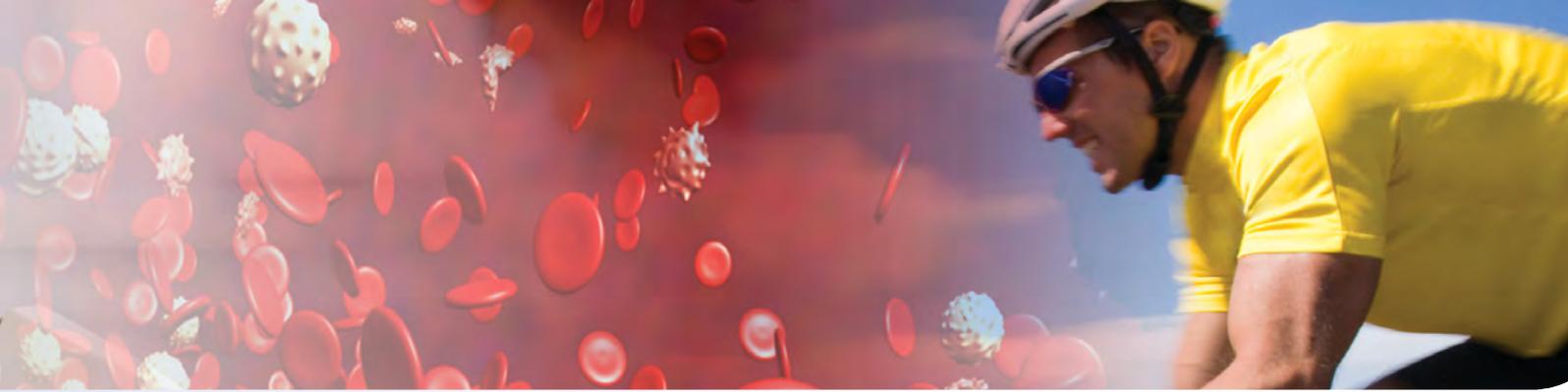
The second study cited was conducted by the same research team. The effects of DHEA-replacement therapy or a placebo on abdominal fat were investigated for the first time in 56 DHEA-deficient elderly men and women who did not exercise regularly. Using the same DHEA-dosing regimen as in the previous study, the researchers found that DHEA levels rose to youthful ranges in both men and women. This increase was accompanied by changes in body composition. Compared with miniscule changes in weight loss in the placebo group, women taking DHEA lost an average of **10.2%** of their visceral (intra-abdominal) fat, while men shed an average of **7.4%**. Subcutaneous fat (under the skin) losses averaged 6% in both men and women taking DHEA.²

DHEA is widely available as a dietary supplement. These two studies utilized **Life Extension's DHEA** formulation to safely restore DHEA levels to youthful ranges in these elderly individuals, which helped maximize lean tissue mass,¹ maintain healthy abdominal weight,² and support insulin sensitivity.²

References:

1. *Am J Physiol Endocrinol Metab.* 2006 Nov;291(5):E1003-8.
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**To order DHEA call 1-800-544-4440
or visit www.LifeExtension.com**



CHOOSE THE DOSE THAT'S RIGHT FOR YOU:



DHEA 15-mg, 100 Capsules, Item #00454

While published studies show the greatest benefit occurs when 50–75 mg of DHEA is consumed each day, some women only need a low dose of DHEA. Just one of these 15-mg capsules a day is all some women need to bring DHEA levels back to youthful levels. A bottle containing 100 **15-mg** capsules of **DHEA** retails for \$12; if a member orders four bottles, the price is reduced to just **\$7.50 per bottle**. Contains rice.



DHEA 25-mg, 100 Capsules, Item #00335

The minimum dose of DHEA for most healthy aging people is 25 mg a day, though optimal doses are 50–100 mg daily. These 25-mg capsules are a popular way to consume the precise amount of DHEA your body may need. A bottle containing 100 **25-mg** capsules of **DHEA** retails for \$15; if a member orders four bottles, the price is reduced to just **\$9.38 per bottle**. Contains rice.



DHEA 25-mg, 100 Dissolve-in-Mouth Tablets, Item #00607

A bottle containing 100 **25-mg dissolve-in-mouth** tablets of **DHEA** retails for \$14; if a member orders four bottles, the price is reduced to just **\$8.81 per bottle**. Contains corn.



DHEA 50-mg, 60 Capsules, Item #00882

The optimal daily dose of DHEA for most people is 50 mg. These economical 50-mg capsules enable most people to conveniently consume the optimal dose of DHEA in just one capsule. A bottle containing 60 **50-mg** capsules of **DHEA** retails for \$16; if a member orders four, the price is reduced to just **\$10.50 per bottle**. Contains rice.

7-Keto® is a registered trademark of Humanetics Corporation. These supplements should be taken in conjunction with a healthy diet and regular exercise program. Results may vary.



7-Keto® DHEA 100-mg, 60 vegetarian Capsules, Item #01271

7-Keto® DHEA is a metabolite of DHEA that safely increases fat-burning enzymes in the liver. Human subjects who consumed 200 mg of 7-Keto® DHEA a day in conjunction with a diet and exercise program lost more total weight and body fat than those who took a placebo.¹ Since 7-Keto® DHEA does not convert to estrogen or testosterone in the body, it can be used by those with hormone-sensitive cancers such as breast and prostate cancer. This 7-Keto® DHEA supplement contains a potent **antioxidant blend** to protect against free radicals that might be formed in response to increased fat-burning. A bottle containing 60 **100-mg** vegetarian capsules of **7-Keto® DHEA**, along with a special antioxidant blend, retails for \$40; if a member orders four bottles, the price is reduced to only **\$27 per bottle**. Contains rice.

Reference: 1. *Curr Therap Res.* 2000;61(7):435-42.



DHEA Complete (25 mg DHEA+100 mg 7-Keto® DHEA), 60 vegetarian Capsules, Item #01250

To obtain optimal potencies of both forms of DHEA, the **DHEA Complete** formula provides **25 mg of DHEA, 100 mg of 7-Keto® DHEA**, and a potent **antioxidant blend** in each capsule. For those seeking to combine the multiple benefits of DHEA and 7-Keto® DHEA, this is the ideal single-formula supplement. A bottle containing 60 vegetarian capsules of **DHEA Complete** retails for \$48; if a member orders four bottles, the price is reduced to only **\$32.40 per bottle**. Contains rice.



DHEA 100-mg, 60 Capsules, Item #00883

Some people produce so little DHEA that they need to take high doses. These 100-mg capsules provide high-potency DHEA at a very low cost. A bottle containing 60 **100-mg** capsules of **DHEA** retails for \$22.50; if a member orders four bottles, the price is reduced to just **\$14.25 per bottle**. Contains rice.

Natural Ways to
Thwart a
Stealth Killer



BY KIRK STOKEL

The lifetime risk of developing **high blood pressure** is **greater than 90%** in adults 55 years and older.¹ You may be one of them. Experts estimate that this silent killer accounts for **40.5 million** doctor visits each year.¹

Sadly, those visits often come too late.

Poorly controlled blood pressure slowly damages kidneys and the vasculature, often culminating in heart attack, stroke, or kidney failure.^{2,3}

Tens of thousands of deaths attributable to hypertension occur each year,¹ yet most could have been prevented had corrective action been taken earlier in life. Published studies show that aging individuals who achieve a mere **5-point decrease** in diastolic blood pressure can reduce their risk for lethal hypertension-related conditions by as much as **16%**.⁴

In this article, you will learn of a discovery by a team of Cambridge researchers showing how to better manage hypertension using low-cost and readily available nutrient compounds. > >

A Fascinating Discovery

A recent study by researchers at the Cambridge Institute for Medical Research reveals the dangerous relationship between oxidative stress and angiotensin, a hormone that boosts blood pressure often to dangerous levels. Aiwu Zhou and colleagues decided to focus on angiotensin's parent molecule, angiotensinogen.⁵ Using ultra-high resolution X-ray crystallography, Zhou's team examined the underlying mechanisms driving high blood pressure.

When oxidative stress is present, the angiotensinogen molecule shifts its shape and floods the system with angiotensin!⁵ This led to the discovery of an "oxidative switch" that impacts blood pressure status in the body. What Zhou's team has done is to identify an entirely new mechanism between oxidative stress and hypertension.

But nutritional scientists have long known that antioxidants confer some protection against hypertension. So Zhou's work is fueling renewed interest in nutrients that fight oxidation and tip the balance away from angiotensin release. Recent discoveries show that a small handful of antioxidant compounds can inhibit the angiotensin-converting enzyme (ACE) itself, contributing to their antihypertensive effects. Let's examine some of nature's own antihypertensive interventions and how they can work to keep you healthy.

Whey Protein

Whey proteins derived from milk are antioxidants that may contribute to their antihypertensive properties.⁶⁻⁸ They also contribute to blood vessel relaxation and reduced "stiffness."⁹ Professor Zhou's discovery that antioxidant status directly affects angiotensin availability further explains how whey proteins may fight elevated blood pressure.⁵ Human studies of whey-rich or whey-enriched milk products demonstrate convincing reductions in blood pressure compared with placebo- or casein-supplemented patients.⁹⁻¹¹

In recent years, scientists have found that whey proteins exert substantial direct angiotensin-converting enzyme (ACE)-inhibiting effects.¹²⁻¹⁴ In the human stomach and intestine, whey proteins break down into very specific short amino acid chains (peptides) that makes them efficient ACE-inhibitors.¹⁵⁻¹⁹ Laboratory studies consistently show that blood pressure is



Whey proteins derived from milk are antioxidants that may contribute to their antihypertensive properties.

reduced in hypertensive animals given whey protein derivatives.^{20,21} That effect is attributed at least in part to ACE inhibition.²¹ The ACE-inhibitory effect is substantially less powerful than those of prescription drugs, but some people encounter side effects with those drugs.^{4,20} Whey protein derivatives, by contrast, can be used for long periods of time without significant problems.⁹ Recent work suggests that these active milk components also inhibit the release of other vessel-constricting molecules such as endothelin-1, offering a second pathway for blood pressure control.²²

Together, all of these findings suggest that whey proteins can reduce the risk of hypertension-related disease.^{4,23} Let's now look at other natural antihypertensive nutrients that can work together with whey to promote your cardiovascular health.

Grape Seed Extract and Resveratrol

Grapes contain many biologically active compounds, most notably multitargeted polyphenols such as resveratrol and proanthocyanidins, which are associated with improvements in cardiovascular risk factors.²⁴

Extracts of grape seed are rich in beneficial compounds. Their constituents include antioxidants that

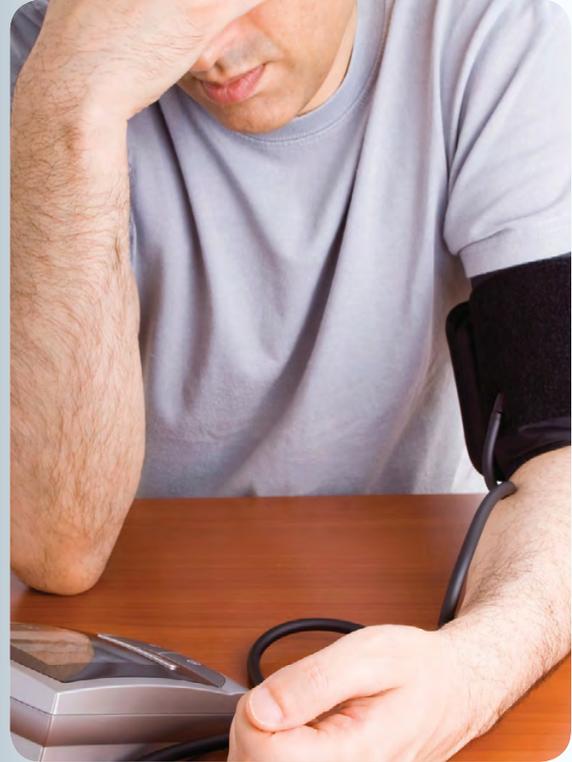
reduce markers of oxidative stress, such as oxidized low-density lipoprotein (LDL), that are associated with atherosclerosis.²⁵ Those antioxidant effects can directly prevent or treat elevations in blood pressure in laboratory animals.²⁶

Grape seed extracts operate at multiple additional targets to achieve their beneficial effects on blood pressure. They fight advanced glycation end product (AGE) formation,²⁷ an early step in producing inflammation associated with cardiovascular disease and cancer.²⁸ This means that grape seed extracts hold promise not only in preventing hypertension, but also in fighting some of its deleterious effects, such as kidney damage.²⁹

The effects of grape seed extract may also protect the heart. In an experimental model of heart attack, cardiac tissue from animals that had received grape seed extract was better able to recover from lack of blood flow (ischemia), compared with the heart tissue of animals that did not receive grape seed extract.³⁰

Grape seed polyphenols can also reduce salt sensitive-hypertension in an animal model, which may further help push blood pressure into the normal range.³¹ Finally, grape seed extracts have been shown to induce cognitive improvements in impaired hypertensive rats.³²

All of these mechanisms contribute to improved blood pressure control and result in the clinically relevant drops seen in blood pressure in human studies.³³ Recent discoveries about resveratrol, a main component of the extracts, shed additional light on their mechanism and their potential.



What You Need to Know

Hypertension

- High blood pressure threatens millions of Americans each year, despite medications and recommendations about diet and exercise.
- Antioxidants have long been known to provide protection against hypertension by a variety of mechanisms.
- In late 2010, landmark research revealed that oxidative stress directly increases production of the potent blood pressure-increasing hormone angiotensin. This discovery lends new urgency to the quest for therapies that can restore normal antioxidant function.
- Nutrients such as whey protein and peptides, grape seed extract, and pomegranate extracts all have superior antihypertensive effects in human and animal studies.
- All three nutrients restore antioxidant function, and each also fights angiotensin's deadly effects both by reducing its production and by blocking its deleterious impact on vulnerable tissues.

Oxidant Stress, Hypertension, and Angiotensin

Over the past decade, scientists have come to recognize the extreme importance of oxidative stress in the causation of hypertension.⁶¹ In animal studies, oxidative stress increases blood pressure; if that stress is corrected, blood pressure normalizes.⁶² The root cause is an imbalance between production and elimination of reactive oxygen species (ROS), which triggers damage to the tissues most directly involved in maintenance of blood pressure.⁶³⁻⁶⁵

The kidney and the blood vessels are two primary target tissues of ROS damage.⁶⁴ Both are intimately involved in regulation of blood flow and pressure, and are themselves rich sources of ROS, which makes them especially vulnerable.⁶⁴ ROS damage reduces blood vessels' ability to relax in the face of increased flow, which raises blood pressure.^{61,65} ROS also trigger inflammatory responses within and around vessels that threaten flow and elevate pressure.^{65,66} And ROS change the signaling characteristics of the vital endothelial cells that both line blood vessels and relay information about pressure to other structures in the vessel.⁶⁵ Finally, ROS in the brain disrupt central nervous system signaling, further elevating blood pressure.⁶⁷

It is in the kidney that the worst mischief is done. The kidney is the primary blood pressure control organ, largely through a molecular signaling network called the renin-angiotensin system.

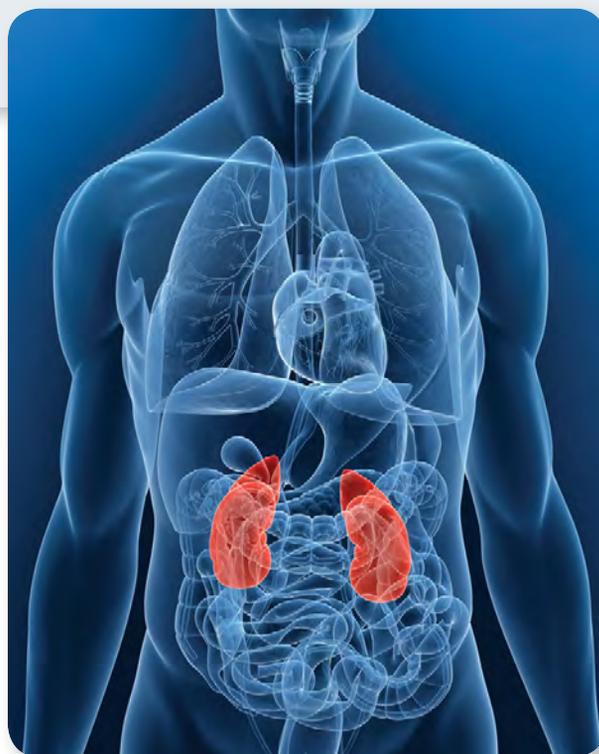
When the kidney perceives a drop in blood flow, it secretes an enzyme called renin. Renin in turn acts on a molecule called angiotensinogen, which is produced throughout the body.⁶⁸ Renin snips off a small portion of the angiotensinogen molecule, producing a short amino acid chain called angiotensin I.⁵ Another enzyme, angiotensin-converting enzyme (ACE), then makes one final snip to produce the active peptide hormone angiotensin II.^{5,68} Angiotensin II is a powerful constrictor of blood vessels, producing an immediate rise in blood pressure upon its release.⁶⁸

About 30 years ago researchers developed a powerful category of drugs known as ACE-inhibitors. These drugs prevent that final step in which angiotensin I is converted to active angiotensin II.⁵ Used correctly they can help to lower blood pressure, although they also carry substantial risk of side effects.⁴

But most ACE-inhibitors work at only one molecular target, leaving them ineffective against the onslaught of oxidative stress, which is a powerful stimulant of angiotensin production. And, in a vicious cycle, increased amounts of active angiotensin further promote production of ROS.⁶⁵ That has left hypertension researchers avidly seeking an alternative means of reducing the oxidative stress-induced effects of angiotensin on blood vessels.

Resveratrol is one of the more fascinating biologically active molecules known to science. It has a plethora of beneficial effects, acting at several key metabolic switches to promote longevity and fight chronic disease. A powerful antioxidant in its own right, resveratrol also enhances activity of the SIRT-1 regulatory complex, which is associated with prolonged life span in a host of experimental models.³⁴⁻³⁶ Resveratrol also inhibits signaling molecules expressed by blood vessel cells that are implicated in hypertension.³⁷ The polyphenol improves the way vascular endothelial lining cells react and respond to factors that control blood pressure.³⁴

Preliminary research suggests that resveratrol may have ACE-inhibitory capabilities, adding to its potential for maintaining healthy blood pressure.³⁸ Additionally, resveratrol may suppress some of the adverse effects of angiotensin II, such as vascular smooth muscle cell overgrowth (hypertrophy).³⁹⁻⁴³



In an animal model, resveratrol has also been found to help prevent cardiac hypertrophy induced by high blood pressure.^{44,45} Chronic cardiac hypertrophy can lead to cardiac dysfunction and heart failure.⁴⁶ Angiotensin's effects have been implicated in that process, and resveratrol can block those effects by its action on multiple pathways.^{45,47,48}

In animal studies, resveratrol reduces pulmonary hypertension, the elevated pressure in arteries of the lungs that dramatically impairs quality of life in people with chronic heart disease.⁴⁹

Pomegranate

The pomegranate has demonstrated benefits for cardiovascular health and blood pressure control.⁵⁰ Pomegranate juice and extracts are rich in some of nature's most powerful polyphenols.⁵¹ Those molecules contribute to a reduction in cellular oxidative stress and help restore natural antioxidants to effective values. As we've seen, ameliorating oxidative stress in cells, particularly those of the vascular system, shows promise as an effective means of combating hypertension, because it limits production of angiotensin.⁵

Like whey proteins and grape seed extracts, however, pomegranate extracts also directly inhibit activity of the angiotensin-converting enzyme (ACE), helping to lower blood pressure.⁵² And like resveratrol, pomegranate extracts are effective at blocking some of the downstream damage induced by angiotensin in tissues vulnerable to hypertensive changes.⁵³

In still a third line of defense, pomegranate supplements can increase levels of the antioxidant protective complexes called paraoxonases (PON).⁵⁴ PONs are major components of high-density lipoprotein (HDL) and are widely recognized as providing much of the benefit we see from HDL.^{54,55}

A fourth avenue of benefit from pomegranate extracts is their effect on vessel wall function. Oxidative damage leaves vessels vulnerable to damage at points where blood pressure is markedly increased by so-called shear stress. Pomegranate juice mitigates that damage by improving activity of endothelial *nitric oxide synthase* (eNOS), thus making more vessel-dilating **nitric oxide** available.⁵⁶

The clinical benefits of pomegranate consumption on cardiovascular disease and blood pressure are undeniable. A landmark 2004 study from Israel



demonstrated that pomegranate juice consumption for 3 years reduced carotid artery wall thickness in patients with narrowing of those arteries.⁵⁷ The carotids are the major blood supplier to the brain, and thickening of those walls is a precursor to devastating strokes. That thickening is itself a direct result of chronic exposure to elevated blood pressure as well as abnormal lipid profiles. The patients in the Israeli study experienced an average of 12% reduction in systolic blood pressure by the end of the first year.

Subsequent human studies have demonstrated improvements in blood flow to the heart and the brain in patients with cardiovascular disease, following pomegranate supplementation.^{58,59} And flow-mediated dilation, a measure of vessels' ability to respond to pressure changes, is improved after consumption of pomegranate juice.⁶⁰

Summary

Blood pressure elevations continue to threaten our longevity and our quality of life. We've known for years that people with a high intake of antioxidants tend to have lower blood pressures and to suffer less from cardiovascular disease in general. It's only in the past decade, however, that we have begun to understand the biochemical underpinnings of that

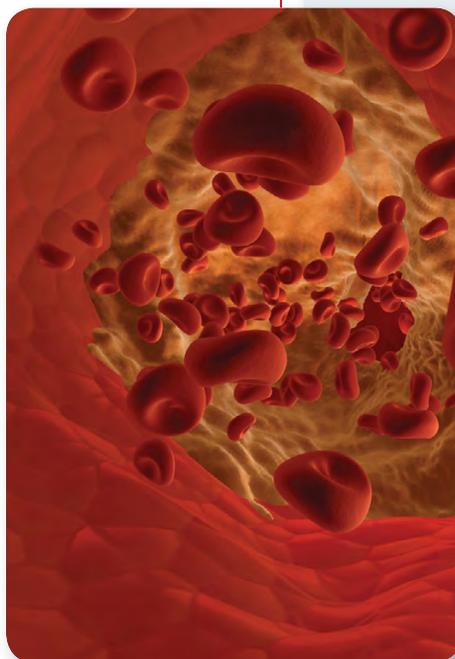
cardioprotective effect. We now understand that oxidative stress induces inflammation in blood vessels that impairs their ability to safely regulate blood pressure.

Only in late 2010 did we learn that a state of high oxidative stress causes the blood pressure-boosting hormone angiotensin to become more readily available in the body. That discovery has set off a storm of interest in researchers aiming to control blood pressure by modifying oxidative stress in the body. Fortunately, solid scientific evidence abounds for the protective effects of three nutrients. Whey protein, grape seed extracts, and pomegranate extracts all work by restoring healthy antioxidant levels. We've learned that they each also prevent both activation of angiotensin and its destructive effects by a series of related but complementary mechanisms. Using all three together simply makes sense as a way to optimize your cardiovascular health. ●

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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Do What It Takes to Maintain Optimal Blood Pressure 24-Hours a Day

Life Extension has long advocated that *optimal blood pressure* readings over a 24-hour period should be at or below **115/75 mmHg** for most people.

When blood pressure is chronically above this level, or when upward spikes in blood pressure occur during certain periods of the day, risk of vascular disease and kidney injury increases.

As humans age, blood pressure tends to rise above optimal ranges, often necessitating a multimodal approach.

Having one's blood pressure periodically monitored in a doctor's office can fail to detect periods of the day when blood pressure may be sharply increased, such as when the effects of a blood pressure drug wear off. The best defense is a home blood pressure monitoring device that is sold over-the-counter in pharmacies or can be ordered directly from Life Extension.

Some people require blood pressure lowering **drugs** to achieve optimal control. A generic drug called **losartan** is often prescribed at a starting dose of **50 mg** once a day. This drug does not always provide 24-hour blood pressure control, sometimes necessitating twice-a-day dosage (up to 50 mg two times a day).

A more expensive drug called **Benicar®** consistently shows better 24-hour blood pressure control, and is usually prescribed at a starting dose of **20 mg** once a day.

An advantage to using **nutrients** that help support healthy blood pressure levels is that the dose of prescription drugs may be reduced. Nutrients and lifestyle changes (reduced calorie/sodium intake and increased physical activity) can also reduce the dosage or need for prescriptive anti-hypertensive drugs.

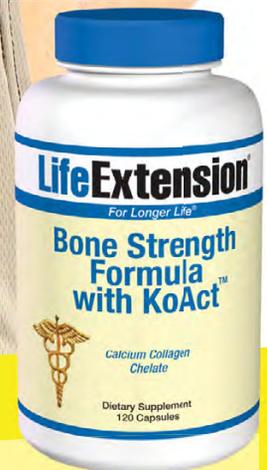
Whatever intervention you select, the ultimate objective is not to exceed a blood pressure level of 115/75 at rest throughout the day. With a home blood pressure monitoring device, you can check your blood pressure at intervals throughout the day to ensure that whatever program you select is achieving **optimal results**.



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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, the price is reduced to \$28.50 per bottle.

Contains corn.

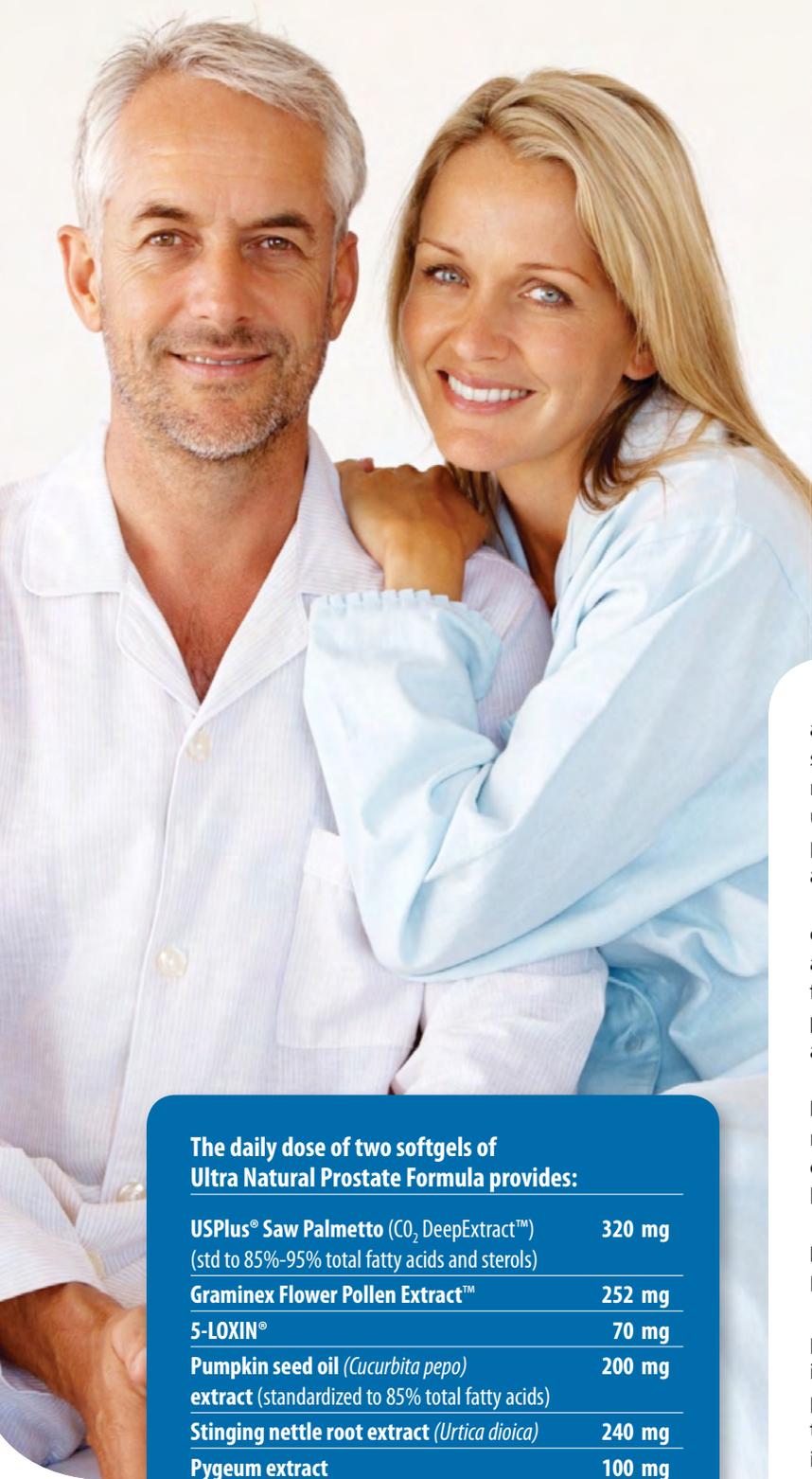
To order Bone Strength Formula with KoAct™, call 1-800-544-4440 or visit www.LifeExtension.com

Four capsules of Bone Strength Formula with KoAct™ provide:

Collagen (from 3,000 mg KoAct™ Calcium Collagen Chelate)	2,700 mg
Calcium (from 3,000 mg KoAct™ Calcium Collagen Chelate and calcium fructoborate)	300 mg
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 healthcare 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® and OsteoBoron® are registered trademarks of VDF FutureCeuticals, Inc., U.S. Patent #5,962,049.



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, the price is reduced to **\$26.25** per bottle. If a member buys 12 bottles, the price is reduced to **\$24** per bottle.

Contains soybeans.



Item #01495

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

USPlus® Saw Palmetto (CO ₂ DeepExtract™) (std to 85%-95% total fatty acids and sterols)	320 mg
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% free 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.

Take Control of Your Blood Pressure!

Natural BP Management

Tens of millions of Americans are in critical need of proper **blood pressure management** and don't even know it. The shocking truth is that the majority of people treated for blood pressure-related issues still have **inadequately controlled blood pressure!**

Fortunately, groundbreaking nutritional research has identified natural agents that help maintain normal blood pressure. Combining these nutrients with lifestyle modifications and regular self-monitoring provides a powerful strategy for supporting blood pressure levels already within normal range.*

Natural BP Management is the first broad-spectrum nutritional supplement to combine potent, standardized concentrations of these novel nutritional agents in one convenient, easy-to-use formula:

- **CVH15™** derived from the milk protein whey naturally inhibits the *angiotensin converting enzyme*.* Since this enzyme can act to increase activity of the dangerous blood vessel *constrictor* angiotensin, CVH15™'s inhibiting effect on this enzyme can help to maintain healthy blood flow and support already normal blood pressure.*
- **Grape seed extract** naturally increases blood vessel dilation, thereby promoting already normal blood flow and blood pressure. Available for the first time is a patented **grape seed extract** that contains a novel ratio of uniquely structured polyphenols.*
- **Pomegranate extract** is an abundant source of highly concentrated compounds called *punicalagins* that function as natural antioxidants and also inhibit the angiotensin converting enzyme, thus supporting blood vessel dilation and countering vessel constriction.* This patent-pending extract not only supports already normal blood pressure management, but also may provide added cardiovascular protection by promoting healthy endothelial function and healthy low-density lipoprotein (LDL) oxidation.*

With its unique combination of novel ingredients, **Natural BP Management** represents a true breakthrough in blood pressure management. Two tablets provide:

Two tablets of Natural BP Management provides:

CVH15™ Whey Protein Hydrolysate	1700 mg
MegaNatural®-BP Grape Seed Non-GMO Extract (epicatechin gallate-free standardized grape seed extract)	150 mg
POMELLA® Pomegranate Fruit Extract (standardized natural-spectrum punicalagins)	50 mg

A bottle containing 60 tablets of **Natural BP Management** retails for \$42. If a Life Extension member orders four bottles, the price is reduced to just **\$28.35** per bottle.

CAUTION: If you have hypertension (high blood pressure) and/or are currently taking medication to lower your blood pressure, seek medical advice. Consult with a health care professional prior to taking or using any product that may affect blood pressure. CVH15™ is naturally derived from the milk protein whey; therefore, individuals with dairy allergies should avoid using this product.

DIRECTIONS: Take two (2) tablets in the morning preferably before a meal, or as recommended by a healthcare practitioner. If needed, take two (2) additional tablets in the evening. If used concurrently with anti-hypertensive medication, start with one (1) tablet daily and adjust dosing as needed based on the advice of a healthcare practitioner.



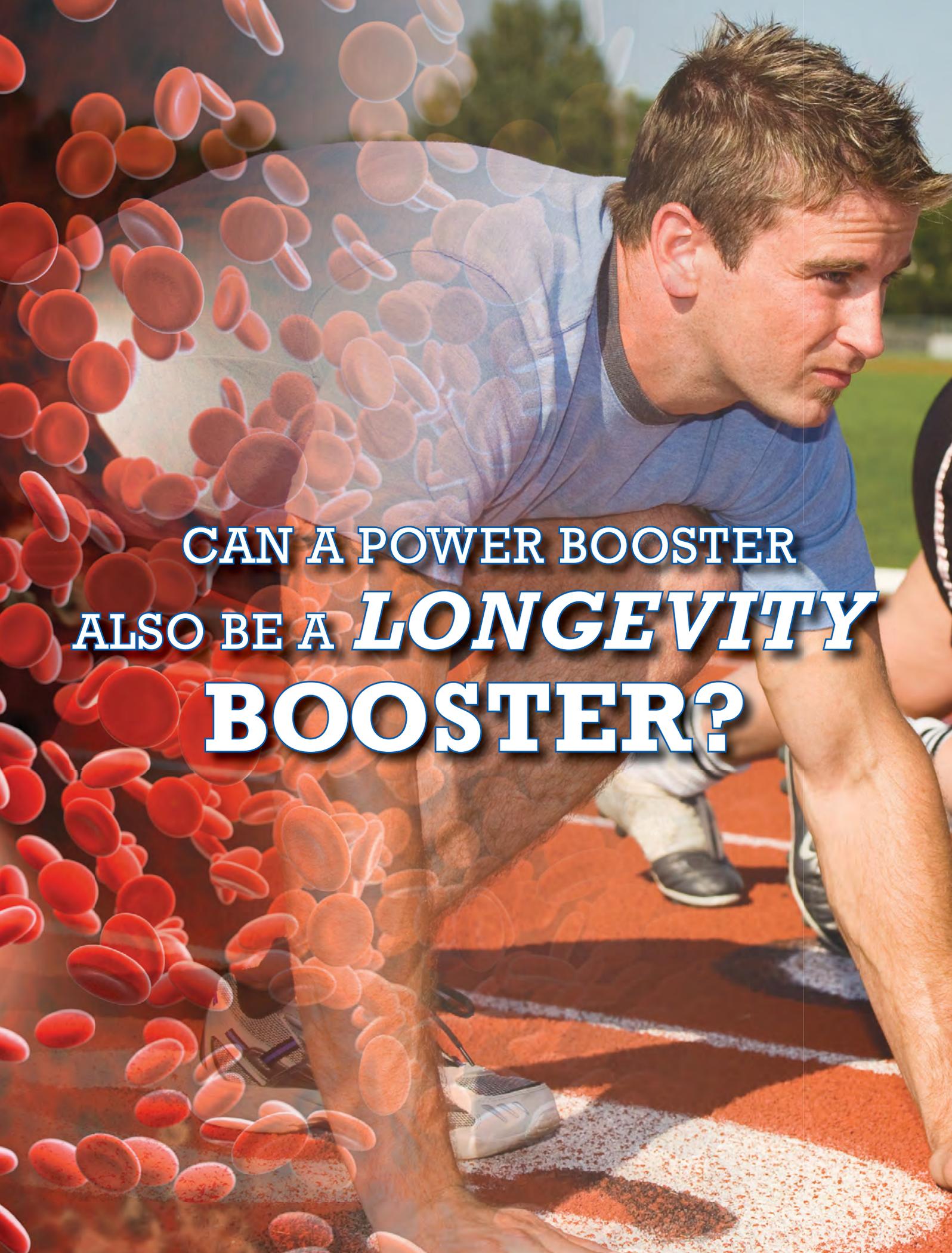
ITEM # 00984

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

Contains milk.

MegaNatural®-BP is a registered trademark of Polyphenolics, a division of Constellation Wines US, Inc., and is produced under US patent 6,544,581, other patents pending. CVH15™ is a trademark of Glanbia Plc. POMELLA® is a registered trademark of Verdure Sciences, Inc.

* 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.



CAN A POWER BOOSTER
ALSO BE A ***LONGEVITY***
BOOSTER?



BY MATILDE PARENTE, MD

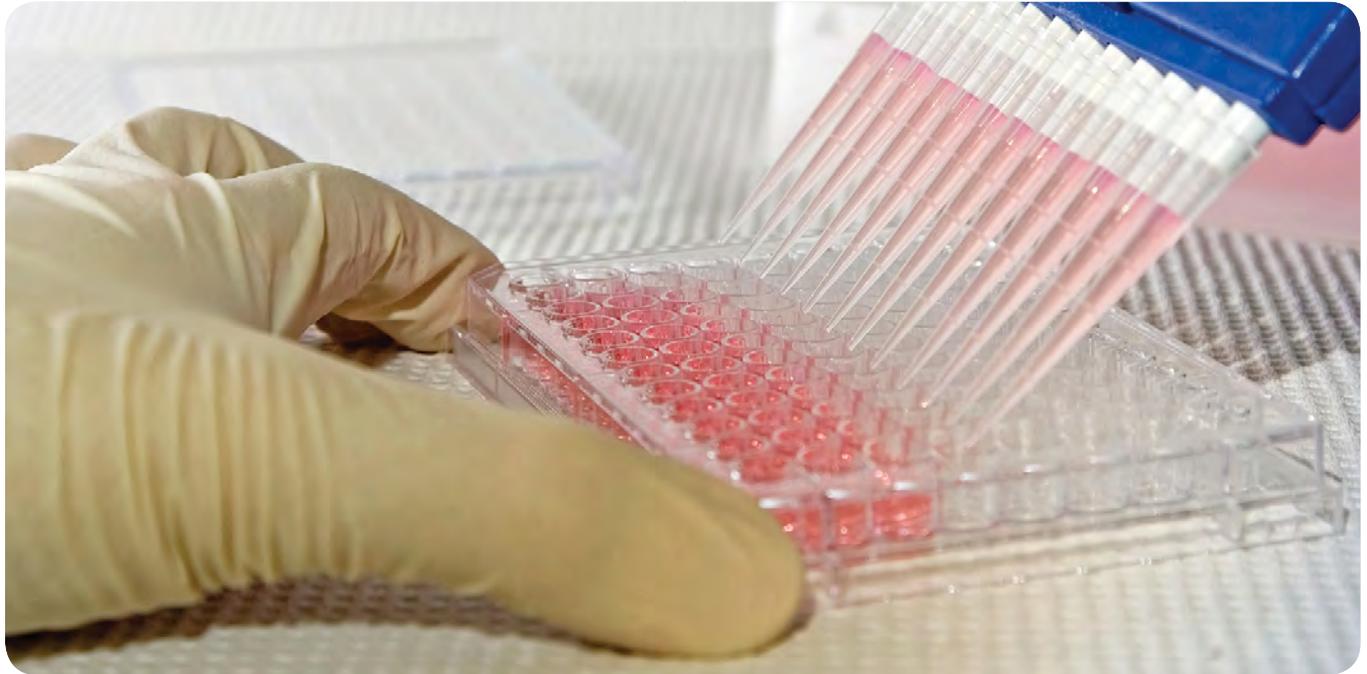
For years, fitness enthusiasts have used **branched chain amino acids** to boost muscle strength and performance.¹⁻³

New research shows why *longevity* enthusiasts may also incorporate them into their nutritional regimen.

A study recently published in the respected clinical journal *Cell Metabolism*⁴ reveals that **branched chain amino acids** (BCAAs) have the power to increase life span in part by inducing **mitochondrial biogenesis**—the spontaneous generation of new mitochondria.

In this article, the results of this study are detailed. BCAAs may *complement* the life span effects of both **pyrroloquinoline quinone (PQQ)** and **resveratrol**.⁵⁻⁷

Specifically, BCAAs may trigger cellular mechanisms that enhance mitochondrial number and function while *also* upregulating expression of the pro-longevity gene that resveratrol targets: **sirtuin-1!**^{1,6,7} > >



The Building Blocks of Life and Longevity

As the foundation of life and the engines that drive cellular metabolism, **amino acids** are the building blocks for all proteins.

The three essential **branched chain amino acids** are **leucine**, **isoleucine**, and **valine**. In concert with other simple amino acids, BCAAs comprise the functional proteins that form the structural basis of human physiology, from skeletal and cardiac musculature to the vast universe of life-sustaining enzymes. In humans, whose total muscle mass accounts for about 40% of body weight, BCAAs make up nearly a fifth of all muscle proteins.¹

In the landmark *Cell Metabolism* study, a team of scientists went beyond BCAAs' metabolic effects to explore their potential to boost life span.⁴ This effort was based on prior studies indicating that the BCAAs leucine, isoleucine, and valine prolonged life in the yeast species *Saccharomyces cerevisiae*.⁸

Lead researcher Giuseppe D'Antona and his team fed male mice a diet that included BCAA-enriched drinking water.⁴ Mice ingesting BCAAs experienced a **12% increase** in median life span from 774 days for untreated controls to 869 days in the treatment group. Because there was no significant difference in food intake, body weight, and body fat content between the treated and untreated animals, the authors concluded that the increased life span

seen in the BCAA-enriched cohort was not a function of decreased body fat but rather the BCAAs themselves.

It was further discovered that mice enjoying increased longevity had high levels of **SIRT1**,⁴ a mammalian form of *sirtuins*, a subset of genes conclusively linked to increased longevity across a range of species.^{6,7,9}

BCAA-treated mice also exhibited upregulation of genetic defense systems that *blunt* the detrimental effects of specific **reactive oxygen species (ROS)**⁴ associated with cellular and somatic (body) aging in many organisms, including mammals.

BCAA-fed groups further experienced a dose-dependent response of new mitochondrial formation⁴ or **mitochondrial biogenesis**, as measured through specific markers of **cellular energetic output** in heart muscle cells.

Exercise was shown to further enhance the mitochondrial function induced by BCAAs.⁴ Trained, BCAA-fed mice exhibited greater amounts of mitochondria in heart and skeletal muscle when those tissues were examined by electron microscopy. The BCAAs treatment groups also showed greater endurance scores on treadmill tests and better performance in tests of

Exercise was shown to further enhance the mitochondrial function induced by BCAAs.

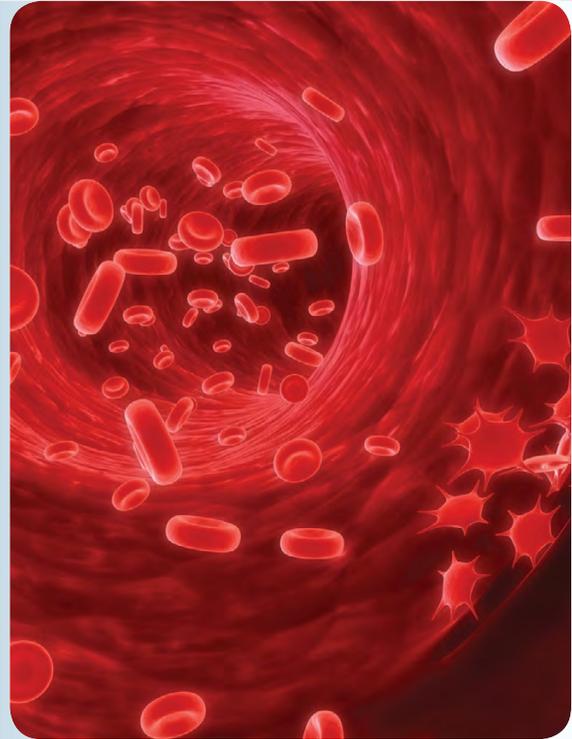
motor coordination, seen to an even greater degree in exercise-trained animals.¹

Dr. D'Antona's study included a second group of mice that carry a specific mutation. These mutant mice lack a key enzyme involved in blood vessel relaxation and regulation called **endothelial nitric oxide synthase** or **eNOS**.⁴ Without eNOS, mice die earlier and develop cardiovascular disease and other age-related pathologies similar to humans suffering from **metabolic syndrome**.¹⁰ Mice lacking the eNOS enzyme did not experience the same benefits of longer life span, improved ability to form new mitochondria, increased expression of SIRT1, or enhanced defense against ROS in response to BCAAs treatment.⁴

This led the researchers to conclude that healthy eNOS activity also plays a key role in BCAAs' pro-longevity action, mitochondrial biogenesis, and reduced oxidative stress.⁴

Unique, Systemic Benefits

Once ingested, dietary BCAAs are transported and metabolized by a group of specific enzymes. What makes BCAAs unique among amino acids is that they are not broken down in the liver. Instead, they enter the bloodstream and are *directly* absorbed into the



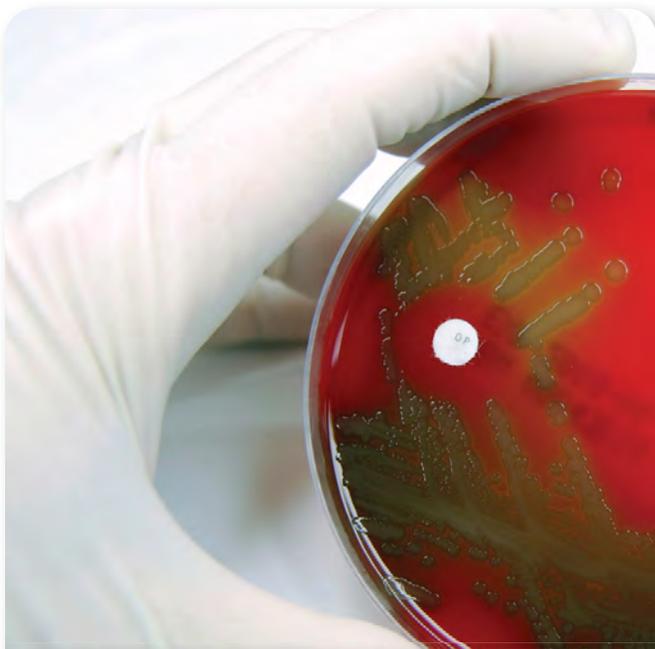
What You Need to Know

Branched Chain Amino Acids and Calorie Restriction

- The three branched chain amino acids leucine, isoleucine, and valine are essential nutrients that cannot be made by the body and must be consumed in the diet.
- BCAAs are not metabolized by the liver, but instead enter the bloodstream, where they are directly taken up by muscle and used for muscle energy, repair, or building.
- Studies in mice and lower life forms show that BCAAs can extend longevity and may share pathways with mTOR. A recent mouse study also showed that BCAAs may provide fuel or signaling ability to enhance the proliferation of new mitochondria, a finding that holds promise for healthier aging.
- Administration of BCAAs also appears to bolster cellular defense mechanisms against harmful oxidizing molecules.
- BCAAs also show promise in supporting insulin sensitivity, maintaining muscle mass with aging, and supporting healthy nervous system function.

skeletal muscle.¹¹ There they enter the cellular powerhouses known as **mitochondria**, the source of over 90% of all energetic output in the human body.¹

BCAAs exert a profound influence over metabolic processes central to protein synthesis. Leucine also appears to play a particularly key role in protein formation and the regulation of protein metabolism.¹² Human studies that have examined these exceptional actions in the bloodstream and skeletal muscle point to a role for BCAAs in muscle recovery from fatigue or intensive physical activity such as strength training.^{1,2} A 2010 review published in the *Journal of the*



International Society of Sports Nutrition cited the power of BCAAs to bolster muscle protein building and delay the onset of fatigue as key benefits for exercising individuals.³ The paper also noted the possible effectiveness of BCAAs as performance enhancers.

In addition to their newly confirmed pro-longevity and mitochondria-generating effects, BCAAs show promise in fighting multiple killer diseases of aging.

Human trials reveal favorable effects of essential amino acid ingestion, including BCAAs, on insulin sensitivity and blood glucose control, as demonstrated in a study of 34 elderly diabetic subjects over a test period of more than a year. A BCAA-rich amino acid mixture improved numerous parameters of blood sugar metabolism, including hemoglobin A1c, in this group of older adults with poorly controlled diabetes.¹³

BCAA-enriched amino acid mixtures have also shown promise for improving the muscle-wasting condition known as sarcopenia in elderly human subjects, who gained muscle mass during treatment.¹⁴ This finding holds important implications for BCAAs' use in other conditions characterized by debilitation and muscle loss.

Since BCAAs are involved in the formation and maintenance of glutamate and the neurotransmitter **gamma-aminobutyric acid (GABA)** in brain tissue, researchers believe they may play a role in supporting healthy nervous system function. Studies in animal models have shown promise that oral BCAA administration can improve the devastating consequences of traumatic brain injury by improving cognitive performance.¹⁵

The Key to Biological Function: mTOR

The regulatory protein **mTOR** influences not only cell growth and protein synthesis but also cell survival. mTOR acts as an energy and nutrient sensor that receives input from the body regarding cellular nutritional status and levels of energy and hormones, including insulin. By sensing energy availability, including caloric intake, mTOR activity helps to govern caloric consumption by inducing the sensations of hunger (satiety) and fullness, in part through mTOR interaction with the hormone **leptin**, which is sometimes called the *anorectic* hormone for its hunger-curbing activity.¹⁶

Studies in rats that were administered the BCAA leucine to their central nervous systems showed increases of mTOR signaling in a region of the brain known as the **hypothalamus**, which was in turn

associated with decreased food intake.^{17,18} The hypothalamus acts to match energy or food intake with energy output, regulates thirst and hunger, and balances vital functions, including body temperature, sleep-wake cycles, and the sensation of fatigue. Disorders of mTOR signaling have been hypothesized as a contributor to overeating syndromes associated with obesity.^{18,19}

The finding that about half of human cancers involve aberrant mTOR signaling has prompted cancer researchers to target this specific pathway in the development of new **cancer treatments**. Interest in this area has led to a second generation of anti-mTOR therapies now under study in over 200 human clinical trials.^{20,21}

Summary

The branched chain amino acids leucine, isoleucine, and valine are essential to human nutrition. While BCAAs have been successfully studied and applied in optimizing muscle development and athletic performance, a new study reveals they can extend life and combat age-promoting cellular injury, perhaps through BCAAs' abilities to foster mitochondrial proliferation. ●

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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Other Benefits of Branched Chain Amino Acids

Branched chain amino acids demonstrate potential benefits for a wide range of applications.

- **Obesity.** Greater dietary intake of BCAAs is associated with a decreased prevalence of being overweight or obese.²² Supplementing with the branched chain amino acid leucine shows potential for preserving lean tissue mass in individuals who are consuming a low-calorie diet in order to lose weight.²³ Scientists believe leucine triggers an after-meal response that protects metabolically active muscle while increasing the loss of body fat.²⁴
- **Metabolic Syndrome.** A diet rich in protein and moderate in carbohydrates is effective in managing metabolic syndrome and type 2 diabetes and in promoting weight loss.²⁵ Leucine may play a key role in the efficacy of a high-protein diet by modulating insulin signaling and glucose use by skeletal muscle.
- **Liver Disease.** BCAAs have been reported to improve event-free survival (free from hepatic failure, rupture of esophageal or gastric varices, development of liver cancer, and death) and quality of life in people with liver cirrhosis.²⁶ Research shows that BCAAs improved the insulin resistance accompanying chronic viral liver disease in a group of male patients.²⁷
- **Cancer Cachexia.** Loss of lean body mass (cachexia) decreases physical performance and quality of life in cancer patients. In an animal model of cancer cachexia, the combination of a high protein diet enriched in leucine plus fish oil reduced tissue loss, improved muscle performance, and normalized daily activity.²⁸ Scientists believe BCAAs may prove helpful in numerous conditions associated with tissue breakdown, including postoperative stress, trauma, and burns.²⁹
- **Muscle Soreness.** Consuming BCAAs before exercise reduced muscle soreness 2 and 3 days after a workout, compared with individuals who did not consume BCAAs.³⁰ BCAAs have also been reported to reduce the feeling of fatigue during an intense workout. Ingesting BCAAs during training reduced the rise in blood markers of muscle damage and inflammation that otherwise occur with strenuous exercise.³¹

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Preserve Youthful

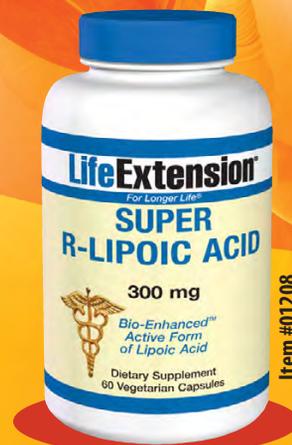
Cellular ENERGY

with Next-Generation
LIPOIC ACID

Published studies have shown the critical importance of **lipoic acid** in supporting healthy mitochondrial function.

Unlike other forms of lipoic acid, **SUPER R-Lipoic Acid** is more bioavailable, stable, and potent, achieving 10-30 times higher peak blood levels than pure R-lipoic acid.¹ This unique **sodium-R-lipoate** can help you reach peak plasma concentrations within just 10-20 minutes² of supplementation.

Super R-Lipoic Acid provides more of the active "R" form of lipoic acid than any other supplement.



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

A bottle of **Super R-Lipoic Acid** containing 60 vegetarian capsules retails for \$49. If a member buys four bottles, the cost is only **\$33.75 per bottle**. Each capsule contains **300 mg** of stabilized, Bio-Enhanced[®] **Super R-lipoic acid** supplying **240 mg** of R-lipoic acid. Suggested dose is one capsule each day.

Contains rice.

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

Vital Greens Plant Foods In a Convenient Powder Blend

We try to eat healthfully, but getting enough **plant foods** each day can be a challenge for many people.

Vital Greens Mix is a blend of **organic** whole plant foods that provide diverse benefits ranging from protecting DNA integrity and maintaining immune function to suppressing vascular risk factors and restoring healthy intestinal flora.

Some of the ingredients in **Vital Greens Mix** superfood include:

- **Chia**, a rich source of protein, fiber, vitamins, minerals, and alpha-linolenic acid (an omega-3 precursor). Recent research at the University of Toronto has shown that regular **chia** intake may help maintain healthy **blood pressure** and **C-reactive protein** levels, both of which are well-known markers of cardiovascular disease.¹
- **Green Grasses and Sprouts** to provide a full array of **chlorophyll-rich**, nutrient-dense natural “green” foods that help **detoxify** and maintain **youthful DNA integrity**. In addition, clinical trials with *chlorella* supplements demonstrate that daily use of this green food may **support healthy immunity** and **wound healing**.^{2,3}
- **Probiotics** to sustain **healthy bacterial balance** in the gut, which may support overall **immune** and **digestive health**.
- A **mushroom blend** combining *maitake*, *shiitake* and *cordyceps* extracts to support **immune health** and provide adaptogenic benefits for balance and resistance.

Item #01098



Each serving provides:

Chia Seed (organic)	3000 mg
Chlorella (organic)	1000 mg
Spirulina (organic)	1000 mg
Acerola (organic)	750 mg
Wheat Grass (organic)	430 mg
Maitake Mushroom Extract (organic)	400 mg
Wheat Sprout (organic)	300 mg
Barley Malt extract (organic)	300 mg
Probiotic Blend (<i>Lactobacillus acidophilus</i> , <i>Lactobacillus casei</i> , <i>Lactobacillus plantarum</i> , <i>Lactobacillus rhamnosus</i> , <i>Bifidobacterium breve</i> , <i>Bifidobacterium longum</i>)	300 mg
Shiitake Mushroom (organic)	300 mg
Cordyceps Mushroom Extract (organic)	300 mg
Dulse (organic)	250 mg
Beet Juice (organic)	250 mg
Barley Grass (organic)	200 mg
Brown Rice Bran (organic)	200 mg
Cilantro (organic)	200 mg
Suma (organic)	150 mg
Flower Pollen Extract	120 mg

Life Extension®'s Vital Greens Mix is a great way to start off a meal. It induces some immediate satiety while providing beneficial plant foods that help neutralize mutagenic components of modern diets.

Each scoop of **Life Extension's Vital Greens Mix** provides a daily dose of nutrient-dense foods and herbal extracts. The retail price of a 30-serving jar of this organic superfood is \$48. When a member buys four jars, the price is reduced to only **\$33 per jar**.

To order **Vital Greens Mix**, call **1-800-544-4440** or visit **www.LifeExtension.com**

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Contains milk, wheat, gluten, rice, corn, and barley.

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.

The ABCs of BCAAs

Muscle Maintenance.

Muscle Growth.

Muscle Recovery.

It's just that simple.

One of the strongest names in the supplement industry proudly introduces a product designed to keep you strong:

Life Extension's Branched Chain Amino Acids

After age 50, it's estimated that you'll begin losing about 1% of strength per year due to muscle deterioration. Without proper exercise and supplements, that rate may increase exponentially, causing a *rapid decrease in quality of life*.

Life Extension's Branched Chain Amino Acids provides all three BCAAs to support healthy muscle maintenance:

1,200 mg of L-Leucine
600 mg of L-Isoleucine
600 mg of L-Valine



Item #01253

Muscles Matter. Protect yours with Branched Chain Amino Acids.

A bottle containing 90 vegetarian capsules of **Branched Chain Amino Acids** retails for \$19.50. If a member buys four bottles, the price is reduced to **\$12.75** per bottle.

To order **Branched Chain Amino Acids**, call 1-800-544-4440 or visit www.LifeExtension.com

Contains rice.

Caution: Individuals with ALS or disorders impairing the metabolism of branched chain amino acids should not use this product.

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.

I N T R O D U C I N G

Mitochondrial Basics

with BioPQQ™

Energy to burn. It's more than just a phrase. It's the key to a healthy life span.

Behind every process your body needs to survive and thrive are the cellular energy generators known as **mitochondria**. Their function is so crucial that a growing number of scientists now believe mitochondrial longevity may determine overall longevity in aging humans.¹⁻⁵ That's why **Life Extension®** has remained at the forefront in identifying innovative compounds that specifically support mitochondrial health.

In addition to the more comprehensive **Mitochondrial Energy Optimizer with BioPQQ™** and standalone **PQQ** products, we now offer a one capsule per day formula for individuals seeking a simplified, low-cost option called **Mitochondrial Basics with BioPQQ™**.

The reason? We want all members to have access to targeted nutrients required to support mitochondrial function and the generation of healthy new mitochondria.

Three Premium Compounds in One Low-Cost Formula

The new **Mitochondrial Basics** brings together cutting-edge mitochondrial energizers, including the most exciting nutrient to emerge in recent years called *pyrroloquinoline quinone* or **PQQ**. The three ingredients in value-priced **Mitochondrial Basics** are:

1. PQQ. This breakthrough micronutrient has recently been shown to trigger **mitochondrial biogenesis**—the growth of new mitochondria in aging cells!⁶ PQQ also activates *genes* involved in protecting the delicate structures within the mitochondria.⁷⁻¹⁰

2. R-lipoic acid. The detrimental effects of free radicals comprise one of the chief obstacles to optimal mitochondrial energy production. Published studies confirm R-lipoic acid's power to promote mitochondrial bioenergetics while simultaneously *blunting* free radical activity.¹¹⁻¹⁶ **Mitochondrial Basics** contains the superior **Bio-Enhanced® R-lipoic acid** and is in a proprietary *microencapsulated* form for better absorption.

3. Acetyl-L-carnitine arginate. Fats are shuttled into the mitochondria for metabolic combustion by the amino acid **carnitine**. The *acetylated* form of carnitine helps to facilitate more efficient utilization of fats than carnitine alone.

Life Extension® members continue to enjoy access to a full range of targeted supplements clinically shown to optimize energy production in the mitochondria. Just one capsule a day of **Mitochondrial Basics** supplies:

BioPQQ™ 10 mg
R-lipoic acid 100 mg
Acetyl-L-carnitine 250 mg
arginate dihydrochloride



Item # 01569

A bottle containing 30 capsules of **Mitochondrial Basics with BioPQQ™** retails for \$52. If a member buys four bottles, the price is reduced to just **\$34.50** per bottle.

PQQ can also be obtained as a low-cost standalone or in the **Mitochondrial Energy Optimizer** formula.

To order new Mitochondrial Basics with BioPQQ™ call 1-800-544-4440 or visit www.LifeExtension.com

BioPQQ™ is a trademark of MGC (Japan). Bio-Enhanced® is a registered trademark of Geronova Research, Inc. ArginoCarn® is a registered trademark of Sigma-tau Health Sciences, Inc. and is protected by US patents 6,365,622, US 6,703,042, and EP 1202956.

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Contains soybeans.

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ASK THE DOCTOR

BY MICHAEL AZIZ, MD

Boosting Testosterone Naturally

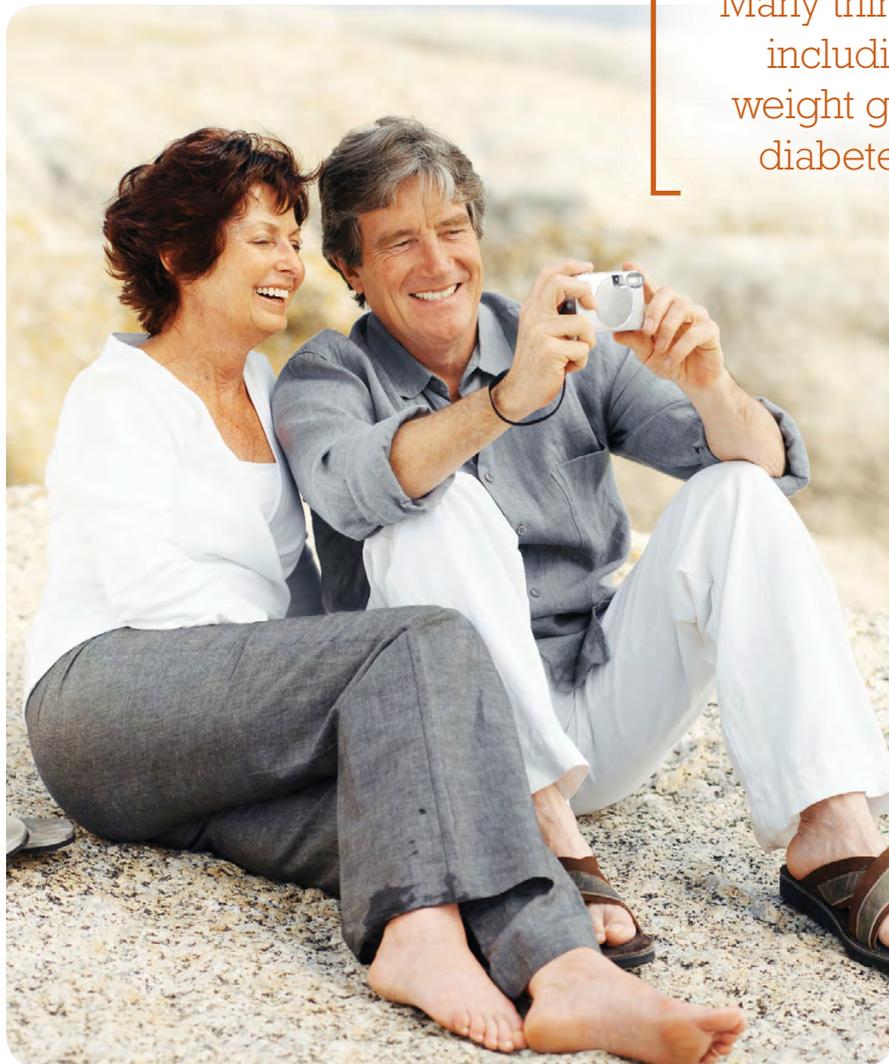


Michael Aziz, MD

Q I'm a 55-year-old male whose testosterone is in the low range. My doctor does not want to prescribe me testosterone replacement therapy. What can I do to help boost my testosterone levels?

A It is unfortunate that many doctors are either reluctant to replace testosterone in men, or are totally inexperienced in this area. Aging men need our hormones, just like women do. We may not get the hot flashes that women do, but we can experience low self-esteem, depression, erection problems, weight gain, etc. Many of these symptoms are frequently dismissed by doctors as part of getting older or misdiagnosed as depression, when, in fact, our testosterone is declining. Replacing testosterone to youthful levels has many benefits and can even help prevent heart disease.

ASK THE DOCTOR



Many things lower testosterone, including: smoking, drugs, weight gain, and illnesses like diabetes and hypertension.

Many things lower testosterone, including: smoking, certain drugs, weight gain, and illnesses like diabetes and hypertension. Living a healthy lifestyle and following the right diet can boost your levels. If you are doing everything correctly and still not getting great results, I suggest checking 25-hydroxyvitamin D levels. Levels should be around 55 ng/mL. Most of us are deficient, especially if we live in a cold climate with little to no sun exposure. Correcting vitamin D by taking vitamin D3 at a dose of 4,000 to 5,000 IU a day can

naturally boost your testosterone levels because D3 plays a part in its production. You can also take zinc at a dose of 80 mg a day, as well as a formula from **Life Extension**[®] that I personally take, called **Super MiraForte**. You should see improvement. However, if levels are still low, you may need to find the right doctor to prescribe testosterone cream or injections. ●

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

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 he is also a fellow of The Royal Society of Medicine in the United Kingdom. He is a national and an international speaker for many distinguished organizations, including the American Academy of Anti-Aging Medicine. Dr. Aziz has been featured on several national TV and radio shows, including *The View*, *The Doctors*, *700 Club*, and *Good Morning America Health*.

He is a regular contributor to *MelRobbins*, a nationally syndicated radio show. 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.

If you suspect that you have low testosterone, it is important that you be tested.

To obtain a comprehensive assessment, you should test for free and total testosterone as well as estradiol.

Dolphin Swim Package

Book a stay of 4 nights or more at The Royal Cancun and receive two free passes to swim with dolphins!

\$135 per night

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Low Testosterone Levels May Lead to:
Reduced Sex Drive • Depression
Less Energy • Cloudy Thinking
Weight Gain • Cardiovascular Issues

Maintaining healthy testosterone levels is one of the most important steps you can take to regain your health and improve your performance. 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

The retail price for a bottle of 120 capsules of **Super MiraForte with Standardized Lignans** is **\$62**. If a member buys four bottles, the price is reduced to **\$42** per bottle.

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Super MiraForte.

To order **Super MiraForte** call **1-800-544-4440** or visit **www.LifeExtension.com**

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WELLNESS PROFILE

BY ROBIN GETTLEMAN



© PHOTO BY GUIDO APICELLA

Harlan Bieleley, MD From Doctor to Patient and Back

If it helps for a doctor to have walked in his patients' shoes, then Harlan Bieleley, MD, has both the resume and the diplomas to make a well-rounded physician. That's because Bieleley was derailed by illness while he was on his way to becoming a dermatologist.

"I got sick during my dermatology residency," Bieleley says. "And the strategy that got me better is why I wanted to open an anti-aging and functional medicine practice."

Bieleley explains that he knew he needed help because he couldn't focus, didn't have any energy, and just plain didn't feel good. He went to several doctors who told him that he needed to balance his hormones and get rid of the toxins that were slowing his body down.

After modifying his lifestyle and choosing the right nutrients and supplements to include in his diet, he soon regained his mental acuity and former robust health.

After modifying his lifestyle and choosing the right nutrients and supplements to include in his diet, he soon regained his mental acuity and former robust health.

WELLNESS PROFILE

“The success I had personally led me to go back to school to study this amazing field of regenerative medicine even further,” Bieley says. “I had an interest in it when it first came out, but the more I dove into it, the more fascinated I became. I was soon studying anti-aging and functional medicine as well.”

This fascination eventually led Bieley to become Board Certified and an Advanced Fellow in Anti-Aging and Regenerative Medicine through the American Academy of Anti-Aging Medicine.

“The fact is that for some diseases like diabetes, for every class of medicine out there, we have a nutritional supplement with less side effects and less costs,” he says. “People can take medication all day, but if they’re going to have lasting improvement in their health, they need to alter their lifestyle and diet accordingly.”

This triple philosophy of combining nutrigenomics, diet, and supplements into one powerful weapon against disease and poor health is at the heart of what Dr. Bieley preaches at his Healthy Living and Longevity Medical Center.

OPENING A PRACTICE, OPENING PATIENTS’ EYES

Dr. Bieley’s office, which has been open for four years, is nestled just off of Federal Highway in North Palm Beach, Florida. The office has an inviting waiting area, replete with copies of the most cutting edge anti-aging reading materials available for patients to peruse. Of course, the current copy of *Life Extension Magazine*® is prominently displayed.

“The writing in *Life Extension*® is really informative and is on the cusp of the latest medical findings

and technology. I always leave issues around for patients to look at,” Bieley says. “Plus, the features in *Life Extension* delve into many of the issues I see my patients battle every day.”

The conditions facing these patients vary by age and sex, but Bieley says that for men, low levels of energy, reduced sexual desire and/or function, and lack of mental focus are some of the most common complaints his patients have when they first step into his office. For women, he says that the most common issues often dealt with are sleeplessness, depression, chronic stress, and menopause anxiety.

“Quite often, my patients come in with a symptom that will really be the result of a cascade of symptoms,” Bieley says. “A man will come in and say that he’s feeling depressed, but when I ask why he’s depressed, he’ll explain that he’s not performing sexually or he has no sexual desire. When we delve

further into why this is the case, he’ll say that he just doesn’t have the energy. So here we are with a man suffering from a whole slew of problems, but they all come back to a general lack of energy, which may lead to the simple problem of low testosterone levels. This is a very fixable problem, but many patients have no idea that having low testosterone is even something that can happen.”

Dr. Harlan Bieley’s Supplement Regimen

- Super MiraForte
- Alpha Lipoic Acid
- Biotin
- Endothelial Defense
- Vitamin D
- Omega-3 Fish Oil



A COMPREHENSIVE INTRODUCTION

One of the first orders of business upon entering Bieley's office as a patient is to give him as much information as you can about the problem. He says the more he knows about a patient's symptoms, the better chance he has of making them better. This is why he hands each patient a comprehensive survey that allows them to rank all of the symptoms that they may be experiencing. Men and women each have different surveys, and they serve the dual purpose of providing Dr. Bieley with an accurate picture of the problem his patient faces, as well as giving him a baseline for how the patient is feeling prior to treatment.

Each survey is over 15 pages and includes standard medical history, along with questions designed to either rule out certain complications or point toward them. In order, the survey runs through the gamut of potential problems, beginning with mental symptoms and moving on to sexual function, physical changes, metabolic disease or changes, urologic problems, testosterone deficiency, dehydroepiandrosterone (DHEA) deficiency, cortisol deficiency, cortisol excess, thyroid hormone deficiency, growth hormone deficiency, melatonin deficiency, aldosterone deficiency, and dysbiosis (abnormal population of gut bacteria).

"By necessity, my approach is very comprehensive in its scope," Bieley says. "When I'm attacking a problem, I will incorporate high-end nutritional evaluation testing as well as clinical nutrigenomics, which is the clinical practice of modifying genetic expression with nutrition in order to get improved patient outcomes without serious



adverse effects. I also prescribe bioidentical hormone replacement therapy only after looking at the symphony of hormones. Once I take a look at this, I can create a hormonal harmony that can lead to higher functioning with improved quality of life."

In addition, Dr. Bieley offers his patients red blood cell membrane fatty acid evaluation and treatment, organic acids testing and treatment, targeted amino acid therapy, and evaluation and treatment for chronic stress, toxic heavy metals, secondary risk factors for heart disease, and neurotransmitter deficiencies. He uses gene testing to evaluate a patient's potential risk for disease and other customized treatments based upon their unique biochemical individuality.

KEEP IT SIMPLE

Despite the overwhelming number of diseases and conditions Dr. Bieley tests for in order to pinpoint exactly what may be bothering someone, he begins all patient interviews with one simple question: "Are you ready to make changes in your life?"

"I ask this question because while we can diagnose a patient's problem and come up with a solution to solve it, ultimately, making beneficial changes in your life will be the key to long-term success," Bieley says.

On a personal level, Bieley had to reevaluate his life habits in order to, as he puts it, "nurture health rather than fight disease."

The difference between the two, while seemingly small, is actually vast.

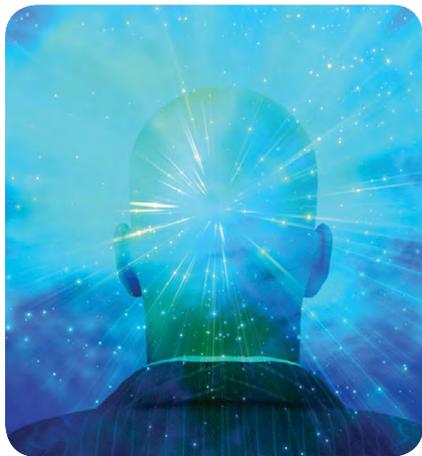
WELLNESS PROFILE

“The difference has to do with methodology and approach,” he says. “Nurturing health involves the dynamic approach of functional medicine that deals with evaluating the underlying triggers, pathophysiology, antecedents, and mediators for preempting, preventing, and treating chronic disease.”

A large part of this “nurturing” health process is maintaining a strong exercise program, which keeps the heart, mind, and body strong.

“The key to cardiovascular conditioning and increasing lean muscle and building muscle, in general, is to create a lactic acid burn that depletes glycogen ten to fifteen minutes into the workout program,” he says. “After this initial warm-up, the rest of the exercise program should focus on ATP production in skeletal muscle and increasing growth hormone and testosterone levels.”

Bieley recommends one hour of exercise at least three times a week, comprised of 40 minutes of resistance training and 20 minutes of interval training. He also tells his patients to work out in the morning prior to eating because if you have glycogen stores in muscle or in the liver when you start your exercise program you will not create the same lactic acid burn.



As is the case with the rest of Bieley’s advice to patients, there is an important nutritional component to the workout. The post-workout shake that he tells his patients they should have is made of 16 ounces of a healthy beverage, 10 grams of D-ribose powder, 2 grams of L-carnitine tartrate powder, 1 gram L-glutamine powder, 30 grams whey protein powder, and 3 grams of buffered vitamin C.

BRAIN TRAINING

While many of the issues facing Dr. Bieley’s patients involve their bodies, quite a few also involve their minds. As such, he has created a Brain Fitness Program to help enhance the memory of his older clients.

“Different exercises stimulate different regions and neurological functions in the brain,” he explains. “Mental exercises can sharpen intelligence.”

Simple things like using your non-habitual hand for everyday tasks or picking a year from your past and trying to remember everything that happened in a specific month will activate certain parts of your brain and strengthen your mind. Even things like putting your watch on a different hand or practicing reading upside down can kickstart your brain into learning a new skill. An odd, but interesting suggestion to spark certain parts of your brain involves watching the television with the sound off and trying to figure out the personalities of the characters by watching their actions. This will help the brain improve its interpretation of visual stimuli, since the audio stimulus normally relied upon will not be there.

“Taking up a new language, a new instrument, or even beginning to listen to a new kind of music,

all can have incredible effects on an aging brain,” Bieley says. “Your mind has the amazing ability to always be able to learn new things.”

In addition to mental exercises, Dr. Bieley offers something called The Brain Spa®, which he describes as an ultra-modern neurofeedback training system (EEG biofeedback with photostimulation) that has been used to improve anxiety, insomnia, ADD/ADHD, and your level of focused attention.

PUTTING IT ALL TOGETHER

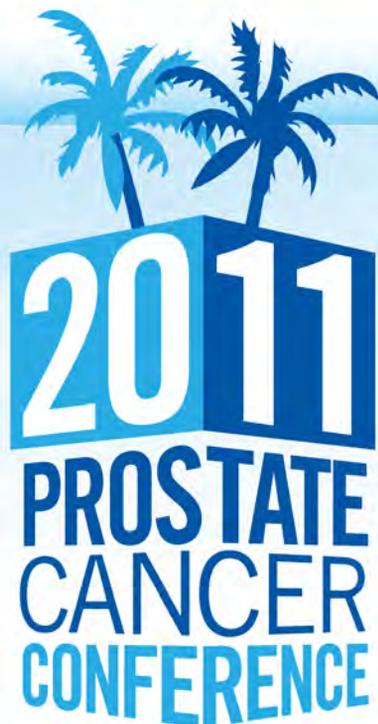
The slogan for Bieley’s Healthy Living and Longevity Medical Center is “Function Higher—Physically, Mentally, Sexually,” and the multi-modal, comprehensive care reflects an incredible attention to detail about how to care for a patient. His step-by-step diagnostic process and explanation of solutions no doubt comes from Bieley’s own experiences sitting on the other side of a doctor’s desk.

In his own words, he focuses on making sure patients don’t feel like they’re being “rushed through the mill” because as a patient, that’s not how he wanted to be treated.

“Being a doctor who overcame an illness offers different insight into the doctor-patient relationship,” he says. “I have empathy for anyone who is ill or just not functioning normally, and I am passionate about finding a customized, sustainable care plan designed just for them. My goal is to get every one of my patients back to robust health.” ●

For more information, please visit:
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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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- Newly Diagnosed - Prostate Cancer 101
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- Rising PSA after local therapy
- Rising PSA – Castrate Resistant
- Failed Taxotere – now what?
- Erectile Dysfunction
- Incontinence
- What supplements work

• Round-Table Discussions: watch and hear speakers' multi-disciplinary approach to actual clinical cases

• Opportunities to interact with speakers after their presentations

• Ask the Experts: question-and-answer sessions with participating faculty and other experts and conference attendees

• Exhibits from participating supporters and other members of the prostate cancer community

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• Saturday Night Gala: Dinner with Live Entertainment, and The Harry Pinchot Award and the Catalyst Award



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For the past 30 years, the Life Extension Foundation® has stated that the most important step one can take to prevent disease cannot be found in a bottle of pills. The true cornerstone of any preventive health care program is annual blood screening. Proactive blood screening can help you greatly reduce your risk of disorders such as heart and kidney disease, stroke, liver conditions, anemia, and diabetes. Plus it's particularly valuable in helping you prevent and treat symptoms associated with hormone imbalance, such as fatigue, memory impairment, bone loss, weight gain, and depression. Blood testing remains one of the most important things you can do for yourself and your loved ones. More than any other measure, annual blood testing holds tremendous potential to protect both yourself and your loved ones.

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1. Call **1-800-208-3444** to discuss and place your order with one of our knowledgeable health advisors. (This order form can also be faxed to 1-866-728-1050 or mailed.) Online orders can also be placed at www.lef.org/blood
2. After your order is placed, you will be mailed either a requisition form to take to your local LabCorp Patient Service Center or a Blood Draw Kit, whichever is applicable. (Please note: If a blood draw kit is used, an additional local draw fee may be incurred.)
3. Have your blood drawn.
4. Your blood test results will be mailed, emailed, or faxed directly to you by Life Extension.
5. Take the opportunity to discuss the results with one of our knowledgeable health advisors by calling 1-800-226-2370; or review the results with your personal physician.

It's that simple! Don't delay—call today!

For Our Local Members:

For those residing in the Ft. Lauderdale, Florida area, blood draws are also performed at the Life Extension Nutrition Center from 9:00 am to 2:00 pm Monday through Saturday. Simply purchase the blood test and have it drawn with no wait! Our address is 1100 West Commercial Blvd, Ft. Lauderdale, FL, 33309. We're located at Commercial Blvd and Powerline Road, just west of I-95. For more information or directions call 954-766-8144.

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NOW
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SHBG! |
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DHEA-S
PSA (prostate-specific antigen)
Homocysteine
C-Reactive Protein (high-sensitivity)
Free Testosterone
Total Testosterone
Estradiol
TSH for thyroid function
Sex Hormone-Binding Globulin (SHBG) | |
| <input type="radio"/> MALE HORMONE ADD-ON PANEL[†] (LCADDM) Pregnenolone and Dihydrotestosterone (DHT) \$115 | |
| To provide an even more in-depth analysis of a man's hormone status, Life Extension has created this panel as an addition to the Male Life Extension Panel. This panel provides information about a testosterone metabolite that can affect the prostate; and the hormone pregnenolone that acts as a precursor to all other hormones. | |
| <input type="radio"/> THYROID ADD-ON PANEL (LCTHYROID) Free T3 & Free T4. \$36 | |
| <input type="radio"/> VITAMIN D (25-OH) (LC081950) \$35.25 | |
| This test is used to assess vitamin D status in your body. | |
| <input type="radio"/> OMEGA SCORE™*** (LCOMEGA) \$98 | |
| Provides valuable information on your risk of developing heart disease, sudden heart attack, and cardiac death. The Omega Score™ also includes your AA:EPA ratio, allowing you to determine and track a major factor in total body inflammation. | |
| <input type="radio"/> COENZYME Q10[†] (LC120251) \$108.75 | |
| Research is revealing that maintaining higher blood levels of CoQ10 may offer greater health benefits. This test measures blood levels of CoQ10. | |
| <input type="radio"/> VAP™ TEST (LC804500) (UPDATED) \$67.50 | |
| The VAP cholesterol test provides a more comprehensive coronary heart disease (CHD) risk assessment than the conventional lipid profile. This test includes measurements of LDL particle size and lipoprotein subclasses. | |
| <input type="radio"/> FOOD SAFE ALLERGY TEST** (LCM73001) \$130.50 | |
| This test measures delayed (IgG) food allergies for 45 common foods. | |

WOMEN'S ANNUAL BLOOD TESTING

- | | |
|---|---|
| <input type="radio"/> FEMALE LIFE EXTENSION PANEL (LC322535) \$199 | NEW
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SHBG! |
| CBC/Chemistry Profile (description on next page)
DHEA-S
Estradiol
Homocysteine
C-Reactive Protein (high-sensitivity)
Progesterone
Free Testosterone
Total Testosterone
TSH for thyroid function
Sex Hormone-Binding Globulin (SHBG) | |
| <input type="radio"/> FEMALE HORMONE ADD-ON PANEL[†] (LCADDF) Pregnenolone and Total Estrogen \$92.50 | |
| To provide an even more in-depth analysis of a woman's hormone status, Life Extension has created this panel as an addition to the Female Life Extension Panel. This panel provides information about total estrogen status; and the hormone pregnenolone that acts as a precursor to all other hormones. | |
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| <input type="radio"/> VITAMIN D (25-OH) (LC081950) \$35.25 | |
| This test is used to assess vitamin D status in your body. | |
| <input type="radio"/> OMEGA SCORE™*** (LCOMEGA) \$98 | |
| Provides valuable information on your risk of developing heart disease, sudden heart attack, and cardiac death. The Omega Score™ also includes your AA:EPA ratio, allowing you to determine and track a major factor in total body inflammation. | |
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| The VAP cholesterol test provides a more comprehensive coronary heart disease (CHD) risk assessment than the conventional lipid profile. This test includes measurements of LDL particle size and lipoprotein subclasses. | |
| <input type="radio"/> FOOD SAFE ALLERGY TEST** (LCM73001) \$130.50 | |
| This test measures delayed (IgG) food allergies for 45 common foods. | |

BLOOD TEST SUPER SALE SPECIAL: Add a **VITAMIN D** test for only \$25 when purchasing any of the following panels:

- Male Life Extension Panel (LC322582COMBO) • Female Life Extension Panel (LC322535COMBO)
- Male Hormone Retest Profile (LCRTMCOMBO) • Female Hormone Retest Profile (LCRTFCOMBO)
- Male Weight Loss Panel (LCWLMCOMBO) • Female Weight Loss Panel (LCWLFOMBO)

SUGGESTED ADDITIONS TO ANNUAL BLOOD TESTING

- | | |
|---|---|
| <input type="radio"/> FIBRINOGEN[†] (LC001610) \$23.25 | <input type="radio"/> CELIAC DISEASE ANTIBODY SCREEN (LC334971) \$74.25 |
| High levels of this blood-clotting factor increase the risk of heart attack and stroke. | This test measures deamidated gliadin IgA; tissue transglutaminase IgA; serum IgA quantitation. |
| <input type="radio"/> CORTISOL (LC004051) \$29.25 | <input type="radio"/> FERRITIN (LC004598) \$21 |
| This test is used to help assess adrenal function. | Used to evaluate iron stores in the body and to determine iron deficiency anemia. |
| <input type="radio"/> LP-PLA2 (PLAC TEST) (LC141275) \$93.75 | <input type="radio"/> HEMOGLOBIN A1C (LC001453) \$23.25 |
| This test is used to aid in predicting risk for coronary heart disease, and ischemic stroke associated with atherosclerosis. Lp-PLA2 is a cardiovascular risk factor that provides unique information about the stability of the plaque inside your arteries. | Used to assess long-term glucose control. |
| | <input type="radio"/> VITAMIN B12/FOLATE (LC000810) \$24.75 |
| | This test measures the amount of vitamin B12 and folic acid in the blood. |

* For non-member pricing call **1-800-208-3444**.

** This test is packaged as a kit, requiring a finger stick performed at home.



OTHER POPULAR PANELS

- CBC/CHEMISTRY PROFILE (LC381822)** \$26
Note: This CBC/Chemistry profile is included in the Male and Female Life Extension panels. Retest profiles and Weight Loss Panels
CARDIOVASCULAR RISK PROFILE
 Total Cholesterol Cholesterol/HDL Ratio
 HDL Cholesterol Estimated CHD Risk
 LDL Cholesterol Glucose
 Triglycerides
LIVER FUNCTION PANEL
 AST (SGOT) Total Bilirubin
 ALT (SGPT) Alkaline phosphatase
 LDH
KIDNEY FUNCTION PANEL
 BUN BUN/Creatinine Ratio
 Creatinine Uric Acid
BLOOD PROTEIN LEVELS
 Total Protein Globulin
 Albumin Albumin/Globulin Ratio
BLOOD COUNT/RED AND WHITE BLOOD CELL PROFILE
 Red Blood Cell Count Monocytes
 White Blood Cell Count Lymphocytes
 Eosinophils Platelet Count
 Basophils Hemoglobin
 Polys (Absolute) Hematocrit
 Lymphs (Absolute) MCV
 Monocytes (Absolute) MCH
 Eos (Absolute) MCHC
 Baso (Absolute) Polynucleated Cells
 RDW
BLOOD MINERAL PANEL
 Calcium Sodium
 Potassium Chloride
 Phosphorus Iron
- FEMALE WEIGHT LOSS PANEL (LCWLF)** \$224.25
 CBC/Chemistry Profile (see description above), DHEA-S, Estradiol, C-Reactive Protein (high-sensitivity), Progesterone, free and total Testosterone, TSH, SHBG, Free T3, Free T4, Insulin.
- MALE WEIGHT LOSS PANEL (LCWLM)** \$224.25
 CBC/Chemistry Profile (see description above), DHEA-S, Estradiol, C-Reactive Protein (high-sensitivity), PSA, free and total Testosterone, TSH, SHBG, Free T3, Free T4, Insulin.
- LIFE EXTENSION THYROID PANEL (LC304131)** \$56.25
 TSH, T4, Free T3, Free T4
- FEMALE HORMONE RE-TEST PROFILE* (LCRTF)** \$187.50
 CBC/Chemistry Profile (see description above), DHEA-S, Total Estrogen, Pregnenolone, Total and Free Testosterone, Progesterone, and TSH. Continual monitoring of hormone levels is necessary for women seeking to maintain optimal blood level values.
- MALE HORMONE RE-TEST PROFILE* (LCRTM)** \$206.25
 CBC/Chemistry Profile (see description above), DHEA-S, DHT, Estradiol, PSA, Pregnenolone, Total and Free Testosterone, and TSH. Continual monitoring of hormone levels is necessary for men seeking to maintain optimal blood level values.
- DR. LICHTEN COMPREHENSIVE THYROID PANEL (LICHTEN02)** \$283.50
 TSH, T4, Free T3, Reverse T3, Thyroid antibodies, Thyroid peroxidase antibodies, Red cell magnesium, vitamin D(25-OH).
- DR. LICHTEN CARDIAC RISK FACTORS* (LICHTEN05)** \$147
 Homocysteine, C-Reactive Protein, Ferritin, Fibrinogen, ABO, and Rh blood typing.

POPULAR SINGLE TESTS

- IGF-1 (LC010363)** \$56.25
 Indicates growth hormone secretion levels. Low levels have been associated with atherosclerosis as well as all-cause mortality.
- DHEA-SULFATE (LC004697)** \$45.75
 This test shows if you are taking the proper amount of DHEA.
- DIHYDROTESTOSTERONE (DHT)* (LC500142)** \$74.25
 Measures serum concentrations of DHT.
- ESTRADIOL (LC004515)** \$24.75
 For men and women. Determines the proper amount in the body.
- FREE-PSA (INCLUDES TOTAL PSA)* (LC480780)** \$45.75
 Recommended to determine if an elevated PSA is indicative of prostate cancer.
- FREE AND TOTAL TESTOSTERONE (LC140103)** \$74.25
 Determines whether testosterone replacement should be considered as a therapy for depression, abdominal obesity, low energy, poor mental performance, or loss of libido.
- PROGESTERONE (LC004317)** \$41.25
 Primarily for women. Determines the proper amount in the body.
- PREGNENOLONE* (LC140707)** \$87
 Used to determine ovarian failure, hirsutism, adrenal carcinoma, and Cushing's syndrome.
- RBC MAGNESIUM (LC080283)** \$66
 Magnesium plays many vital roles in preventing heart disease, controlling blood pressure, and maintaining healthy cholesterol levels.
- REVERSE T3 (LC002212)** \$41.25
 Having high levels of reverse T3 is known as thyroid resistance and produces symptoms of low thyroid function (hypothyroidism).

*Certain tests need to be shipped to the lab on dry ice for customers using a blood draw kit, and incur an additional \$35 charge. If you are going to LabCorp, this charge **does not** apply.

For non-member prices call 1-800-208-3444

This is NOT a complete listing of LE blood test services. Call 1-800-208-3444 for additional information.

ORDER LIFESAVING BLOOD TESTS FROM VIRTUALLY ANYWHERE IN THE US!

TERMS AND CONDITIONS

This blood test service is for informational purposes only and no specific medical advice will be provided. National Diagnostics, Inc., and the Life Extension Foundation contract with a physician who will order your test(s), but will not diagnose or treat you. Both the physician and the testing laboratory are independent contractors and neither National Diagnostics, Inc., nor the Life Extension Foundation will be liable for their acts or omissions. Always seek the advice of a trained health professional for medical advice, diagnosis, or treatment. When you purchase a blood test from Life Extension/National Diagnostics, Inc., you are doing so with the understanding that you are privately paying for these tests. There will be absolutely no billing to Medicare, Medicaid, or private insurance. I have read the above Terms and Conditions and understand and agree to them.

Signature of Life Extension Member _____

X _____

Life Extension Foundation Members only _____

MEMBER NO. _____

Male Female

Name _____

Date of Birth (required) / / _____

Address _____

City _____

State _____ Zip _____

Phone _____

Credit Card No. _____

Expiration Date / _____

Mail your order form to:

LifeExtension
NATIONAL DIAGNOSTICS, INC.

1100 West Commercial Blvd.,
 Ft. Lauderdale, FL 33309

Phone your order to: **1-800-208-3444**

Fax your order to: **1-866-728-1050**

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
Carnosoothe w/PicroProtect
Digest RC™
Enhanced Super Digestive Enzymes
(also available with Probiotics)
Florastor
Intact Digest
Life Flora™
Natural EsophaGuard
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®
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
Aspirin (Enteric Coated)
Cho-Less™
D-Ribose Capsules
D-Ribose Powder
Endothelial Defense™ with
Full-Spectrum Pomegranate™
Fibrinogen Resist
Forskolin
Homocysteine Resist
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
Sytrinol™
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
Full-Spectrum Pomegranate™
Grapeseed Extract with Resveratrol &
Pterostilbene
Huperzine A with Natural Vitamin E
Kyolic® Garlic Formula 105
Kyolic® Reserve
Mega Green Tea Extract
Mega Green Tea Extract (Decaffeinated)
Mega Lycopene Extract
Nutrim
Optimized Ashwagandha Extract
Pomegranate Extract
Pomegranate Juice Concentrate
ProGreens®
Pure-Gar™
Pycnogenol
Optimized Quercetin
Resveratrol with Synergistic Grape-Berry Actives
Rhodiola Extract
Rosmarinic Acid Extract
Silymarin

SODzyme™ with GliSODin®
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
Lifesield® Immunity™
Maitake SX-Fraction
Norwegian Shark Liver Oil
Optimized Fucoidan w/Maritech® 926
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
Ginger Force
Krill Oil
5-LOXIN®
Mega EPA/DHA
Mega GLA with Sesame Lignans
MSM
Natural Relief 1222™ Cream
Serraflazyme
SODzyme™ with GliSODin® 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
N-Acetyl Cysteine
Liver Force
Certified European Milk Thistle
PhosChol® (Nutrasal)
SAME
Silymarin

MINERALS

Biosil
Bone Restore
Bone Strength Formula w/KoAct™
Bone-Up™
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-Methyl L-Selenocysteine
Strontium
Vanadyl Sulfate
Zinc/Vitamin C Lozenges

MISCELLANEOUS

Blood Pressure Monitor Arm Cuff Medium
Cell Sensor Gauss Meter™
CR Way 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

Bioactive Milk Peptides
L-Theanine
5 HTP
Enhanced Natural Sleep® w/ Melatonin
Enhanced Natural Sleep® w/o Melatonin
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
Mist Oral III™ with CoQ10
Mouthwash w/Pomegranate
Toothpaste

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

Cat Mix
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

Amber Self MicroDermabrasion
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
DermaWhey
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®
Lavinin Underarm Deodorant
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
Sun Protection Spray
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 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
Cleanse Smart
Coriolus Super Strength
CR Mimetic Longevity Formula
Derma-Vits™
Cinsulin® w/InSea2™ and Crominex® 3+
EDTA
European Leg Solution Diosmin 95
Fem Dophilus
Femmenessence MacaPause®
Flush & Be Fit
GlucFit™

Ideal Bowel Support 299
Lustre™
Maitake SX-Fraction™
Menopause Solutions
Migra-eeze™
Natural Female Support
Organic Total Body Cleanse
Pecta-Sol®
Potassium Iodide
PQQ Caps with BioPQQ™
PteroPure™
Prelox® Natural Sex for Men®
Pyridoxal 5' - Phosphate
Rosmarinic Acid Extract

SPORTS PERFORMANCE

Creatine Capsules
Creatine Powder
Enhanced Life Extension Protein
DMG (N, N-dimethylglycine)
Inosine
L-Glutamine Capsules
L-Glutamine 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
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 Satiereal®
Natural Appetite Control
Natural Glucose Absorption Control
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

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
A					
00449	ACETYL-L-CARNITINE - 500 mg, 100 caps	\$56.00	\$42.00		
	Buy 4 bottles, price each	46.66	35.00		
00788	ACETYL-L-CARNITINE ARGINATE - 100 caps	59.00	44.25		
	Buy 4 bottles, price each	50.99	38.24		
01308	ADVANCED LIPID CONTROL - 60 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01300	ADVANCED ORAL HYGIENE - 60 veg. mint lozenges	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		
01417	AGAVE DIGESTIVE-IMMUNE SUPPORT - 360 grams powder	30.00	22.50		
	Buy 4 jars, price each	27.00	20.25		
00681	AHCC - 500 mg, 30 caps	48.98	36.74		
	Buy 4 bottles, price each	43.55	32.66		
*46925	ALLI® REFILL PACK - 120 caps	69.95	58.00		
00457	ALPHA-LIPOIC ACID w/BIOTIN (SUPER) - 250 mg, 60 caps	37.00	27.75		
	Buy 4 bottles, price each	32.00	24.00		
01440	ANTI-ALCOHOL ANTIOXIDANTS w/HEPATOPRO - 100 caps	26.00	19.50		
	Buy 4 bottles, price each	23.00	17.25		
00105	APPLE PECTIN POWDER - 227 grams	14.75	11.06		
	Buy 4 bottles, price each	13.75	10.31		
01012	ARGININE CAPS - 800 mg, 200 caps	26.50	19.88		
	Buy 4 bottles, price each	23.25	17.44		
01039	ARGININE/ORNITHINE - 500/250, 100 caps	16.00	12.00		
	Buy 4 bottles, price each	14.50	10.88		
00038	ARGININE/ORNITHINE POWDER - 150 grams	22.95	17.21		
	Buy 4 bottles, price each	19.00	14.25		
01025	(L)-ARGININE FREE-FORM POWDER - 100 grams	15.98	11.99		
	Buy 4 bottles, price each	14.31	10.73		
01317	ARTHROMAX™ w/THEAFLAVINS - 120 veg. caps	44.00	33.00		
	Buy 4 bottles, price each	40.00	30.00		
01404	ARTHRO-IMMUNE JOINT SUPPORT - 60 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	26.00	19.50		
00919	ARTICHOKE LEAF EXTRACT - 500 mg, 180 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	25.38	19.04		
00086	ASCORBATE C (SUPER) - 8 oz powder	26.99	20.24		
	Buy 4 bottles, price each	24.87	18.65		
00080	ASCORBIC ACID POWDER - 454 grams	38.00	28.50		
	Buy 4 bottles, price each	34.93	26.20		
00082	ASCORBYL PALMITATE - 500 mg, 100 caps	22.50	16.88		
	Buy 4 bottles, price each	20.00	15.00		
00888	ASHWAGANDHA EXTRACT (OPTIMIZED) - 60 veg. caps	10.00	7.50		
	Buy 4 bottles, price each	9.00	6.75		
01066	ASPIRIN - 81 mg, 300 enteric coated tablets	6.00	4.50		
	Buy 4 bottles, price each	5.33	4.00		
00708	ASTAXANTHIN - 2 mg, 30 softgels	10.25	7.69		

SUB-TOTAL OF COLUMN 1

No.		Retail Each	Member Each	Qty	Total
B					
01040	BELLY SLIM & TONE - 6 fl oz	\$42.00	\$31.50		
	Buy 4 bottles, price each	38.00	28.50		
00920	BENFOTIAMINE w/ THIAMINE - 100 mg, 120 veg. caps	19.95	14.96		
	Buy 4 bottles, price each	18.60	13.95		
00925	BENFOTIAMINE (MEGA) - 250 mg, 120 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01206	BERRY COMPLETE - 30 veg. caps	21.00	15.75		
	Buy 4 bottles, price each	18.67	14.00		
01406	BERRY COMPLETE w/RZD™ ACAI (ENHANCED) - 60 veg. caps	29.00	21.75		
	Buy 4 bottles, price each	26.00	19.50		
00664	BETA-CAROTENE - 25,000 IU, 100 softgels	10.98	8.24		
	Buy 4 bottles, price each	9.83	7.37		
00653	BETTERWOMAN® -40 caps	40.00	30.00		
	Buy 4 bottles, price each	38.00	28.50		
01073	BILBERRY EXTRACT - 100 mg, 100 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
01512	BIOACTIVE MILK PEPTIDES - 30 veg. caps	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
*01006	BIOSIL™ - 5 mg, 30 veg. caps	18.95	15.16		
*01007	BIOSIL™ - 1 fl oz	29.99	23.99		
00102	BIOTIN - 600 mcg, 100 caps	7.50	5.63		
	Buy 4 bottles, price each	6.50	4.88		
00145	BIOTIN POWDER - 30 grams	12.50	9.38		
	Buy 4 bottles, price each	11.00	8.25		
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		
	Buy 4 bottles, price each	20.00	15.00		
01438	BLUEBERRY EXTRACT w/ POMEGRANATE - 60 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01506	BONE FORMULA (DR. STRUM'S INTENSIVE) - 300 veg. caps	56.00	42.00		
	Buy 4 bottles, price each	50.00	37.50		
00811	BONE RESTORE - 150 caps	22.50	16.88		
	Buy 4 bottles, price each	19.50	14.63		
01211	BONE STRENGTH FORMULA w/KOACT™ - 120 caps	42.00	31.50		
	Buy 4 bottles, price each	38.00	28.50		
00313	BONE-UP® - 240 caps	24.95	18.71		
	Buy 4 bottles, price each	22.50	16.88		
01379	BOOSTER - 60 softgels	48.00	36.00		
	Buy 4 bottles, price each	44.00	33.00		
01580	BOOSTER w/ADVANCED K2 COMPLEX (SUPER) - 60 softgels	42.00	31.50		
	Buy 4 bottles, price each	38.00	28.50		
00621	BORON - 3 mg, 100 caps	5.95	4.46		
	Buy 4 bottles, price each	5.25	3.94		
00202	BOSWELLA - 100 caps	38.00	28.50		
	Buy 4 bottles, price each	30.00	22.50		
00258	BOSWELLA TOPICAL CREAM - 4 oz	15.00	11.25		
	Buy 4 jars, price each	13.00	9.75		
01253	BRANCHED CHAIN AMINO ACIDS - 90 vegetarian caps	19.50	14.63		
	Buy 4 bottles, price each	17.00	12.75		

SUB-TOTAL OF COLUMN 2

No.		Retail Each	Member Each	Qty	Total
00999	BREAST HEALTH FORMULA - 60 veg. caps Buy 4 bottles, price each	\$34.00 30.00	\$25.50 22.50		
00893	BRITE EYES III - 2 vials, 5 ml each Buy 4 boxes, price each	34.00 32.00	25.50 24.00		
00136	BROMELAIN POWDER - 100 grams Buy 4 bottles, price each	21.00 18.75	15.75 14.06		
01203	BROMELAIN (SPECIALLY-COATED) - 500 mg, 60 enteric coated tablets Buy 4 bottles, price each	21.00 19.00	15.75 14.25		
00884	BUTTERBUR EXT. w/STANDARDIZED ROSMARINIC ACID - 60 softgels Buy 4 bottles, price each	44.00 39.60	33.00 29.70		
C					
01015	CALCIUM CITRATE w/VITAMIN D - 300 caps Buy 4 bottles, price each	\$24.00 21.25	\$18.00 15.94		
00535	CALCIUM D-GLUCARATE - 200 mg, 60 caps Buy 4 bottles, price each	18.00 15.00	13.50 11.25		
01493	CALORIE CONTROL WEIGHT MANAGEMENT FORMULA BLUEBERRY-POMEGRANATE FLAVOR - 402 grams powder Buy 4 jars, price each Buy 8 jars, price each	50.00 44.00 40.00	37.50 33.00 30.00		
00118	CAPSULE FILLER MACHINE FOR "00" CAPSULES Buy 4 machines, price each	17.95 17.25	13.46 12.94		
00613	CAPSULE FILLER MACHINE FOR "0" CAPSULES Buy 4 machines, price each	17.95 17.25	13.46 12.94		
00916	CARNITINE w/GLYCOCARN® (OPTIMIZED) - 60 veg. caps Buy 4 bottles, price each	29.00 26.10	21.75 19.58		
01041	L-CARNITINE - 500 mg, 30 caps Buy 4 bottles, price each	15.00 13.20	11.25 9.90		
01258	CARNOSOOTHE w/PICROPROTECT™ - 60 veg. caps Buy 4 bottles, price each	29.95 27.00	22.46 20.25		
01287	CARNOSINE (SUPER) - 500 mg, 90 caps Buy 4 bottles, price each	66.00 60.00	49.50 45.00		
01003	CAT MIX - 100 grams powder Buy 4 bottles, price each	15.00 12.00	11.25 9.00		
00390	CDP CHOLINE CAPS - 250 mg, 60 caps Buy 4 bottles, price each	36.00 34.00	27.00 25.50		
00998	CELL SENSOR-EMF DETECTION METER	39.95	29.95		
01370	CHILDREN'S FORMULA LIFE EXTENSION MIX™ - 100 chewable tablets Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00550	CHLORELLA - 500 mg, 200 tablets Buy 4 bottles, price each	23.50 21.00	17.63 15.75		
01548	CHLOROPHYLLIN w/ZINC - 100 softgels Buy 4 bottles, price each	24.00 20.00	18.00 15.00		
*01359	CHO-LESS™ - 90 capsules	32.50	24.38		
00541	CHOLINE CHLORIDE - 16 oz liquid Buy 4 bottles, price each	14.95 14.00	11.21 10.50		
00364	CHONDROITIN SULFATE CONCENTRATE - 400 mg, 60 tablets Buy 4 bottles, price each	19.95 18.00	14.96 13.50		
01218	CHROMIUM ULTRA - 100 veg. caps Buy 4 bottles, price each	24.00 21.00	18.00 15.75		
01504	CHROMIUM W/CROMINEX® 3+ (OPTIMIZED) - 500 mcg, 60 veg. caps Buy 4 bottles, price each	9.00 8.00	6.75 6.00		
00551	CILANTRO HERBAL EXTRACT - 1 oz Buy 4 bottles, price each	12.00 11.00	9.00 8.25		

SUB-TOTAL OF COLUMN 3

No.		Retail Each	Member Each	Qty	Total
01503	CINSULIN® w/INSEA™ AND CROMINEX® 3+ - 90 veg. caps Buy 4 bottles, price each	\$38.00 34.00	\$28.50 25.50		
00069	CITRUS BIOFLAVONOID - 100 caps Buy 4 bottles, price each	15.99 14.82	11.99 11.12		
00818	CLA BLEND W/SESAME LIGNANS (SUPER) - 1000 mg, 120 softgels Buy 4 bottles, price each Buy 10 bottles, price each	36.00 33.00 26.33	27.00 24.75 19.75		
00819	CLA BLEND w/GUARANA & SESAME (SUPER) -1000 mg, 120 softgels Buy 4 bottles, price each	42.00 38.33	31.50 28.75		
01078	CLEANSE SMART - 60 caps	31.99	23.99		
00050	COD LIVER OIL (EMULSIFIED) - 12 fl oz (355 ml) Buy 4 bottles, price each	14.58 12.27	10.94 9.20		
00293	COD LIVER OIL (EMULSIFIED) - 100 softgels (Emulsified) Buy 4 bottles, price each	9.95 9.38	7.46 7.04		
00922	COGNITEX w/PREGNENOLONE & NEUROPROTECTION COMPLEX - 90 softgels Buy 4 bottles, price each Buy 12 bottles, price each	74.00 66.60 64.00	55.50 49.95 48.00		
00921	COGNITEX w/α PREGNENOLONE w/NEUROPROTECTION COMPLEX - 90 softgels Buy 4 bottles, price each Buy 12 bottles, price each	72.00 64.00 62.00	54.00 48.00 46.50		
01421	COGNITEX BASICS - 60 softgels Buy 4 bottles, price each Buy 12 bottles, price each	38.00 35.00 32.00	28.50 26.25 24.00		
00110	COMPLETE B-COMPLEX - 180 caps Buy 4 bottles, price each	21.50 18.00	16.13 13.50		
01574	COMPREHENSIVE NUTRIENT PACK - 30-day supply Buy 4 bottles, price each	189.00 171.00	141.75 128.25		
00119	COPPER CAPSULES - 2 mg, 100 caps Buy 4 bottles, price each	8.95 8.09	6.71 6.07		
00949	COQ10™ w/ α-LIMONENE (SUPER ABSORBABLE) - 50 mg, 60 softgels Buy 4 bottles, price each Buy 12 bottles, price each	25.00 22.00 20.00	18.75 16.50 15.00		
00950	COQ10™ w/ α-LIMONENE (SUPER ABSORBABLE) - 100 mg, 100 softgels Buy 4 bottles, price each Buy 12 bottles, price each	66.00 60.00 56.00	49.50 45.00 42.00		
01226	COQ10 (SUPER UBIQUINOL) - 100 mg, 60 softgels Buy 4 bottles, price each Buy 12 bottles, price each	56.00 52.00 48.00	42.00 39.00 36.00		
01426	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -100 mg, 60 softgels Buy 4 bottles, price each Buy 12 bottles, price each	62.00 56.00 52.00	46.50 42.00 39.00		
01425	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -50 mg, 100 softgels Buy 4 bottles, price each Buy 10 bottles, price each	58.00 53.00 50.00	43.50 39.75 37.50		
01427	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -50 mg, 30 softgels Buy 4 bottles, price each	20.00 18.00	15.00 13.50		
01431	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -200 mg, 30 softgels Buy 4 bottles, price each Buy 10 bottles, price each	62.00 56.00 52.00	46.50 42.00 39.00		
01053	CORIOLUS SUPER STRENGTH - 600 mg, 150 veg. caps	99.95	74.96		
00857	COROMEGA CHILD BRAIN & BODY - (Lemon Lime) 30 packets Buy 4 boxes, price each	25.00 22.50	18.75 16.75		

SUB-TOTAL OF COLUMN 4

Buyers Club Order Form

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
C CONTINUED					
80139	COSMESIS AMBER SELF MICRODERMABRASION - 2 oz Buy 2 jars, price each	\$49.00 42.00	\$36.75 31.50		
80118	COSMESIS ANTI-AGING MASK - 2 oz Buy 2 bottles, price each	72.00 63.36	54.00 47.52		
80134	COSMESIS ANTI-GLYCATION SERUM - 1 oz W/BLUEBERRY & POMEGRANATE EXTRACTS Buy 2 bottles, price each	33.00 31.35	24.75 23.51		
80133	COSMESIS ANTIOXIDANT FACIAL MIST - 2 oz Buy 2 bottles, price each	32.00 30.40	24.00 22.80		
80127	COSMESIS ANTIOXIDANT REJUVENATING FOOT CREAM - 2 oz Buy 2 jars, price each	45.00 42.80	33.75 32.10		
80128	COSMESIS ANTIOXIDANT REJUVENATING FOOT SCRUB - 2 oz Buy 2 jars, price each	59.00 51.92	44.25 38.94		
80117	COSMESIS ANTIOXIDANT REJUVENATING HAND CREAM - 2 oz Buy 2 jars, price each	64.00 57.49	48.00 43.12		
80121	COSMESIS ANTIOXIDANT REJUVENATING HAND SCRUB - 2 oz Buy 2 jars, price each	58.00 51.04	43.50 38.28		
80105	COSMESIS ANTI-REDNESS & BLEMISH LOTION - 1 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80120	COSMESIS CORRECTIVE CLEARING MASK - 2 oz Buy 2 jars, price each	64.50 56.76	48.38 42.57		
80108	COSMESIS ESSENTIAL PLANT LIPIDS REPARATIVE SERUM - 1 oz Buy 2 bottles, price each	74.95 65.95	56.21 49.46		
80123	COSMESIS FACE REJUVENATING ANTIOXIDANT CREAM - 2 oz Buy 2 jars, price each	69.50 61.16	52.13 45.87		
80107	COSMESIS FINE LINE-LESS - 1 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80131	COSMESIS HAIR SUPPRESS FORMULA - 4 oz Buy 2 bottles, price each	59.00 51.92	44.25 38.94		
80137	COSMESIS HEALING FORMULA ALL-IN-ONE CREAM - 1 oz Buy 2 jars, price each	53.00 45.43	39.75 34.07		
80115	COSMESIS HEALING MASK - 2 oz Buy 2 bottles, price each	64.50 56.76	48.38 42.57		
80109	COSMESIS HYALURONIC FACIAL MOISTURIZER - 1 oz Buy 2 bottles, price each	58.00 51.04	43.50 38.28		
80110	COSMESIS HYALURONIC OIL-FREE FACIAL MOISTURIZER - 1 oz Buy 2 bottles, price each	58.00 51.04	43.50 38.28		
80138	COSMESIS HYDRATING ANTI-OXIDANT FACE MIST - 4 oz Buy 2 bottles, price each	39.95 38.00	29.96 28.50		
80103	COSMESIS LIFTING & TIGHTENING COMPLEX - 1 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80135	COSMESIS MELATONIN CREAM - 1 oz Buy 2 jars, price each	33.00 27.10	24.75 20.33		
80114	COSMESIS MILD FACIAL CLEANSER - 8 oz Buy 2 bottles, price each	59.00 51.92	44.25 38.94		
80122	COSMESIS NECK REJUVENATING ANTIOXIDANT CREAM - 2 oz Buy 2 jars, price each	64.00 56.32	48.00 42.24		
80119	COSMESIS PEEL OFF CLEANSING MASK - 2 oz Buy 2 bottles, price each	64.50 56.76	48.38 42.57		
80111	COSMESIS PIGMENT CORRECTING CREAM - 1/2 oz Buy 2 bottles, price each	74.00 65.12	55.50 48.84		
80106	COSMESIS REJUVENATING SERUM - 1 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80112	COSMESIS SKIN LIGHTENING SERUM - 1/2 oz Buy 2 bottles, price each	85.00 74.80	63.75 56.10		

SUB-TOTAL OF COLUMN 5

No.		Retail Each	Member Each	Qty	Total
80130	COSMESIS SKIN STEM CELL SERUM - 1 oz Buy 2 bottles, price each	\$74.00 69.00	\$55.50 51.75		
80116	COSMESIS ULTRA LIP PLUMPER - 1/3 oz Buy 2 bottles, price each	64.00 56.32	48.00 42.24		
80101	COSMESIS ULTRA WRINKLE RELAXER - 1 oz Buy 2 bottles, price each	89.95 79.76	67.46 59.82		
80113	COSMESIS UNDER EYE REFINING SERUM - 1/2 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80104	COSMESIS UNDER EYE RESCUE CREAM - 1/2 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80129	COSMESIS VITAMIN C SERUM - 1 oz Buy 2 bottles, price each	85.00 74.80	63.75 56.10		
80136	COSMESIS VITAMIN D LOTION - 4 oz Buy 2 bottles, price each	36.00 33.66	27.00 25.25		
80102	COSMESIS VITAMIN K HEALING CREAM - 1 oz Buy 2 bottles, price each	79.50 69.96	59.63 52.47		
00862	CRAN-MAX® - 500 mg, 60 veg. caps Buy 4 bottles, price each	17.50 15.00	13.13 11.25		
01424	CRAN-MAX® with UTIROSE™ (OPTIMIZED) - 60 veg. caps Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00609	CREATINE CAPSULES - 120 caps Buy 4 bottles, price each	10.95 9.25	8.21 6.94		
00610	CREATINE POWDER - 500 grams Buy 4 bottles, price each	29.00 26.63	21.75 19.97		
01096	CREATINE WHEY GLUTAMINE POWDER - 1000 grams (vanilla) Buy 4 bottles, price each	45.00 42.00	33.75 31.50		
~01089	CRUCIFEROUS VEGETABLE SOUP - 32 oz. pouch Buy 6 pouches, price each	11.95 11.25	8.96 8.44		
~01090	(ASIAN) CRUCIFEROUS VEGETABLE SOUP - 32 oz. pouch Buy 6 pouches, price each	11.95 11.25	8.96 8.44		
01429	CR MIMETIC LONGEVITY FORMULA - 60 veg. caps Buy 4 bottles, price each	39.00 36.00	29.25 27.00		
***CRWAY	CR WAY OPTIMAL HEALTH PROGRAM SOFTWARE	195.00	195.00		
00912	CURCUMIN W/BIOPERINE® (SUPER) - 800 mg, 60 caps Buy 4 bottles, price each	26.00 24.00	19.50 18.00		
00407	CURCUMIN® (SUPER BIO) - 400 mg, 60 veg. caps Buy 4 bottles, price each	35.00 32.00	26.25 24.00		
00064	(L) CYSTEINE - 500 mg, 60 caps Buy 4 bottles, price each	18.95 16.31	14.21 12.23		
D					
01063	DERMA-VITS™ - 90 caps	\$14.99	\$11.24		
01313	DERMAWHEY - 400 mg, 60 caps Buy 4 bottles, price each	65.00 59.00	48.75 44.25		
00856	DHA (BARLEAN'S KID'S) 8 fl. oz (Fruit Punch) Buy 4 bottles, price each	22.00 20.00	16.50 15.00		
00995	DHA 240 - 240 mg, 60 softgels Buy 4 bottles, price each	19.00 17.00	14.25 12.75		
00658	7-KETO® DHEA METABOLITE - 25 mg, 100 caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		
01271	7-KETO® DHEA METABOLITE - 100 mg, 60 veg. caps Buy 4 bottles, price each	40.00 36.00	30.00 27.00		
00607	DHEA - 25 mg, 100 tablets Buy 4 bottles, price each	14.00 11.75	10.50 8.81		

SUB-TOTAL OF COLUMN 6

To order online visit: www.lifeextension.com

Buyers Club Order Form

No.		Retail Each	Member Each	Qty	Total
01250	DHEA COMPLETE - 60 veg. caps Buy 4 bottles, price each	\$48.00 43.20	\$36.00 32.40		
00335	DHEA - 25 mg, 100 caps Buy 4 bottles, price each	15.00 12.50	11.25 9.38		
00454	DHEA - 15 mg, 100 caps Buy 4 bottles, price each	12.00 10.00	9.00 7.50		
00882	DHEA - 50 mg, 60 caps Buy 4 bottles, price each	16.00 14.00	12.00 10.50		
00883	DHEA - 100 mg, 60 caps Buy 4 bottles, price each	22.50 19.00	16.88 14.25		
01358	DIGEST RC - 30 tablets Buy 4 boxes, price each	19.95 17.00	14.96 12.75		
01272	DIGESTIVE ENZYMES (ENHANCED SUPER) - 100 veg. caps Buy 4 bottles, price each	18.95 16.00	14.21 12.00		
01273	DIGESTIVE ENZYMES w/PROBIOTICS (ENHANCED SUPER) - 100 veg. caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		
00034	D,L-PHENYLALANINE CAPSULES - 500 mg, 100 caps Buy 4 bottles, price each	18.75 16.00	14.06 12.00		
00257	DMAE BITARTRATE - 150 mg, 200 caps Buy 4 bottles, price each	14.00 10.50	10.50 7.88		
00197	DMAE-GINKGO - 100 caps Buy 4 bottles, price each Buy 8 bottles, price each	36.00 30.00 27.50	27.00 22.50 20.63		
00059	DMG - 125 mg, 60 tablets Buy 4 boxes, price each	18.50 17.00	13.88 12.75		
01547	DNA PROTECTION FORMULA - 60 veg. caps Buy 4 bottles, price each	30.00 28.00	22.50 21.00		
00544	DOG MIX - 100 grams powder Buy 4 bottles, price each	19.50 16.00	14.63 12.00		
00321	DR. PROCTOR'S ADVANCED HAIR FORMULA - 2 oz Buy 4 bottles, price each	39.95 32.00	29.96 24.00		
00320	DR. PROCTOR'S HAIR FORMULA SHAMPOO - 8 oz Buy 4 bottles, price each	24.95 22.00	18.71 16.50		
00376	DR. TUNG'S TONGUE CLEANER Buy 4 bottles, price each	8.45 8.05	6.34 6.04		
00899	DUAL-ACTION MICRODERMABRASION ADV. EXFOLIATE - 2.4 oz Buy 4 jars, price each	39.95 38.95	29.96 29.21		
00240	DUAL-C - 90 caps Buy 4 bottles, price each	12.00 10.50	9.00 7.88		
E					
00388	ECHINACEA EXTRACT - 250 mg, 60 caps Buy 4 bottles, price each	\$14.35 12.50	\$10.76 9.38		
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 Buy 4 bottles, price each	56.00 52.00	42.00 39.00		
00997	ENDOTHELIAL DEFENSE™ w/GLISODIN® - 60 veg. caps Buy 4 bottles, price each	52.00 46.00	39.00 34.50		
00625	EPA/DHA (MEGA) - 120 softgels Buy 4 bottles, price each	19.95 18.00	14.96 13.50		
01428	ESSENTIAL FAT-SOLUBLE NUTRIENTS - 30 softgels Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
*01042	EUROPEAN LEG SOLUTION DIOSMIN 95 - 600 mg, 30 veg. tabs Buy 4 bottles, price each	20.00 18.00	15.00 13.50		
F					
***01054	FACE MASTER® PLATINUM	\$199.00	\$199.00		
00965	FAST-ACTING JOINT FORMULA - 30 caps Buy 4 bottles, price each	39.00 36.00	29.25 27.00		
20053	FEM DOPHILUS® - 30 caps	25.95	19.46		

SUB-TOTAL OF COLUMN 7

No.		Retail Each	Member Each	Qty	Total
20055	FEM DOPHILUS® - 60 caps	\$39.95	\$29.96		
01064	FEMMESENCE MACAPAUSE® - 120 veg. caps	34.99	26.24		
*01311	FERNBLOCK® w/SENDARA™ (ENHANCED) - 30 veg. caps Buy 4 bottles, price each	39.00 35.00	29.25 26.25		
00229	FIBER FOOD CAPS - 200 caps Buy 4 bottles, price each Buy 10 bottles, price each	15.00 12.50 11.90	11.25 9.38 8.93		
00228	FIBER FOOD POWDER - 300 grams Buy 4 bottles, price each Buy 10 bottles, price each	15.00 12.50 11.90	11.25 9.38 8.93		
00718	FIBRINOGEN RESIST™ - 30 veg. caps Buy 4 bottles, price each	49.00 44.00	36.75 33.00		
00873	FLAXSEED POWDER (HI-LIGNAN® NUTRI-FLAX®) - 16 oz powder	9.95	7.46		
01200	FLORASTOR® - 250 mg, 50 caps	55.15	41.36		
01212	FLUSH + BE FIT - 2- week cleanse for women	29.99	22.49		
01312	FOLATE (OPTIMIZED) (L-METHYL-FOLATE) 1000 mcg - 100 veg. caps Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
00347	FOLIC ACID + B12 CAPSULES - 200 caps Buy 4 bottles, price each	10.50 9.50	7.88 7.13		
00300	FORSKOLIN - 10 mg, 60 caps Buy 4 bottles, price each	15.00 12.50	11.25 9.38		
01513	FUCOIDAN w/MARITECH® 926 (OPTIMIZED) - 60 veg. caps Buy 4 bottles, price each	36.00 33.00	27.00 24.75		
00993	FUCOXANTHIN-SLIM™ - 90 softgels Buy 4 bottles, price each	44.00 39.00	33.00 29.25		

G

00127	GABA POWDER - 100 grams Buy 4 bottles, price each	\$23.75 22.50	\$17.81 16.88		
00559	GAMMA E TOCOPHEROL/TOCOTRIENOLS - 60 softgels Buy 4 bottles, price each	42.00 37.00	31.50 27.75		
00759	GAMMA E TOCOPHEROL W/SESAME LIGNANS - 60 softgels Buy 4 bottles, price each	32.00 29.00	24.00 21.75		
00117	GELATIN CAPSULES - 1000 empty caps size "00" Buy 4 bags, price each	19.00 18.00	14.25 13.50		
01301	GH PITUITARY SUPPORT DAY FORMULA - 120 vegetarian tabs Buy 4 bottles, price each	48.00 44.00	36.00 33.00		
01302	GH PITUITARY SUPPORT NIGHT FORMULA - 120 veg. caps Buy 4 bottles, price each	25.00 22.50	18.75 16.88		
01228	GINGER FORCE - 60 softgels	29.95	22.46		
00778	GINKGO BILOBA CERTIFIED EXTRACT™ - 120 mg, 365 caps Buy 2 bottles, price each	46.00 43.50	34.50 32.63		
00504	GINKGO EXTRACT (SUPER) - 120 mg, 100 caps Buy 4 bottles, price each	29.00 26.50	21.75 19.88		
01032	(PANAX RED) GINSENG - 60 veg. caps	29.99	22.49		
00756	GLA WITH SESAME LIGNANS (MEGA) - 60 softgels Buy 4 bottles, price each	19.50 18.00	14.63 13.50		
00345	(L) GLUTAMINE CAPSULES - 500 mg, 100 caps Buy 4 bottles, price each	14.95 13.50	11.21 10.13		
00141	(L)-GLUTAMINE POWDER - 100 grams Buy 4 bottles, price each	19.00 16.88	14.25 12.66		
00522	GLUCOSAMINE/CHONDROITIN CAPSULES - 100 caps Buy 4 bottles, price each	38.00 32.00	28.50 24.00		
00512	GLUCOFIT™ - 100 softgels Buy 4 bottles, price each	28.00 25.00	21.00 18.75		

SUB-TOTAL OF COLUMN 8

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

MAY 2011

Buyers Club Order Form

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
G CONTINUED					
00113	GLUTATHIONE, CYSTEINE & C - 750 mg, 100 caps Buy 4 bottles, price each	\$18.00 16.00	\$13.50 12.00		
00314	L-GLUTATHIONE (MEGA) - 250 mg, 60 caps Buy 4 bottles, price each	35.95 32.36	26.96 24.27		
00795	GLYCINE - 1000 mg, 100 caps Buy 4 bottles, price each	12.00 10.80	9.00 8.10		
00128	GLYCINE POWDER - 300 grams Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
01091	GRAPE EXTRACT w/RESVERATROL (WHOLE) - 60 veg. caps Buy 4 bottles, price each	36.00 34.00	27.00 25.50		
01411	GRAPE SEED EXTRACT w/RESVERATROL & PTEROSTILBENE -100 mg, 60 veg. caps Buy 4 bottles, price each	36.00 34.00	27.00 25.50		
00953	GREEN TEA EXTRACT (MEGA) - lightly caffeinated - 100 veg. caps Buy 4 bottles, price each	28.00 26.50	21.00 19.88		
00954	GREEN TEA EXTRACT (MEGA) - decaffeinated - 100 veg. caps Buy 4 bottles, price each	28.00 26.50	21.00 19.88		
H					
01074	5 HTP - 100 mg, 60 caps	\$27.95	\$20.96		
00010	HAIR CONDITIONER - 16 oz Buy 4 bottles, price each	6.00 4.50	4.50 3.38		
00230	HCA - 90 caps Buy 4 bottles, price each	18.00 15.50	13.50 11.63		
00800	HOMOCYSTEINE RESIST - 100 caps Buy 4 bottles, price each	24.00 21.60	18.00 16.20		
00067	HOODIA GORDONII - 60 caps	14.00	10.50		
00627	HUPERZINE A w/NATURAL VITAMIN E - 50 mcg, 60 caps Buy 4 bottles, price each	27.95 24.00	20.96 18.00		
00661	HYDRODERM ® - 1 oz Buy 2 bottles, price each	79.95 65.33	59.96 49.00		
I					
^ 01060	i26 HYPERIMMUNE EGG - 140 grams powder	\$49.99	\$42.00		
^ 01319	i26 HYPERIMMUNE EGG - 135 capsules	31.99	25.59		
^ 01318	i26 HYPERIMMUNE EGG CHEWABLES - (vanilla) 45 tablets	31.99	25.59		
01065	IDEAL BOWEL SUPPORT 299V - 30 veg. caps	21.95	16.46		
00955	IMMUNE PROTECT w/PARACTIN ® - 30 veg. caps Buy 4 bottles, price each	29.50 26.55	22.13 19.91		
01049	INNERPOWER ™ - 555 grams powder	42.00	31.50		
00155	INOSINE - 500 mg, 60 caps Buy 4 bottles, price each	22.95 21.00	17.21 15.75		
00109	INOSITOL CAPSULES - 500 mg, 100 caps Buy 4 bottles, price each	14.99 13.79	11.24 10.34		
00410	INOSITOL CAPSULES - 1000 mg, 360 caps Buy 4 bottles, price each	48.00 43.75	36.00 32.81		
00108	INOSITOL POWDER - 100 grams Buy 4 bottles, price each	18.00 16.88	13.50 12.66		
01021	INTACT DIGEST ™ - 8 fl oz Buy 4 bottles, price each	35.00 33.00	26.25 24.75		
01292	INTEGRA-LEAN ® IRVINGIA - 150 mg, 60 veg. caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		
01002	IODORAL ® - 180 caps	50.00	37.50		
00563	IRON PROTEIN PLUS - 300 mg, 100 caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		
01492	IRVINGIA w/PHASE 3 ™ - 120 veg. caps CALORIE CONTROL COMPLEX (OPTIMIZED) Buy 4 bottles, price each	56.00 48.00	42.00 36.00		

SUB-TOTAL OF COLUMN 9

No.		Retail Each	Member Each	Qty	Total
J, K					
00056	JARRO-DOPHILUS EPS ™ - 60 veg. caps	\$21.95	\$16.46		
01224	K w/ADVANCED K2 COMPLEX (SUPER) - 90 softgels Buy 4 bottles, price each	26.00 23.00	19.50 17.25		
01050	(NKO) KRILL OIL - 60 softgels	33.95	25.46		
00316	KYOLIC ® GARLIC FORMULA 102 - 350 mg, 200 caps Buy 4 bottles, price each	23.95 20.50	17.96 15.38		
00214	KYOLIC ® GARLIC FORMULA 105 - 200 caps Buy 4 bottles, price each	22.95 18.25	17.21 13.69		
00789	KYOLIC ® RESERVE - 600 mg, 120 caps Buy 4 bottles, price each	24.75 21.45	18.56 16.09		
L					
00513	LACTOFERRIN (APOLACTOFERRIN) CAPS - 60 caps Buy 4 bottles, price each	\$40.00 36.00	\$30.00 27.00		
00017	LAVILIN UNDERARM DEODORANT - 12.5 grams cream Buy 4 jars, price each	15.00 13.75	11.25 10.31		
00020	LECITHIN - 16 oz. granules Buy 4 jars, price each	15.00 12.50	11.25 9.38		
00019	LECITHIN w/B5 AND BHA - 16 oz. granules Buy 4 jars, price each	15.00 12.50	11.25 9.38		
01538	LIFE EXTENSION MIX ™ - 315 veg. tablets Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 69.50	73.50 64.50 52.13		
01555	LIFE EXTENSION MIX ™ - 315 tablets Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 69.50	73.50 64.50 52.13		
01557	LIFE EXTENSION MIX ™ w/EXTRA NIACIN - 315 tablets Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 69.50	73.50 64.50 52.13		
01554	LIFE EXTENSION MIX ™ - 490 caps Buy 4 bottles, price each Buy 10 bottles, price each	110.00 98.00 85.00	82.50 73.50 63.75		
01556	LIFE EXTENSION MIX ™ POWDER - 14.81 oz Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 72.00	73.50 64.50 54.00		
01565	LIFE EXTENSION MIX ™ - 315 tablets w/o copper Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 69.50	73.50 64.50 52.13		
01567	LIFE EXTENSION MIX ™ w/EXTRA NIACIN 315 tablets w/o copper Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 69.50	73.50 64.50 52.13		
01564	LIFE EXTENSION MIX ™ - 490 caps w/o copper Buy 4 bottles, price each Buy 10 bottles, price each	110.00 98.00 85.00	82.50 73.50 63.75		
01566	LIFE EXTENSION MIX ™ POWDER - 14.81 oz w/o copper Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 72.00	73.50 64.50 54.00		
00263	LIFE FLORA ™ - 300 mg, 120 caps Buy 4 bottles, price each	20.50 18.75	15.38 14.06		

SUB-TOTAL OF COLUMN 10

To order online visit: www.lifeextension.com

Buyers Club Order Form

No.		Retail Each	Member Each	Qty	Total
01314	LIFESHIELD® IMMUNITY™ - 60 veg. caps	\$39.95	\$29.96		
01227	LIVER FORCE - 30 veg. caps	34.95	26.21		
00939	5-LOXIN® - 75 mg, 100 veg. caps	19.50	14.63		
	Buy 4 bottles, price each	17.25	12.94		
01013	L-LYSINE - 620 mg, 100 caps	9.00	6.75		
	Buy 4 bottles, price each	8.00	6.00		
00129	L-LYSINE POWDER - 300 grams	16.00	12.00		
	Buy 4 bottles, price each	13.75	10.31		
01470	LURALEAN® CAPS SPECIAL PROPOLMANNAN PARTICLE SIZE - 120 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
01017	LUSTRE™ - 90 tablets	17.50	13.13		
	Buy 4 bottles, price each	15.50	11.63		
00455	LYCOPENE EXTRACT (MEGA) - 15 mg, 90 softgels	35.00	26.25		
	Buy 4 bottles, price each	30.00	22.50		
M					
01044	MAGNESIUM CAPS - 500 mg, 100 caps	\$9.50	\$7.13		
	Buy 4 bottles, price each	8.00	6.00		
00502	MAGNESIUM CITRATE - 160 mg, 100 caps	9.00	6.75		
	Buy 4 bottles, price each	7.50	5.63		
00704	MAITAKE™ SX-FRACTION - 90 veg. tablets	49.95	37.46		
00547	MELATONIN - 300 mcg, 100 caps	5.75	4.31		
	Buy 4 bottles, price each	5.00	3.75		
01083	MELATONIN - 500 mcg, 200 veg. caps	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
00329	MELATONIN - 1 mg, 60 caps	5.00	3.75		
	Buy 4 bottles, price each	4.63	3.47		
00330	MELATONIN - 3 mg, 60 caps	8.00	6.00		
	Buy 4 bottles, price each	6.88	5.16		
01086	MELATONIN - 3 mg, 60 time-release veg. caps	10.50	7.88		
	Buy 4 bottles, price each	9.38	7.04		
00331	MELATONIN - 10 mg, 60 caps	28.00	21.00		
	Buy 4 bottles, price each	24.00	18.00		
00332	MELATONIN - 3 mg, 60 lozenges	8.00	6.00		
	Buy 4 bottles, price each	6.88	5.16		
01087	MELATONIN TIME RELEASE - 300 mcg, 100 veg. caps	6.25	4.69		
	Buy 4 bottles, price each	5.63	4.22		
01088	MELATONIN TIME RELEASE - 750 mcg, 60 veg. caps	5.75	4.31		
	Buy 4 bottles, price each	5.00	3.75		
01009	MEMORY UPGRADE™ - 600 grams powder	26.95	20.21		
01047	MENOPAUSE SOLUTIONS - 120 tablets	49.95	37.46		
00536	METHYLCOBALAMIN - 1 mg, 60 lozenges (vanilla)	9.95	7.46		
	Buy 4 bottles, price each	8.00	6.00		
00537	METHYLCOBALAMIN - 5 mg, 60 lozenges (vanilla)	32.00	24.00		
	Buy 4 bottles, price each	25.00	18.75		
	Buy 10 bottles, price each	23.00	17.25		
00709	MIGRA-EEZE™ (BUTTERBUR) - 60 softgels	29.50	22.13		
	Buy 4 bottles, price each	26.33	19.75		

SUB-TOTAL OF COLUMN 11

No.		Retail Each	Member Each	Qty	Total
00702	MILK THISTLE (OPTIMIZED) - 100 caps	\$42.00	\$31.50		
	Buy 4 bottles, price each	38.00	28.50		
00623	MINERAL FORMULA FOR MEN - 100 caps	15.00	11.25		
	Buy 4 bottles, price each	12.50	9.38		
	Buy 12 bottles, price each	10.83	8.13		
00624	MINERAL FORMULA FOR WOMEN - 100 caps	15.00	11.25		
	Buy 4 bottles, price each	12.50	9.38		
	Buy 12 bottles, price each	10.83	8.13		
01315	MIRAFORTE w/STANDARDIZED LIGNANS (SUPER) - 120 caps	62.00	46.50		
	Buy 4 bottles, price each	56.00	42.00		
01569	MITOCHONDRIAL BASICS w/BIOPOQ™ - 30 caps	52.00	39.00		
	Buy 4 bottles, price each	46.00	34.50		
01568	MITOCHONDRIAL ENERGY OPTIMIZER w/BIOPOQ™ - 120 caps	94.00	70.50		
	Buy 4 bottles, price each	84.00	63.00		
00803	MIST ORAL III w/COQ10 - 2 fl oz	28.00	21.00		
	Buy 4 bottles, price each	25.33	19.00		
00065	MK-7 - 90 mcg, 60 softgels	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
01279	MOUThWASH w/POMEGRANATE - 16 oz	18.50	13.88		
	Buy 4 bottles, price each	17.00	12.75		
00451	MSM (METHYLSULFONYLMETHANE) - 1000 mg, 100 caps	14.00	10.50		
	Buy 4 bottles, price each	11.95	8.96		
N					
00215	N-ACETYL CYSTEINE - 600 mg, 60 caps	\$14.00	\$10.50		
	Buy 4 bottles, price each	13.50	10.13		
00168	NAPCA w/ALOE VERA - 8 fl oz	10.00	7.50		
	Buy 4 bottles, price each	9.15	6.86		
00066	NATTOKINASE - 60 softgels	24.98	18.74		
00891	NATURAL APPETITE CONTROL - 90 softgels	28.00	21.00		
	Buy 4 bottles, price each	25.20	18.90		
00984	NATURAL BP MANAGEMENT - 60 tablets	42.00	31.50		
	Buy 4 bottles, price each	37.80	28.35		
00913	NATURAL ESOPHAGUARD - 10 softgels	19.95	14.96		
	Buy 2 boxes, price each	19.00	14.25		
00712	NATURAL ESTROGEN w/POMEGRANATE EXTRACT - 60 caplets	38.00	28.50		
	Buy 4 bottles, price each	33.00	24.75		
01221	NATURAL FEMALE SUPPORT - 30 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	24.00	18.00		
01471	NATURAL GLUCOSE ABSORPTION CONTROL - 60 veg. caps	39.00	29.25		
	Buy 4 bottles, price each	36.00	27.00		
00698	NATURAL RELIEF 1222™ - 2 oz	28.00	21.00		
	Buy 4 tubes, price each	25.00	18.75		
01084	NATURAL SLEEP® - 3 mg, 60 veg. caps	12.99	9.74		
	Buy 4 bottles, price each	10.00	7.50		
01507	NATURAL SLEEP® (ENHANCED) w/ MELATONIN - 30 caps	22.00	16.50		
	Buy 4 bottles, price each	20.00	15.00		
01511	NATURAL SLEEP® (ENHANCED) w/O MELATONIN - 30 caps	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		

SUB-TOTAL OF COLUMN 12

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

MAY 2011

Buyers Club Order Form

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
N CONTINUED					
01085	NATURAL SLEEP MELATONIN® - 5 mg, 60 veg. caps	\$18.00	\$13.50		
	Buy 4 bottles, price each	16.00	12.00		
00987	NATURAL STRESS RELIEF - 30 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	24.00	18.00		
01076	NEW FACE SOLUTION - 1.7 oz bottle	54.00	40.50		
	Buy 4 bottles, price each	49.00	36.75		
00373	NO-FLUSH NIACIN - 800 mg, 100 caps	19.00	14.25		
	Buy 4 bottles, price each	17.00	12.75		
01035	NUTRIM - 170 grams powder	25.95	19.46		
00523	N-ZIMES™ - 270 caps	23.90	17.93		
	Buy 4 bottles, price each	22.00	16.50		
O					
00104	OCTACOSANOL - 8000 mcg, 60 caps	\$17.99	\$13.49		
	Buy 4 bottles, price each	15.74	11.81		
01483	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) - 60 softgels	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
01482	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) - 120 softgels	32.00	24.00		
	Buy 4 bottles, price each	28.00	21.00		
	Buy 10 bottles, price each	24.90	18.68		
01484	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) - 120 enteric coated softgels	34.00	25.50		
	Buy 4 bottles, price each	31.00	23.25		
	Buy 10 bottles, price each	28.00	21.00		
01501	ONE-PER-DAY - 60 vegetarian tablets	19.95	14.96		
	Buy 4 bottles, price each	18.00	13.50		
00717	ONLY TRACE MINERALS - 90 caps	15.00	11.25		
	Buy 4 bottles, price each	12.50	9.38		
00915	OPTIZINC® - 30 mg, 90 veg. caps	5.95	4.46		
	Buy 4 bottles, price each	5.00	3.75		
01070	ORGANIC TOTAL BODY CLEANSE™ - 14-day supply	34.99	26.24		
00043	L-ORNITHINE - 500 mg, 100 caps	24.95	18.71		
	Buy 4 bottles, price each	20.00	15.00		
P					
00107	PABA CAPS - 500 mg, 100 caps	\$13.99	\$10.49		
	Buy 4 bottles, price each	12.33	9.25		
00073	PANCREATIN - 500 mg, 50 caps	11.99	8.99		
	Buy 4 bottles, price each	10.99	8.24		
00923	PEAK ATP® WITH GLYCOCARN® - 60 tablets	59.00	44.25		
	Buy 4 bottles, price each	56.00	42.00		
00342	PECTA SOL-C® MODIFIED CITRUS PECTIN - 454 grams powder	99.95	74.96		
	Buy 4 jars, price each	95.70	71.78		
01080	PECTA SOL-C® MODIFIED CITRUS PECTIN - 270 veg. caps	69.95	52.46		
00673	PGX™ SOLUBLE FIBER BLEND (WELLBETX®) -180 caps	34.95	26.21		
00865	PHARMAGABA™ - 60 chewable tablets	29.95	22.46		
	Buy 4 bottles, price each	27.00	20.25		
01320	PHOSCHOL® - 900 mg, 100 softgels	69.45	52.09		
00368	PHOSPHATIDYLSERINE CAPS - 100 mg, 100 caps	54.00	40.50		
	Buy 4 bottles, price each	48.00	36.00		
00614	PILL CUTTER/GRINDER	11.95	8.96		
00561	POLICOSANOL - 10 mg, 60 tablets	24.00	18.00		
	Buy 6 bottles, price each	18.00	13.50		

SUB-TOTAL OF COLUMN 13

No.		Retail Each	Member Each	Qty	Total
01423	POMEGRANATE™ (FULL-SPECTRUM) - 30 softgels	\$24.00	\$18.00		
	Buy 4 bottles, price each	21.00	15.75		
00956	POMEGRANATE EXTRACT - 30 veg. caps	19.50	14.63		
	Buy 4 bottles, price each	17.55	13.16		
00957	POMEGRANATE JUICE CONCENTRATE - 16 oz. liquid	25.95	19.46		
	Buy 4 bottles, price each	24.00	18.00		
00577	POTASSIUM IODIDE - 1 box, 14 tablets	6.95	5.21		
	Buy 4 boxes, price each	5.25	3.94		
01500	PQQ CAPS W/BIO-PQQ™ - 10 mg, 30 veg. caps	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
00302	PREGNENOLONE - 50 mg, 100 caps	24.00	18.00		
	Buy 4 bottles, price each	19.00	14.25		
00700	PREGNENOLONE - 100 mg, 100 caps	26.00	19.50		
	Buy 4 bottles, price each	22.50	16.88		
*01373	PRELOX® NATURAL SEX FOR MEN® - 60 tablets	50.00	37.50		
	Buy 4 bottles, price each	45.00	33.75		
00571	PRIMAL DEFENSE™ - 90 caplets	49.95	37.46		
	Buy 4 bottles, price each	48.50	36.38		
01019	PRIMAL DEFENSE™ - 180 caplets	78.95	59.21		
00525	PROBOOST THYMIC PROTEIN A™ - 4 mcg, 30 packets	72.00	54.00		
	Buy 4 boxes, price each	70.00	52.50		
00869	PRO FEM CREAM - 2 fl oz (Progesterone Cream)	32.00	24.00		
	Buy 4 bottles, price each	29.00	21.75		
01020	PROGREENS® - 15 stick pack	22.50	16.88		
01072	PRO M INTERNAL DEODORIZER - 500 mg, 100 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
**01495	PROSTATE FORMULA W/ 5-LOXIN® STAND. LIGNANS (ULTRA NAT) -60 softgels	38.00	28.50		
	Buy 4 bottles, price each	35.00	26.25		
	Buy 12 bottles, price each	32.00	24.00		
01092	PROTEIN - VANILLA - (Enhanced Life Extension) -1000 grams powder	38.00	28.50		
	Buy 4 bottles, price each	36.00	27.00		
01093	PROTEIN - CHOCOLATE - (Enhanced Life Extension) -1000 grams powder	38.00	28.50		
	Buy 4 bottles, price each	36.00	27.00		
01094	PROTEIN - NATURAL - (Enhanced Life Extension) -1000 grams powder	38.00	28.50		
	Buy 4 bottles, price each	36.00	27.00		
01095	PROTEIN - BERRY - (Enhanced Life Extension) -1000 grams powder	38.00	28.50		
	Buy 4 bottles, price each	36.00	27.00		
00290	PROTEIN - VANILLA - (Designer Whey) 2 lbs powder	42.49	31.87		
	Buy 4 bottles, price each	38.50	28.88		
00282	PROTEIN - CHOCOLATE - (Designer Whey) 2 lbs powder	42.49	31.87		
	Buy 4 bottles, price each	38.50	28.88		
00283	PROTEIN - NATURAL - (Designer Whey) 2 lbs powder	42.49	31.87		
	Buy 4 bottles, price each	38.50	28.88		
01508	PTEROPURE™ - 50 mg Pterostilbene 60 veg. caps	32.00	24.00		
	Buy 4 bottles, price each	30.00	22.50		
01056	PURE-GAR® - 200 caps	24.95	18.71		
	Buy 4 bottles, price each	21.00	15.75		
01075	PURE PLANT PROTEIN - Natural Vanilla 450 grams powder	36.00	27.00		
	Buy 4 jars, price each	33.00	24.75		
01209	PUMPKIN SEED EXTRACT (WATER-SOLUBLE) - 60 veg. caps	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		
01210	PUMPKIN SEED EXT w/SOY ISOFLAVONES (WATER-SOLUBLE) - 60 veg. caps	22.00	16.50		
	Buy 4 bottles, price each	20.00	15.00		
01031	PYCNOGENOL® - 60 veg. caps	86.95	65.21		

SUB-TOTAL OF COLUMN 14

No.		Retail Each	Member Each	Qty	Total
P CONTINUED					
01217	PYRIDOXAL 5'-PHOSPHATE - 100 mg, 60 veg. caps	\$22.00	\$16.50		
	Buy 4 bottles, price each	19.80	14.85		
Q, R					
01309	QUERCETIN (OPTIMIZED) - 250 mg, 60 veg. caps	\$18.00	\$13.50		
	Buy 4 bottles, price each	17.00	12.75		
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	23.95	17.96		
00060	RED YEAST RICE EXTENDED RELEASE - 30 veg. tablets	21.50	16.13		
00605	REGIMINT - 60 enteric-coated caps	19.95	14.96		
	Buy 4 bottles, price each	18.67	14.00		
00448	REJUVENEX® BODY LOTION - 6 oz	24.00	18.00		
	Buy 4 tubes, price each	19.80	14.85		
	Buy 8 tubes, price each	17.00	12.75		
00918	REJUVENEX® FACTOR - 1.7 oz airless pump	65.00	48.75		
	Buy 2 bottles, price each	60.00	45.00		
	Buy 4 bottles, price each	55.00	41.25		
	Buy 8 bottles, price each	49.91	37.43		
01220	REJUVENEX® (ULTRA) - 2 oz	52.00	39.00		
	Buy 2 jars, price each	48.00	36.00		
	Buy 4 jars, price each	44.00	33.00		
	Buy 8 jars, price each	39.93	29.95		
00676	REJUVENIGHT (ULTRA) - 2 oz	39.95	29.96		
	Buy 4 jars, price each	36.00	27.00		
00706	REJUVENIGHT w/PROGESTERONE (ULTRA) - 2 oz	42.00	31.50		
	Buy 4 jars, price each	38.00	28.50		
01413	RESVERATROL W/PTEROSTILBENE - 20 mg, 60 veg. caps	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
01410	RESVERATROL W/PTEROSTILBENE - 100 mg, 60 veg. caps	36.00	27.00		
	Buy 4 bottles, price each	32.00	24.00		
01430	RESVERATROL w/SYNERGISTIC GRAPE-BERRY ACTIVES (OPTIMIZED) - 250 mg, 60 veg. caps	46.00	34.50		
	Buy 4 bottles, price each	41.33	31.00		
00889	RHODIOLA EXTRACT - 250 mg, 60 veg. caps	11.75	8.81		
	Buy 4 bottles, price each	10.58	7.94		
00972	(D) RIBOSE POWDER - 150 grams	27.50	20.63		
	Buy 4 jars, price each	24.75	18.56		
01473	(D) RIBOSE TABLETS - 100 veg. tabs	32.00	24.00		
	Buy 4 bottles, price each	28.00	21.00		
01208	R-LIPOIC ACID (SUPER) - 300 mg, 60 veg. caps	49.00	36.75		
	Buy 4 bottles, price each	45.00	33.75		
00070	RNA CAPSULES - 500 mg, 100 caps	17.95	13.46		
	Buy 4 bottles, price each	16.16	12.12		
00917	ROSMARINIC ACID EXTRACT - 60 veg. caps	59.00	44.25		
	Buy 4 bottles, price each	53.00	39.75		
S					
01082	SACCHAROMYCES BOULARDII + MOS - 30 veg. caps	\$9.95	\$7.46		
01067	SACCHAROMYCES BOULARDII + MOS - 90 veg. caps	21.95	16.46		
01432	SAFFRON w/SATIREAL (OPTIMIZED) - 60 veg. caps	36.00	27.00		
	Buy 4 bottles, price each	32.00	24.00		
*00573	SAMBU® GUARD - 175 ml	17.49	13.99		
00358	SAME (S-ADENOSYL-METHIONINE) - 200 mg, 20 enteric coated tablets	17.00	12.75		
	Buy 8 boxes, price each	15.00	11.25		

SUB-TOTAL OF COLUMN 15

No.		Retail Each	Member Each	Qty	Total
00453	SAME (S-ADENOSYL-METHIONINE) - 200 mg, 50 enteric coated tablets	\$40.00	\$30.00		
	Buy 4 bottles, price each	35.00	26.25		
00557	SAME (S-ADENOSYL-METHIONINE) - 400 mg, 20 enteric coated tablets	32.00	24.00		
	Buy 6 boxes, price each	25.00	18.75		
01055	SAME (S-ADENOSYL-METHIONINE) - 400 mg, 50 enteric coated tablets	72.00	54.00		
	Buy 4 bottles, price each	66.00	49.50		
01043	SEA-IODINE™ - 1000 mcg, 60 veg. caps	8.00	6.00		
	Buy 4 bottles, price each	7.20	5.40		
00046	SELENIUM - 2 oz dropper bottle	9.95	7.46		
	Buy 4 bottles, price each	9.45	7.09		
00567	SE-METHYL L-SELENOCYSTEINE - 200 mcg, 100 caps	12.00	9.00		
	Buy 4 bottles, price each	11.00	8.25		
00318	SERRAFLAZYME - 100 tablets	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
00011	SHAMPOO - 16 fl oz	6.00	4.50		
	Buy 4 bottles, price each	4.75	3.56		
00284	SHARK LIVER OIL (NORWEGIAN) - 1000 mg, 30 softgels	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
00184	SILYMARIN - 100 mg, 50 caps	9.25	6.94		
	Buy 4 bottles, price each	8.25	6.19		
01502	SKIN RESTORING CERAMIDES w/LIPOWHEAT™ - 30 liquid caps	25.00	18.75		
	Buy 4 bottles, price each	23.00	17.25		
00961	SODZYME® w/GLISODIN® AND WOLFBERRY - 90 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	24.00	18.00		
00657	SOLARSHIELD SUNGLASSES - 1 pair smoke color	12.99	9.74		
	Buy 2 pairs, price each	11.50	8.63		
01097	SOY EXTRACT (ULTRA) - 150 veg. caps	87.00	65.25		
	Buy 4 bottles, price each	78.00	58.50		
00286	SOY PROTEIN CONCENTRATE - 16 oz of powder	12.00	9.00		
	Buy 4 jars, price each	10.63	7.97		
01099	STABILIMUM® 200 - 30 caps	30.00	22.50		
00432	STEVIA EXTRACT - 100 packets, 1 gram each	9.95	7.46		
	Buy 4 boxes, price each	9.00	6.75		
00351	ST. JOHN'S WORT EXTRACT - 300 mg, 60 caps	10.98	8.24		
	Buy 4 bottles, price each	10.00	7.50		
00327	ST. JOHN'S WORT EXTRACT (PLANETARY) - 600 mg, 60 tablets	16.75	12.56		
	Buy 4 bottles, price each	13.85	10.39		
01476	STRONTIUM - 750 mg, 90 veg. caps	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		
00971	SUN PROTECTION SPRAY W/BETA GLUCAN - SPF30 - 6 oz	14.95	11.21		
	Buy 4 bottles, price each	13.50	10.13		
00747	SUNGLASSES (OVERXCAST POLARIZED) - gray color, large	27.00	20.25		
	Buy 2 pairs, price each	21.00	15.75		
00748	SUNGLASSES (OVERXCAST POLARIZED) - gray color, medium	27.00	20.25		
	Buy 2 pairs, price each	21.00	15.75		
00758	SUPER ABSORBABLE SOY ISOFLAVONES - 60 caps	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
01408	SUPER SAW PALMETTO/NETTLE ROOT W/BETA-SITOSTEROL 60 softgels	28.00	21.00		
	Buy 4 bottles, price each	26.00	19.50		
	Buy 12 bottles, price each	24.00	18.00		

SUB-TOTAL OF COLUMN 16

Buyers Club Order Form

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
S CONTINUED					
01407	SUPER SAW PALMETTO W/BETA-SITOSTEROL - 30 softgels Buy 12 bottles, price each	\$15.00 12.00	\$11.25 9.00		
00578	SUPER SELENIUM COMPLEX - 200 mcg, 100 caps Buy 4 bottles, price each Buy 12 bottles, price each	12.00 10.00 9.00	9.00 7.50 6.75		
00674	SYTRINOL™ - 60 softgels Buy 4 bottles, price each	32.00 28.00	24.00 21.00		
T					
TAL•SHI™ COSMETICS • For information please call 1-800-544-4440 or visit www.lifeextension.com					
01062	TART CHERRY - 600 mg, 60 caps	\$18.95	\$14.21		
00199	TAURINE - 1000 mg, 50 caps Buy 4 bottles, price each	8.95 8.00	6.71 6.00		
00133	TAURINE POWDER - 300 grams Buy 4 bottles, price each	20.00 16.88	15.00 12.66		
01304	THEAFLAVIN STANDARDIZED EXTRACT - 30 veg. caps Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00555	(L) THEANINE - 100 mg, 60 caps Buy 4 bottles, price each	24.00 20.50	18.00 15.38		
01038	THERALAC - 30 caps	44.95	33.71		
00224	THYMIC IMMUNE FACTORS - 100 caps Buy 4 bottles, price each	18.00 14.00	13.50 10.50		
00668	THYROID FORMULA™ (METABOLIC ADVANTAGE) - 100 caps	21.95	16.46		
00349	TMG POWDER - 50 grams Buy 4 bottles, price each	14.00 11.00	10.50 8.25		
00359	TMG - 500 mg, 180 tablets Buy 4 bottles, price each	18.00 15.50	13.50 11.63		
00366	TOCOTRIENOLS - (Rice) 50 mg, 60 softgel caps Buy 4 bottles, price each	39.95 36.00	29.96 27.00		
00781	TOCOTRIENOLS WITH SESAME LIGNANS - 60 softgels Buy 4 bottles, price each	38.00 36.00	28.50 27.00		
01400	TOCOTRIENOLS (SUPER-ABSORBABLE) - 60 softgels Buy 4 bottles, price each	30.00 28.00	22.50 21.00		
01278	TOOTHPASTE - 4 oz (Mint) Buy 4 tubes, price each	9.50 8.67	7.13 6.50		
01274	TOTAL SUN PROTECTION CREAM W/BETA GLUCAN - 4 oz Buy 4 tubes, price each	28.00 25.20	21.00 18.90		
01468	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT - 60 veg. caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		
01469	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT W/RESVERATROL -60 veg. caps Buy 4 bottles, price each	32.00 29.60	24.00 22.20		
01046	TRIPLE ACTION UNDER EYE REJUVENATOR - 0.5 oz pump Buy 4 boxes, price each	24.00 22.00	18.00 16.50		
00866	TRYPTOPURE® L-TRYPTOPHAN - 500 mg, 90 veg. caps Buy 4 bottles, price each	38.00 34.00	28.50 25.50		
01202	TRYPTOPURE® PLUS (OPTIMIZED) - 90 veg. caps Buy 4 bottles, price each	40.00 36.00	30.00 27.00		
01516	TWO-PER-DAY - 60 veg. tablets Buy 4 bottles, price each	9.95 9.00	7.46 6.75		
01515	TWO-PER-DAY - 120 veg. tablets Buy 4 bottles, price each	18.95 17.00	14.21 12.75		
00326	L-TYROSINE - 500 mg, 100 tablets Buy 4 bottles, price each	12.50 11.42	9.38 8.57		

SUB-TOTAL OF COLUMN 17

No.		Retail Each	Member Each	Qty	Total
U					
* 00310	UDO'S OIL 3-6-9 BLEND - 17 fl oz	\$27.49	\$21.99		
* 00311	UDO'S 3-6-9 OIL BLEND - 180 caps	33.79	27.03		
* 00322	UDO'S CHOICE® WHOLESOME FAST FOOD - 16 oz bottle	27.49	21.99		
01061	ULTIMATE FLORA ADVANCED IMMUNITY PROBIOTICS - 30 caps	29.99	22.49		
V					
00213	VANADYL SULFATE - 7.5 mg, 100 tablets Buy 4 bottles, price each	\$15.00 12.50	\$11.25 9.38		
00252	VELVET DEER ANTLER - 250 mg, 30 caps Buy 4 bottles, price each	36.00 34.00	27.00 25.50		
00408	VENOTONE - 60 caps Buy 4 bottles, price each	18.95 16.00	14.21 12.00		
00427	VINPOCETINE - 5 mg, 100 tablets Buy 4 bottles, price each	18.00 14.00	13.50 10.50		
01033	VISION OPTIMIZER - 90 caps	29.95	22.46		
01098	VITAL GREENS MIX - 319.5 grams powder Buy 4 jars, price each	48.00 44.00	36.00 33.00		
01219	VITAMIN A NUTRISORB - 0.6 fl oz	27.00	20.25		
00091	VITAMIN B1 CAPS - 500 mg, 100 caps Buy 4 bottles, price each	16.99 15.17	12.74 11.38		
00093	VITAMIN B2 CAPS - 100 mg, 100 caps Buy 4 bottles, price each	12.99 11.88	9.74 8.91		
00096	VITAMIN B3 NIACIN - 1000 mg, 100 caps Buy 4 bottles, price each	12.75 12.00	9.56 9.00		
00372	VITAMIN B3 NIACIN - 500 mg, 100 caps Buy 4 bottles, price each	7.65 6.65	5.74 4.99		
00098	VITAMIN B5 - 500 mg, 100 caps (Pantothenic Acid) Buy 4 bottles, price each	10.50 9.38	7.88 7.04		
00556	VITAMIN B6 - 250 mg, 100 caps Buy 4 bottles, price each	12.50 11.00	9.38 8.25		
00361	VITAMIN B12 - 500 mcg, 100 lozenges Buy 4 bottles, price each	8.75 7.25	6.56 5.44		
00927	VITAMIN C WITH DIHYDROQUERCETIN - 1000 mg, 250 tablets Buy 4 bottles, price each	25.50 23.25	19.13 17.44		
00084	VITAMIN C (BUFFERED) POWDER - 454.6 grams Buy 4 bottles, price each	23.95 22.00	17.96 16.50		
00864	VITAMIN D3 - 2000 IU, 1 fl oz Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
00251	VITAMIN D3 - 1000 IU, 250 caps Buy 4 bottles, price each	12.50 11.25	9.38 8.44		
00713	VITAMIN D3 - 5000 IU, 60 caps Buy 4 bottles, price each	11.00 9.90	8.25 7.43		
01418	VITAMIN D3 - 7000 IU, 60 caps Buy 4 bottles, price each	14.00 12.60	10.50 9.45		
01372	VITAMIN D3 w/SEA-IODINE™ - 5000 IU, 60 veg. caps Buy 4 bottles, price each	14.00 12.50	10.50 9.38		
01472	VITAMINS D AND K w/SEA-IODINE™ - 60 veg. caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		
00063	VITAMIN E (PURE NATURAL) - 400 IU, 100 caps Buy 4 bottles, price each Buy 10 bottles, price each	18.75 17.25 15.00	14.06 12.94 11.25		

SUB-TOTAL OF COLUMN 18

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No.		Retail Each	Member Each	Qty	Total
01225	VITAMIN K2 (LOW-DOSE) - 45 mcg, 90 softgels	\$18.00	\$13.50		
	Buy 4 bottles, price each	16.00	12.00		
Z					
01585	ZEAXANTHIN W/LUTEIN & MESO-ZEAXANTHIN AND C3G (SUPER) - 60 softgels	\$22.00	\$16.50		
	Buy 4 bottles, price each	19.80	14.85		
01586	ZEAXANTHIN W/LUTEIN & MESO-ZEAXANTHIN PLUS ASTAXANTHIN AND C3G (SUPER) - 60 softgels	42.00	31.50		
	Buy 4 bottles, price each	38.00	28.50		
00061	ZINC LOZENGES - 75 lozenges	9.50	7.13		
	Buy 4 bottles, price each	6.75	5.06		
01051	ZYFLAMEND - 120 softgels	60.95	45.71		
01029	ZYFLAMEND EASYCAPS - 180 softgels	31.95	23.96		

SUB-TOTAL OF COLUMN 19

* These products are not 25% off retail price.

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

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††Can only be sold in the USA.

†††Member pricing not valid on this item.

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A Whole Life-Cycle Mushroom Formula for Healthy Liver Function & Detoxification*

The Mushroom Life Cycle

The mushroom life cycle includes three distinct phases: mycelium, fruiting body, and spore. Mushrooms spend most of their life as mycelium, extracting nutrients from their environment and protecting themselves from invaders. Many beneficial compounds known as extracellular compounds are secreted by the mushroom during this critical life process. As the mushroom readies to reproduce, most species form a fruiting body — a structure most people would refer to as the actual “mushroom” since it’s the part of fungi most readily visible. Many species’ fully formed fruiting bodies end their life cycle with the rebirth of the mushroom — when spores are formed and released to begin the life cycle anew. Before being released, spores are equipped with their own arsenal of protective compounds and nutrients which will allow them to survive harsh conditions and thrive in new environments.

The Benefits of Whole

New Chapter® believes in the wisdom of nature and the promise of whole food. We believe the combination and preservation of the whole mushroom — and its complete life cycle — is essential. Many modern products isolate the wisdom of the whole — and focus on one life stage of the mushroom cycle or heavily refine and extract specific compounds from the mushroom. Focusing on just mycelium, for example, ignores the many beneficial and unique compounds that exist only in the fruiting body or spore phase. If mushrooms are selectively refined through extraction, their ability to function as nourishing superfoods can be lost.

Mushrooms are Marvels of Mother Nature

The number of distinct species is a matter of debate, with estimates ranging from 30,000 to 1.5 million. What is not disputed, however, is the close relationship between mushrooms and humans, and the many benefits mushrooms can provide for overall health and wellness.

 **100% GROWN & CRAFTED IN THE USA**

Liver Force 60 Softgels Item# 01227

Retail Price: \$34.95 Member Price: \$26.21

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

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**Liver Force combines species both
revered traditionally and researched
extensively for liver support.***

Human culture has evolved with mushrooms and many societies have relied on mushrooms to provide a wholesome food source. Over thousands of years of trial and error, many cultures have also discovered health benefits associated with consuming mushrooms. These health benefits are almost as broad as those found in the plant

kingdom — and range from immune and respiratory support to promoting healthy liver and brain function.* Societies soon discovered mushrooms can boost vitality, wellness, endurance, and even sexual function.* Today, more than fifty years of research has confirmed that mushrooms are indeed a unique

class of natural therapeutics capable of addressing a wide range of health concerns.

New Chapter LifeShield Mushroom formulas deliver tonic mushrooms’ whole protective shield through the combination of mycelium, their extracellular compounds, fruiting bodies, and spores. Each stage of a mushroom’s life cycle adds critical nutrients and protection for the mushroom. The combination of these stages creates the activated LifeShield to promote your health and wellness.*

LifeShield® Liver Force

LifeShield Liver Force is formulated with select species of tonic mushrooms, including Coriolus (Turkey Tail), to promote healthy liver function and detoxification.* It combines species both revered traditionally and researched extensively for liver support.*



 **NEWCHAPTER Organics®**

* 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.

Cleanse SMART

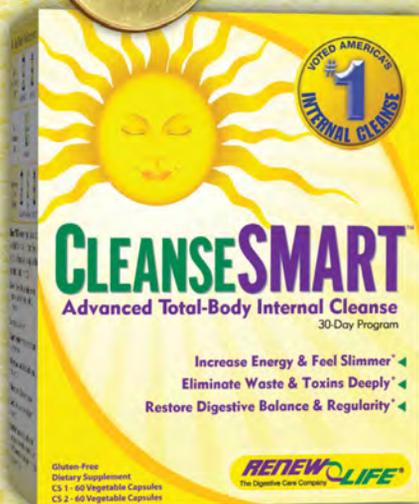
The internal cleansing
formula that lives
up to its name.



Every day, we are exposed to an unprecedented amount of harmful toxins in the air, water, and even the foods we eat. As we age, these toxins can build up in our bodies and may cause fatigue, constipation, weight gain, skin problems and even brain fog. In fact, certain pollutants may actually accelerate aging, as occurs with free radical damage¹, and the leading causes of death—heart disease, cancer and lung disease—can all be worsened by environmental contaminants.^{2,3,4} For powerful protection in this dirty world, turn to CleanseSMART, America's #1 internal cleanse.



Voted #1
Internal Cleanse
for the last
7 years in a row.[†]



CleanseSMART, 30-day, 2-part kit
Item #01078
Retail Price \$31.99
Member Price \$23.99

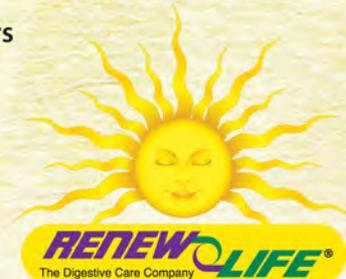
The advanced CleanseSMART program works deeply, helping your body to rid itself of toxins and pollutants that impact your health every day. In 30 days, it helps you feel slimmer, restores regularity, improves digestion, increases energy and decreases bloating—everything you want in a powerful total-body cleanse.* A combination of 23 herbs and minerals—including 9 concentrated herbal extracts—CleanseSMART allows for a stronger, more effective cleanse designed to support the body's seven channels of elimination with special emphasis on the colon and the liver.* **Take your cleanse to the next level and experience the difference!**

- ✓ Advanced 30-day, 2-part internal cleanse
- ✓ Improves regularity without harsh laxatives*
- ✓ Helps eliminate toxins with deep acting herbal extracts*
- ✓ Ideal for experienced cleansers or first timer cleansers with occasional constipation*
- ✓ Contains no added ingredients or fillers

Make the intelligent choice.
Try CleanseSMART today!

LifeExtension[®]

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



[†] Vitamin Retailer magazine VITY Awards 2004-2010

¹ D. Harman, "Role of free radicals in aging and disease." Ann NY Acad Sci. 1992 Dec 26;673:126-41

² N. Kunzli, et al., "Ambient Air Pollution and Atherosclerosis in Los Angeles." Environ Health Perspect. 2005 February; 113(2): 201-206

³ http://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp08-09rpt/PCP_Report_08-09_508.pdf

⁴ <http://www.niehs.nih.gov/health/impacts/respiratory/cfm>

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Don't suffer the harsh side effects of antibiotics.

Take Theralac[®].

ANTIBIOTICS AND THERALAC WORK HAND IN HAND.

Many people taking antibiotics suffer disruption of their intestinal flora and, consequently, their digestive regularity suffers. Antibiotics reduce the numbers of beneficial probiotic bacteria and may cause undesirable bacteria to flourish.

One particular adverse bacteria, *Clostridium difficile*, or *C. diff.*, is known to be resistant to antibiotics and can cause severe diarrhea. The best way to stop the havoc *C. diff.* wreaks is to **overwhelm it with Theralac.**

THERALAC IS CLINICALLY PROVEN TO WORK.

Theralac has been proven in a



clinical study to **maintain normal intestinal flora while people were on antibiotics.**

In a double-blind, placebo-controlled study subjects took the equivalent of two Theralac capsules daily for two weeks while on the powerful antibiotic Augmentin[®]. The results were amazing! **The Theralac group saw no disruption of intestinal**

flora while the non-Theralac[®] group experienced substantial disruption.

Theralac assists with nutrient absorption and **helps regulate peristaltic action.** Theralac helps maintain estrogen, cholesterol and glycemic levels in those already within normal range.

LEADING DOCTORS RECOMMEND THERALAC.

Dr. Russell Blaylock, MD, recommends taking **2-4 Theralac capsules daily while on antibiotics**, continuing for two weeks following antibiotic therapy. And **key doctors of Lyme disease patients** rely on Theralac to

help patients suffering from severe antibiotic associated diarrhea.

So to ensure digestive health while taking antibiotics, order Theralac today by calling **800-544-4440** or visit **LifeExtension.com.**

Then take your antibiotics and avoid unintended consequences.



RECOMMENDED 10 SEPARATE TIMES IN THE BLAYLOCK WELLNESS REPORT

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L **OWER PRICES** – Life Extension Pharmacy® can save you over **80%** on common prescriptions such as metformin and simvastatin. In fact, while CVS offers **90 40mg** tablets of simvastatin for **\$154.99**, Life Extension Pharmacy® sells the same dosage for **\$21.23**. An **86%** reduction!*

I **NDIVIDUAL NEEDS** – While chain pharmacies deal in volume, Life Extension Pharmacy® deals in *value*. Our pharmacists spend quality one-on-one time with customers to answer any and all questions. We also offer customized compounded medications, including hormone replacement therapy.

F **OUNDATION PARTNERSHIP** – Life Extension Pharmacy® is partnered with the Life Extension Foundation®, enabling us to provide *cutting edge integrative care*. We also provide access to *peer-reviewed scientific literature* through the Foundation, as well as vital information about *drug interactions, side effects, lower-cost alternatives*, and, in some cases, *safer medications*.

E **XCEPTIONAL KNOWLEDGE** – In addition to offering safety and prescription advice, our pharmacists are trained to *think independently*, and will explain how *vitamins, minerals, hormones, and natural nutrients* may be used to work synergistically with your drugs to help you achieve optimal health.

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to transfer an existing one.

* Prices as of April 1, 2011. Prices subject to change.

**To find out how you may benefit by
transferring your prescriptions,
call 1-877-877-9700.**

Life Extension Pharmacy, Inc. is a licensed pharmacy based in Fort Lauderdale, FL. A portion of prescription proceeds goes to the Life Extension Foundation, a nonprofit organization.



WHAT'S INSIDE

Visit us at www.LifeExtension.com

LifeExtension[®] Magazine

THREE MILLION NEEDLESS CANCER DEATHS



PAGE 50 • In **1983**, Life Extension[®] advised daily low-dose aspirin therapy. The **FDA** responded by threatening criminal charges. Now an **Oxford** analysis has *conclusively* shown it slashes cancer death risk by **20%**—which means *millions* have died because of FDA censorship.

OPTIMIZE YOUR SEX HORMONE STATUS



PAGE 30 • Testosterone and estrogen imbalances (in men and women) result in age-related pathologies. Recent studies reveal a little-known blood marker that interacts with sex hormones—and how testing for it can help optimize sex hormone status.

THE LONGEVITY FACTOR IN THE JAPANESE DIET



PAGE 40 • The Japanese are amongst the longest-lived people in the world, incredible Okinawans achieving healthy life spans. Scientists have now identified nutrients in **seaweeds** native to the traditional Japanese diet with potent **anti-aging benefits**.

EGREGIOUS HOSPITAL INEPTITUDE



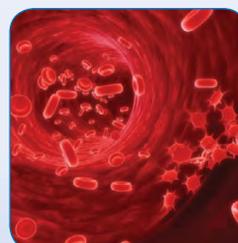
PAGE 7 • **William Faloon** was recently hospitalized and witnessed such egregious *inefficiency* and *ineptitude* that he made significant lifestyle changes—not only for health reasons, but also to avoid having to endure hospital confinement again.

NATURAL WAYS TO PREVENT A STEALTH KILLER



PAGE 62 • The lifetime risk of developing high blood pressure is **greater than 90%** in adults 55 years and older, often resulting in **stroke, kidney damage, and heart attack**. A recent Cambridge study validates use of certain nutrients to combat chronic hypertension.

BRANCHED CHAIN AMINO ACIDS GROW NEW MITOCHONDRIA



PAGE 74 • Fitness enthusiasts use **branched chain amino acids** (BCAAs) to boost strength and performance. In a recent animal model, BCAAs increased life span in part by growing new mitochondria, giving *longevity* enthusiasts a reason to take it as well.