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March 2013

Defend Against Looming Physician Shortage

**Does Your Body
Need Testosterone
Therapy?**

**Slash Your Risk
of Alzheimer's**

**Carnitine *Restores*
Cellular Function**

**LEEZA
GIBBONS**

***Her War Against
Alzheimer's Disease***

\$4.99



0 09281101139 2

Super Potent Multi-Nutrient Formula

Compare CENTRUM® to TWO-PER-DAY:

Sample Ingredient Comparison	LIFE EXTENSION® TWO-PER-DAY	Centrum® Silver® Adults 50+
Vitamin C	500 mg	60 mg
Vitamin D	2,000 IU	500 IU
Vitamin B1	75 mg	1.5 mg
Vitamin B2	50 mg	1.7 mg
Vitamin B6	75 mg	3 mg
Vitamin B12 (as methylcobalamin)	300 mcg	25 mcg
Niacin (as niacinamide)	50 mg	20 mg
Pantothenic acid	100 mg	10 mg
Vitamin E	100 IU (natural)	50 IU (synthetic)
Natural Folate	400 mcg	400 mcg (synthetic)
Zinc	30 mg	11 mg
Selenium	200 mcg	55 mcg
Lutein	5,000 mcg	250 mcg
Lycopene	2,000 mcg	300 mcg
Biotin	300 mcg	30 mcg
Boron	3,000 mcg	150 mcg
Chromium	200 mcg	45 mcg
Molybdenum	100 mcg	45 mcg
Magnesium	100 mg	50 mg
Manganese	2 mg	2.3 mg
Iodine	150 mcg	150 mcg
Potassium	25 mg	80 mg
Vitamin A (as beta-carotene)	4,500 IU	1,000 IU
Vitamin A (preformed)	500 IU	1,500 IU
Choline (as bitartrate)	20 mg	(none)
Inositol	50 mg	(none)
PABA	30 mg	(none)
Calcium	12 mg	220 mg
Alpha Lipoic Acid	125 mg	(none)

Commercial "one-a-day" supplements provide very low potencies.

The box to the left reveals how much more potent **Two-Per-Day** is compared to the leading commercial multi-vitamin.

Compared to conventional "one-a-day" products, **Life Extension® Two-Per-Day** contains up to **50 times more** potency! This **Two-Per-Day** formula is available in tablet or capsule form.

Commercial supplements often contain the cheapest form of nutrients that don't provide optimal benefits. For example, the 50 IU of synthetic vitamin E contained in **Centrum® Silver® Adults 50+** may provide relatively little vitamin E to the bloodstream compared to the 100 IU of natural vitamin E in **Two-Per-Day**.

Two-Per-Day provides the three most effective forms of **selenium** which are sodium selenite, L-selenomethionine, and Se-methyl L-selenocysteine.



Compared to Centrum® Silver® Adults 50+, Two-Per-Day Tablets or Capsules provide about:

- 4 times more Vitamin D
- 8 times more Vitamin C
- 2 times more Vitamin E
- 10 times more Biotin
- 20 times more Boron
- 4 times more Selenium
- 25 times more Vitamin B6
- 50 times more Vitamin B1
- 12 times more Vitamin B12
- More than twice as much niacin, zinc, and many other nutrients

A bottle containing 120 tablets of **Two-Per-Day Tablets** retails for \$20. If a member buys four bottles, the price is reduced to **\$13.50** per bottle. (Item #01715) A bottle containing 120 capsules of **Two-Per-Day Capsules** retails for \$22. If a member buys four bottles, the price is reduced to **\$15** per bottle. (Item #01714)

Each bottle of **Two-Per-Day** lasts **60 days**, so members can obtain the benefits of this high-potency formula for as little as **\$6.75 per month**.

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

To order Life Extension Two-Per-Day Tablets or Two-Per-Day Capsules, call 1-800-544-4440 or visit www.LifeExtension.com

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.



Ratings based on results of the 2012 ConsumerLab.com Survey of Supplement Users. More information at www.consumerlab.com.

REPORTS

26 CARNITINE RESTORES CELLULAR FUNCTION

Carnitine levels decline with age. The result is reduced cellular energy production—a major cause of degenerative disease. A wealth of published data documents the ability of **carnitine** to improve insulin sensitivity, mitochondrial function, and cardiovascular health.

40 SLASH YOUR RISK OF ALZHEIMER'S DISEASE

Every 68 seconds, an American develops Alzheimer's. There is no cure. Fortunately, scientists are uncovering hormones, nutrients, and drugs that take aim at the multiple pathologies involved in the development of Alzheimer's, thus providing a roadmap as to what maturing humans can do to prevent this epidemic calamity.

62 LEEZA GIBBONS TAKES PERSONAL ACTION AGAINST ALZHEIMER'S

After watching her mother suffer the devastation of Alzheimer's, Emmy award winner Leeza Gibbons founded *Leeza's Place* to provide resources for those caring for Alzheimer's patients. Leeza took her fight against Alzheimer's further by campaigning for innovative stem cell research and initiating a personal prevention regimen that includes diet, exercise, and nutrients. With Leeza's courage and vision, changes are occurring in the care and treatment of Alzheimer's patients.

80 HIGHLIGHTS FROM THE WIRELESS CONNECTIVITY IN MEDICAL DEVICES CONFERENCE

Doctors and patients are about to experience an electronic revolution in medicine. New digital devices can now help overworked doctors provide better care and monitoring for their patients, avoiding deadly medication errors and misdiagnosis. Recent advances include implantable systems that deliver exact amounts of medication, electronic seizure stoppers, and the ability to transmit CAT scans to any doctor's iPhone.



7 ON THE COVER

DEFEND YOURSELF AGAINST IMPENDING DOCTOR SHORTAGE

Today's **over-regulated** healthcare system has grown so **expensive** that the average person cannot afford it. Nor can businesses or governments. A new law is supposed to provide virtually every American with medical coverage. But no one knows where the **physicians** will come from to treat **30 million** newly insured individuals. Find out about the looming **physician shortage**, how to **reverse** this deadly trend, and what you can do to reduce your odds of becoming a victim.

DEPARTMENTS

19 IN THE NEWS

Tea drinkers have lower mortality; increased vitamin D reduces tooth decay; CoQ10 improves ejection fraction; low intake of fruits and vegetables decreases telomere length; new study on omega-3 brain benefits and more.

71 ASK THE DOCTOR

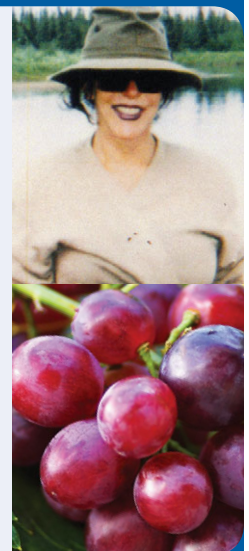
Worldwide, testosterone levels are declining and usually under diagnosed. Aaron E. Katz, MD, Chairman of Urology at Winthrop University Hospital in Mineola, New York, discusses the prevalence of testosterone deficiency and provides three steps to follow with your doctor in determining if testosterone supplementation is right for you.

89 PROFILE

At 73, **Life Extension**® member Virginia Waitley, credits her healthy lifestyle and numerous supplements for giving her the energy of someone half her age. Virginia is a role model for successful aging.

95 SUPER FOODS

The skin of the grape is a rich source of cancer-fighting **proanthocyanidins**, which possess **50** times more antioxidant power than vitamin C. Research demonstrates that grapes and their compounds provide potent protection against cardiovascular disease, cancer, and age-related cognitive decline.



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Discover the European "Secret" to **Youthful, Healthy Legs**

Combat Unsightly Veins with This High-Potency Extract

30 YEARS OF CLINICAL EVIDENCE BRINGS LONG-AWAITED RELIEF

It is estimated that *half* of all women in the United States will develop unsightly veins by age 50.¹ While dermatologists often suggest surgery to correct this "age-related" issue, European women have enjoyed access to a **natural solution for 30 years!**

Life Extension® offers American women the same extract *without* a prescription. No more compression bandages or stockings. Instead, experience the same beautifying effects European women have been raving about for three decades—**naturally!**

Derived from the sweet orange, **European Leg Solution** featuring **Certified Diosmin 95** contains a flavonoid called **diosmin** and is available in a one tablet per day formula.

MICRONIZED FOR GREATER EFFECTIVENESS

In order to derive any significant benefit, bioactive diosmin extract **must be able to reach veins directly.**

Life Extension®'s proprietary extract undergoes a complex, highly purified process called **micronization**. It yields the only *form* of diosmin clinically proven to support healthy vascular function in the legs.^{1,2}

This scientifically controlled, multi-phase technique *radically reduces* the size of the standard diosmin particles contained in each tablet, from **100 microns** to less than **45 microns**. The result is an optimally bioavailable standardized extract. This ensures rapid, efficient delivery of diosmin to the bloodstream, enabling enhanced *penetration* of the delicate inner lining of the veins.

As with so many age-related conditions, *inflammation*³ is the chief culprit behind the presence of unsightly veins.

European Leg Solution featuring **Certified Diosmin 95** offers effective protection by **disrupting this inflammatory response.**

THE PREFERRED TREATMENT AMONG EUROPEAN WOMEN FOR BEAUTIFUL LEGS IS HERE

Life Extension's **European Leg Solution** featuring **Certified Diosmin 95** provides the same pharmaceutical grade extract used by millions throughout Europe. The retail price for a bottle containing 30 600 mg vegetarian tablets is \$20. If a member buys four bottles, the cost is only **\$13.50** per bottle.

Contains corn.

Caution

If you are taking anti-coagulant or anti-platelet medications, or have a bleeding disorder, consult your healthcare provider before taking this product.



Item # 01042

Six Ways Life Extension's **European Leg Solution** featuring **Certified Diosmin 95** Works for You

1. Maintains healthy blood flow through your capillaries—the most *fragile* of your blood vessels.
2. Maintains tone and elasticity of your veins—the key to sustained vascular health.
3. Eases the effects of circulating cytokines that promote inflammation.
4. Safeguards collagen and elastin against oxidative damage.
5. Enjoys an outstanding safety record.
6. Produces results in just 1–2 weeks, with a single **600 mg** tablet taken each morning.²

*Product not for sale outside the United States.

To order **European Leg Solution** featuring **Certified Diosmin 95**,
call 1-800-544-4440 or visit www.LifeExtension.com

References: 1. <http://www.womenshealth.gov/faq/varicose-spider-veins.cfm>. 2. *Angiology*. 2003 Jul-Aug;54 Suppl 1:S33-44.
3. *Eur J Vasc Endovasc Surg* 2004;28:484-93.

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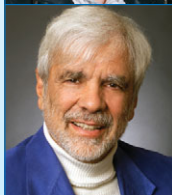
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Item # 01596

Your Skin's Internal Moisturizer

Ceramides are essential for preserving healthy-looking skin.^{1,2} That's why they're included in so many anti-aging face creams.

Your body's production of **ceramides** declines with age.³ That's bad news, since ceramides make up **35-40%** of the binding matrix that maintains moisture balance and protects the skin's surface.⁴ It's therefore critical that ceramides lost to aging are replaced.

Restore Ceramides Naturally from Within!

The **ceramides** that young skin naturally produces to retain its supple appearance are identical to those present in **wheat**!

Wheat-derived oils have been used *topically* for centuries as a natural moisturizer. But you can't get enough ceramides from topically applied wheat oil to have a long-term impact on your skin's appearance. And they don't appear in sufficient concentration in your diet.

That's why **Life Extension**® brought together these skin-nourishing oils in a concentrated **oral formula** called **Skin Restoring Phytoceramides with Lipowheat™**.

Lipowheat™ is a proprietary **ceramide blend** that offers **nutritional** support for aging skin to complement the topical products you may already be using.

The Moisturizing Pill the Japanese Have Enjoyed for a Decade!

Lipowheat™ ceramides have been available to Japanese women as a functional food since 2000.⁵ The hydrating action of **Lipowheat™** ceramides have proven effective in clinical trials.

To take one example, after just three months ingesting **200 mg** per day of **Lipowheat™**, a group of people suffering from dry, flaking skin reported dramatic improvement in the look and feel of their skin. These results were verified by electrochemical analysis showing that **95%** of participants exhibited improved skin hydration. Even better, all subjects who at the onset of the study experienced chronic itching reported sharply decreased itching or **complete elimination** of the problem by the end of the study!⁵

Aging Americans can now offset the visible impact of the gradual decline in their ability to produce enough ceramides by using **Skin Restoring Phytoceramides with Lipowheat™**.

One bottle containing 30 **350 mg** vegetarian liquid capsules of **Skin Restoring Phytoceramides with Lipowheat™** retails for \$25. If a member buys four bottles, the price is reduced to **\$17.25**. Contains wheat.

Lipowheat™ is a trademark of LAVIPHARM Group of Companies.

**To order Skin Restoring Phytoceramides with Lipowheat™
call 1-800-544-4440 or visit www.LifeExtension.com**

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The Looming Doctor Shortage



BY WILLIAM FALOON



Government **regulation** results in high prices, poor quality, and lack of innovation.

A frequent complaint in the most **regulated** economies (i.e. **communistic**) is persistent **shortages** of everything.

When government exerts absolute control, waiting in line for essentials becomes a routine event. In extreme cases, the outcome is **famine**, such as has occurred in **North Korea** in recent times.

Some Americans still believe that difficult problems can be solved if government enacts more **regulations**.

The problem is that today's **over-regulated** healthcare system has grown so **expensive** that the average person cannot afford it. Nor can businesses or governments.

Instead of repealing **regulations** that cause **sick-care costs** to be so dreadfully overpriced, the **federal government** thought that by writing 900+ pages of new **regulations** (The Affordable Care Act), the problem would go away.¹



We at *Life Extension*® have a **33-year** track record of predicting future medical-related events. Our early warnings about **over-regulation** were ignored. The result is that **sick-care costs** are a major factor behind individual, business, and government insolvencies.

This article discusses the coming **physician shortage**, what can be done to **reverse** this deadly trend, and how you can reduce your odds of becoming a victim.

Economic Truths Ignored

As the population ages, demand for medical services is sharply escalating. Little has been done, however, to provide a corresponding increase in supply.

Increased demand without additional supply equals **shortages**.

When it comes to **shortages of medical services**, the tragic result is needless suffering and death.

The Affordable Care Act, which is supposed to provide virtually every American with medical coverage, is now coming into force. But no one knows where the **physicians** will come from to

treat these “**newly insured**” individuals.²

In many parts of the country, hoards of the newly insured, along with people who are merely growing old, are creating **severe** physician shortages.¹

Doctor Shortages Not a New Problem

People exposed to conventional healthcare are aware that most doctors lack the time to provide optimal care. This is evidenced by delays in getting appointments, jammed waiting rooms, and long hold-ups in exam rooms.

Some physicians aren't taking new patients, while others crowd whoever calls into a clogged schedule that does not allow sufficient time to treat each patient.

You can drive your car in for a “10-minute oil change,” but you are unlikely to get that much time with most physicians, even though your life may be on the line.

As more scientific advances occur in the medical arena, the inability of physicians to devote enough time with their patients will result in greater numbers of tragic outcomes.

Warnings of **physician shortages** are no longer confined to the pages of this magazine. These dire predictions are now coming from the medical establishment itself!

The Frightening Numbers

The *Association of American Medical Colleges* estimates that within two years the United States will have **62,900 fewer** doctors than needed. By 2025, the shortfall of doctors will exceed **100,000**.³

Mainstream experts, including many who supported the **Affordable Care Act**, say there is little that anyone can do to close the gap as the law will extend coverage to over **30 million** Americans.¹

It typically takes a decade to train a doctor. Even if medical schools significantly increased enrollment, they would not come close to generating enough physicians to treat the newly insured **and** the rapidly aging population.

High tuition costs, stringent academic requirements, and brutal internships create barriers that limit the supply of new doctors. The **Harvard School of Medicine**, for example, accepts only **165** new admissions each year, and not all these students graduate into medical practice.⁴

Some in the mainstream describe a **doctor shortage** as an “invisible problem.” Patients still get care, they say, but the process is often slow and difficult. It can force patients to drive long distances, languish on waiting lists, overuse emergency rooms and even forgo care. Those who delay treatment place an even greater future burden on what is an already broken sick-care system.

Even more ominous for many of the “newly insured” is that since

2008, more than **50%** of **primary care** doctors have stopped accepting new Medicaid patients.³ The consequence will be that certain patients entitled to free healthcare may not find a willing physician.⁵

To avoid this looming catastrophe of **doctor shortages**, radical changes must be made in the way sick-care is dispensed in the United States.

Free Market Solutions

The media is turning these “doctor shortages” into headline news stories and stating the problem is unsolvable.

Those involved in preventive medicine have long known that a combination of poor lifestyle choices and an aging population would create shortages of all kinds of medical services. **The Affordable Care Act** only accelerates this impending health disaster.

I have written three books and authored dozens of articles that describe the ominous shortage of competent medical care and how

this can be resolved through **free market** regulatory reform. It is somewhat encouraging that even the **FDA** is considering some of the changes we at *Life Extension* advocated more than thirty years ago.

For example, many medicines that currently require a physician's prescription can be safely dispensed by pharmacists, thereby eliminating the need for doctors to squander their time on minor problems. In other cases, empowered patients could access reliable websites or telephone help lines that could suggest lower-cost versions to what now are **prescription-only** drugs.

Pros Versus Cons of Self-Prescribing

One can always come up with cynical scenarios whereby an uninformed patient will inappropriately **self-prescribe** a drug and suffer an adverse outcome.

We have argued the opposite, i.e. an empowered patient can **self-prescribe** certain medications more effectively than with conventional physician oversight.

Let's look at **hypertension**, which is one of the most under-treated diseases in the modern world. Those who fail to keep their **blood pressure** in *optimal* ranges suffer sharply higher rates of **stroke**,⁶⁻⁸ **heart attack**,^{9,10} and **kidney failure**.¹¹⁻¹⁴

Hypertension is often described as a “silent killer” because it seldom produces symptoms. Conventional medicine relies on doctor's offices to check every patient's blood pressure to identify those who are hypertensive. Doctors should recognize any reading above 115/75 as a cause for concern and recommend lifestyle changes (such as losing weight) and/or initiate treatment with an anti-hypertensive medication.^{15,16}

The reality is that doctors today don't usually worry about their patient's blood pressure until it reaches **140/90**—a dangerously high level. Most doctors will prescribe blood pressure medication and instruct the patient to return for a follow-up. The patient may or may not fill the script. If the drug causes an unpleasant side effect, the patient may discontinue it and not go back to the doctor.¹⁷

Even if a patient is compliant in losing some weight and taking their medication, they may not know if they are achieving optimal **24-hour blood pressure control**. They may, for instance, take their blood pressure pill in the morning and see their doctor a few hours later. The patient's blood pressure might be fine that hour, but as the drug wears off, they may spend more than half their day in dangerously high ranges.¹⁸

What if instead a national alert were made about the **shortage of doctors** and patients could be responsible for taking care of mostly manageable conditions such as **hypertension**. Every



household (or community) would be instructed to purchase an **at-home blood pressure monitoring device** (they cost less than \$80). Twice a day monitoring would be advised until blood pressure is brought down to optimal ranges through lifestyle changes, supplements, and/or drugs that could be purchased over-the-counter.

If one drug caused an unpleasant side effect, another could be immediately tried. Consulting with a pharmacist would assist in identifying an effective, side-effect free anti-hypertensive drug for virtually everyone. The minority with refractory hypertension that fails to respond to lifestyle changes and simple drug therapy should of course see a doctor, who may prescribe multiple medications to reduce blood pressure.

If blood pressure drugs were allowed to be sold without a prescription, and the public notified that controlling their blood pressure was one of individual responsibility, I foresee a drop in hypertension-induced illnesses, huge reductions in sick-care costs, and an alleviation of the pending doctor shortage. With waiting rooms cleared of hypertensive patients, doctors would have more time to spend with those who have serious problems.

Under this free market reform, I envision private companies forming that would sell at-home blood pressure monitors and an array of low-cost blood pressure medications. These companies would provide hypertension advisors who would be trained to suggest medications to try based on one's blood pressure readings and other variables. Even more efficient would be entering at-home blood pressure readings on to websites that would automatically suggest the best medication(s) and lifestyle changes.

The Real World...

Pessimists raise all kinds of fearful concerns when it comes to people taking charge of their own health. What goes on in the real world, however, validates this free market approach to resolving the **doctor shortage** while enabling **improved** overall outcomes (meaning fewer strokes, heart attacks, and failed kidneys).

I have owned an **at-home blood pressure monitor** for many years. It enables me to achieve precise blood pressure control. I sometimes go days without having to take a blood pressure medication.

If I relied on doctors, I would not have known that the drug I had initially used was only providing me with about 12 hours of blood pressure control. If I relied only on doctors, I would later be taking a high-dose anti-hypertensive drug every day, even though on most days I don't need it. (My blood pressure continues to drop as I lose weight...one of the benefits of calorie restricting.)

I have let dozens of people use my at-home blood pressure

monitor. About half are hypertensive, yet only one person ever bothered making a doctor's appointment and she went through a lot of hassles to get insurance to cover it.

If these hypertensive individuals were able to walk into a pharmacy and ask for a low-cost generic drug like **losartan**, I'm certain most of them would have done it.

The hassles of finding a doctor, setting up an appointment, waiting hours to see the doctor, dealing with one's insurance (or paying out of pocket), dropping off the prescription at the pharmacy, then coming back to pick up the prescription causes too many people to ignore asymptomatic diseases like hypertension.

A one-month supply of **losartan** (sixty **50 mg** tablets) if sold in a free market would cost less than \$14 a month. This makes blood pressure control "affordable" to virtually everyone. Many pharmacies have blood pressure monitors for public use, so even if one cannot afford their own monitor, they could still achieve **optimal** blood pressure control by stopping by the pharmacy.



The role of “individual responsibility” is significant as any drug can have side effects and there are certain people who should not take losartan such as pregnant women or women who may become pregnant. This information is instantly available on the Internet, so part of this kind of **individual responsibility** mandate is for people to spend a little time reading about any medication they decide to **self-prescribe**.

Naysayers to this **free market approach** overlook the impending **shortage of doctors**, the fact that most doctors aren’t adequately controlling their patients’ blood pressure, and that hypertension remains a leading preventable cause of death.¹⁹ They also ignore the epidemic of hypertension-induced disability (despite universal screening in doctor’s offices) and the fact that America cannot afford the inflated costs of **over-regulated** sick care, despite federal mandates that virtually everyone now be “insured.”

Self-Treating Vascular Risk Factors

A comprehensive blood test can reveal a host of factors that can lead to a heart attack or stroke.

For instance, if **fasting glucose** is over **85 mg/dL**, the rate of heart attack is **40% higher** according to a large study of 22,000 people.²⁶ In addition to the use of supplements (like **green coffee extract**) and lifestyle changes, people should be allowed to purchase glucose-lowering drugs like **metformin** and **acarbose** without tying up valuable physician time. Safety data is widely available and doses could be adjusted by **empowered patients** to achieve optimal glucose control.



My Family Member’s Urinary Tract Infection

A family member of mine traveled to Southern California for a week. She called me the first night complaining of a urinary tract infection. I gave her two choices.

She could log on to Google to find what antibiotic was currently being recommended for urinary tract infections and drive down to Mexico to buy it, OR go to a walk-in clinic to obtain a prescription. She delayed doing either and suffered for several days before going to a walk-in clinic and of course facing all the delays in getting the prescription filled.

How efficient, I thought, if pharmacies could sell an over-the-counter package that supplied an effective antibiotic, a temporary pain reliever, and a standardized **cranberry** supplement to help prevent recurrence. Such a “**Urinary Tract Infection Cure**” package might include:

1. **Nitrofurantoin**: ten **100 mg** tablets. One tablet to be taken twice a day for five continuous days. This is one of the antibiotics of choice in curing urinary tract infections.^{20,21}
2. **Phenazopyridine**: six **200 mg** capsules. Take one capsule three times a day for two days. This drug relieves urinary tract pain, burning, irritation, and discomfort, as well as urgent and frequent urination caused by urinary tract infections.²²
3. **CranMax®**: thirty **500 mg** capsules. Take one capsule daily for at least 30 days.^{23,24}

The cost for such a package would be less than \$30, thus slashing this sick-care cost outlay, while mitigating the coming doctor shortage as urinary tract infections cause over **eight million visits** to physicians each year.²⁵

The walk-in clinic visit alone for my family member cost over **\$150** and caused her to suffer days before finding the time to go. How much more humane and efficient if adults could buy a “**Urinary Tract Infection Cure**” package over-the-counter?

Elevated **LDL** is one of many underlying causes of **atherosclerosis**. If **LDL** levels remained stubbornly high despite lifestyle changes and use of supplements, **low-dose statins** should be available on a **non-prescription** basis. I mention **low-dose** because doctors too often prescribe such a high dose of statin drugs that side effects manifest. We long ago described studies showing that far lower doses of statins can produce desired reductions in LDL without creating new health problems.^{27,28} Empowered patients managing their own **LDL/cholesterol** levels would eliminate many doctor visits that clog waiting rooms.

Low testosterone is a risk factor for cardiovascular disease in men.²⁹⁻³² A physician help-line could be established whereby doctors review a person's **blood test results** and prescribe testosterone over the phone, thereby enabling more aging men to enjoy youthful testosterone ranges. Follow-up blood tests could guard against estrogen overload caused by the excess conversion of testosterone to estrogen and rule out rare side effects (such as overproduction of red blood cells).

Government regulators today are particularly concerned about people using testosterone without in-person physician visits. The reality is that hurried doctors often don't prescribe ideal individual testosterone doses, fail to protect against estrogen overload, and neglect long-term follow-up to ensure optimal **free testosterone** status. A help-line solely dedicated to providing superior hormone balance in aging men could free up frontline physicians that need to be available to treat patients with serious illnesses.

There is no question that physical examinations by doctors who have adequate time to spend with

each patient have clear advantages. But with a **looming doctor shortage**, this is no longer possible, and aging individuals should be given options that will save them (and the sick-care system) substantial dollars.

Nearly Half of Doctors Already Suffering Burn Out

A national survey of physicians finds the prevalence of **burnout** is already **"alarming."**

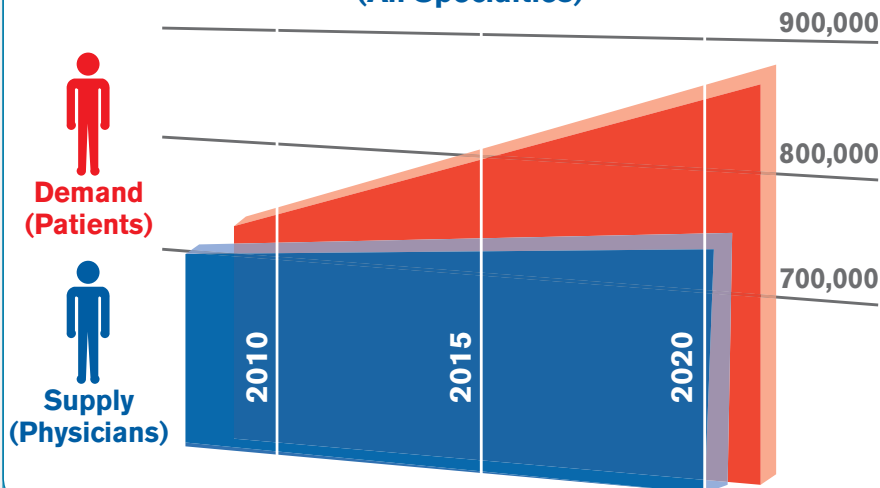
Congress Partially Caused this Problem in 1997

With a growing, aging population, the demand for physicians will intensify over the coming years. The *Association of American Medical Colleges* estimates the United States faces a shortage of more than **90,000** physicians by 2020—a number that will grow to more than **130,000** by 2025.³⁵

Congress capped the number of federally supported residency training positions 15 years ago with the passage of the Balanced Budget Act of **1997**.³⁵

Increased medical school enrollment is part of the solution to addressing the doctor shortage.

Projected Supply and Demand, Physicians, 2008-2020 (All Specialties)



QUICK FACTS:³⁵

Shortage of doctors by 2020	90,000
Shortage of primary care physicians	45,000
Shortage of surgeons and specialists	46,000
Physicians likely to retire in a decade	250,000
Americans entering the health care system in 2014.	32 million
Time from the start of med school until new doctors enter practice.	7 years

Public Needs to Act!

The public is fearful of change, even when circumstances dictate it and the overall result would be huge numbers of human lives spared.

The entrenched establishment dreads any variation that would reduce their profit machines and will not hesitate to disseminate false and misleading propaganda to protect their virtual monopoly.

The appropriate **deregulation** of archaic laws would eliminate the healthcare cost crisis, yet those who financially benefit from today's broken system (like pharmaceutical companies) will violently oppose these rational proposals. Yet no one in the federal government has even contemplated **regulatory reform** as the only solution to Medicare's current road to inevitable default.

Citizens must act and demand common sense change.

Penalties of Failing to Face Reality

This article describes a few trivial changes to healthcare **regulation** that would slash medical expenses, improve patient outcomes, and alleviate physician shortages.

The financial news publishes articles each day describing how sick-care costs are **bankrupting** governments, businesses, unions, and individuals. I ask when you read these distressing reports that you recall that **Life Extension** has battled the inefficient **regulatory** structure behind this cost crisis since the early 1980s.

We predicted with intrepid certainty that failure to tear down suffocating **regulatory** barriers would lead to catastrophic economic problems while **stagnating** scientific advancement.

A Trip to Mexico With My Son

A few years ago I wrote about a trip I took to Mexico where my 13-year-old son was bitten by an insect. He developed a painful reaction that required immediate attention. Fortunately in Mexico, you don't need a prescription to buy most drugs. I was able to walk into a pharmacy and purchase a tube of **triamcinolone** cream at virtually no cost. Within a few hours my son was cured.

In the United States, it is not so easy or affordable. For some ludicrous reason, the FDA mandates that we obtain a doctor's prescription for topically-applied **triamcinolone** cream. If this insect bite had occurred in the US, I would have had to find an urgent care medical facility that was open, pay the doctor over **\$100**, and then take the prescription to a pharmacy and wait for it to be filled. My son would have spent many additional hours in pain and I would have spent a lot more money and time.

If I could not locate an urgent care center, a hospital emergency room visit would have been the only alternative. The cost to me and my insurance company would have been over **\$500** for an ER room visit as opposed to spending only a few dollars for a tube of triamcinolone cream at a Mexican pharmacy with no prescription.

The Mexican pharmacy, by the way, was overwhelmed with American tourists who were behaving like children in a candy store. The shelves were stocked with just about every popular American prescription drug, but no prescription was required. Prices for most drugs were a fraction of what they cost in the US.

The coming **shortage of physicians** mandates that the law be amended to make most prescription drugs available to empowered patients in the United States without the requirement of an in-person physician visit.

This report corroborates the looming **physician shortage** and warns that **45.8%** of physicians already suffer a symptom of burnout.³³

One doctor describes that being asked to see more patients while not having enough time to devote to them makes one feel like "**being on a hamster wheel.**"

Experts were surprised at the high rate of burnout in frontline physicians and stated that this will adversely affect patient outcomes

and ultimately drive up costs, as sick people aren't being efficiently cured.³⁴

When I develop a medical problem, I don't want my life to depend on a "**burnt out**" doctor. If adults are given the option of self-medicating for simple and common problems like elevated LDL, hypertension, and urinary tract infections, then the quality of care can increase as the patient load decreases.

The looming **shortage of physicians** will affect most everyone reading this article. It is just one symptom of a sick-care system plagued by **regulatory inefficiency**.

The best way to avoid becoming a victim is to take aggressive care of your precious health every single day, as I know most of you do already.

Comprehensive blood tests performed annually, and access to a **blood pressure monitor**, are two simple steps that can enable Americans to become “**empowered patients**,” thereby not being **100% reliant** on hurried physicians.

For longer life,



William Faloon

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MALE AND FEMALE BLOOD TEST PANELS

Unlike commercial blood tests that evaluate only a few disease 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 disorders. Until March 25, 2013, we are including **fibrinogen** and **hemoglobin A1C** tests in the **Male** and **Female Panels** at no additional cost. Elevated **fibrinogen** sharply increases heart attack risk, while long term glucose control can be monitored using **hemoglobin A1C**. Just look at the **huge** number of parameters included in the **Male** and **Female Blood Test Panels**:

MALE PANEL

LIPID PROFILE

Total Cholesterol

LDL (low-density lipoprotein)

HDL (high-density lipoprotein)

Triglycerides

CARDIAC MARKERS

C-Reactive Protein (high sensitivity)

Homocysteine

Fibrinogen

LIMITED
TIME
OFFER

HORMONES

Free and Total Testosterone

DHEA-S

Estradiol (an estrogen)

TSH (thyroid function)

Vitamin D 25 hydroxy

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

Hemoglobin A1C

LIMITED
TIME
OFFER

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)

HDL (high-density lipoprotein)

Triglycerides

CARDIAC MARKERS

C-Reactive Protein (high sensitivity)

Homocysteine

Fibrinogen

LIMITED
TIME
OFFER

HORMONES

Progesterone

DHEA-S

Free and Total Testosterone

Estradiol (an estrogen)

TSH (thyroid function)

Vitamin D 25 hydroxy

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

Hemoglobin A1C

LIMITED
TIME
OFFER

COMPLETE BLOOD COUNT (CBC)

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Non-member retail price: \$481 • Special Member Discount Price: **\$269**

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

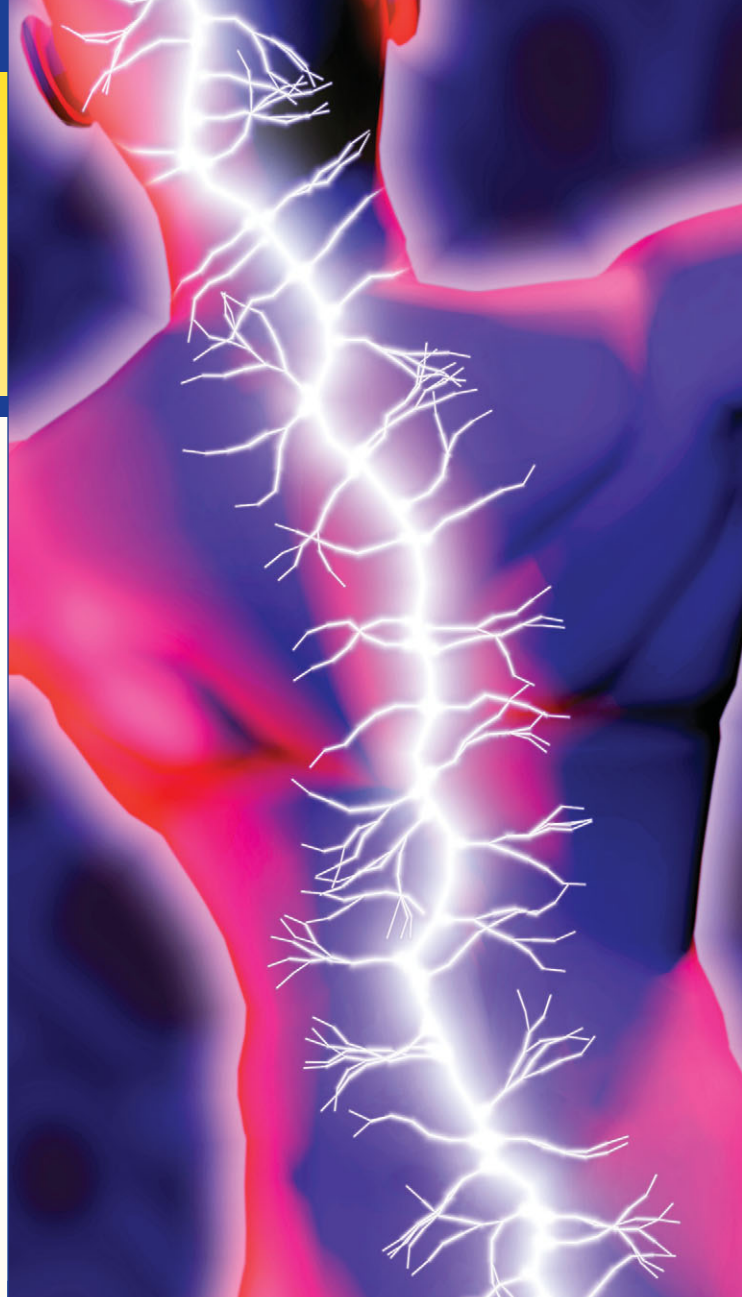
Then—at your convenience—you can visit one of the blood-drawing facilities provided by LabCorp in your area. (Restrictions apply in NY, NJ, RI, MA, MD)

The Neurologically Active Form of VITAMIN B12

Methylcobalamin is the form of **vitamin B12** active in the **central** and **peripheral nervous system**. The liver may not convert the common form of vitamin B12 (cyanocobalamin) into adequate amounts of **methylcobalamin** needed for proper **neuronal functioning**.

Methylcobalamin has been shown to protect against glutamate-induced "excitotoxic" neuronal damage. For fastest absorption and utilization, hold lozenge in mouth until completely dissolved and then swallow.

The **Life Extension Foundation® Buyers Club** offers **methylcobalamin**, the neuro-logically active form of vitamin B12, at remarkably low prices. Methylcobalamin lozenges come in a **good-tasting vanilla flavor**.



ITEM #01536

ITEM #01537

Methylcobalamin 1 mg dissolve-in-mouth lozenges

	Retail Price	Member Price
60 lozenges	\$9.95	\$7.46
Four bottles	\$32	\$6 each

Methylcobalamin 5 mg dissolve-in-mouth lozenges

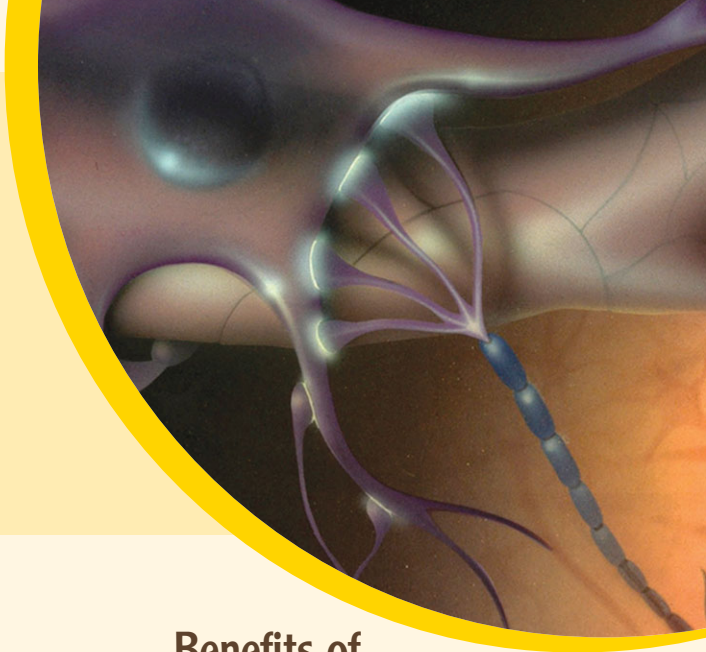
	Retail Price	Member Price
60 lozenges	\$ 32	\$24
Four bottles	\$100	\$18.75 each
Ten bottles	\$230	\$17.25 each

To order vanilla-flavored methylcobalamin lozenges, call 1-800-544-4440 or visit www.LifeExtension.com

Contains corn.

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

The BRAIN REGENERATION Nutrient



Brain cells are able to communicate with each other because they are connected together by **neurites** (dendrites and axons). Neurites are long, filament-like terminal branches of nerve cells that grow much like the branches of a tree. Neurites function to provide the communication circuitry pathways between the nerve cells.

Acetyl-L-carnitine arginate is a patented form of carnitine that **stimulates the growth of neurites** in the brain.* **Acetyl-L-carnitine** by itself stimulates **neurite growth** after five days by **5.6%**. **Acetyl-L-carnitine arginate**, on the other hand, stimulates neurite outgrowth in the same time period by **19.5%**. . . **a more than three-fold increase!** **Acetyl-L-carnitine arginate** acts together with acetyl-L-carnitine to increase neurite outgrowth.¹

An equally impressive finding is that the average length of the neurites produced by **acetyl-L-carnitine arginate** is **21% greater** than that of the neurites produced by the **acetyl-L-carnitine-only** group.¹



Item #01525

To order
Acetyl-L-Carnitine-Arginate Caps,
call 1-800-544-4440
or visit
www.LifeExtension.com

Benefits of Acetyl-L-Carnitine

The acetylated form of L-carnitine (**acetyl-L-carnitine**) facilitates the release and synthesis of acetylcholine by donating its acetyl group towards the production of **acetylcholine**, an important neurotransmitter. Acetyl-L-carnitine also enhances the release of **dopamine** from neurons and helps it bind to dopamine receptors. Numerous human and animal studies validate the multiple beneficial mechanisms that **acetyl-L-carnitine** exerts in the brain. **Acetyl-L-carnitine** is more potent than ordinary L-carnitine in carrying fatty acids across the membrane into the cell where they are burned as energy.

Acetyl-L-Carnitine-Arginate Supplement

With the discovery of **acetyl-L-carnitine arginate**, the benefits of acetyl-L-carnitine can now be greatly augmented. A formula called **Acetyl-L-Carnitine-Arginate** provides:

Acetyl-L-carnitine arginate (DiHCl)	320 mg
Acetyl-L-carnitine (HCl)	300 mg

The retail price for **100 vegetarian capsules** of **Acetyl-L-Carnitine-Arginate** formula is \$59. If a member buys four bottles, the price is reduced to **\$38.24 per bottle**. The suggested dose is one capsule three times daily.

Reference

1. *Neurochem Res.* 1995 Jan;20(1):1-9.

NEW

Extraordinary Enzymes

Digestive Support That Does Not Promote Glucose Spikes

Human studies suggest that supplementary **enzymes** may improve digestion and help minimize post-meal **glucose** surges.^{1,2}

Since proteins, plant fibers, and fats are broken down differently, one needs the proper spectrum of **enzymes** for **optimal digestion**.

A new **multi-enzyme formula** facilitates both optimal nutrient absorption and broad relief from digestive discomforts without promoting after-meal **glucose** surges.^{2,3}

TWELVE PREMIUM ENZYMES

Extraordinary Enzymes provides a potent array of **protease**, **cellulase**, and **lipase** enzymes specially formulated to adapt to a variety of stomach acid pH conditions and powerfully support digestion.

With a **total of twelve different enzymes**, this unique formula supports the digestion of just about *any* food that may pose a problem for you—whether a protein, fiber, or fat.

Extraordinary Enzymes provides a blend of powerful enzymes to help your system convert a variety of foods to energy and readily absorb the nutrients in the foods you consume. This formulation may enhance protein content in your body and allow for better fat utilization.^{4,5}

Together, these enzymes work by an all-natural, synergistic process to help provide nutritional support for a healthy digestive system.

The twelve enzymes in value-priced **Extraordinary Enzymes** are:

Protease SP (<i>Bacillus sp.</i> , <i>Aspergillus oryzae</i>)	97,000 HUT
Protease S (<i>Aspergillus melleus</i>)	10,500 PC
Acid Protease (<i>Aspergillus niger</i>)	10 SAPU
Lipase (<i>Candida rugosa</i> , <i>Rhizopus oryzae</i> , <i>Aspergillus niger</i>)	4,000 FIP
Cellulase (<i>Trichoderma longibrachiatum</i>)	2,400 CU
Trypsin (Porcine)	20,000 USP
Chymotrypsin (Porcine)	3,336 USP
Phytase (<i>Aspergillus niger</i>)	20 FTU
Beta-Glucanase (<i>Trichoderma longibrachiatum</i>)	30 BGU
Hemicellulase (<i>Aspergillus niger</i>)	4,000 HCU
Pectinase (<i>Aspergillus niger</i>)	50 endo-PGU
Xylanase (<i>Trichoderma longibrachiatum</i>)	600 XU
Total Nutrient Absorption Blend	200 mg



WHAT'S NOT IN EXTRAORDINARY ENZYMES?

Unlike commercial digestive enzyme supplements, **amylase** is intentionally left out of **Extraordinary Enzymes**. The reason is that **amylase** breaks down **starches** into **glucose** that is rapidly absorbed into the bloodstream.²

Extraordinary Enzymes facilitates the healthy breakdown of plant fibers that cause people to avoid healthy vegetables because of digestive discomforts.

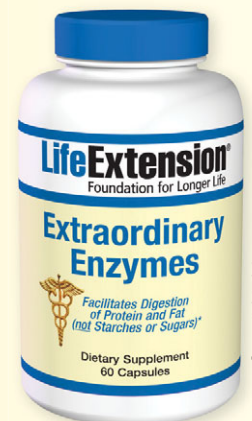
Most people will take one capsule before the two heaviest meals, which provides **400 mg** of natural digestive enzymes each day.

A bottle of 60 capsules of **Extraordinary Enzymes** retails for \$26. If a member buys four bottles, the price is reduced to **\$18** per bottle.

Contains milk, soybeans, tree nuts (coconut), and wheat.

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5. Available at: <http://chemistry-today.teknoscienze.com/pdf/MU%200MEGA3-08.pdf>. Accessed October 3, 2012.



Item# 0706

To order Extraordinary Enzymes, 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.



IN THE NEWS

Tea Drinking Benefits Older Population

The *British Journal of Nutrition* published the findings of researchers at Duke University in North Carolina of a beneficial effect for tea consumption among older individuals residing in China.*

Danan Gu and associates analyzed data from 13,429 men and 19,177 women aged 65 years and older who participated in the Chinese Longitudinal Health Longevity Survey. Subject interviews provided data on frequency of tea consumption and other data. Tea drinking was categorized as daily or almost daily, sometimes (two to four times per week), or seldom or never.

Among men, those who reported drinking tea almost every day had up to a **20%** lower risk of dying in comparison with men who seldom drank the beverage. Frequency of tea intake did not appear to have an effect on mortality among women in this study. However, the authors did note that for both sexes, high frequency of tea consumption decreases the risk of cognitive impairment, cumulative health deficits, cardiovascular disease, and disability in self-care.

Editor's Note: In their discussion, the authors suggest that the higher prevalence of smoking among older Chinese men in comparison with women could make the protective effects of tea more noticeable in this group.

—D. Dye

* *Br J Nutr.* 2012 Nov;108(9):1686-97.

Review Finds Reduction in Tooth Decay in Association with Increased Vitamin D

A recent issue of the journal *Nutrition Reviews* published an article by Dr. Philippe Hujoel of the University of Washington in Seattle, which found an association between increased vitamin D and reduced tooth decay in children.*

For his review, Dr. Hujoel selected 24 controlled clinical trials including a total of 2,827 children between the ages of 2 and 16 years. Vitamin D was increased by supplementation with vitamin D2, vitamin D3, cod liver oil, or ultraviolet light. The median follow-up period was 12 months, during which tooth decay was quantified by the number of new dental caries that occurred.

In a pooled analysis of subjects, tooth decay was reduced by **47%** in children given vitamin D in comparison with those who did not receive it. No significant differences were observed between vitamin D2, vitamin D3, and ultraviolet light exposure.

Editor's Note: Dr. Hujoel observed that the incidence of dental caries in young children is on the rise at a time when vitamin D levels are declining. "Whether this is more than just a coincidence is open to debate," he said. "In the meantime, pregnant women or young mothers can do little harm by realizing that vitamin D is essential to their offspring's health. Vitamin D does lead to teeth and bones that are better mineralized."

—D. Dye

* *Nutr Rev.* 2012 Dec.



Apples May Help Lower Cholesterol

Evidence suggests that consumption of apple, or its bioactive components, modulate lipid metabolism and reduce the production of proinflammatory molecules. A recent article in the *Journal of the Academy of Nutrition and Dietetics* sought to study this evidence.*

A trial was designed involving one-hundred sixty qualified postmenopausal women from the greater Tallahassee, FL, area during 2007-2009 who were randomly assigned to one of two groups: dried apple (**75 g/day**) or dried plum (comparative control). Fasting blood samples were collected at baseline, 3, 6, and 12 months to measure various parameters. Physical activity recall and 7-day dietary recall were also obtained.

Over the course of the study, there were no significant differences between the dried apple and dried plum groups in altering serum levels of atherogenic cholesterol except total cholesterol at 6 months. However, when within treatment group comparisons are made, consumption of **75 g** dried apple (about two medium-sized apples) can significantly lower atherogenic cholesterol levels as early as 3 months. Furthermore, consumption of dried apple and dried plum are beneficial to human health in terms of anti-inflammatory and antioxidative properties.

—M. Richmond

* *J Acad Nutr Diet.* 2012 Aug;112(8):1158-68.



Body Mass Index May be Better Predictor of Cardiovascular Disease than Serum Cholesterol

A research letter published in the *Archives of Internal Medicine* suggests that body mass index (BMI) could be a better predictor of the development of cardiovascular disease than serum cholesterol levels.* (Body mass index is calculated by dividing weight in kilograms by height in meters squared.)

David Faeh, MD, MPH, and his associates at the University of Zurich analyzed data from 17,791 men and women who participated in a community health promotion initiative. During the course of up to 31.2 years of follow-up, 2,170 men and 1,761 women died, among whom 749 and 630 deaths were attributable to cardiovascular disease.

Dr. Faeh and colleagues calculated ten year risk models of fatal cardiovascular disease using total serum cholesterol or body mass index values. They found that the BMI model could better discriminate between persons at low and high cardiovascular disease risk.

Editor's Note: Although it is not an infallible indicator of an individual's healthy or unhealthy body weight, BMI can be useful in studies examining large numbers of people, such as the current study. While the results of the study are not to be interpreted as a negation of the relative importance of cholesterol levels in the development of heart disease, the authors remark that traditional cardiovascular disease predictive models such as the Framingham Risk Score fail to take BMI into account.

—D. Dye

* *Arch Intern Med.* 2012;172(22):1766-68.

Meta-analysis Affirms Benefit for CoQ10 Supplementation in Heart Failure

The results of a meta-analysis published in the *American Journal of Clinical Nutrition* indicate that supplementing with coenzyme Q10 (CoQ10) is associated with an improvement in ejection fraction in men and women with congestive heart failure.¹

Colleagues at Tulane University selected 13 randomized, controlled trials involving CoQ10 supplementation that reported ejection fraction or New York Heart Association (NYHA) functional classification of congestive heart failure patients (which classifies the extent of the disease on a scale of I-IV). Coenzyme Q10 doses ranged from **60 to 300 mg/day**, which were given for 4 to 28 weeks.

Pooled analysis of a total of 395 participants found an average net increase in ejection fraction of **3.67%** among those supplemented with CoQ10 in comparison with control groups. New York Heart Association classification among CoQ10-supplemented subjects also improved slightly, although the researchers did not consider it significant.

Clinical research by cardiologist Peter Langsjoen in 2008 found that ejection fraction could be boosted from **24%** to **45%** (the higher the percentage, the better) using **450 mg/day** of the ubiquinol form of CoQ10 on congestive heart failure patients.²

Editor's Note: Congestive heart failure occurs when the heart fails to pump in an efficient manner. The condition is assessed by measuring ejection fraction, which represents the fraction of blood pumped out of a heart's ventricles each time it contracts.

—D. Dye

1. *Am J Clin Nutr.* 2012 Dec 5.

2. Langsjoen P. 5th Annual International CoQ10 Symposium. Kobe, Japan: November 9-12, 2007.



Vitamin D Supplementation Improves Outcome in Men with Low-Risk Prostate Cancer

An article published in the *Journal of Clinical Endocrinology & Metabolism* reports the findings of a trial conducted by researchers at the Medical University of South Carolina which revealed a benefit for supplementing with vitamin D among men whose prostate cancer was at low risk of progressing into a more aggressive form.*

The trial included 48 African-American and Caucasian men with low-risk prostate cancer who received **4,000 IU** vitamin D3 daily for one year. Prostate biopsies were conducted before and after the treatment period. Nineteen men diagnosed with prostate cancer who underwent biopsies at a similar interval served as controls.

Of the vitamin D-treated subjects, **55%** had fewer cancerous cores in their biopsied tissue or improved Gleason scores (which evaluate the prognosis of cancerous prostate tumors) at the end of the trial. In contrast, progression occurred in **63%** of the men in the untreated control group.

Editor's Note: Men with low risk prostate cancer frequently receive regular monitoring, as opposed to undergoing surgery or radiation which can cause unwanted effects such as urinary incontinence.

—D. Dye

* *J Clin Endocrinol Metab.* 2012 Jul;97(7):2315-24.

Reduced CoQ10 Levels Associated with Poor Neurologic Outcome and Greater Risk of Dying Following Cardiac Arrest

The journal *Resuscitation* published the results of a study conducted by researchers at Beth Israel Deaconess Medical Center which found a reduction in coenzyme Q10 (CoQ10) among patients who died while hospitalized subsequent to resuscitation following cardiac arrest.*

The study included 23 post-arrest patients and 16 healthy controls. Blood samples obtained 24 hours after return of spontaneous circulation in the cardiac arrest group were analyzed for plasma CoQ10 and markers of inflammation, and compared to values obtained from the control subjects. Neurologic function among cardiac arrest survivors was assessed at hospital discharge.

Coenzyme Q10 values among cardiac arrest patients averaged less than half of those of healthy subjects. Patients who survived had CoQ10 levels that were nearly twice that of those who died during hospitalization. Similar differences were observed when those with good neurologic outcome were compared to those whose neurologic outcome was poor.

Editor's Note: Cardiac arrest, which occurs when the heart suddenly stops pumping, affects an estimated 350,000 individuals each year in the United States, resulting in a significant incidence of death and neurologic injury.

—D. Dye

* *Resuscitation.* 2012 Aug;83(8):991-5.

Longer Telomeres Linked to Eating Less Fat, More Fruit, and Vegetables

A decrease in telomere length, which has been linked with age-related diseases including heart disease, has been found in a recent study to be associated with a reduced intake of vegetables in women and fruit in men. Men also experienced a decrease in average telomere length in association with a greater intake of fat, particularly butter. The study was reported in the *European Journal of Clinical Nutrition*.*

Researchers measured white blood cell telomere length in 1,942 men and women. Questionnaire responses were analyzed for the intake of fats, fruits, and vegetables. Higher total fat intake as well as saturated fat was associated with shorter telomeres in men, but not women, however, monounsaturated and polyunsaturated fats were not associated with telomere length in either gender. Consuming more butter was associated with shorter telomere length among men. Women who ate more vegetables and men who consumed more fruit had longer telomeres.

Editor's Note: Telomeres are bits of DNA at the ends of chromosomes that shorten with cellular aging. Telomere length has been suggested as a marker for biological aging, chronic disease risk, and premature mortality. The authors remark that the increase in inflammation and oxidative stress associated with increased saturated fat intake could explain the adverse effect on telomere length observed in this study. However, fruit and vegetables are rich in antioxidants, which could help protect telomeres.



—D. Dye

* *Eur J Clin Nutr.* 2012 Dec;66(12):1290-4.



Omega-3 Supplementation Improves Working Memory in Young Adults

The journal *PLOS One* published an article recently that reveals a benefit for supplementation with omega-3 fatty acids on working memory in young men and women.*

University of Pittsburgh researchers led by Rajesh Narendran of the Department of Radiology tested the effects of a supplement providing **930 mg** eicosapentaenoic acid (EPA) and **750 mg** docosahexaenoic acid (DHA) in 11 men and women between the ages of 18 and 25. Evaluation of working memory, positron emission tomography (PET) imaging of the brain, and tests for red blood cell fatty acid levels were conducted before and after the six month treatment period.

Participants experienced an increase in plasma omega-3 fatty acid levels and improvement in working memory at the end of six months.

Editor's Note: "What was particularly interesting about the presupplementation n-back test was that it correlated positively with plasma omega-3," observed Bita Moghaddam, whose lab conducted the research. "This means that the omega-3s they were getting from their diet already positively correlated with their working memory."

—D. Dye

* *PLOS One*. 2012;7(10):e46832.

Healthy Talk with Dr. Mike Smith of Life Extension Premieres!

You won't want to miss a single episode of *Healthy Talk* hosted by Life Extension's senior health science specialist, Michael Smith, MD. This new hour-long show features the very latest health information, global health news, innovative therapies, and so much more.

Known to his devoted fans as "Dr. Mike, the country doctor with a city education," he specializes in presenting complex health topics—be it diabetes, migraines, or food sensitivity—in a clear, conversational manner.

Each week, he'll welcome knowledgeable experts and influential opinion leaders in the fields of health, wellness, fitness, and medicine. You'll learn something new with every show. And the best part is you'll be able to join in the conversation. So keep your questions handy, be sure to listen ... and call in! It's health news you can use!

Tune in to *Healthy Talk* every Wednesday at 1 p.m. on WWNN-AM 1470 in South Florida. Or listen in live on www.wwnnradio.com.



Join Dr. Mike Smith of Life Extension® each week as he hosts this new radio call-in talk show on WWNN-AM 1470 in South Florida.

Rich Rewards®

Polyphenol-Retained Coffee

The Healthy Gourmet Choice

Not all coffee provides the same powerful protection.¹⁻¹³

When it comes to obtaining coffee's full range of health benefits, *most people aren't getting their money's worth!*

The reason? Most of the coffee bean's polyphenol content is **destroyed** during the roasting process.

Among the most beneficial of these polyphenols is **chlorogenic acid**, a potent inhibitor of the **glucose-6-phosphatase** enzyme that stimulates excess **gluconeogenesis**.

A Patented Organic Roast

Life Extension®'s Rich Rewards® Breakfast Blend and Decaffeinated Roast are made using a patented, **100% natural** process called **HealthyRoast™**. It delivers a more complete nutritional profile of the coffee bean, yielding **chlorogenic acid** levels *far greater* than other premium brands.

Handpicked deep in the rainforests of Central America, **Rich Rewards®** consists exclusively of **100% USDA certified organic arabica** coffee beans, gently roasted in small batches and ground for easy brewing.

Savory Taste Without Stomach Upset

Have you given up coffee because it upsets your stomach? With **Rich Rewards®**, you can enjoy coffee again. The **HealthyRoast™** process also preserves special, naturally occurring compounds in coffee that soothe your stomach.

Concerned about caffeine but don't like the weak taste of decaffeinated coffee? With **Rich Rewards® Decaffeinated Roast**, you can limit your caffeine intake without compromising on flavor. The caffeine is removed through a completely chemical-free **Water Process**, which relies solely on water and carbon filters. It delivers the full flavor, aroma, and body of the *arabica* bean.

Life Extension's **Rich Rewards®** coffees give you a uniquely beneficial brew with superior flavor. The **Rich Rewards® Breakfast Blend** contains up to **87% more chlorogenic acid** than conventional caffeinated coffees. **Rich Rewards® Decaffeinated Roast** contains up to **187% more chlorogenic acid** than conventional decaffeinated coffees.

Comparison of Conventional Coffee to Life Extension's Rich Rewards® Blend

Chlorogenic Acid		Chlorogenic Acid	
Conventional Coffee (Caffeinated)	92 mg	Rich Rewards® Coffee Blend (Caffeinated)	172 mg
Conventional Coffee (Decaffeinated)	46 mg	Rich Rewards® Coffee Blend (Decaffeinated)	132 mg

This chart shows Life Extension's **Rich Rewards® Breakfast Blend** contains up to **87% more chlorogenic acid** than conventional caffeinated coffees and the **Rich Rewards® Decaffeinated Roast** contains up to **187% more chlorogenic acid** than conventional decaffeinated coffees. This enables one to obtain the benefits of heavy coffee drinking in about half the number of cups.

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* US Patent 6,723,368.



A 12 oz bag of **Life Extension® Rich Rewards® Breakfast Blend** retails for \$13. Members pay **\$9.75** per bag. Item # 01609



A 12 oz bag of **Life Extension® Rich Rewards® Decaffeinated Roast** retails for \$14. Members pay **\$10.50** per bag. Item # 01610

To order either of the
Rich Rewards® Antioxidant Coffees call **1-800-544-4440** or
visit **www.LifeExtension.com**

ANTI-AGING EFFECTS OF PYCNOGENOL®

Life Extension® **Pycnogenol®** French Maritime Pine Bark Extract is a natural botanical extract containing procyanidins, bioflavonoids, and other health-giving molecules that synergistically support the body's natural defenses against 5 major processes that characterize premature aging. Its effectiveness is backed by 40 years of study.

Life Extension® **Pycnogenol®** French Maritime Pine Bark Extract is designed to counteract premature-aging-related changes by providing support for the following mechanisms:

MEMBRANE FUNCTION: *Pycnogenol®* promotes the integrity and normal characteristics of cell membranes.¹⁻⁴

DNA FUNCTION: *Pycnogenol®* helps support normal DNA function through antioxidant activity and possibly other mechanisms.⁵⁻⁸

EASE INFLAMMATION: *Pycnogenol®* helps ease inflammation by normal modulation of inflammatory cytokine molecules.⁹⁻¹³

OXIDATIVE STRESS: *Pycnogenol®* supports the normal functioning of healthy antioxidant systems to help suppress free radicals and protect DNA.¹⁴⁻¹⁹

GLYCATIION: *Pycnogenol®* supports cellular metabolism of sugar, healthy fasting, and post-meal blood sugar levels already within normal range, and normal sugar absorption in the intestine.²⁰⁻²⁵

Unlike other forms of pine bark extract, Pycnogenol® is a superior patented and standardized ingredient that has undergone extensive human clinical research to substantiate its numerous anti-aging properties. A bottle of **Life Extension® Pycnogenol® French Maritime Pine Bark Extract** containing 60 vegetarian capsules retails for \$64. If a member buys four bottles, the price is reduced to **\$45** per bottle. The dose for most people is one capsule daily, so each bottle lasts **two months**.

Each capsule of Life Extension® Pycnogenol® French Maritime Pine Bark Extract provides:

Pycnogenol® dried French Maritime pine (<i>Pinus pinaster</i>) extract (bark)[std. to 65% procyanidins (65 mg)]	100 mg
Vitamin C (as ascorbyl palmitate)	4 mg



Item # 01637

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Pycnogenol® is a registered trademark of Horphag Research Ltd. Use of this product may be protected by one or more U.S. patents and other international patents. Supported by over 40 years of research.

To order **Pycnogenol® French Maritime Pine Bark Extract**,
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ARE YOU GETTING Curcumin's BENEFITS?



How Much Curcumin Are You Absorbing?

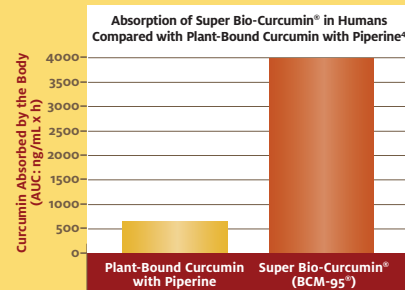


Chart 1. Super Bio-Curcumin® (BCM-95®) showed 6.3 times greater bioavailability (absorption and sustainability over 8 hours) in humans compared with plant-bound curcumin with piperine (as measured by the area under the curve [AUC] in a plot of blood levels against time, that is, the total amount of curcumin absorbed by the body over 8 hours).

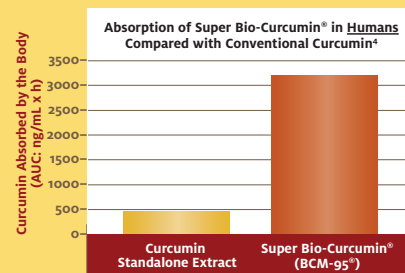


Chart 2. Super Bio-Curcumin® (BCM-95®) showed 6.9 times greater bioavailability (absorption and sustainability over 8 hours) in humans compared with conventional curcumin (as measured by the area under the curve [AUC] in a plot of blood levels against time, that is, the total amount of curcumin absorbed by the body over 8 hours).

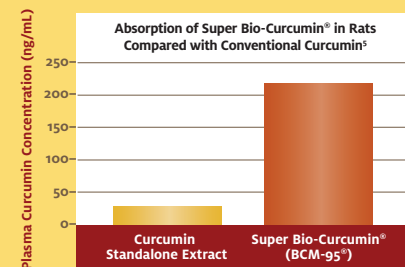


Chart 3. Bioavailability in rats fed with BCM-95® is 7.8 times higher than conventional curcumin.

Curcumin is the health-promoting trace compound derived from the Indian spice **turmeric**. But not all turmeric is alike.

The curcumin found in the vast majority of dietary supplements is derived from turmeric that is **nutritionally inferior**.

Why? Almost all growers harvest turmeric at the point when the turmeric root turns its signature yellow color, but *before* it has fully matured.

The turmeric root requires more time in the ground for highly beneficial phytonutrients called **curcuminoids** and **sesquiterpenoids** to attain peak concentrations.

Life Extension®'s Super Bio-Curcumin® derives from turmeric that is grown with organic practices, cultivated to maturity, then specially transported and processed to preserve and deliver the root's most complete nutritional profile.

In recent studies comparing the effects of standard curcumin against turmeric extracts comparable to **Super Bio-Curcumin®**, researchers observed:^{1,2}

- Nearly twice the support for **immune** health.
- Approximately twice the support for **inflammatory** issues.
- Almost double the **antioxidant** support.

A separate study indicated that an antioxidant-rich curcumin extract³ provided powerful support for heart health.

Unrivalled Potency and Absorbability with BCM-95®

Curcumin is neither absorbed nor *retained* well in the blood, which is another challenge facing those who wish to maximize its benefits.

The highly popular **Super Bio-Curcumin®** uses **BCM-95®**, a patented, *bioenhanced* preparation of curcumin. It has been shown to reach up to **7 times higher concentration** in the blood than standard curcumin.⁴

The graphs on this page illustrate that one 400 mg vegetarian capsule per day of **Super Bio-Curcumin®** supplies the equivalent of **2,500-2,800 mg** of commercial curcumin supplements.

A bottle containing 60 vegetarian capsules of **Super Bio-Curcumin®** retails for \$38. If a member buys four bottles, the price is reduced to only **\$26.25** per bottle. **Contains rice.**



Item # 00407

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

Bio-Curcumin® and **BCM-95®** are registered trademarks of Dolcas-Biotech, LLC.

U.S. Patent Nos. 7,883,728, 7,736,679 and 7,879,373.

To order Super Bio-Curcumin®
call 1-800-544-4440
or visit www.LifeExtension.com

Carnitine Restores Cellular Function

A wealth of emerging technology demonstrates that as we gain control over individual mechanisms involved in cellular aging, systemic symptoms of degeneration can be slowed or even reversed.¹

One of the most promising mechanisms addresses our mitochondria,^{2,3} the powerhouses found in all human cells that control the energy we need to stay alive.⁴

Over time, our mitochondria decrease in both number and function. The result is essentially a short-circuiting of power to every area of your body. Keeping these cellular powerhouses functioning properly can postpone many of the so-called “inevitable” signs of aging. Research now shows that the amino acid carnitine can forestall and even reverse many well-known factors of aging.

With advancing age, carnitine levels decline in all of our tissues.^{2,3} That spells trouble for mitochondria, which become starved of energy and filled with cellular waste.^{3,4}

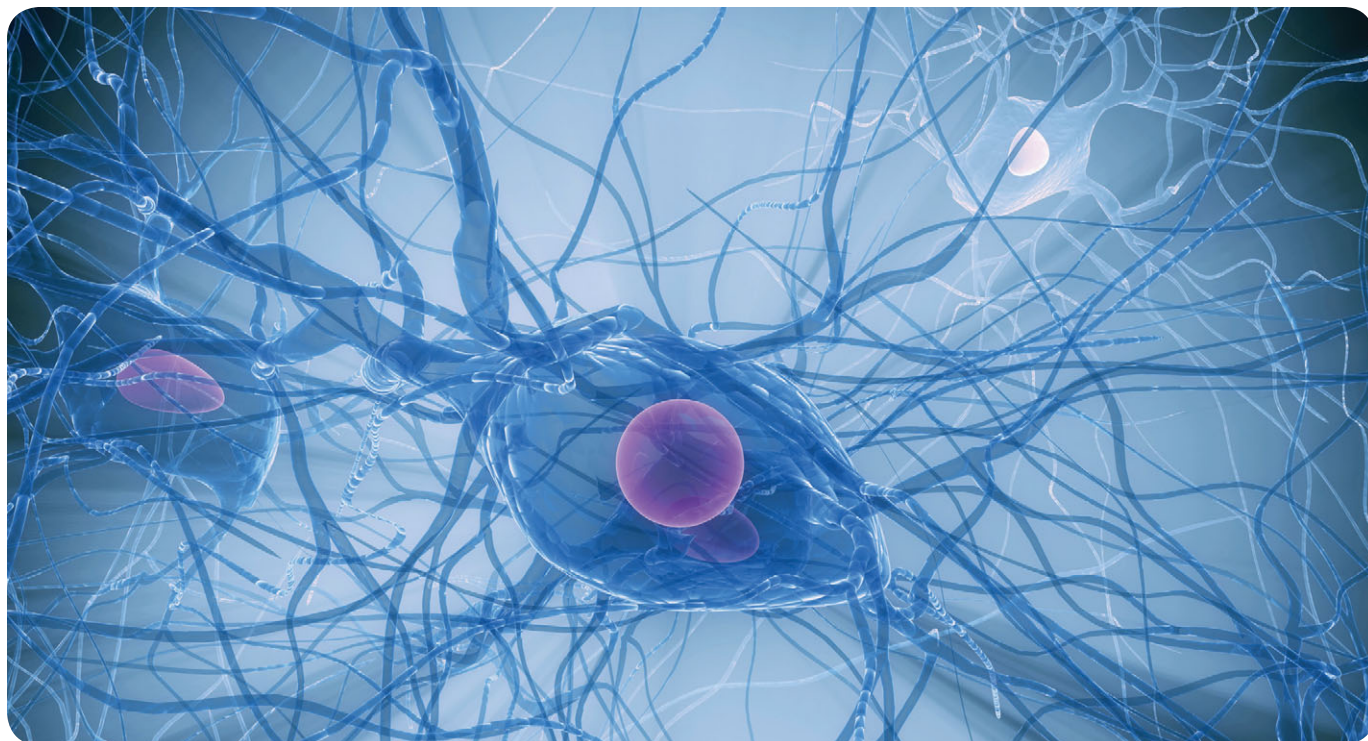
Simply put, a carnitine deficiency leads to the wholesale destruction of our mitochondria. And, ultimately, this loss of mitochondrial function is likely to hasten death. Fortunately, carnitine is sold as a dietary supplement in the United States, available without the need of a doctor's prescription as it is in some other countries. >



Why Mitochondria Decline with Aging

Mitochondria reside in nearly *every* cell in our bodies; they power cells by converting food into the energy our body needs to operate.⁴ Think of the mitochondria like the power company that supplies energy to your home. If the power goes out, your food spoils, your heating and air condition won't work, you have no light. The same effect occurs within your body. If the mitochondria—your power supply—isn't functioning properly, or if they decrease in numbers, then your cells won't have the energy they need to power your body's many functions.

As the amount of functioning mitochondria decreases, many of the “symptoms” of aging manifest. In part, this occurs because of the mitochondria's continual burning of fatty acids to produce energy. In the process of releasing energy, huge bursts of *oxidant* compounds damage **mitochondria** and the cells that contain them.⁴ This steady assault leads to the gradual loss of *mitochondrial function* in all of our tissues.⁵



The age-related decline in **mitochondrial activity** is largely responsible for cardiovascular and neurological disorders as well as obesity and type II diabetes.⁶⁻⁹ Loss of mitochondrial function in muscle tissue also leads to the familiar “flabby” body composition we associate with older people because it causes muscle atrophy and increased body fat mass.¹⁰ From this list, you can see how essential carnitine is to your daily health.

Total carnitine levels in aging individuals are roughly **20%** lower than in youth,¹¹ which leaves mitochondria increasingly vulnerable to damage.

Fortunately, studies have proven that supplementing with carnitine can restore mitochondrial function to near-youthful levels.¹²

Carnitine Reduces Death Rates

The heart muscle uses fat as its primary energy source. Carnitine is a fat-transporting compound that is absolutely essential for normal heart function.¹³ Over time, the decline of carnitine plays a role in the weakening of the heart’s muscles.¹⁴

People with heart muscle damage from heart attacks or heart failure have especially low carnitine levels.¹⁵⁻¹⁷ Fortunately, carnitine supplementation has proven to be remarkably effective in fighting and even reversing the heart-weakening effects from that drop in carnitine levels.¹⁴

In one study, 160 male and female heart attack survivors between 39 and 86 years old received either

4 grams/day of L-carnitine or a placebo for 12 months.¹⁸ The patients taking L-carnitine experienced significantly favorable decreases in heart rate and blood pressure; they also had improved blood lipid profiles. Most importantly, those supplementing with carnitine had a dramatically reduced **death rate** compared to those not taking carnitine. Patients taking carnitine had a death rate of just **1.2%** in the entire year, while **12.5%** of control patients died, with the majority of deaths attributed to repeat heart attacks.¹⁸

L-carnitine supplementation also prevents the progression of heart muscle damage in people with congestive heart failure and improves exercise tolerance in people who develop chest pain (angina) with exertion.¹⁵ In one study, **55%** of patients experienced improvement in their standard heart failure classification.¹⁵

People with angina, an early sign of heart muscle threatened by ischemia (low blood flow), benefited from carnitine supplements. A natural derivative of L-carnitine, **propionyl-L-carnitine**, at a dose of **500 mg** 3 times daily, increased the mean time that patients could exercise without EKG signs of ischemia by an impressive **450%**.¹⁶ That result indicated improved blood flow to heart muscle cells following ischemia, an effect amply demonstrated in animal studies.^{19,20}

Carnitine also increases concentrations of **nitric oxide** that help endothelial cells relax and increase blood flow, which can help lower blood pressure.²¹⁻²³ Three weeks of supplementation with **2 grams** of

L-carnitine improved blood flow by **17%** during the critical after-meal period in a group of people fed a high-fat meal; placebo patients had a **12%** decrease in blood flow.²⁴ And a daily **6-gram** intravenous dose of propionyl-L-carnitine for one week improved walking distance in people with peripheral arterial disease by **28%**.²⁵

Two Groups Gain Exceptional Benefits

Two groups stand to gain exceptional benefits from carnitine supplementation: diabetics and those on dialysis. Both groups are at especially high risk for cardiovascular complications and early death, and both groups have an even greater depletion of carnitine than others of the same age.^{17,26}

Dialysis exerts huge stresses on the human body, all of which accelerate atherosclerosis and heart disease. The addition of a **1 gram**, IV dose of L-carnitine at the end of each dialysis session markedly reduced chemical markers of stress and increased levels of the protective cytokine adiponectin.²⁶

The same **1 gram** dose, given orally, produced a marked reduction in serum inflammatory markers and factors that promote excessive blood clots.²⁷ Finally, a dose of **10 mg/kg** of carnitine (about **750 mg/day** in an average-sized person) produced a significant **12%** decrease in the size of the heart's left ventricle in dialysis patients.²⁸ That "left ventricular hypertrophy" is a known complication of hemodialysis and contributes to early heart failure.

Diabetics suffer from both ischemic (low blood flow) and non-ischemic heart muscle dysfunction, much of which can be reduced by long-term oral L-carnitine supplements.²⁹ Animal studies show that whether you're a diabetic or not, oral supplementation with L-carnitine helps your heart muscle pump harder and more efficiently.²⁹ Even more impressive, carnitine's mitochondria-friendly actions help reduce body fat mass, which in turn improves insulin sensitivity and may help control blood sugar levels.^{30,31}

Carnitine Fights Diabetes

As **obesity** rates skyrocket, more and more Americans are developing **type II diabetes** as a result, producing a syndrome called "diabetes."^{32,33}

Since carnitine helps the mitochondria utilize energy, it plays a critical role in reducing the occurrence and impact of diabetes.³⁴ Recent studies show that in addition to helping the mitochondria burn fat as energy, carnitine is also vital for removing waste products from mitochondria.^{2,35} This is important,



What You Need to Know

Anti-Aging Benefits of Carnitine

- A major cause of aging is the decline in function of mitochondria, the tiny powerhouses that energize our cells.
- Most chronic diseases of aging reflect loss of mitochondrial function and numbers, limiting the energy available to cells as we age.
- Poorly-functioning mitochondria also impose huge oxidant stress on their parent cells, further accelerating aging and shortening life.
- L-carnitine, a molecule with several related forms, provides mitochondria with both the energy they need and the anti-oxidant protection that they must have to retain their youthful function.
- Carnitine supplements extend life by increasing energy to tissues throughout the body.
- Carnitine supplementation has proven effective in reducing fatigue, enhancing cardiovascular function, improving body composition and promoting weight loss, lowering blood sugar levels, and delaying or reversing brain degeneration.
- Its energy-releasing properties make carnitine a useful supplement for reducing the deadly cachexia experienced by many cancer patients.

because we now recognize that the buildup of mitochondrial waste products is one of the most important contributors to insulin resistance, which further promotes high blood sugar and obesity.⁴

Obesity and aging contribute to low carnitine levels, which compromises mitochondrial performance and increases insulin resistance, promoting further obesity and carnitine reduction.² Restoring carnitine levels to their youthful values is an effective way to break this deadly cycle.²

Human volunteers who took L-carnitine **3 grams/day** for 10 days had favorable changes in body composition.³⁶ Supplemented patients used their fat for energy, burning it **22%** faster than control patients, without any increase in muscle protein breakdown. Another study, using **2 grams/day** for 6 months, demonstrated a loss of total fat mass of **4 pounds**, with a gain in lean muscle mass of **8.4 pounds**.³⁷

Animal studies confirm and extend these findings, showing that propionyl-L-carnitine decreases body weight gain, food intake, and fat composition, while improving insulin resistance.³⁴

Carnitine also has multiple favorable effects on blood sugar and insulin resistance, the hallmarks of type II diabetes.³⁵ Animals fed a high fat diet develop the same symptoms and signs that humans do: obesity,



Important Forms of Carnitine

The basic L-carnitine molecule that supports mitochondrial function is available in several forms, each of which offers specific functions:

L-carnitine tartrate is a stable salt form of L-carnitine and has been shown to be absorbed faster than other L-carnitine compounds.⁸¹ It favorably affects biochemical markers of recovery from physical exertion, optimizing the processes of muscle tissue repair and remodeling.⁸²

Acetyl-L-carnitine is a molecule chiefly active in moving fat molecules across the mitochondrial membrane.⁶⁹ It readily crosses into the brain from the bloodstream, and its extra acetyl molecule provides additional energy directly to brain cells.

ArginoCarn®* is a patented form of acetyl-L-carnitine arginate dihydrochloride that is molecularly bonded to the amino acid arginine and known as the AminoCarnitine® generation. In a way that closely resembles natural nerve growth factor, this compound induces outgrowth of the tiny but essential nerve cell protrusions called neurites that underpin memory formation and learning.⁷⁰

Glycine propionyl-L-carnitine hydrochloride (GlycoCarn®)* is a patented form of AminoCarnitine® that is molecularly bonded to the amino acid glycine and known as the AminoCarnitine® generation. Propionyl-L-carnitine is essential in carbohydrate and lipid metabolism and is a potent antioxidant.³¹ It is especially useful in cardiovascular diseases.³¹ The related glycine form has also been shown to extend those benefits to skeletal muscle, enhancing exercise performance.⁷¹

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insulin resistance, abnormal lipid profiles, and liver damage, which are known as **metabolic syndrome**. Just 4 weeks of treatment with L-carnitine reversed all of those abnormal parameters.^{30,32,38,39}

Similar effects have been found in diabetic humans. Two grams of L-carnitine twice daily for 10 days improved insulin sensitivity and reduced insulin levels.⁴⁰ L-carnitine supplementation of **2 grams/day** caused a significant reduction in plasma free fatty acids, which contribute to insulin resistance.⁴¹ Three grams/day were shown to reduce simulated **after-meal** blood sugar spikes from **157 mg/dL** to **132 mg/dL** (oral glucose tolerance test).⁴² A significant number of studies document the deadly impact of elevated **after-meal** glucose levels.

Carnitine Defends Memory

Most forms of age-related memory and cognitive decline are closely related to **mitochondrial dysfunction** in brain tissue. That provides an obvious opportunity for intervention with a mitochondrial enhancer such as carnitine. Most studies of neurodegeneration used the acetyl-L-carnitine form of carnitine.

The impact of acetyl-L-carnitine is especially important in Alzheimer's disease, the leading cause of dementia and mild cognitive impairment in the United States. One early study showed that supplementing with acetyl-L-carnitine every day for a year led to improvements on the cognitive portion of a standard Alzheimer's disease rating scale in patients younger than 61.⁴³

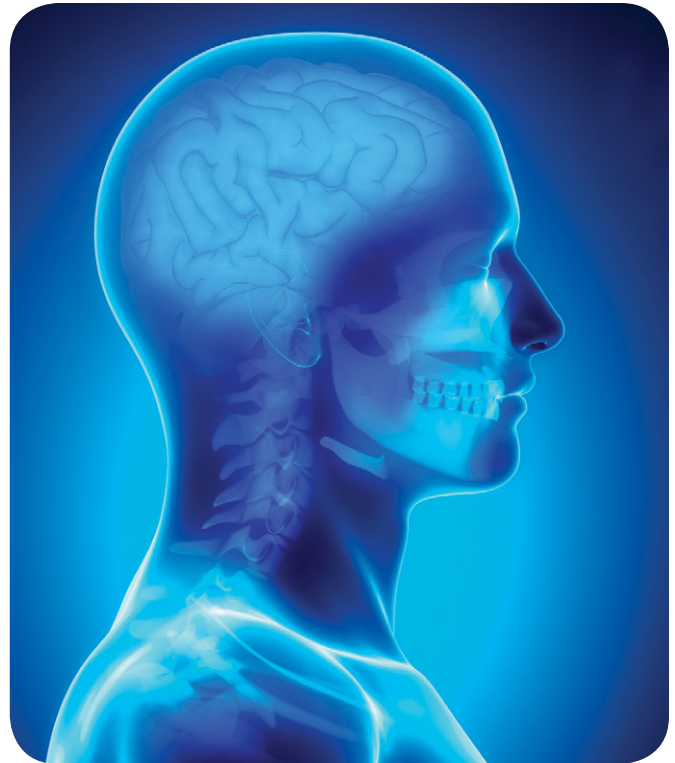
More recent studies have shown good effects even in older patients, but, as with all forms of prevention, the earlier you start taking carnitine, the more powerful the effects on memory. Doses ranging from **1.5 to 3 grams/day** of acetyl-L-carnitine have consistently been shown to produce treatment effects several-fold greater than placebo alone, with the greatest impact in patients in the earlier stages of the disease.⁴⁴⁻⁴⁶ Improvements from acetyl-L-carnitine supplementation can be seen as early as 3 months, and continue to increase over time.⁴⁵ (Carnitine has not been found effective in patients with advanced Alzheimer's.)

Laboratory studies explain some of the reasons for acetyl-L-carnitine's impact on Alzheimer's disease, and most of them focus on carnitine's mitochondrial protective properties.

Scientists can induce Alzheimer's-like changes in brain cells using a variety of chemical techniques. What they consistently find is that treatment with acetyl-L-carnitine enhances mitochondrial function and slows development of Alzheimer's-like changes, which include accumulation of **amyloid beta**.⁴⁷ Even after dangerous quantities of **amyloid beta** form in brain tissue, acetyl-L-carnitine treatment reduces its impact.³

Lab animals with conditions similar to Alzheimer's disease demonstrate improved memory and learning when treated with acetyl-L-carnitine.^{47,48} In fact, treated animals show increased expression of important memory-associated proteins that had become impaired by Alzheimer's disease.⁴⁹

Acetyl-L-carnitine is useful in other forms of cognitive decline as well, even in poorly-defined conditions such as mild cognitive impairment. People supplemented with **1.5 to 2 grams** of acetyl-L-carnitine daily show marked improvement on standard mental status and memory scores.^{50,51} These effects are especially impressive among the very old, including at least one study of people over 100 years old.³⁷



Carnitine Benefits Body Composition

Carnitine's influence on mitochondrial function can improve age-induced changes in body composition. When lab animals were given carnitine, they experienced reductions in their abdominal fat mass, increases in their muscle strength, and lower concentrations of *leptin*, a cytokine that triggers fat-induced inflammation.^{10,52}

Human volunteers who took **3 grams/day** of L-carnitine for 10 days had favorable changes in body composition.³⁶ Patients taking L-carnitine used their fat for energy, burning it **22%** faster than control patients, and without any increase in muscle protein breakdown. Another study using **2 grams/day** demonstrated a loss of total fat mass of **4 pounds**, with a gain in lean muscle mass of **8.4 pounds**.³⁷

Additional studies on animals confirm and extend these findings, showing that propionyl-L-carnitine decreases body weight gain, food intake, and fat composition, while improving insulin resistance.³⁴

Benefits of supplementation go well beyond memory, however. Not surprisingly for a **mitochondrial function-boosting** compound, improvements in energy level, and reduction in physical and mental fatigue are commonly reported in studies of carnitine supplementation (both with L-carnitine and acetyl-L-carnitine).^{37,53} And a few studies have found improvements in depression while patients supplement with L-carnitine.^{54,55}



Finally, as a result of the obesity epidemic (and with fatty liver disease on the rise),⁵⁶ researchers are showing a growing interest in using carnitine to optimize liver mitochondrial function and prevent or mitigate the effects of liver failure. Several studies have demonstrated clinical and biochemical improvements in patients with hepatic encephalopathy, a condition in which rising blood ammonia levels impair cognitive and motor function.⁵⁷⁻⁵⁹

Carnitine Combats Cancer Wasting

One of the most painful and tragic consequences of many cancers is their induction of *cachexia*, the progressive loss of appetite, energy, and body fat, with increased muscle wasting.^{60,61} Cancer cachexia is induced by many factors, one of which is decreased tissue carnitine levels.⁶⁰⁻⁶² Diminished appetite contributes to poor nutrition and further declines in carnitine levels.^{63,64}

Many strong studies now demonstrate that the carnitine supplements can reduce the rate and severity of cancer cachexia.^{65,66} Many also show improvements in appetite, fatigue, and quality of life—especially in the form of L-propionyl carnitine.^{61,67,68}

Summary

Loss of mitochondrial function is a major contributor to the process of aging. It deprives vital tissues in our body of the energy they need to perform normal tasks and to keep us vibrant, healthy, and young. Carnitine, a natural facilitator of energy transport in mitochondria, is essential for keeping mitochondria healthy and preventing their age-related loss.

Exercise-Related Benefits of Carnitine

- Carnitine reduces exercise-induced oxidative stress. Studies show that carnitine sharply reduces harmful fat oxidation byproducts in muscle tissue.⁷²⁻⁷⁷
- Carnitine reduces fatigue following moderate exercise. A study of middle-aged men and women showed that **2 grams/day** of L-carnitine improved recovery time after physical exertion.⁷⁸ A human study done with kidney patients on hemodialysis (a group chronically plagued by fatigue) showed that a large IV dose of carnitine could increase the amount of time they were able to exercise before becoming fatigued by **22%**—while also beneficially lowering heart rates.⁷⁶
- Carnitine enhances muscle performance and endurance.^{10,72,79} One study in animals demonstrated a **39%** increase in the distance the animals were able to run before they experienced exhaustion in normal air, and an astonishing **50%** increase when the animals ran under low-oxygen conditions.⁷⁹
- Carnitine increases exercise tolerance for people who experience angina with exertion.³⁰ Patients taking **500 mg** 3 times daily of propionyl-L-carnitine (a natural derivative of L-carnitine) experienced a **450%** increase in the mean time they could exercise without EKG signs of ischemia.³¹ That result indicated improved blood flow to heart muscle cells following ischemia, an effect proven time and again in animal studies.^{34,35}
- Carnitine enhances the performance of trained endurance athletes. One study showed that **2 grams/day** of L-carnitine reduced heart rates and lowered blood sugar levels during exercise.⁸⁰ Another study demonstrated that athletes using **4.5 grams/day** of glycine propionyl-L-carnitine experienced increased muscle power with decreased fatigue-inducing lactic acid accumulation.⁷¹

Supplementing with carnitine can help preserve cell energy levels, reduce fatigue, enhance heart muscle strength, reduce the impact of obesity and diabetes, slow signs of brain aging, and protect heart attack victims from dying. ●

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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ENHANCED HEART MUSCLE FUNCTION

Cardiotonics have traditionally been used to improve heart function and vitality. Formulated for optimum heart muscle health, **Cardio Peak™ with Standardized Hawthorn and Arjuna** provides dual **cardiotonic** support.

Extensive research demonstrates that the botanical extracts **Hawthorn** and **Arjuna** deliver optimum support for normal heart muscle function and coronary artery health.¹⁻¹⁷

Hawthorn: Peak Cardiotonic Support

Used for centuries in Europe for heart health, the cardiotonic effects of **Hawthorn** extract have been well documented in numerous clinical trials.^{1,9-12}

Hawthorn contains specific *bioflavonoid complexes* targeted to help promote normal circulation and efficient heart muscle function.^{2,5,13}

Studies indicate that the constituents in Hawthorn powerfully support:

- Strong *contractile force* of human heart muscle.³
- Protection for heart muscle cells from oxidant damage.^{1,2}
- Normal gene expression to promote cardiovascular health.^{2,4,5}
- Improved cardiovascular performance.¹¹

Arjuna: Boosting Heart-Health Benefits

Traditionally used for cardiovascular health, **arjuna** extract *complements* the effects of hawthorn in support of enhanced heart function.¹⁴⁻¹⁷ A number of scientific studies have shown that arjuna delivers strong support for:

- Enhanced heart muscle tone, improving its “squeeze” and increasing the amount of blood it can pump each second without exhaustion.¹⁶
- Healthy endothelial function.⁸
- Improved exercise endurance.¹⁷

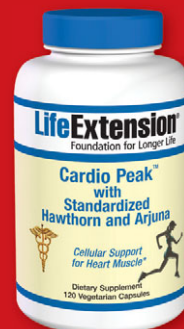
A comprehensive program that includes diet, exercise, and lifestyle changes is important to your cardiovascular health. For unique **cardiotonic support** for a strong and healthy heart, **Cardio Peak™ with Standardized Hawthorn and Arjuna** may become a key element in your daily regimen!

To order Cardio Peak™ with Standardized Hawthorn and Arjuna,
call 1-800-544-4440 or visit www.LifeExtension.com

The suggested **twice daily** dosage of **2 capsules** of **Cardio Peak™ with Standardized Hawthorn and Arjuna** provides:

Rejuna™ Arjuna (<i>Terminalia arjuna</i>) 10:1 extract (bark) [std. to 40% polyphenols (600 mg)]	1,500 mg
Hawthorn-Derived Oligomeric Proanthocyanidins (OPCs) [from standardized Hawthorn (<i>Crataegus monogyna</i>) and <i>Crataegus laevigata</i>] extract (leaf and flower)]	60 mg

A bottle of 120 vegetarian capsules of **Cardio Peak™ with Standardized Hawthorn and Arjuna** retails for \$36. If a member buys four bottles, the price is reduced to **\$24** per bottle.



Item# 01700

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Rejuna™ is a trademark of Verdure Sciences, Inc

Natural Support for Cellular Energy Production

Optimized Carnitine with GlycoCarn®

Diminished cellular energy production is an inevitable consequence of aging. As adults mature, the cellular power plants known as the *mitochondria* become dysfunctional. The resulting slowdown in energy production manifests in numerous health problems.

Nutritional researchers have discovered that the amino acid **carnitine** promotes the burning of fat for fuel in the mitochondria, thus promoting youthful levels of cellular energy production.* Researchers have now identified several optimized, next-generation forms of **carnitine** that not only help boost cellular energy production, but also may confer targeted benefits for the brain, heart, muscles, and central nervous system.

Optimized Carnitine with GlycoCarn® combines these advanced forms of carnitine—*acetyl L-carnitine*, *glycine propionyl L-carnitine*, and *acetyl L-carnitine arginate*—in a single formula that provides balanced, broad-spectrum support for cellular energy production throughout the body.

Acetyl L-carnitine readily crosses the blood-brain barrier to combat oxidative stress and promote energy production in critical brain and central nervous system tissues.¹ Acetyl L-carnitine also supports healthy brain function by stimulating the release of acetylcholine and dopamine, two neurotransmitters that play vital roles in brain health and communication.*

Acetyl L-carnitine arginate has an added molecule of arginine that enables it to augment the effects of acetyl L-carnitine, promoting the growth of neurites that facilitate communication among nerve cells in the brain.²

GlycoCarn® is a patented form of AminoCarnitine®, that is a molecularly bonded to the amino acid glycine and known as the AminoCarnitine® generation that quickly penetrates into heart, endothelial, and muscle cells, with effects that range from protecting heart muscle from lack of blood flow to combating muscle fatigue by increasing muscle energy stores of glycogen.³

Two capsules of **Optimized Carnitine with GlycoCarn®** provide:

Acetyl L-carnitine HCl	800 mg
ArginoCarn® Acetyl L-carnitine Arginate Di-HCl	300 mg
GlycoCarn® Glycine Propionyl L-Carnitine HCl	300 mg

A bottle of 60 vegetarian capsules of **Optimized Carnitine with GlycoCarn®** retails for \$36. If a member buys four bottles, the price is reduced to only **\$24 per bottle**.

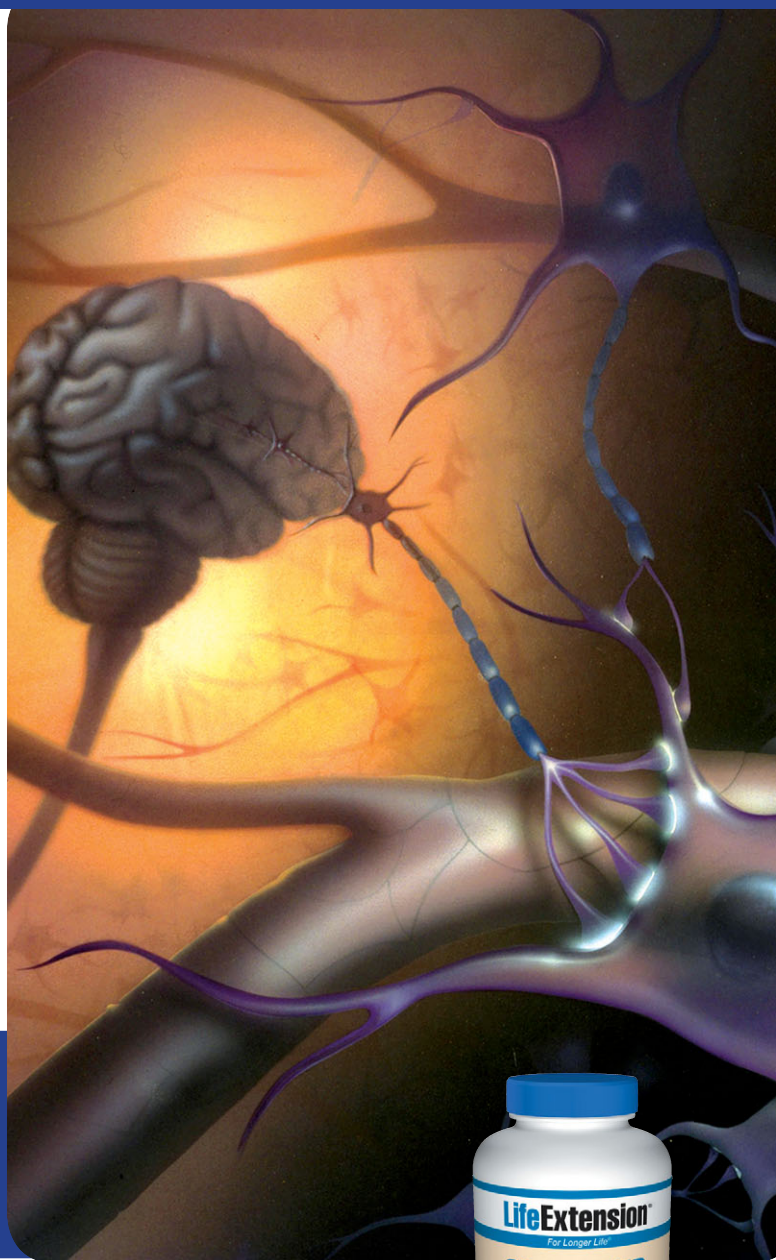
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CAUTION: For some people, L-carnitine, especially acetyl-L-carnitine, may have a stimulating effect. Therefore, it may be unwise to take it in the evening.

GlycoCarn®, ArginoCarn®, and AminoCarnitine® are registered trademarks of Sigma-tau HealthScience, Inc., and are protected by US patent Nos. 6,703,042 and worldwide patent EP1202956. The combination of multiple forms of Carnitine is protected by Sigma-tau patent # 6,245,378.

*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.



Item # 00916

To order **Optimized Carnitine with GlycoCarn®**,
call **1-800-544-4440** or visit
www.LifeExtension.com

NEW

L-CARNITINE Powder

with Natural Lemon Flavor

Over time, levels of carnitine diminish in all of our tissues,^{1,2} reducing cellular energy production and metabolic activity—a major cause of aging.³⁻⁹ For those whose regimen demands higher potencies, we now offer **L-Carnitine Powder with Natural Lemon Flavor!**



Item # 01719

Maintaining normal levels of carnitine supports the optimum functioning of the mitochondria, the powerhouses found within human cells. Mitochondria produce the energy that our vital tissues need to keep us vibrant, healthy, and young—and for *life itself*.¹⁰

L-CARNITINE POWDER...

- Carnitine helps maintain cellular metabolic activity by assisting in the intracellular transport of fatty acids from the cell fluid into the mitochondria, where fats are oxidized to generate cellular energy.¹¹⁻¹³
- Helps prevent excess accumulation of cellular debris.¹⁴⁻¹⁶
- Supports a healthy concentration of nitric oxide, which helps endothelial cells relax and maintain blood flow—supporting proper blood pressure.¹⁷⁻¹⁹
- Helps the body maintain healthy body fat composition, which in turn supports insulin sensitivity and healthy blood sugar levels already within normal range.^{20,21}
- Supports brain cells' natural defenses against age-related memory and cognitive decline.^{22,23}

Support the optimum functioning of your mitochondria with a high-quality L-Carnitine supplement—now available as L-Carnitine Powder with Natural Lemon Flavor.

A one-scoop serving of **L-Carnitine Powder with Natural Lemon Flavor** provides **1,000 mg** of L-Carnitine (from L-Carnitine tartrate). Depending on individual requirements and carnitine you may be obtaining in other formulas, one to two scoops may be taken daily with or without food.

A container of 60 servings of **L-Carnitine Powder** retails for \$28. If a member buys four containers, the price is reduced to **\$18** per container.

The advantage of **L-Carnitine Powder** is to enable convenient supplementation with higher doses. Those who prefer capsules can choose from several carnitine formulas available to Life Extension members at discounted prices.

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To order **L-Carnitine Powder with Natural Lemon Flavor**, call **1-800-544-4440** or visit **www.LifeExtension.com**

ARE YOU TAKING THE OPTIMAL FORMS OF VITAMIN E?

According to the *Proceedings of the National Academy of Sciences*, alpha tocopherol (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

Prestigious scientific journals have highlighted **gamma tocopherol** as one of the most critically important **forms** of **tocopherols** which includes d-alpha tocopherol (natural 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** extract long ago. Consumers thus obtain superior benefits at a much **lower cost**.

WORLD'S MOST COMPREHENSIVE VITAMIN E FORMULA!

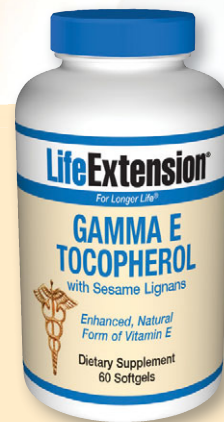
The **Gamma E Tocopherol with Sesame Lignans** formula provides potent doses of critically important gamma **tocopherol** along with **sesame lignans** to augment its antioxidant effects. Suggested dose is one softgel daily.

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	30.51-35.9 mg
Beta tocopherol	0-7.18 mg
Sesame seed (<i>Sesamum indicum</i>) lignan extract	20 mg



Item # 00759

Contains soybeans.

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.

CAUTION: If you are taking anti-coagulant or anti-platelet medications, or have a bleeding disorder, consult your healthcare provider before taking this product.

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

ULTIMATE eye HYDRATION



Item # 00893

The retail price for a box containing two 5 mL vials of **Brite Eyes III** is \$34. If a member buys four boxes, the price is reduced to **\$24 per box**.

**To order Brite Eyes III,
call 1-800-544-4440
or visit www.LifeExtension.com**

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

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

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

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

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

BY LIAM HAWKINS

NUTRITIONAL STRATEGIES TO COMBAT **Alzheimer's**

Someone in America develops Alzheimer's every **68 seconds**. This rate is projected to more than double by **2050**, to one every **33 seconds**.¹

Alzheimer's research is accelerating, but there is still no cure.

A vast array of published data, however, shows that making healthy dietary choices, along with proper use of nutrients, hormones, and drugs may dramatically reduce one's risk of developing this mind-destroying killer.

Most recently, an innovative brain scan was unveiled that for the first time can accurately diagnose the brain plaques that are characteristic of Alzheimer's. More than 300 hospitals and imaging centers have the ability to perform this scan.²

The dilemma we face today is that the five drugs approved for Alzheimer's only *partially* treat *some* of the symptoms. None of them can slow or stop the progression of the disease itself—let alone reverse it.³

Just because mainstream medicine has no solutions doesn't mean you're powerless against Alzheimer's.

Dozens of compounds have ample research behind them demonstrating their ability to take aim at multiple degenerative steps in the development of Alzheimer's.^{4,5} This may not only prevent the disease from developing, but it can also modify the course of the disease itself—reversing cognitive deficits, restoring memory, delaying the progression of disease, and more. >





The Complexity of Alzheimer's

Symptoms of Alzheimer's disease, the most common form of dementia, begin with insidious loss of memory which progresses to involve all aspects of cognition, including confusion and mood swings.^{6,7} After a painful and lingering illness, Alzheimer's causes death; it's the **6th** leading cause of death in Americans overall, and the **5th** among those over 64.²

Doctors are in a scientific and therapeutic quandary with Alzheimer's. We know a great deal about the disease's risk factors, about the pathological changes that occur in the brain, and about the biochemistry underlying them. We can predict with accuracy the natural course of the disease, once its symptoms become evident.

But to date, conventional medicine can do almost nothing to slow or stop the disease's progression, let alone prevent or reverse it.^{3,7}

Part of the problem is the complexity of Alzheimer's. Rather than having a few clear-cut causes that can be targeted with individual medicines, a host of interrelated abnormalities contribute to Alzheimer's disease.⁴ These develop slowly, and most are already in place by the time the first symptom arises.⁶ Ultimately, loss of brain cells and their billions of connections leads to atrophy, or shrinkage, of the brain itself, especially in the hippocampus and cortex, brain areas responsible for memory, cognition, and personality.⁶

No synthetic drug can yet address these multiple factors. Nutraceuticals offer a different approach. Rather than a single target, these natural products take aim at multiple steps in the development of Alzheimer's.⁵

The list of researched nutraceuticals that offer hope for modifying the course of Alzheimer's disease is long, and growing. Many of these nutrients attack Alzheimer's at multiple target points.⁸⁻¹⁰

The list is so long, in fact, that it's easy to become overwhelmed and to wonder which nutrients are right for any one individual to choose. That answer, of course, is highly individualized.

What we have done is meticulously compile a listing of supplements grouped by the kind of evidence available to support their use. The first group includes nutrients with good support from strong human studies. The second group includes those with extensive evidence from epidemiological studies relating intake (or blood levels) to the risk of Alzheimer's disease. The third group is comprised of nutrients for which we have strong laboratory evidence, but for which human

studies are still incomplete. The science behind nutritional strategies for preventing Alzheimer's continues to evolve. Here's what we know as of today...

Nutrients with Strong Evidence from Human Studies

Acetyl-L-Carnitine

Acetyl-L-Carnitine is a natural amino acid-derived molecule that contributes to movement of fatty acids and other vital fuels from the cell into mitochondria.¹¹⁻¹³ As such, it contributes to brain mitochondrial health and efficiency.¹²⁻¹⁵

Animal studies show that acetyl-L-carnitine supplementation decreases buildup of **amyloid beta** and **tau proteins**, and speeds degradation of amyloid beta, thus contributing to its rapid clearance from brain cells.¹⁵⁻¹⁷ At the same time, acetyl-L-carnitine boosts natural cellular antioxidant levels.¹⁵ These changes are accompanied by improved memory, cognition, and behavior, including slowing the rate of deterioration.^{13,18}

Compared to control patients, Alzheimer's patients supplemented with **acetyl-L-carnitine** at doses of **2 to 3 grams/day** for three to six months show slower decline in multiple cognitive functions, reduced attention deficits, and increased energy available to cells as ATP, the universal energy-storage molecule.¹⁹⁻²³ Acetyl-L-carnitine research provides the first demonstration that a nutrient therapy may modify



Ginkgo



Ginseng



Coffee



CoQ10

the clinical and central nervous system neurochemical parameters of the disease, unlike any existing drugs, which only influence symptoms.^{3,20}

Acetyl-L-carnitine supplements, like most nutraceuticals, work in the earliest stages of Alzheimer's disease, emphasizing the importance of starting the supplement well before the onset of detectable symptoms.^{21,22} Studies also show that adding acetyl-L-carnitine to the prescription drugs donepezil or rivastigmine in mild Alzheimer's can improve the response rate to these drugs from **38** to **50%**.¹¹

Ginseng

Panax ginseng and its extracts are used in traditional Chinese medicine to enhance memory and cognition. This natural plant product has multiple mechanisms of action, including reducing amyloid beta plaque formation, enhancing amyloid beta clearance, and reducing brain cell death.²⁴⁻²⁷ Animal studies show that ginseng treatment reverses many of the memory and behavioral abnormalities found in models of Alzheimer's.²⁸

Human clinical trials show good efficacy of ginseng extracts in terms of improving scores on the standard Alzheimer's rating scales.²⁹ One study of ginseng, **4.5 grams/day** showed improvements that continued until treatment was stopped, after which scores declined to those of the control group.³⁰

Huperzine

Huperzine A is a biochemical component of the Chinese club moss *Huperzia serrata*. It binds reversibly to the enzyme that destroys the neurotransmitter acetylcholine, helping to maintain the signaling molecule's presence in the synapses, where nerve cells communicate.^{31,32} This mechanism is similar to that of most common Alzheimer's drugs available today, but Huperzine also blocks the excitatory NMDA channels that overstimulate brain cells, offering a path not only to symptom relief but also to slowing the disease itself.³³ Finally, huperzine protects mitochondria from the destructive effects of amyloid beta, and triggers enzymes that degrade the toxic protein.^{34,35}

Human studies of Huperzine at doses of **200** to **400 mcg** twice daily have shown significant improvement,^{31,36-39} with some studies demonstrating improvements of **61%** to **348%** compared with placebo in scores measuring Alzheimer's disease severity and activities of daily living.^{31,37} Minor side effects such as ankle swelling and insomnia have been reported in **3%** of patients taking huperzine.³⁷



What You Need to Know

Nutrients Attack Multiple Mechanisms of Alzheimer's Disease

- Alzheimer's disease steals people — first it takes their memories, then their personalities, and finally their lives.
- Someone in the US gets Alzheimer's almost once a minute, and that rate is rising sharply.
- Conventional medications can only modify symptoms; they are entirely ineffective at changing the course of the disease.
- Nutritional supplements, each of which has multiple mechanisms of action, are best suited for combating Alzheimer's; many different supplements show promise at slowing the disease and reversing the biochemical abnormalities that underlie it.
- Combinations of supplements may offer the most comprehensive protection against Alzheimer's disease.
- Regardless of which supplements you choose, starting early (before symptoms appear) is likely to produce much better effects than waiting until the disease's mind-robbing actions are evident.

Nutritional Support for the Brain

Curcumin (as absorption-enhanced BMC95®): **400–800 mg** daily

R-Lipoic acid: **240–480 mg** daily

Acetyl-L-Carnitine: **1,000–3,000 mg** daily

Fish oil: providing **1,400 mg** EPA and **1,000 mg** DHA daily

Vinpocetine: **10–30 mg** daily

Pyrroloquinoline quinone (PQQ): **10–20 mg** daily

Phosphatidylserine: **100 mg** daily

Coffee (caffeinated) **3–5 cups** daily, ideally standardized to provide highest concentration of polyphenols.

Blueberry extract: **150–750 mg** daily

Green tea extract (standardized to **98%** polyphenols): **725–1,450 mg** daily

Resveratrol: **250 mg** daily

Whole grape extract: **150 mg** daily

Magnesium: **140 mg** daily as magnesium-L-threonate and at least **100 mg** daily as magnesium citrate

Vitamin B12: **1,000–5,000 mcg** daily

Vitamin B-6: **250 mg** daily

Folate (preferably as L-methylfolate): **400–1,000 mcg** daily

Vitamin D: **5,000 – 8,000 IU** daily; optimal blood levels of 25-OH-vitamin D are between **50–80 ng/mL**

Coenzyme Q10 (preferably ubiquinol): **100–300 mg** daily

N-acetylcysteine (NAC): **600–1,800 mg** daily

Ashwagandha extract: **250 mg** daily

Alpha glyceryl phosphoryl choline: **600 mg** daily

Huperzine A: **200–800 mcg** daily

Panax ginseng: **400–1,000 mg** daily

Vitamin E: **400 IU** daily with at least **200 mg** gamma tocopherol

Ginkgo biloba (standardized extract): **120–240 mg** daily

Lipoic Acid

Lipoic acid is a small molecule that's essential for proper mitochondrial energy production.⁴⁰ It boosts natural cellular antioxidant systems.^{40,41} Lipoic acid protects brain cells from death induced by amyloid beta and other oxidizing substances.⁴² It also binds tightly to toxic metal ions, preventing them from inducing oxidant stress.⁴³ Lipoic acid boosts production of acetylcholine in the brain, making more of the neurotransmitter available.⁴⁰ In animal models of aging brains, alpha-lipoic acid slows development of cognitive dysfunction and memory loss, and prevents degeneration of brain cells.^{44–46}

In human studies, alpha-lipoic acid supplementation at **600 mg/day** led to stabilization or slowing of cognitive decline, with Alzheimer's disease scores remaining constant for 1 year and progressing extremely slowly over 4 years.^{47,48} As with most supplements, the effects are more pronounced in patients with early stages of the disease.⁴⁸

Editor's Note: Alpha-lipoic acid is a 50/50 mixture of two different chemical forms of lipoic acid, an "R" form and an "S" form. Studies show that the "R" form is more biologically active and more bioavailable than the "S" form—as such, a lower dose of pure R-lipoic acid can be considered.⁴⁹

N-Acetylcysteine (NAC)

N-acetylcysteine (NAC) is an amino acid precursor of the cellular antioxidant glutathione.⁵⁰ As such, it can boost intracellular protection against the ravages of oxidant stress. NAC has been used in the laboratory successfully to clean up reactive oxygen species and ameliorate the behavioral changes seen in older animals and those with features of Alzheimer's.^{41,51}

Social isolation is known to increase the risk of Alzheimer's disease, resulting in increased oxidant stress levels and higher levels of amyloid beta. An intriguing study in mice showed that NAC supplementation could mitigate isolation-induced oxidant stress and amyloid beta formation.⁵²

Human studies, though limited in number, have demonstrated slowing of deterioration in those with Alzheimer's supplemented with n-acetylcysteine (NAC), particularly for cognitive tasks.⁵³

Omega-3 Fatty Acids

People with high intakes of fish oil, rich in omega-3 fatty acids, have lower levels of all kinds of dementia, including Alzheimer's disease. People with lower levels of omega-3 intake have greater Alzheimer's risk.^{54–57}



Omega-3 fatty acids, especially DHA and EPA, reduce inflammation and form important components of brain cell membranes.

Human studies of omega-3 supplementation are encouraging, but it appears that benefits arise mainly in people with very early Alzheimer's, or mild cognitive impairment, the stage that precedes Alzheimer's itself.⁵⁷⁻⁶⁰ Once the disease has reached the mild to moderate stage, no beneficial effects are seen.⁶¹

Vitamin D

Vitamin D is best known for its role in calcium metabolism and bone health, but the past decade has revealed multiple other crucial effects of the vitamin, which has receptor molecules throughout the body, especially in brain cells.^{62,63} Vitamin D is now considered a neurohormone, with multiple beneficial effects in the brain.⁶⁴

Older adults, and especially people with Alzheimer's have abnormally low vitamin D levels compared with the healthy population.⁶⁴⁻⁶⁶ Those with the lowest levels have as much as a **25-fold** risk of having the Alzheimer's predecessor, mild cognitive impairment when compared to those with highest vitamin D levels.⁶⁷

The specific cause and effect relationship remains murky, but it is clear that vitamin D has many different means of protecting brain cells. These include regulation of brain cell calcium channels, nerve growth factor, and nitric oxide synthesis, as well as antioxidant and anti-inflammatory mechanisms.^{62,68-71} Vitamin D also stimulates clearance of amyloid beta, an effect that is boosted by curcumin.^{63,64,72,73}

Studies show an improvement in cognition associated with an improvement in vitamin D status.⁶⁴ Vitamin D has some overlap in mechanisms with the Alzheimer's drug memantine, and a recent study showed that using both the drug and supplement together gave superior results to using either alone.^{70,74}

Ginkgo Biloba

Extracts of *Ginkgo biloba* have been in use in Europe for more than a decade as a prescription drug to treat degenerative dementias including Alzheimer's disease.⁷⁵ Ginkgo reduces brain cell death and may enhance clearance of the precursor to amyloid beta proteins.^{76,77}

Clinical trials in the US and Europe demonstrate that ginkgo extracts improve cognitive function,⁷⁸⁻⁸⁰ but the findings have not been consistent.^{81,82} One study showed ginkgo extracts can slow progression of early Alzheimer's by up to **25 months**, while also delaying the need for dependence on caregivers.⁷⁹

Several studies compared ginkgo with donepezil, one of the standard drugs for Alzheimer's treatment. Both showed no detectable differences between donepezil **5-10 mg** and ginkgo **160-240 mg** in terms of cognitive improvement, and one showed that the combination of donepezil and ginkgo, while not improving outcomes, did reduce the donepezil-related side effects.^{83,84}

Ginkgo extracts at the higher dose of **240 mg/day** seem to show still more impressive benefits in randomized, placebo-controlled trials, again in patients with mild to moderate Alzheimer's,⁸⁵⁻⁸⁷ but not all human studies show benefit.^{81,82}

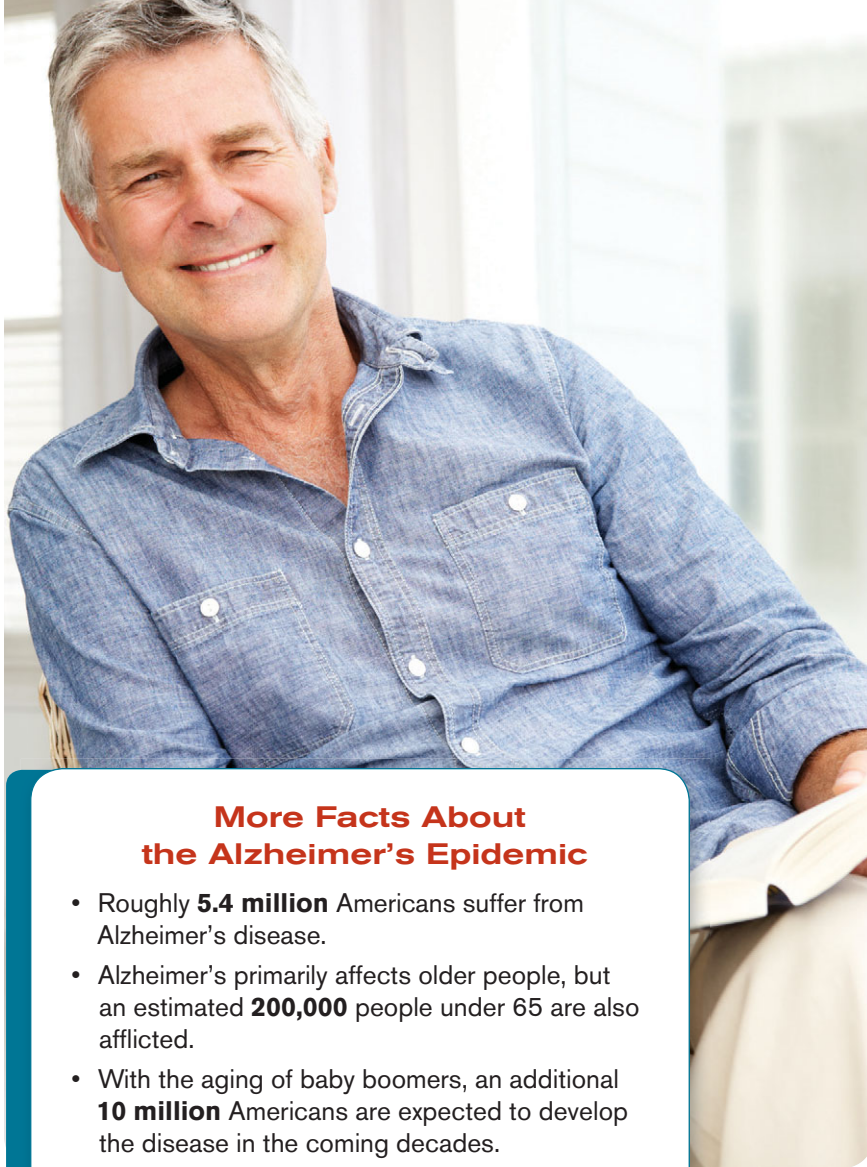
Nutrients with Strong Evidence from Epidemiological Studies

Coffee

Many large epidemiological studies show that moderate coffee consumption (3-5 cups of caffeinated coffee/day) is associated with reduced risk for Alzheimer's.⁸⁸⁻⁹¹

People who drank coffee at that level in mid-life had a **65%** decrease in Alzheimer's risk later in life.^{91,92} And high blood caffeine levels appear to prevent the progression of minimal cognitive impairment to fully-developed Alzheimer's.⁹³

Studies show that caffeine can reduce brain levels of toxic **amyloid beta** proteins in animals, while



More Facts About the Alzheimer's Epidemic

- Roughly **5.4 million** Americans suffer from Alzheimer's disease.
- Alzheimer's primarily affects older people, but an estimated **200,000** people under 65 are also afflicted.
- With the aging of baby boomers, an additional **10 million** Americans are expected to develop the disease in the coming decades.
- By 2050, it's estimated that a million new cases will arise per year; that will amount to a prevalence of **11 to 16 million** in the US alone.
- The percentage of deaths from heart disease and stroke fell by **13** and **20%**, respectively, between 2000 and 2008; the proportion due to Alzheimer's rose by **66%** in the same time period.
- More than **15 million** family members provided an estimated **17.4 billion** hours of care to people with Alzheimer's and other dementias.
- Payments for health care services for those with Alzheimer's are estimated at **\$200 billion** per year.
- Medicare costs for those with Alzheimer's are **3 times** those for people without the disease.
- One in seven people with Alzheimer's lives alone, while up to half have no identifiable caregiver.
- People with Alzheimer's who live alone are exposed to many other health risks than those who live with others.

not only slowing but in fact reversing the amyloid beta-associated cognitive impairment.^{89,94,95} Just 1 to 2 months of caffeine treatment restored memory and lowered brain amyloid beta levels in mice.⁸⁹

Coffee's other components, including **chlorogenic acid**, also have major protective effects on brain cells.^{90,96-99} It is likely, however, that coffee's primary benefit to brain health is related largely to its **caffeine** content.

Magnesium

Magnesium is a mineral that is essential for myriad human biological functions. It is especially important in the brain.

Increasing brain magnesium using a special compound called **magnesium-L-threonate** restores degraded neuronal connections by increasing **synaptic density**, a process that underlies learning and memory.¹⁰⁰

Lab studies show that magnesium modulates enzymes involved in amyloid beta production; at low levels, magnesium favors amyloid beta buildup, while at higher levels, it favors amyloid beta breakdown.^{101,102} There's also evidence

that magnesium opposes the effects of excitotoxic neurotransmitters; this would have the effect of reducing inflammation and perhaps amyloid beta deposition.¹⁰³

Magnesium levels are markedly lower in people with Alzheimer's disease than in healthy controls, and the degree of magnesium deficiency correlates with the severity of the disease.¹⁰⁴⁻¹⁰⁶

Vitamin E

People who have high intakes of vitamin E from food are at lower risk of Alzheimer's than those who don't, but studies of typical vitamin E supplements don't find that effect.^{107,108} The difference is that most supplements are comprised almost solely of the **alpha tocopherol** form of vitamin E,^{107,109} whereas the major form of vitamin E from food is **gamma tocopherol**. More current studies show that the **gamma** forms of vitamin E provide needed brain benefits.^{110,111}

Specifically, higher intakes and levels of **gamma tocopherol** and **gamma tocotrienol** are associated with lower risks for both Alzheimer's and its predecessor, mild cognitive impairment.^{107-109,112}

The Underlying Pathological Factors Associated with Alzheimer's Disease

Numerous abnormalities exist in the brains of people with Alzheimer's disease, though there is considerable scientific debate about which are causes and which are consequences.¹⁷⁹ Prescription medications cannot change any of these abnormalities; rather, they contribute marginally to improving symptoms. By contrast, virtually every one of these anomalies has shown some response to therapy with nutraceuticals in lab studies:^{1,5,9,15,17,152,179-183}

- **“Senile” plaques:** these are collections of abnormal proteins called **amyloid beta**, composed of a precursor called **amyloid precursor protein**; these extracellular plaques impose oxidant stress and trigger inflammatory changes and ultimately death of brain cells.
- **Neurofibrillary tangles:** these are intracellular structures also composed of abnormal proteins called **tau**; like amyloid beta they trigger cell destruction and ultimately death.
- **Imbalanced neurotransmitters:** levels of the neurotransmitter **acetylcholine** are inadequate for proper signaling in Alzheimer's disease; modern drug therapy is almost exclusively directed at boosting acetylcholine levels in brain cells, though this neither slows nor stops the disease progression.
- **Oxidative stress:** most researchers believe that oxidative stress is one of the true “fundamental” causes

of Alzheimer's, although the precise mechanisms are unclear; oxidant stress is both a cause and a consequence of abnormal protein accumulations such as amyloid beta.

- **Inflammation:** like oxidant stress, inflammation is now recognized as a root cause of Alzheimer's; inflammation is triggered by oxidant stress and also causes it, and release of inflammatory cytokines and invasion of brain tissue by inflammatory cells appear to exacerbate the condition.
- **Inefficient mitochondria:** disturbances of energy flow through mitochondria, the “reactors” that power cellular processes, releases huge amounts of oxidative molecules that damage surrounding cell structures as well as mitochondria themselves.
- **Elevated homocysteine:** homocysteine is an amino acid that is elevated in many chronic conditions; elevated levels can increase activation of tau and amyloid precursor proteins, leading to deposits of amyloid beta and neurofibrillary tangles.
- **Excitotoxicity:** like any machine run at high levels for a long period, the brain suffers from too much excitatory signaling, typically caused by the neurotransmitter glutamate; excitotoxicity can result not only from normal wear and tear, but also from most of the other abnormalities described above.



Nutrients with Strong Laboratory and Theoretical Evidence

Ashwagandha

The Ayurvedic plant, Ashwagandha, has widely-demonstrated beneficial effects, many of which are attributed to several of its antioxidant components, which are more powerful than most commercial antioxidants.¹¹³

Extracts from Ashwagandha's fruit and root protect brain cells in culture from the oxidant effects of amyloid beta; in one study they negated the cell death caused by amyloid beta.¹¹³

Laboratory findings reveal that ashwagandha extract inhibits **acetylcholinesterase**, an enzyme responsible for breaking down acetylcholine, one of the brain's key chemical messengers.¹¹⁴ Drugs such as



The Role of Anti-inflammatory Drugs and Metformin

Given the impact of inflammation in the Alzheimer's disease brain, it is natural that scientists would look with hope to the group of drugs known as non-steroidal antiinflammatory drugs (NSAIDs). The NSAIDs include common, over-the-counter drugs like ibuprofen and naproxen, certain prescription drugs, such as celecoxib, and aspirin, the oldest NSAID in existence.

All of the NSAIDs work by inhibiting activities of enzymes, cyclooxygenases (or simply COX), which are involved in production of inflammatory signaling molecules called prostaglandins. By inhibiting COX activity, the hope is that one might reduce inflammatory changes in brain tissues of people with Alzheimer's disease.

Epidemiological studies are encouraging, consistently showing lower incidence of Alzheimer's disease among people who use NSAIDs regularly, with greater protection among those who use them over long time periods.¹⁸⁴⁻¹⁸⁶ The rate of protection varies somewhat, but in general NSAID users develop Alzheimer's at rates in the range of **40 to 65%** of those in people not using NSAIDs.^{184,185}

Animal studies also show improvement both in physical changes in the brain on NSAIDs and also in behavior, memory, and cognition. Unfortunately, human studies have been less convincing, until quite recently. Earlier studies showed little improvement in Alzheimer's patients taking NSAIDs, but more recent, and more carefully-designed studies now suggest that certain NSAIDs (naproxen and ibuprofen) may slow disease progression in patients with very early, mild disease.¹⁸⁷⁻¹⁹⁰ And at least one study showed that a regimen of both ibuprofen **400 mg/day** and aspirin **500 mg/day** for one year resulted in modest increases in performance on cognitive testing in middle-aged women with normal cognition.¹⁹¹

But these beneficial results seem to occur only in patients with very early Alzheimer's, or in those who as yet show no symptoms. In fact, there's some evidence that taking NSAIDs in more advanced Alzheimer's disease can worsen certain aspects of the disease.^{189,190}

Some studies focus specifically on aspirin, the prototypical NSAID derived originally from willow bark. In addition to its ability to block the inflammation-inducing COX enzymes, aspirin has additional benefits of importance in Alzheimer's disease. For example, it reduces the number of activated platelets; people with Alzheimer's often have excessive amounts of activated platelets, which may contribute to poor blood flow in the disease.¹⁹² An exciting synergistic effect has been suggested between aspirin and the omega-3 fatty acid DHA: aspirin appears to promote conversion of DHA into anti-inflammatory molecules that may help to blunt the effects of inflammation on development of Alzheimer's disease.^{193,194}

Metformin, like aspirin, is a well-established modern-day drug with natural origins (it's derived from a French lilac bush).¹⁹⁵⁻¹⁹⁷ Most applications for metformin today have to do with diabetes and insulin resistance, which are increasingly relevant topics for Alzheimer's researchers. In fact, the brain impact of diabetes and insulin resistance is so great that some scientists term Alzheimer's "Type III diabetes."¹⁹⁸ Studies show that metformin helps the body break down and deactivate proteins that contribute to the neurofibrillary tangles characteristic of neurons affected by Alzheimer's disease;¹⁹⁹ obese mice with experimental Alzheimer's show fewer biochemical brain changes when treated with metformin.²⁰⁰

Aricept®, which is currently used in the treatment of Alzheimer's disease, act in this very manner to slow the progression of this mind-robbing disease as well as improve cognition and behavior.¹¹⁵

B-Vitamins

The B vitamins folate (B9), pyridoxine (B6), and cobalamin (B12) are essential for recycling of the molecules that make up DNA; without sufficient B vitamins there is a buildup of the amino acid homocysteine, which is toxic to many tissues. Elevated homocysteine levels are a known risk factor for Alzheimer's disease, though it is still unclear if homocysteine is actually a cause of the condition.¹¹⁶⁻¹¹⁸

Laboratory and human studies show that B vitamin supplements lower homocysteine, slow buildup of abnormal proteins amyloid beta and tau, and reverse the cognitive and memory deficits induced by artificially elevated homocysteine levels.^{119,120}

Blueberries

Blueberries are extremely rich in the beneficial plant molecules called polyphenols, which are powerful antioxidants.¹²¹ Polyphenols can also affect the way genes are expressed, switching on those that offer protection against neuronal damage, and switching off those that signal increased inflammation or other deleterious effects.¹²²

Blueberry extracts' antioxidant actions help protect neurons against the damage done by amyloid beta proteins.^{121,123} They have also been shown to protect neurons and improve animal behavior even when amyloid beta levels are unchanged, meaning that they provide protection "downstream" from amyloid beta's oxidant and inflammatory effects.¹²⁴⁻¹²⁶

CoQ10 and PQQ

Coenzyme Q10 (CoQ10) and pyrroloquinoline quinone (PQQ) are essential nutrients that help keep mitochondria healthy by improving their efficiency at burning foods to produce energy.¹²⁷⁻¹³⁰

Laboratory studies show that CoQ10 supplementation reduces the amount of amyloid beta plaque formation in brain cells, resulting in improved behavior.^{131,132} PQQ acts after amyloid beta has already accumulated, helping cells recover from amyloid beta-induced oxidant stress, preventing neuronal cell death, and decreasing further production of reactive oxygen species.¹³³

Balancing Hormones, Especially DHEA, in Alzheimer's

Although its effects are not fully understood, it's clear that stress of all kinds takes a toll on the brain. Eventually, mainly under the influence of excessive levels of the stress-response hormone cortisol, structural and functional changes occur, especially in the hippocampus, the brain's most concentrated region of memory-processing neurons.²⁰¹

Normally, the effects of cortisol are balanced by high brain concentrations of the neurosteroid dehydroepiandrosterone (DHEA).²⁰² DHEA, and its "sulfate" form, DHEAS, are the most abundant hormones produced by the adrenal glands, the body's stress-controlling organs.²⁰³ These hormones serve to protect hippocampus and other brain cells from oxidative stress and the deleterious immune system disruptions induced by cortisol, which left unchecked can drive inflammatory processes that further damage memory and cognition.^{204,205}

With advancing age comes a drop in DHEA production, however, while cortisol production is relatively unchanged (in fact, some studies suggest that cortisol increases with age).²⁰¹⁻²⁰⁴ The sharp decline in DHEA levels is often referred to as "adrenopause," and is thought to contribute to age-related increases in atherosclerosis, cancer, and dementia.²⁰³

The resulting imbalance in the DHEA/cortisol ratio is a direct measure of risk for Alzheimer's disease: people (especially women) with Alzheimer's have much lower DHEA/cortisol ratios than do healthy age-matched controls, who in turn have lower ratios than younger adults.^{201,206}

Laboratory and animal studies demonstrate that DHEA supplementation has substantial anti-inflammatory effects in the brain, including inhibition of nitric acid production, an early inflammatory signaling molecule.^{204,207,208} DHEA also stimulates production of new neurons in tissue-culture experiments.²⁰⁹ DHEA produces a restoration of youthful cognition and memory when older animals, or those with Alzheimer's disease, are supplemented with the neurohormone.^{210,211}



Curcumin

Curcumin is a yellow biomolecule derived from the spice turmeric.¹³⁴ Like other antioxidants, curcumin protects brain cells and their mitochondria against amyloid beta-induced toxicity and inhibits formation of abnormal proteins.¹³⁴⁻¹³⁶

But curcumin also possesses some unique features with regard to Alzheimer's disease. Sophisticated molecular studies reveal that curcumin can prevent amyloid beta molecules from assembling, and can also destabilize amyloid beta plaques after they have formed.^{137,138} This permits the body's natural cleanup cells, macrophages, to rapidly clear amyloid beta fragments before they can re-form and damage brain cells. And curcumin stimulates macrophages to make that cleanup process still more rapid and efficient.

Another beneficial mechanism of curcumin is to enhance the health of mitochondria, the tiny cellular power plants that provide energy to all of our cells. Aging mitochondria are thought to be responsible for much of the brain cell death and dysfunction that occurs in Alzheimer's disease.¹³⁹ Curcumin, through its antioxidant actions, scavenges dangerous oxygen free radicals produced by ailing mitochondria, preventing their death and enhancing their action.¹⁴⁰

Finally, curcumin has favorable effects on brain insulin receptors. The balance between glucose levels and insulin in the brain is capturing scientists' attention, with some even referring to Alzheimer's disease as "type III diabetes."¹⁴¹ Studies of diabetic animals reveal that curcumin enhances actions of insulin receptors in brain tissue.^{142,143}

Studies in animal models of Alzheimer's disease demonstrate the value of these multiple mechanisms on learning and memory. Curcumin supplements given even after the onset of Alzheimer's-like symptoms result in fewer mistakes on memory-dependent tasks, and improved performance on mazes that test both reasoning and memory.¹⁴⁴⁻¹⁴⁷ When the animals' brains are examined at the end of such experiments, they demonstrate significantly less brain cell death in memory-processing brain areas.¹⁴⁵

In one of the most dramatic experiments to date, curcumin supplements were found to protect against brain aging in general among mice treated with an age-accelerating compound.¹⁴⁸ These remarkable findings were accompanied by improved performance on cognitive tasks and enhanced locomotion; in these animals' brains improved oxidant defenses and restored mitochondrial enzyme activities were observed as well.

This kind of reversal of Alzheimer's damage is something no existing drug can do.

Grape Seed Extract

Grapes, and particularly their seeds, contain very high levels of proanthocyanidins, clusters of polyphenols that have multiple health benefits including anti-inflammatory and antioxidant effects. But they also have remarkable gene modulating activities, directing protein expression away from that seen in Alzheimer's and towards a more normal state.¹⁴⁹ And they readily cross the blood-brain barrier to be deposited in brain tissue.¹⁵⁰

These effects result in reduction of Amyloid beta formation by several different mechanisms, as well as enhanced amyloid beta clearance.¹⁵¹⁻¹⁵³ Grape seed extracts also reduce inflammation in animal models of Alzheimer's disease.¹⁵⁴

Green Tea

Green tea is rich in a variety of polyphenols, especially one called EGCG, that have multiple beneficial attributes. EGCG interferes with the Alzheimer's disease process in several important ways.¹⁵⁵

EGCG physically blocks the assembly of amyloid beta proteins, preventing them from clumping together to form plaques.¹⁵⁶ The compound also generates a unique set of stable proteins from the amyloid beta precursor molecule; these proteins can't bind together at all, further reducing the burden of plaque.¹⁵⁷

Intriguingly, EGCG, given before exposure, prevents mitochondrial dysfunction induced by amyloid beta in brain cells, while also normalizing cells' responses to the excitatory neurotransmitter NMDA.^{158,159}



Resveratrol

Resveratrol is a multi-functional polyphenol that plants use as an antifungal compound; it is found abundantly in red grapes.^{8,160-162} Resveratrol has antioxidant characteristics, but scientists are especially excited about its ability to change how genes are expressed.¹⁶³ This so-called epigenetic capability allows resveratrol to affect multiple points in the complex series of events that ultimately produces Alzheimer's symptoms.¹⁶⁴

Studies show that these properties of resveratrol act both before and after amyloid beta protein is deposited in brain tissue. Resveratrol promotes enzyme actions that slow amyloid beta production, and speed its clearance, while it also promotes expression of enzymes that limit the nitric oxide and inflammatory cytokine production that amyloid beta triggers.^{160,165-168}

Glucose utilization is impaired in the brains of Alzheimer's patients, leading to further deterioration of their cells; this is one of the many ways that Alzheimer's and type II diabetes overlap. Breaking research reports that resveratrol can promote glucose utilization in brain cells, potentially mitigating the destructive effect of elevated sugar.¹⁶⁹

Vinpocetine

Vinpocetine is an alkaloid derived from the periwinkle (Vinca) plant.¹⁷⁰ It increases brain blood flow and decreases platelet aggregation through its inhibition of the enzyme PDE1.^{170,171} Vinpocetine also produces higher brain levels of the neurotransmitter *acetylcholine* that is deficient in Alzheimer's disease.¹⁷¹

By separate mechanisms, vinpocetine provides antioxidant protection to brain cells, and markedly reduces mitochondrial dysfunction.¹⁷⁰⁻¹⁷² These combined mechanisms, and perhaps others, contribute to vinpocetine's ability to prevent neuronal damage and improve impaired learning and memory in animal models of Alzheimer's.¹⁷¹

Nutrient Combinations

The multifactorial nature of Alzheimer's disease makes it a natural condition for combinations of nutrients that, together, can target many, if not most, of the underlying molecular damage.¹⁷³

Studies of a mouse model of Alzheimer's reveal so much improvement in learning in supplemented mice that their performance could not be distinguished from that of healthy mice. The supplement contained curcumin, piperine, epigallocatechin gallate, alpha-lipoic acid, n-acetylcysteine, B vitamins, vitamin C, and folate.¹⁷⁴

Several human studies have been done with a supplement containing curcumin, piperine, EGCG, alpha-lipoic acid, N-acetylcysteine, B vitamins, vitamin C, and folate in those with mild to moderate Alzheimer's disease. Patients' performance on standard neuropsychiatric measures were equivalent to those on donepezil, and exceeded those of galantamine, drugs in current use for Alzheimer's.¹⁷⁵ Even in institutionalized patients with later-stage disease, this formulation produced an improvement of about **30%** on the standard neuropsychiatric inventory.¹⁷⁶ This formulation has also been shown to improve cognitive performance in people without dementia, demonstrating the power of combined supplementation.¹⁷⁷

One proprietary nutritional product (containing Ashwagandha, blueberry, grape seed extract, ginger, vinpocetine, and phosphatidylserine plus alpha-glyceryl phosphoryl choline and other ingredients) has also now been shown to improve cognition in adults with memory and cognition problems and improve working memory, executive function, and inspection time (a measure of decision-making), in an open clinical trial.¹⁷⁸

Summary

Alzheimer's is a complex, multifactorial, and progressive disease that steals mind and memory. To date, mainstream medicine remains baffled by the condition, with just 5 drugs on the market, none of which can modify or slow disease progression.

Nutritional supplements, on the other hand, have multiple mechanisms, offering a broader front on which to attack Alzheimer's. Many different supplements show great promise by acting on several or many different targets in the disease's progression. Combining many nutrients together is proven to offer even greater impact.

Using a combination of multitargeted supplements may be the only way to stop or slow Alzheimer's disease, and prevent it from taking away your personality. ●

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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When Life Extension® introduced 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.

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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 **100 vegetarian capsules** of **Mega Green Tea Extract** is **\$28**.

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ALZHEIMER'S DISEASE STUDY

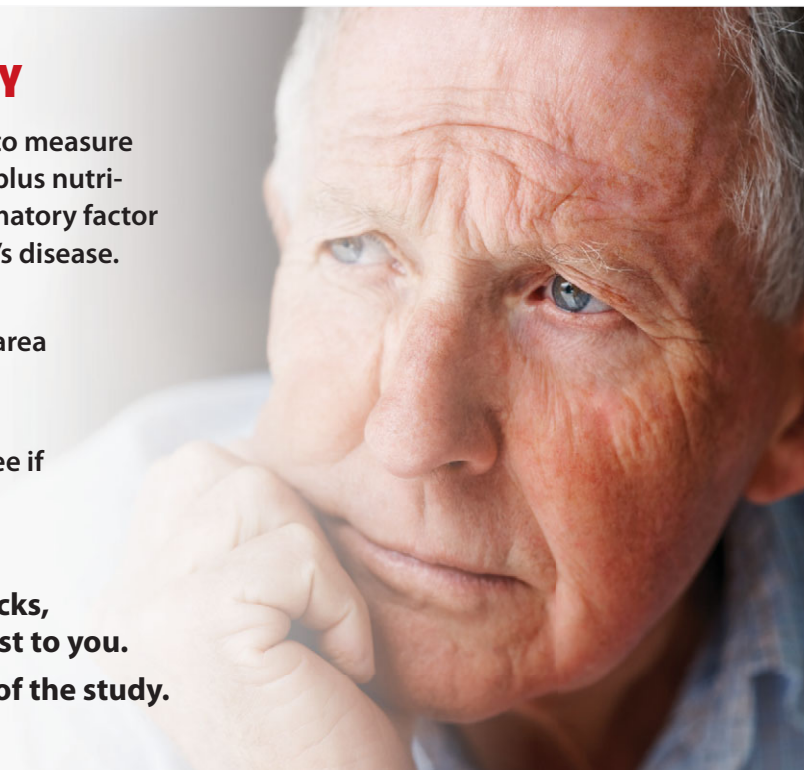
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HALF OF AGING HUMANS IN THE DEVELOPED WORLD ARE MAGNESIUM DEFICIENT!¹

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A Critical Brain Booster. . .

Magnesium is needed for more than **300** biochemical reactions in the body.²

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It is very *hard* for your body to maintain optimal levels of magnesium in the **brain**.² This is of *special concern* for maturing individuals, as magnesium deficiency increases over time.¹

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Most commercially available magnesium supplements are not readily absorbed into the central nervous system.

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The suggested daily dose of three **Neuro-Mag™ Magnesium L-Threonate Capsules** provides **2,000 mg** of **Magnesium-L-Threonate**. While this supplies a modest **144 mg** of elemental magnesium, its superior **absorption** into the bloodstream and nervous system make it a preferred choice for aging humans to supplement with.

This same brain health-supporting magnesium is also available in a good tasting powder mix called **Neuro-Mag™ Magnesium L-Threonate with Calcium and Vitamin D3 Powder**. In addition to its appealing natural lemon flavor, the one-scoop per day serving size supplies the same amount of magnesium **plus 500 mg** of **calcium** (as calcium lactate gluconate—a highly *soluble* form of calcium) and **1,000 IU** of **vitamin D3**.

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Item # 01603



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For more than **forty years**, the antioxidant compound **N-acetyl-L-cysteine**, or NAC, has been recognized for its role in supporting bronchial and respiratory health.¹⁻¹⁰ Today, a *burst* of renewed scientific interest has yielded fresh insights into its role in supporting overall health.

At the core of N-acetyl-L-cysteine's power is its ability to support healthy cellular levels of **glutathione** (GSH), a nutrient utilized by all cells for protection against free radical damage and insults from foreign compounds.

N-acetyl-L-cysteine directly contributes to glutathione production and stimulates enzymes involved in maintaining glutathione, providing critical energy and support for cell function across multiple systems of the body.

Over **thirty** placebo-controlled clinical trials involving cellular glutathione have indicated beneficial effects of oral **N-acetyl-L-cysteine** on health, quality of life, and well-being.¹¹

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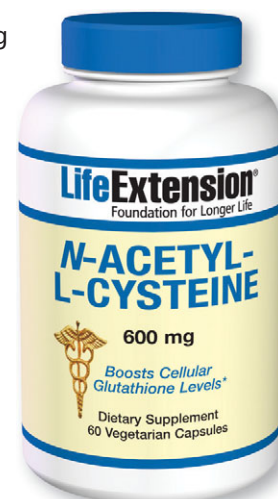
Individuals seeking support for system-wide health with **Life Extension® N-Acetyl-L-Cysteine** may choose to ingest between **600-1,800 mg per day**.

The retail price for a bottle containing **60 600 mg** vegetarian capsules of **N-Acetyl-L-Cysteine** is \$14. If a member buys four bottles, the price is reduced to just **\$10.13** per bottle.

Caution: Those who supplement with NAC should drink six to eight glasses of water daily in order to prevent cysteine renal stones. Cysteine renal stones are rare but do occur.

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Item #01534

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BY JON FINKEL

LEEZA **GIBBONS:** *All In Against* ALZHEIMER'S

The essence of fame is recognition; whether at a restaurant or a park or the grocery store, when you're famous, people know who you are. But what happens when you're a celebrity and one day, and as you're helping your mother make her bed, she looks at you blankly and says, "You're a really nice lady. Do I know you?"

Such is the power and devastation of Alzheimer's disease—capable of rendering one of the most recognizable people on television a complete stranger to her own mom. The celebrity in this case is Emmy Award-winner **Leeza Gibbons**; the Alzheimer's victim, her mother Jean. Unfortunately, this scenario, which played out in Jean's bedroom, has been reenacted in some shape or form by the loved ones of the five million people suffering from this disease in the United States. >



The Evolution of a Health Advocate

“My mom was relatively young when she started showing signs of the disease,” Gibbons says. “She was in her late fifties. In the beginning, it’s very common to have forgetfulness and behavioral issues with hygiene and things like that. My mom would repeat herself quite often and she knew things were getting worse. I would have to go through her wardrobe to put together easy outfits for her to wear because she was losing the ability to plan.”

At first, Gibbons and her family didn’t want to face the fact that the matriarch of their family, a strong, vivacious, sharp woman, was fading before their eyes. Even though Gibbons’ grandmother died of Alzheimer’s, it was extremely hard for her to reconcile that the disease was now ravaging her own mother.

"I remember going to visit my grandmother, who wouldn't recognize us, and my mom would say, 'if this ever happens to me, I don't want you to visit me. I won't know you and I want you to live your life'," Gibbons says. "At the time, I thought, number one, there's no way it's going to happen to her, and number two, there's no way I wouldn't see her."

By the time Jean Gibbons was 62, she was diagnosed with Alzheimer's, and the slow, torturous march of the disease had begun. Ten years later, she had mentally disappeared, unable to recognize anyone in her family.

"My mom had given us strict orders when she was healthy that she didn't want to live with us if she couldn't call us by our names," Gibbons explains. "But during the progression of the disease, my family members and I had to come together to figure out what to do."

Personally, Gibbons admits to spending the first year or so of her mom's diagnosis on a self-imposed wild goose chase to find the cure. She was a journalist, after all, and she felt that if she could just travel to the right places and speak to the right people she could find a way to stop the advancement of the disease. This time and energy she spent trying to find answers was in response to the feeling that all family members of Alzheimer's victims face: utter helplessness.

"For the first few years, I couldn't bear the feeling of being helpless," she says. "It felt so uncomfortable. Looking back, I realize now that you just have to capitalize on all the time that your loved one is still capable of being themselves. There's so much blame and shame and feelings that follow a diagnosis that people miss out on that valuable time. That's why I beat the drum so loudly about getting an early diagnosis."

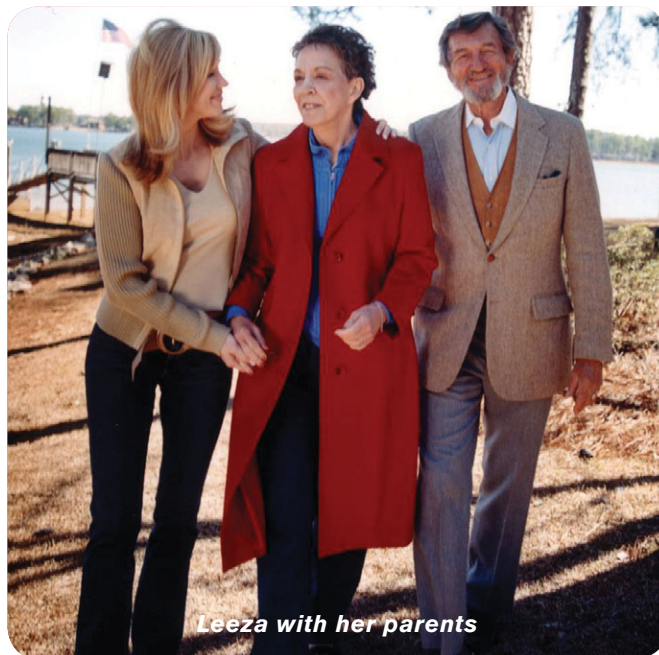
Leeza's Place is Born

Eventually, Leeza would stop spinning her wheels looking for a miracle cure and get down to the business of being a caregiver and tackling the reality of facing Alzheimer's head on.

"In a brilliant stroke of parenting before the disease had gotten too bad, my mother told me directly that I'm a reporter, and that what was happening to her was a story that I could tell to help others," Gibbons says. "Every time I get to do that now, it's an honor."

From those simple marching orders, Gibbons has created a veritable Alzheimer's Caregiver empire of invaluable resources for the loved ones of Alzheimer's disease patients.

"There was no 'a-ha' moment and no epiphany that I had to start the Alzheimer's programs and facilities that exist now," she says. "It was such an organic



Leeza with her parents

evolution. It was like a blossoming. I was grieving and it dawned on me that here I am, this health advocate, waiting to get going. It was such a beautiful shield that helped me with my grief and it has been my heart's employment ever since."

The results of Gibbons' self-described "blossoming" are staggering. To start, there's Leeza's Place: A Place for Caregivers, whose mission Gibbons' describes so eloquently on the Leeza's Place website:

"We began with my promise to my mother that I would take her story of stolen memories and use it to educate and empower. Now, we have a new promise...and that is to all of you who wonder where the strength will come from; all of you who wake in the middle of the night with a terrifying gasp of "now what"; all of you who journey so courageously and feel so alone. We promise there is life after diagnosis.

We promise to give you the tools to find your way. We promise the caregivers and their diagnosed loved ones that you will not have to look down a long, dark tunnel and fail to see a light. We will be a beacon for your journey of hope and together we will begin to make it better."

There are currently four Leeza's Place locations: Leeza's Care Connection at Providence Saint Joseph Medical Center in Burbank, California, Leeza's Place at Olympia Medical Center in Los Angeles, California, Leeza's Place Memorial Hospital Pembroke in Pembroke Pines, Florida, and Leeza's Place at Provena Saint Joseph Medical Center in Joliet, Illinois.

"We're not involved in the diagnosis or medical area of Alzheimer's," Gibbons explains. "What we do is become partners with continuing care in the community. We align ourselves with hospitals and non-profits while our partners handle the medical side of things. I like to think of us as trained in the matters of the heart. Our doors are always open and we make sure we do not have a clinical feel at all. Our centers have a living room setting."

Leeza's Place is focused on free caregiver support and provides information, both at the centers and on the website, about every aspect of dealing with a loved one's Alzheimer's diagnosis. Everything from advice about assisted living facilities, care providers, finances, insurance, legal information, and even retirement research is available.

On a personal level, nothing is off the table in terms of helping people get through the emotional upheaval of a loved one's diagnosis. The facilities provide reiki stress relief, humor therapy, legacy writing, scrapbook writing, and even poetry readings. They offer different classes in every location in order to help victims any way that they can.

"We know what we're doing works," Gibbons says. "And we know there's a high demand for it. We have four centers right now, but we need four thousand. That's why it's so important to affiliate with a website like AlzheimersDisease.com to let people know that this resource is out there. Even if someone doesn't live near a facility, our websites can be extremely valuable."

Remarkable Research on the Horizon

In addition to Leeza's Place, Gibbons hosts the Dare2Care event in Hollywood that honors celebrities and their philanthropic interests. This "party with a purpose" raises funds for Leeza's Place. But Gibbons believes in a two-pronged approach when it comes to taking on Alzheimer's. While one aspect is dealing with the caregivers and the victims themselves, the other is the science and the scientists who are working to find an actual cure for the disease. To that end, Gibbons is using her appointment by Governor Arnold Schwarzenegger to be an Alzheimer's Advocate to good use, as evidenced by her involvement with the renowned California Institute for Regenerative Medicine (CIRM).

"It is a remarkable assignment," Gibbons says. "I feel like we're at the front door of cutting-edge cures. California is the mecca of stem cell science and this agency is the only one of its kind that has been created. The voters in our state designated three billion dollars to go to stem cell research. We didn't want to wait for the National Institutes of Health or the government,

we want to aggressively go after treatments and cures and get them to people as soon as possible."

One of the more exciting developments that Gibbons has been a part of is a research project at the University of California - Irvine that involves injecting stem cells into the hippocampus to restore memory in mice. In the mouse models, the scientists put mice in a water maze and taught them how to get out so that each mouse could get out one hundred percent of the time. They then gave the mice an Alzheimer's-like disease and waited for it to take effect so that none of the mice could navigate the maze. Once the mice reached this stage, stem cells were injected into the hippocampus of each mouse and many of them were able to navigate the maze again.

"I did a little victory dance when I heard about that study," Gibbons says. "I know it's just mice and there is a giant leap to go from a mouse to a human, but we all want to see evidence that something might work. Even if it doesn't work, then we know that that's a 'no,' and we learned something."

The main objective of CIRM is to bring the brightest minds in stem cell science together. Case in point, the recent awarding of the Nobel Prize to CIRM-funded scientist Shinya Yamanaka, who discovered that mature, specialized cells can be reprogrammed to become immature cells capable of developing into all tissues of the body. This groundbreaking discovery has led to new research fields that will experiment with reprogramming human cells to create new opportunities to study diseases and develop methods for diagnosis and therapy.



Leeza at a charity event

Leeza Gibbons on How to Deal with a Loved One's Alzheimer's Diagnosis

The number one thing to remember is that it's a marathon, not a sprint. You have to have a team of people and you will want to find lots of options for support. You'll need legal advice, psychological advice, and both physical and spiritual support. I don't care how smart and resourceful you are, dealing with this disease is a foreign language. Take advantage of the people whose job it is to mine all the resources for you. That's what they live for.

One of the things I always talk about is going the distance. As a caregiver, you will deplete and you will empty out quickly. You're going to get to the end of your rope fast. You have to figure out how to balance your work, your children, your family, everything. Life has to go on. You have to figure out how not to lose yourself in the disease and your loved one's battle. Most importantly, you need to remember that a heart never forgets. Love transcends a disease.

"Early on there was controversy, but we were given a mandate by the voters and we have been disbursing the money as instructed," Gibbons says. "It has funded such incredible scientists across the state and we are now a beacon of stem cell research."

From the Laboratory to Real Life

While Gibbons has amassed enough knowledge about the effects of Alzheimer's disease and caregiving to be considered an expert, she is quick to remind people that she is not a scientist, and when it comes to her own personal lifestyle, she just tries to avoid many of the common triggers that can be detrimental to overall health.

"Stress is a killer," Gibbons says. "It's not the friend of any disease. If you can mitigate stress in your life, it'll be good for your heart and good for your mind. A great way to do that is through exercise. Daily exercise, a good night's sleep, and stress reduction are three of the easiest, most proven things people can do to improve their health."

Gibbons admits that practicing what she preaches on that front has taken time because she has a strong work ethic and has had to learn to shut things down at the end of the day.

"It's an emerging skill that I've been developing that I'm proud of," she says. "Sleep is imperative. I really prioritize it. Not stressing about work is imperative. I've learned to just walk away from whatever I'm doing to relax at the end of the day."

From a diet perspective, Gibbons believes that a proper diet along with a healthy lifestyle can help delay the inevitable.

"How preventative are blueberries when it comes to Alzheimer's disease? I don't know, but I'm sure going to eat them!" she says. "I also take elderberry, tumeric, omega-3s, and curcumin, so it's a balance. All I know is that I promised my kids that I'd do everything I could to make sure that I don't get my mother's disease. I'm sitting right here at the front lines of science to throw money at the best and brightest to find a cure. I believe I'm doing everything that I personally can to attack this disease and I sleep well at night. It's like my mom always said, 'Show up, do your best, and let go of the rest.'"

In Gibbons' case, her best is changing lives for the better. ●

Leeza Gibbons is perhaps best known for her role as an anchor and reporter for Entertainment Tonight, but she currently hosts the AARP's TV series *My Generation* on PBS as well as co-hosts the syndicated show *America Now*. For more information on Leeza, visit www.leezagibbons.com. For information on Leeza's Place, visit www.leezasplace.org. Follow Leeza on Twitter @LeezaGibbons

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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References for most can be found at:
http://www.lef.org/magazine/mag2007/feb2007_report_cognitex_03.htm

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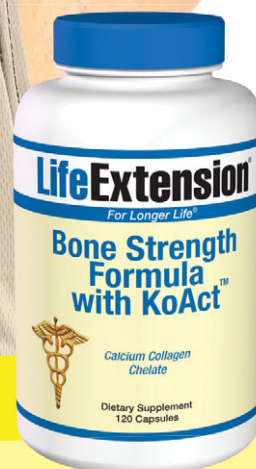
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Vitamin D3 (as cholecalciferol)	1,000 IU
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ASK THE DOCTOR

BY AARON E. KATZ, MD

Do I Need Testosterone Replacement?

Q ■ I am a 61-year-old man in generally good health, but I've been experiencing some worrisome symptoms lately. I just don't seem to have the vigor that I once had, I feel fatigued much of the time, as though my mind were in a fog, and my enthusiasm for work and recreation isn't what it once was. Could I be suffering from testosterone deficiency? If so, is testosterone replacement safe and effective at my age? What tests should I undergo? What are the risks of the therapy?



AARON E. KATZ, MD

A ■ You ask some important questions, ones that I hear all the time from men in my integrative urology practice. Let's see if we can shed some light on this important issue.

First, testosterone deficiency (or "low T," as some TV ads put it) is real. There's been a gradual decline in average testosterone in men around the world over the past few decades. In industrialized nations, as many as **10%** of men have testosterone below the "normal" level; that number rises to **15** to **30%** in diabetic or obese men.¹⁻³

Testosterone deficiency is unfortunately under-diagnosed; too many men have their symptoms written off as “normal aging” or depression, when in fact there may be a chance to intervene favorably.¹ In fact, fewer than **10%** of men with testosterone deficiency receive treatment.¹

For reasons not yet entirely worked out, we see testosterone levels begin to decline in adult men at about the age of 30, after which levels fall about **1%** per year. So by the time you are 61, your testosterone levels are likely to have fallen nearly a third compared to what they were in your youth.

Naturally, not all men experience testosterone decline at precisely the same rate, but when levels drop as they may have in your case, it's not at all unusual for there to be some changes that you can see, and also that you can feel.

Although testosterone is produced by both men and women, it is traditionally thought of as a male hormone, and in men, about **90%** of it is produced in the testes. We see the effects of testosterone in men after puberty in the form of so-called secondary sex characteristics: facial and body hair, a

deepening of the voice, clear muscle definition, etc.

So, with decreasing testosterone levels, the changes you may see have to do with some of those features: diminished muscle mass or definition, decreased strength, and so on. Men in my practice frequently complain that their workouts aren't as effective as they once were; it takes them longer and they have to work harder to maintain their “buff” look.

Widespread Influence of Testosterone

But testosterone is also a *neurohormone*, with profound effects on our behavior and mood. So the things you may feel with declining testosterone are a decrease in sex drive and performance, sleep disturbances, including trouble getting to sleep or staying asleep, loss of concentration, irritability, and a general loss of drive for work and play, just as you report. I often hear from men whose testosterone levels are low that they just don't find themselves turning heads on the street the way they used to.

Your comment about “mind fog” is important. This is indeed often a complaint I hear from men with low testosterone. On the other hand, men with prostate enlargement (benign prostatic hypertrophy, or BPH) may suffer from multiple sleep interruptions at night, when they need to get up to urinate frequently. Those disruptions of a normal sleep cycle may also be contributing to your fatigue. If you think you might be suffering from BPH, it is important that you have your prostate evaluated before beginning testosterone treatment.

Step 1: Modify Lifestyle Factors That Affect Testosterone Levels

Some other factors might be influencing your experience as well, entirely unrelated to testosterone levels: are you taking other medications that could produce somnolence or a sense of weakness? Do you have an abnormality in blood chemistry that might explain it? Are you having exceptional stress in your life? Any of these (and many others) could explain your symptoms, but most of them can also be causes of falling testosterone levels.

And there are plenty of modifiable things that could cause your testosterone to drop. Obesity is one of the best known; fat tissue contains enzymes that convert testosterone to estrogen, robbing you of your male hormone and raising levels of your female hormones (both men and women need to have both testosterone and estrogen for normal function, but testosterone is predominant in men, estrogen in women).² With obesity comes the metabolic syndrome and diabetes, two additional known risk factors for testosterone deficiency.^{2,4}



Smoking is another known factor that can speed a man's declining testosterone levels, as is excessive alcohol consumption.^{5,6} And stress can suppress them substantially.^{7,8}

So, before considering testosterone therapy, I always encourage men to change what they can in terms of these risk factors. That usually means losing some weight, and always means quitting smoking, even if that requires short-term drug therapy. Cutting alcohol intake to not more than 1-2 drinks/day is also likely to be helpful.

One word about exercise: regular, mild exercise will help raise testosterone levels, but constant over-exertion can have precisely the opposite effect: levels can drop even further.⁹⁻¹² Be sure your exercise regimen is not excessive; it's best to do it under the supervision of a trainer or physician.

Step 2: The Medical Work Up

Once we've addressed all those risk factors, if symptoms persist, it is indeed time to consider testosterone replacement therapy. A visit to your doctor for a thorough history and physical exam is vital preparation for testosterone therapy. I don't believe that anyone should embark on any kind of hormone replacement therapy without a physician's guidance, so that means no ordering testosterone from websites promising sexual vitality and a youthful body!

At that office visit, your doctor will perform a rectal exam to estimate the size of your prostate, and to determine if you have any enlargement (the rectal exam is also a screen for prostate cancer). I won't start testosterone replacement therapy in any man with a significantly enlarged prostate, because treatment could cause further, rapid enlargement of the

prostate, which could block your urine flow. You might need to be started on one of the available drugs to relieve prostate enlargement before you can initiate testosterone therapy.

At your doctor's office you'll also provide a blood specimen to be tested for prostate specific antigen (PSA), as a further screen for cancer. I also perform an ultrasound of the prostate. This helps me standardize a man's PSA level to get a more accurate idea of any potential cancer risk.

Finally, your blood will be tested for its testosterone and estradiol content. While there are several ways to measure testosterone, in my practice I simply use the total testosterone level. It is also important to check estradiol levels because many men with deficient testosterone over-convert testosterone to estradiol resulting in higher than desirable levels of estradiol. Men with higher levels of estradiol should begin an aromatase inhibitor at the same time as testosterone replacement therapy is initiated to prevent this conversion. Note that you don't have to have been fasting prior to these blood tests.

Step 3: Time for Testosterone

So, assuming that, given your symptoms and a normal physical exam, your testosterone level comes back in the deficient range, we then have a number of options for treatment. Probably the most commonly-used therapy is a topical gel, which you would apply to your arms, abdomen, or legs—*not* your scrotum.

It's important at this stage to emphasize patience! It can take weeks to months not only to achieve desirable levels, but also to begin to see and feel the results.



And recognize that, since you have a cluster of symptoms, they may resolve at different rates.

Side effects of testosterone therapy are generally minimal and rare. A few men develop acne, while even fewer may experience breast enlargement, which is a sign that they are converting too much testosterone into estradiol, warranting the prescribing of an aromatase-inhibiting drug like anastrozole.

Perhaps the most significant effect of testosterone replacement therapy is that it will cause your testes, your normal source of testosterone, to dramatically reduce their own production of the hormone. That can mean shrinkage of the testes over time, as well as a decrease in sperm production. So, younger men, or any man interested in his fertility, should be aware that testosterone therapy could lead to infertility.

Conversely, a man who is past his reproductive years, and who gets good results from testosterone replacement, may find that he will need to continue treatment for life (or for as long as he desires the

benefits). So long as the other side effects remain under control, this is a safe option.

Testosterone Therapy and Prostate Cancer

And that brings us to a final important question, namely, what is the impact of testosterone therapy on prostate cancer? Many prostate cancers are “androgen dependent,” that is, they require a certain level of testosterone in order to grow and survive. That, for many years, made physicians leery of starting replacement therapy for fear of triggering or promoting a malignancy.

More recently, however, we’ve learned that this is largely an unnecessary concern.¹³ While it could be potentially dangerous (and counterproductive) to start testosterone replacement in a man with active prostate cancer, we now know that in men with treated prostate cancer, whose PSA levels are stable, testosterone therapy is safe.

Summary

Testosterone deficiency in older men is a real and growing problem, though its symptoms often overlap with those of other conditions. That means a thorough history and physical exam is mandatory before considering testosterone replacement, as is a baseline measurement of testosterone. Losing weight, cutting back on drinking, and stopping smoking are non-invasive steps you can take to raise your testosterone levels naturally. Testosterone therapy, if indicated, is generally safe, easy to apply, and free of major side effects, but men should recognize that long-term

testosterone therapy can produce infertility.

Since low testosterone is statistically associated with higher risks of a host of age-related diseases such as reduced longevity, risk of fatal cardiovascular events, obesity, muscle wasting, mobility limitations, osteoporosis, frailty, cognitive impairment, depression, Sleep Apnea Syndrome, and other chronic diseases,¹³ you may be doing yourself a favor far greater than simply reducing your troublesome symptoms. ●

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

Aaron E. Katz, MD, is currently the Chairman of Urology at Winthrop University hospital in Mineola, NY. Dr. Katz has developed a patented blood test to detect micrometastatic circulating tumor cells in patients with prostate cancer that has not yet spread. The National Institutes of Health has awarded grants to Dr. Katz to support his research. Dr. Katz has become an international leader in the field of cryotherapy and ablation of small tumors within the prostate and kidney. Dr. Katz’s deep interest in herbal medicine research led him to found the Center for Holistic Urology at Columbia in 1998, where he has been a clinical investigator and managed several groundbreaking new cancer prevention clinical trials. In 2006, Dr. Katz was named the Vice Chairman of Columbia University’s Department of Urology. Dr. Katz has published over 100 scientific articles in peer-reviewed journals and has authored several chapters in urologic text books. His first book for the lay audience, *Dr. Katz’s Guide to Prostate Health: From Conventional to Holistic Therapies* (Freedom Press), was published in 2006. He is currently the host of “Katz’s Corner,” a Sunday morning radio show on WABC. For more information, please visit, www.doctorkatz.org.

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Optimized QUERCETIN

For those seeking a high-quality quercetin formula, Life Extension® introduces **Optimized Quercetin**—a “gold-standard” formula derived from a proprietary food-source blend.

Quercetin is a bioflavonoid with unique qualities that supports cellular health and function. In human cell culture studies, quercetin has been shown to block the manufacture and release of inflammation-causing substances,^{1,2} which can help support a healthy immune response to the seasonally changing environment.

Quercetin also helps promote a healthy cardiovascular system by preserving endothelial integrity³ and supporting healthy blood glucose levels for those already within normal range.⁴

Optimized Quercetin contains 250 mg of quercetin plus 250 mg of super food extracts that provide an array of added health benefits. A bottle of 60 vegetarian capsules of **Optimized Quercetin** retails for \$18. If a member buys four bottles, the cost is only **\$12.75 per bottle. ITEM # 01309**

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



Item # 01309

Top Off Your TESTOSTERONE *Naturally*

Low Testosterone Levels May Lead to:
Reduced Sex Drive • 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 with Standardized Lignans contains the following testosterone supporting ingredients:

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



Item # 01698

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.

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

Super Health. Super Libido.
Super MiraForte.

Caution: If you are taking any medication, use only under physician supervision. Men with existing prostate cancer may not be able to use this product. Elevations in free testosterone can unmask an occult (hidden) prostate cancer. Anyone with this concern should have a baseline PSA prior to using this product and a follow-up PSA test 60 days later. If a significant elevation of PSA is found, discontinue this product and advise physician. Do not take more than 15 mg per day of Bioperine®.

Contains corn. Bioperine® is a registered trademark of Sabinsa Corp. HMRlignan™ is a registered trademark used under sublicense from Linnea S.A.

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.

Concierge Anti-Aging Physician Services



50% Discount for Life Extension Members

Courtesy to Life Extension Members, Genemedics Health Institute is offering our services at a **50% discounted rate**. Our program consists of two different program options. Both program options consist of evaluation of blood work and prescription(s) of bioidentical hormone replacement therapy if there is hormone imbalance.

Program options include:

Concierge VIP Services: ~~\$995~~ \$495 Every Six Months

This program includes a detailed evaluation of your lifestyle. Based on your lab results and your health and fitness goals, your Genemedics Health Institute medical doctor will customize a bioidentical hormone replacement therapy program, nutrition plan, nutritional supplement regimen and exercise program. Your customized nutrition plan, nutritional supplement regimen and exercise program will be re-evaluated routinely to assure that you continue to progress toward your health and fitness goals. Your VIP services will also include **24/7** access to your medical doctor.

Pay Per Consultation Program: ~~\$299~~ \$149 Per 30 Minute Consultation

If you cannot afford the concierge VIP services, the pay per consultation program may be right for you. The initial **30 minute** consultation will consist of an evaluation of your blood work along with a customized hormone replacement therapy program (when medically necessary). There is typically a blood work evaluation 6 weeks after starting hormone therapy and then every 6 months. Each blood work evaluation will consist of a **30 minute** consultation with your Genemedics Health Institute medical doctor. Once hormone balance is achieved, the program costs will be approximately **\$298** per year.

The Aging Process

As we age, we begin to notice that our body and mind do not function as they did when we were in our twenties. Aging is often attributed to one's worsening quality of life due to symptoms such as fatigue, low energy, loss of motivation, weight gain, decreased sex drive, depressed mood, anxiety or irritability, loss of memory or loss of concentration. The good news is that these symptoms are not "just a part of getting older" and you don't have to live with these "symptoms of aging" anymore!

Are There Any Side Effects?

Side effects will be minimal to none if bioidentical hormones are used (rather than synthetic hormones) and if the physician prescribing the bioidentical hormones is an expert bioidentical hormone replacement therapy doctor.

What is Hormone Replacement Therapy?

The symptoms that we often attribute to being "a part of getting older" are actually due to hormones declining which occurs as both men and women age. Bioidentical hormone replacement therapy can help men and women renew their lives! Some of the many benefits of bioidentical hormone replacement therapy for both men and women are listed above. Bioidentical hormone replacement therapy will reverse all symptoms of hormone imbalance and return men and women to the optimal physical, sexual, mental, and emotional health of their 20s and 30s.

What are Bioidentical Hormones?

Bioidentical hormones are considered natural hormones because they are the exact molecular structure of the hormones produced by the human body. Synthetic hormones are commonly prescribed and are considered artificial because they are not the same molecular structure of the hormones produced by the human body. For example, the most commonly prescribed estrogen in women, Premarin®, is a synthetic estrogen produced

from the a pregnant horse's urine. It does not take an expert to realize that horse estrogen belongs in a horse and not a human. Studies have shown that synthetic hormones have many side effects and many expert physicians believe that bioidentical hormones are a much safer and more effective form of hormone therapy.

Why Choose Genemedics Health Institute?

Finding a highly qualified bioidentical hormone replacement therapy physician is one of the most important decisions that you will make! Would you let your primary care physician, urologist or OB/GYN physician perform heart surgery on you? Probably not. As good as your physician may be in their field, they simply do not have the proper training to perform heart surgery. The same applies for bioidentical hormone replacement therapy. Unfortunately, many physicians prescribe hormones to patients despite not having the proper training and knowledge. A physician prescribing too low of a dose of bioidentical hormones will result in limited results and benefits. A physician prescribing too high of a dose of bioidentical hormones will cause side effects.

So, how do you find an expert bioidentical hormone therapy doctor? Look no further! There are very few doctors in the country that have the high level of training and clinical experience of Dr. Shanlikian. When it comes to your health, only trust the best!

Other Costs to Consider:

- Cost of Medication(s) - The average cost is **\$20-50** per month. Price varies based on individual hormone requirements.
- Cost of Blood Work - Insurance often covers blood work. If it is not covered by insurance, Life Extension® offers discounted prices for members. Average out-of-pocket cost is **\$259** per lab panel (per 6 months).

George Shanlikian, M.D., Founder and C.E.O.

- Board Certified and Advanced Fellow – Anti-Aging and Regenerative Medicine
- Member of the American Association of Clinical Endocrinologists
- Internal Medicine – University of Miami, Board Certified
- Medical Degree – Wayne State University
- Nutrition Degree – Wayne State University

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HEALTHIER YOU!

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ANTI-ALCOHOL ANTIOXIDANTS

with HepatoProtection Complex

Protects Against the Harmful Effects
of **ALCOHOL-INDUCED FREE RADICALS**

Alcohol-induced free radical assault
can wreak havoc throughout the body.

A study in the journal *Alcohol* demonstrated how
antioxidants help to maintain a healthy brain.¹ Another study
in the journal *Artery* stated:

*"N-acetyl-cysteine, an analogue of the dietary amino acid
cysteine, binds acetaldehyde, thus preventing its
damaging effect on physiological proteins."*²

Life Extension's **Anti-Alcohol Antioxidants with
HepatoProtection Complex** provides broad-spectrum
nutrients designed to suppress free radicals, neutralize toxic
alcohol metabolites (such as acetaldehyde),³⁻⁶ and support
healthy liver function.

In addition to **vitamin B1, vitamin C, N-acetyl-L-cysteine,
and benfotiamine**, this formula's **HepatoProtection
Complex** provides potent doses of these novel antioxidants:

- **CHLOROPHYLLIN**, an agent that protects the integrity
of DNA.*
- **LEUCOSELECT®** grapeseed extract, **SILYMARIN**
(from milk thistle), and **trans-RESVERATROL**, three
hepatoprotective agents that aid in reducing compounds
from potentially toxic xenobiotics and protecting cells from
oxidative stress.*
- **PICROLIV® PICRORHIZA KURROA ROOT EXTRACT**
contains antioxidant kutkins that scavenge alcohol-induced
excess free radicals and stimulate regeneration of cells
(hepatocytes).*

A 100-capsule bottle of **Anti-Alcohol Antioxidants with
HepatoProtection Complex** retails for \$26. If a member buys
four bottles, the price is reduced to **\$17.25** per bottle.

The recommended dose of six capsules of
**ANTI-ALCOHOL ANTIOXIDANTS with
HepatoProtection Complex** provides:

Vitamin C (as ascorbic acid)	3000 mg
N-acetyl-L-cysteine	1200 mg
Benfotiamine	750 mg
Thiamine (vitamin B1) (as thiamine HCl)	100 mg
Glutathione (reduced)	50 mg
Vitamin E (as d-alpha tocopheryl)	50 IU
Zinc (as zinc oxide)	8 mg
Selenium (as sodium selenate)	25 mcg

HEPATO PROTECTION COMPLEX

Chlorophyllin	20 mg
Leucoselect® grape seed extract	20 mg
Silymarin (from milk thistle) extract	20 mg
Picroliv® extract standardized Kutkin	15 mg
Barley Grass	15 mg
Trans-resveratrol	5 mg

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Caution: This product does not prevent, reduce, or modify any of the
mental-impairment effects that alcohol induces. Consuming alcohol and
taking this product will not allow a person to safely operate a vehicle
or any other equipment. Do not drink and attempt to drive.

Leucoselect® is a registered trademark of Indena USA. U.S. Reg No. 2294439.
Picroliv® is a registered trademark of Sabinsa Corp.



Item # 01440

To order **Anti-Alcohol Antioxidants with HepatoProtection Complex**,
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.

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

Mitochondrial Basics with BioPQQ™ 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 with BioPQQ™** 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 with BioPQQ™** 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 with BioPQQ™** 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 with BioPQQ™** formula.

**To order
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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9. Entrez Gene: CREBBP CREB binding protein [Homo sapiens] GenelD: 1387.

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Contains soybeans.

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.

HIGHLIGHTS from The Wireless Connectivity in Medical Devices Conference

Lightning fast computers and state-of-the-art technology are revolutionizing the world around us on an almost daily basis. What this means for health care is that we are on the forefront of a rapidly changing landscape, where tech-savvy researchers and medical-minded entrepreneurs are teaming up to bring us advances in medicine and health treatment that could extend the human life span far beyond our current unacceptable limits. The Wireless Connectivity in Medical Device Conference held in San Jose, California, is an event that showcases just how far we've come...and how far we're about to go. >





Increasingly, hospital staff rely on the nearly instantaneous communication and diagnostic information provided by wireless devices. The idea that someone's medical records will not be immediately available anywhere in the world or that a healthy person needs to be confined to a bed while being monitored, is all about to change.

In fact, one of the panelists discussed his concerns about how **FDA regulation** may disrupt the rapid advance of new technologies and how the companies attending the conference can overcome it. This article highlights some of the more remarkable companies and products that were on display at the conference.

ResolutionMD

An impressive example of a wireless medical device that physicians can use is ResolutionMD. ResolutionMD can transmit a CT scan of the head of a suspected stroke victim from a remote hospital to the iPhone of a specialist at another hospital. In stroke, “time is brain,” which means having rapid access to a specialist can mean rapid diagnosis and treatment to prevent loss of brain tissue. With ResolutionMD, the specialist can be a great distance from the patient, but can nonetheless examine images of the patient’s brain as if in the same hospital. ResolutionMD guards against compromised patient privacy by not saving the image data in the iPhone.

CareFusion

CareFusion is a company making and distributing infusion pumps for administering medications in hospitals. At least 100,000 people are killed worldwide every year by medication errors, according to CareFusion’s Vice President of Connectivity. CareFusion hopes to reduce that number. Prescriptions from physicians are electronically transmitted to pharmacists for review, and then wirelessly transmitted to an infusion pump that will administer the medication to the patient. A nurse scans the identification of the patient and the medication, validating that both are correct. Some medications, such as those for blood pressure, can be administered with a rate or volume that achieves the desired blood pressure. CareFusion installs its infusion pumps throughout a whole hospital, to ensure standardization and uniformity for safety.

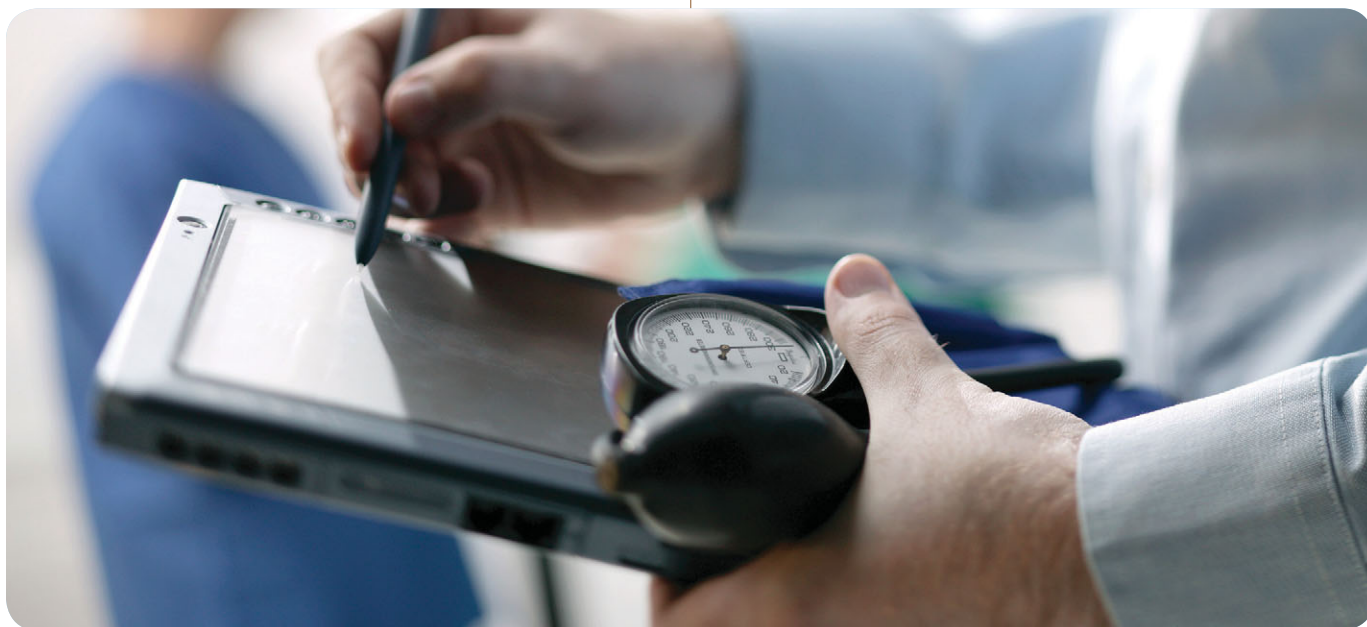
MicroCHIPS, Inc.

The President of MicroCHIPS, Inc. described his company’s use of an implantable medication delivery device to overcome compliance problems. Parathyroid hormone may be required for treatment of osteoporosis, but patients are expected to administer the hormone to themselves by daily injection. After two years, **77%** of osteoporosis patients will have stopped their daily injections because of the pain and inconvenience. An implantable device that subcutaneously administers parathyroid hormone on a daily basis has proven to be a successful solution.

MicroCHIPS also offers an implantable device that can deliver multiple medications (“pharmacy on a chip”) to geriatric patients who have trouble remembering to take all their pills. With portable, wearable infusion devices that communicate wirelessly with physicians, the physician can easily change the dose of the prescription remotely.

DuoFertility

The DuoFertility monitor predicts a woman’s most fertile days well in advance. The DuoFertility sensor is worn under the arm like a patch, makes up to 20,000 measurements per day, and wirelessly transmits the data to a PC which can forward the data to company experts over the internet. The inventor has said, “My job is to get millions of women pregnant.”



Electronic Seizure Stopper

One of the more incredible devices in development was an electric seizure stopper that could greatly improve the lives of those afflicted with epileptic seizures. This device is under development, but it attaches to the head of someone prone to seizures. When the device detects the development of epileptic seizures, it stops those seizures by the delivery of short bursts of electric pulses. Half of epileptics do not respond to drug treatment and the other half often suffers side effects from the drugs. The electric pulse device has no side effects.

Internal Video Capsule

Another medical equipment designer discussed his work on a video-capable capsule that could be swallowed easily by a patient. As the capsule makes its way through the patient's body, it would provide video recordings of the gastrointestinal tract, and wirelessly transmit those videos during an 8-hour transit through the body. The patient can be at home or elsewhere while the videos are transmitted to a receiver that he or she is wearing. Stomach ulcers and colon polyps are only some of the things that could be observed. The developer said that different cell types provide different information in response to different wavelengths or laser imaging.

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



MICROCHIPS, INC.

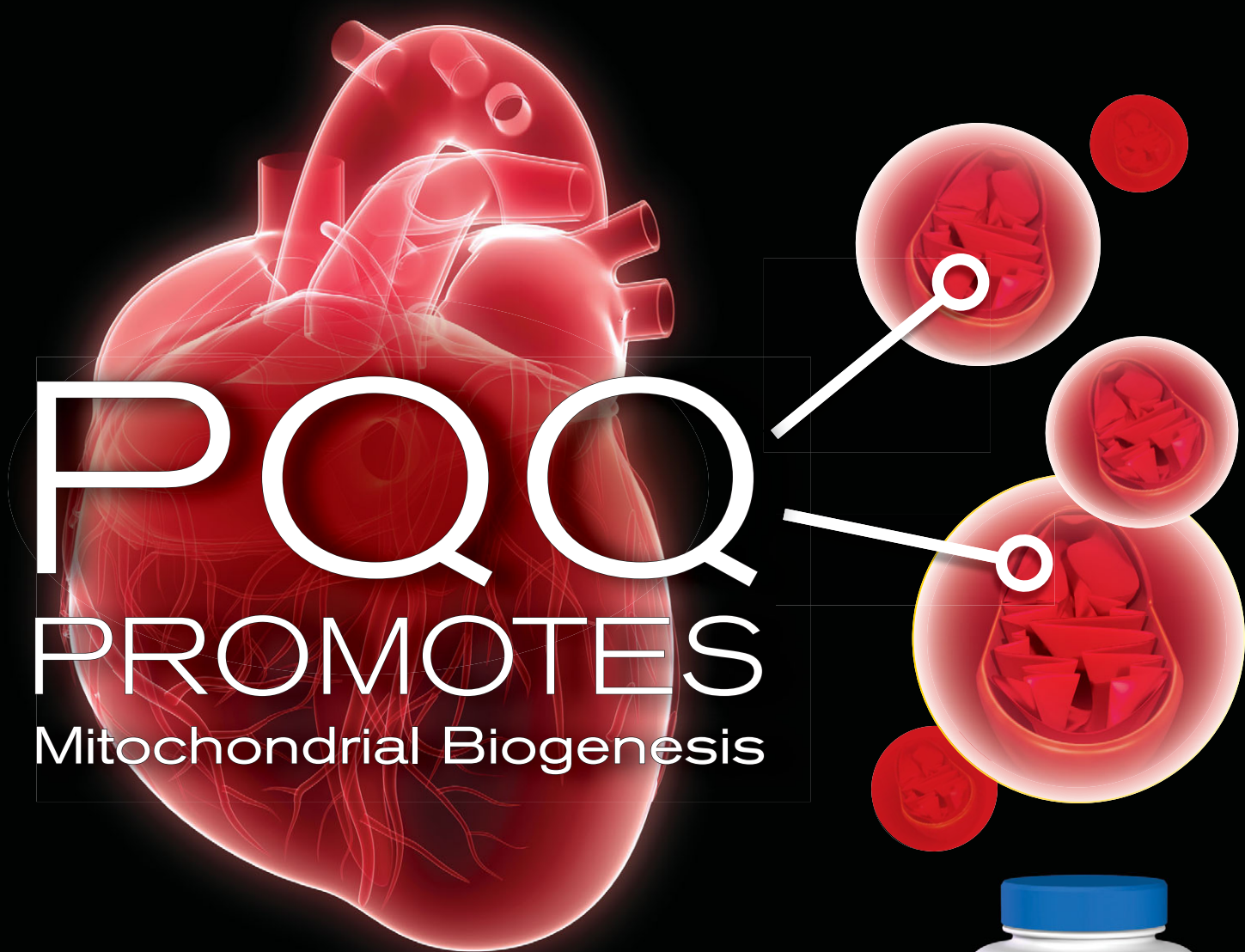
Engineering the Future

Many of those attending the conference were engineers. Here are a few of the exciting devices they spoke about that are currently in development:

- Artificial knees and ankles that could lift a leg or stop the forward motion of a leg under computer control.
- Hearing aids that could communicate with television or cell phones.
- A device attached to the head that could detect the development of epileptic seizures, and stop those seizures by the delivery of short bursts of electric pulses. Half of epileptics do not respond to drug treatment, and the other half often suffers side effects from the drugs. The electric pulse device has no side effects.
- A capsule that could be swallowed to make video recordings of the gastrointestinal tract, and wirelessly transmit those videos during an 8-hour transit through the body. The patient can be at home or elsewhere while the videos are transmitted to a receiver that he or she is wearing. Stomach ulcers and colon polyps are only some of the things that could be observed. The developer said that different cell types provide different information in response to different wavelengths or laser imaging.

MICROCHIPS, INC.





PQQ

PROMOTES

Mitochondrial Biogenesis

Critical Importance of Mitochondria

Back in 1983, **Life Extension®** was the first to introduce **CoQ10** as a proven method to enhance **mitochondrial** energy production.

CoQ10 has since gained universal recognition for its role in supporting cellular performance throughout the body.¹⁻⁶

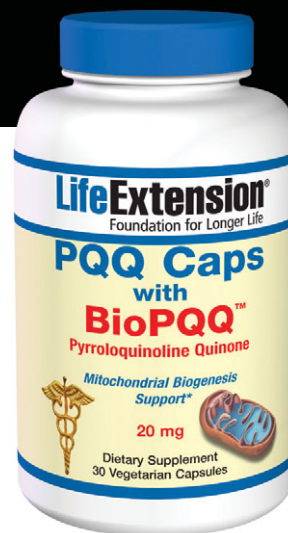
In an unprecedented breakthrough, a compound called **PQQ** (*pyrroloquinoline quinone*) has been shown to support **mitochondrial biogenesis**—the spontaneous generation of **new mitochondria** in aging cells.⁷

PQQ is available as a low-cost dietary supplement.

Mitochondria are cellular energy generators that supply virtually all the power your body requires for a healthy life span. An abundance of published studies underscores the critical importance of the **mitochondria** to overall health, especially as we age.⁸⁻¹⁴ Energy-intensive organs like the heart and brain are *dense* with mitochondria.

Until recently, the only natural ways for aging individuals to increase the number of mitochondria in their bodies were long-term calorie restriction or exhaustive physical activity—which are difficult or impractical for most people to implement.

PQQ offers a viable alternative.



Item #01647

The Ultimate Cell Rejuvenator

The enormous amount of energy generated within the mitochondria exposes them to constant free radical attack. The resulting **mitochondrial decay** is a hallmark of aging.

PQQ protects and augments delicate mitochondrial structures to promote *youthful* cellular function in **three** distinct ways:

- **Antioxidant power.** Like CoQ10, **PQQ** is a highly potent antioxidant. Its extraordinary molecular stability enables it to facilitate thousands of biochemical reactions in the mitochondria, without breaking down, for maximum antioxidant and bioenergetic support.¹⁵
- **Favorably modulates gene expression.** PQQ activates *genes* that promote formation of **new mitochondria**⁷—and beneficially interacts with genes directly involved in mitochondrial health. These same genes also support **healthy body weight**, normal **fat** and **sugar metabolism**, and **youthful cellular proliferation**.¹⁶
- **Mitochondrial defense.** Mitochondria possess their *own* DNA, distinct from the DNA contained in the nucleus. Unfortunately, compared to nuclear DNA, mitochondrial DNA is relatively unprotected. PQQ's antioxidant potency and favorable gene expression profile act to support mitochondrial defense.



Vital Protection for the Aging Heart and Brain

PQQ is an **essential nutrient**, meaning your body cannot make it on its own. A growing body of research indicates that PQQ's unique nutritional profile supports heart health and cognitive function—alone and in combination with CoQ10.^{17,18} This comes as no surprise, given how much energy these vital organs need.

Research shows that **PQQ** supports **heart cell function** in the presence of free radicals and promotes blood flow in heart muscle.¹⁹

When taken in combination with **CoQ10**, just **20 mg per day** of **PQQ** has been shown to promote **memory, attention, and cognition** in maturing individuals.²⁰

A Breakthrough Weapon in the Battle Against Aging

Life Extension® has identified a purified, highly potent form of PQQ from Japan that is produced through a unique fermentation process. The result is the highest quality PQQ available on the market today called **BioPQQ™**.

A bottle containing **30 20 mg** vegetarian capsules of **PQQ Caps with BioPQQ™** retails for \$40. If a member buys four bottles, the price is reduced to **\$27** per bottle.

The recommended daily dose for **PQQ** is **20 mg**. Those taking **Mitochondrial Energy Optimizer** or **Mitochondria Basics** only require an additional **10 mg** of **PQQ** since these formulas already provide **10 mg** of **PQQ**. The retail price for **30 10 mg PQQ** caps is \$24. If a member buys four bottles, the price is reduced to only **\$16.50** per bottle. (Item #01500)

BioPQQ™ is a trademark of MGC (Japan).

To order **PQQ Caps with BioPQQ™** standalone or any other PQQ-containing formula call **1-800-544-4440** or visit **www.LifeExtension.com**

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Rich Rewards™

**Lentil
Vegetable
Soup**

One Smart Bowl of Soup™

A delicious vegetarian soup suitable for vegans

Only Healthy Ingredients

Processed food companies sell vegetable soups so cheaply because they load them with *high-glycemic* carbohydrates (rice, potatoes, pasta) that cost virtually nothing. They then add inexpensive ingredients like corn, sugar, and sometimes omega-6 fats (like cottonseed oil). So for less than \$2, you get a relatively high-carb-calorie soup that provides virtually no health benefits. **Life Extension®** has formulated a **lentil vegetable soup** suitable for vegans that contains only garden-fresh ingredients, including lentils, mushrooms, tomatoes, carrots, **extra-virgin olive oil**, and a host of other beneficial **plant foods**.

Each serving of **Rich Rewards Lentil Vegetable soup** contains only **120 calories** of the best-documented foods to maintain your precious health. You can consume the entire contents or use a smaller portion of the soup as part of a meal for you (or several people).

The entire container supplies about **3.5 servings** of these lentils, mushrooms, and vegetables—with none of the **glucose-spiking** fillers found in commercial soups.

Rich Rewards Lentil Vegetable Soup is packaged in a re-closable bottle free of **BPA**. While the **FDA** says the BPA lining in most cans is safe, we at Life Extension have always used BPA-free containers.

The retail price for a **3.5 serving bottle** of **Rich Rewards Lentil Vegetable soup** is \$13. The member price is **\$9.75**.



Item # 01705

Lentil Vegetable Soup

Nutrition Facts

Serving Size 1 cup (245g)

Servings Per Container about 3.5

Amount Per Serving

Calories 120 Calories from Fat 40

% Daily Value *

Total Fat 4.5g **7%**

Saturated Fat 0g **0%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 35mg **1%**

Total Carbohydrate 17g **6%**

Dietary Fiber 5g **20%**

Sugars 7g

Protein 5g

Vitamin A 40% • Vitamin C 40%

Calcium 4% • Iron 15%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

Calories: 2,000 2,500

Total Fat Less than 65g 80g

Saturated Fat Less than 20g 25g

Cholesterol Less than 300mg 300mg

Sodium Less than 2,400mg 2,400mg

Total Carbohydrate 300g 375g

Dietary Fiber 25g 30g

Ingredients: Water, Diced Tomatoes in Juice (tomatoes, tomato juice, citric acid, calcium chloride), Lentils, Tomato Paste, Celery, Onion, Mushroom, Carrot, Extra Virgin Olive Oil, Garlic, Parsley, Black Pepper, Sage, Basil, Thyme.

Cruciferous Vegetable Soups

You can also order soups that contain vegetables like **broccoli**, **cauliflower**, and **asparagus** in **extra-virgin olive oil** with only **60-70 calories** per serving at the same price as the **Lentil Vegetable Soup**.

Cruciferous Vegetable

Retail Price \$11.95

Member Price \$8.96

#01530

Spicy Cruciferous Vegetable

Retail Price \$11.95

Member Price \$8.96

#01531



Souper tasty. Souper Satisfying.

You know you don't eat enough veggies. So **Life Extension®** cooked up a convenient, tasty way to spoon-feed you these souper foods. Unlike many canned soups, **Rich Rewards™ Lentil Vegetable Soup** is contained in a convenient resealable package that is free of BPA.

This soup provides unique garden-fresh ingredients, such as lentils, mushrooms, tomatoes, carrots, and other beneficial plant foods plus heart-healthy extra virgin olive oil.

One Smart Bowl of Soup

Contains about 3.5 servings of healthy lentils, mushrooms, and vegetables per bottle

Only 120 calories per serving

No added starches or sugars!

Excellent source of lentils, mushrooms, and fiber

Contains 4.5 grams of total fat per serving

0g trans fat. No saturated fat or cholesterol

To order your fresh supply of Rich Rewards Lentil Vegetable soup, call 1-800-544-4440 or visit www.lef.org/soup

THE NEXT GENERATION OF PROSTATE PROTECTION:

ULTRA NATURAL PROSTATE WITH APRÈSFLEX™ AND STANDARDIZED LIGNANS

Ultra Natural Prostate with AprèsFlex™ and Standardized Lignans softgels combines cutting-edge ingredients that have been scientifically substantiated to protect the prostate gland and maintain its healthy function.*

The latest addition to this formula is **AprèsFlex™**, an extract of *Boswellia serrata* that has been shown in studies to have **two times the bioavailability** of the leading boswellia extract. AprèsFlex™ inhibits the dangerous enzyme *5-lipoxygenase*. Boron is included because of studies showing it may help slow elevation of prostate-specific antigen (PSA).

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 is included in the formula to help maintain healthy DNA gene function in prostate cells.

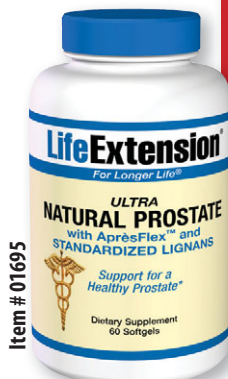
In order to boost its anti-estrogen capabilities, **Ultra Natural Prostate Formula** incorporates **HMRLignan™**, derived from Norway spruce, **flax lignans**, and **nettle root extract**.

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.

The retail price for one bottle of **Ultra Natural Prostate Formula with AprèsFlex™ and Standardized Lignans** is \$38. If a member buys four, 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 and corn.

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



Item # 01695

The daily dose of two softgels of **Ultra Natural Prostate Formula with AprèsFlex™ and Standardized Lignans 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
AprèsFlex™ (<i>Boswellia serrata</i>) extract	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 HMRLignan™	20.15 mg
Norway Spruce and ActiFlax™ Flax Lignan extracts	
Boron	3 mg

AprèsFlex™ is a trademark of Laila Nutraceuticals exclusively licensed to PL Thomas—Laila Nutra LLC. International patents pending. ActiFlax™ is a trademark of Pharma Science Nutrients, Inc., all rights reserved. HMRLignan™ 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.

* 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.



WELLNESS PROFILE

BY JON FINKEL

Virginia **WAITLEY**

Embracing Health, Embracing Happiness



Virginia Waitley shows her day's catch.

A generation or two ago, if someone had the energy and enthusiasm to get up at three o'clock in the morning to begin the first of two jobs – not out of necessity, mind you, but out of enjoyment – you would assume that person was in their twenties or thirties. Likewise, if you mentioned the age '73' to someone in 1950 or so, it might conjure up the image of an elderly person, whittling away the last years of their life in a rocking chair or quietly sipping tea while playing cards.

The times, they are a-changing.

These days with the advances in health and nutrition, the very notion of being retired, even for 73-year-olds, is well, being retired. Case in point, Life Extension member, Virginia Waitley.

Turning Retirement on Its Head

Virginia Waitley, 73, is a commercial real estate broker in Rancho Santa Fe, California. That is, when she's not selling solar panels six mornings a week throughout the city of San Diego.

"I get up at three o'clock in the morning every day," Ms. Waitley says, proudly. "I'm on my computer and I check in on other real estate brokers from San Diego to San Francisco. I've just always had high energy levels, but lately it's been incredible."

What has she been doing lately? Taking supplements - lots of them.

"I read as many health books as I can find," she says. "I particularly like Suzanne Somers. I read all of her books, and in one of them, she mentioned that she couldn't wait for her Life Extension Magazine® to arrive every month. I thought to myself, 'If that's how she feels, I might feel the same way'."

With that in mind, Ms. Waitley ordered the magazine and waited for the first issue to arrive.

"When it finally came, I thought it was wonderful," she says. "I

probably got the magazine about a year before I became a member, which wasn't too long ago. But once I joined and started ordering the products like Two-Per-Day, Super Bio Curcumin, Krill Healthy Joint Formula, Super Ubiquinol CoQ10, and so many more, I began feeling fantastic."

In all, Ms. Waitley takes about a dozen products from Life Extension on a regular basis. In addition to the supplements mentioned above, her regimen includes astaxanthin, magnesium, Bone Restore, Optimized Cran Max with UTIRose™, Endothelial Defense, Resveratrol, Super Omega-3, and folic acid.

Prior to her discovery of Life Extension, however, she was hardly taking any supplements.

Knowledge is Power

"I always took calcium," she says. "And a friend gave me a multivitamin a while ago to try, but that was it. About five years ago I was diagnosed as being almost pre-diabetic, and that scared me, so I immediately took care of that

with exercise and eating right. I corrected that problem, but ever since I started reading about what I should be taking, I have noticed such a difference. It has totally changed my life."

Ms. Waitley says that about a month after she started her supplement regimen, she noticed that her energy level had nearly doubled - this from a woman who spent two years hiking in Aspen and Telluride.

Virginia Waitley's Life Extension Cabinet

Two-Per-Day

Super Bio Curcumin

Krill Healthy Joint Formula

Super Ubiquinol CoQ10

Astaxanthin

Magnesium

Bone Restore

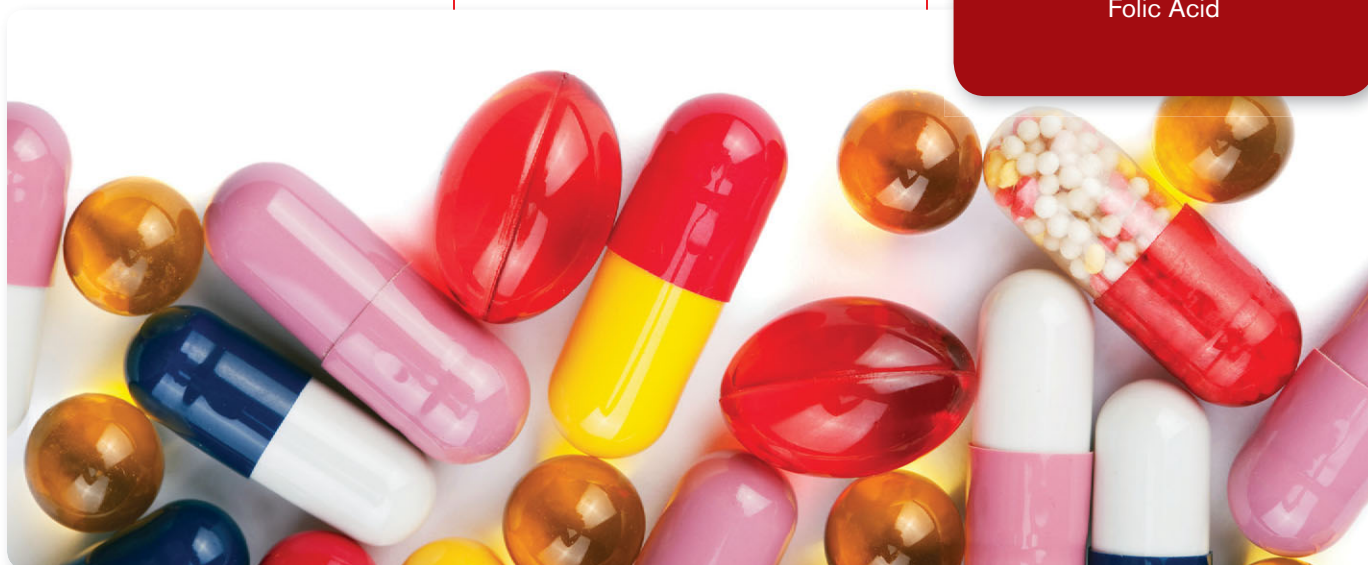
Optimized Cran Max

Endothelial Defense

Optimized Resveratrol

Super Omega-3

Folic Acid





"I had a bad business experience and I needed to get away," she says of her time in the mountains.

These days, back in Southern California, Ms. Waitley hikes the Torrey Pines reserves for an hour or an hour-and-a-half whenever she can to stay fit and energized.

Another part of her plan for endless vitality is to make sure her diet is nourishing her body. She does this by starting every day with the same breakfast, which is a high-fiber cereal with wheat germ, walnuts, and blueberries sprinkled in. After breakfast she takes all her morning vitamins to ensure optimal absorption.

"I try to eat as healthy as I can," she says. "I eat lots of broccoli because I know it has anti-cancer benefits. I eat lots of eggplant, too."

Living A Full Life

Perhaps the reason Ms. Waitley takes such excellent care of herself as she ages is because she knows what a gift life can be. She grew up very poor and her father passed away when she was young. Her mother didn't have any money at

all, which meant she spent much of her youth hiking in the woods around their small farm house in Clinton, New York.

"I got my first job when I was twelve," she says. "I sold Christmas cards around my neighborhood. Five years later I became the youngest person hired by Eastern Airlines in New York City. I worked for them and eventually moved to United Airlines, where I was the top salesman in terms of conventions and reservations for eight years."

Along the way she got married, had a daughter who recently graduated with honors at the University of Southern California, and is the proud grandparent to three grandkids.

"I have a lot to be happy about," she says. "We only go through life once, so we might as well try to be happy. Part of being happy is being healthy, which is why I started learning about health and nutrition. Life Extension has really opened my eyes to what I should be doing to live for a long time. I really intend to live to be 110. I've been planning on that for about 5 years now or more."

Hopefully, the pages of this magazine will help her exceed even her own longevity expectations. ●

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



KRILL HEALTHY JOINT FORMULA

TARGETED SUPPORT
FOR OPTIMAL JOINT
FUNCTION AND MOBILITY



Maintaining healthy, flexible joints is essential to quality of life. Joint stiffness and discomfort can stand in the way of performing even simple everyday tasks.

Most people do not obtain critical nutrients shown to support youthful joint function and mobility.

To meet this urgent need, **Life Extension®** introduced **Krill Healthy Joint Formula**, a patent-pending blend of deep-sea **whole krill oil** sourced in Antarctica, combined with **hyaluronic acid** and **astaxanthin**.

In a recent clinical trial involving over 100 maturing individuals, a **55% reduction** in joint discomfort was observed in less than three months, with **63%** of participants maintaining ease of motion.¹

THREE SYNERGISTIC COMPOUNDS FOR SUPERIOR BENEFIT

The data reveals that the fatty acids found in krill oil are particularly effective for joint health.² These unique fatty acids have been shown to *specifically target joint tissue*.^{2,3}

Hyaluronic acid occurs naturally in the joints,⁴ where it acts to lubricate and cushion against repeated physical impacts.⁵ Because it forms a major component of cartilage and soft tissue,⁴ it is widely used to promote joint health.⁴⁻⁸

The difficulty has been that hyaluronic acid is a large molecule not well absorbed by the body. When combined with krill oil, it has been shown to reach significantly *higher* levels in the bloodstream than in standalone form.⁸

Krill oil is a natural source of the antioxidant carotenoid **astaxanthin**. Astaxanthin works in multiple ways, including suppression of free radical activity and enhanced mitochondrial function.⁹ It also maintains krill oil's molecular stability.

Most commercially available krill oils do not contain significant amounts of astaxanthin because it is nearly eliminated during processing. **Krill Healthy Joint Formula** is *fortified* with astaxanthin, for maximum stability and superior benefit.

JUST ONE SOFTGEL DAILY

The suggested daily serving of one **Krill Healthy Joint Formula** softgel daily supplies **353 mg** of this proprietary blend.

A bottle containing **30** softgels of **Krill Healthy Joint Formula** retails for \$32. If a member buys four bottles, the price is reduced to **\$21.75** per bottle. Just one softgel a day of **Krill Healthy Joint Formula** duplicates a successful human clinical trial.

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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 crustacean shellfish (krill).

Licensed from Valensa International.

Zanthin® is a registered trademark of Valensa International, Inc.



Item # 01600

To order **Krill Healthy Joint Formula**
call 1-800-544-4440 or visit **www.LifeExtension.com**



Enhanced Night Vision!

EYE PROTECTION FORMULA

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.

Falling down is responsible for 70% of accidental deaths in older people.¹ Poor lighting conditions are often the culprit.

Fortunately, **C3G** derived from **black currant extract** supports eyesight in **dark** conditions by promoting the healthy function of delicate structures within the retina that support **night vision**.²

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

Comprehensive Ocular Protection in One Daily Softgel

The **Super Zeaxanthin** formula provides ingredients that have been shown to promote healthy eyesight. Just one softgel of **Super Zeaxanthin with Lutein, Meso-Zeaxanthin 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
[Paprika (<i>capsicum annum</i>) extract (fruit), OptiLut®, Lutein Plus® and MZ® Marigold Extract (flower)]	
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 and C3G** is \$22. If a member buys four bottles, the price is reduced to **\$14.85** per bottle.



Item # 01685

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LuteinPlus® and MZ® are registered trademarks of Nutriproducts Ltd., 7
Marfleet, CB22 5LA, UK, licensed under US Patents 6,218,436 & 6,329,432.

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

IS YOUR FOLIC ACID WORKING FOR YOU?

Folate is involved in **neurotransmitter synthesis** and critical **enzymatic reactions** throughout the body.

By depleting excess **homocysteine**, folate benefits cardiovascular health and nervous system function.

Those who take ordinary folate supplements, however, may not be experiencing its full spectrum of effects. This is because once ingested, not everyone converts folate to its biologically active form called **5-methyl-tetrahydrofolate** (5-MTHF).¹ Research shows that in a large proportion of the population, *genetic enzyme deficiencies* prevent the conversion of folate to **5-MTHF**, leaving many vulnerable to low blood folate levels (and higher-than-desired homocysteine).

A BIOACTIVE FORM OF FOLATE

A more useful approach is to take the bioactive folate **5-MTHF** directly, which has been declassified as a drug and is now available as a dietary supplement. **5-MTHF** has been shown to dramatically raise blood serum folate levels² compared with folic acid supplementation. This bioactive folate is up to **seven times** more bioavailable than folic acid. This greater *bioavailability* is especially important in people who have a genetic enzyme deficiency³ since it requires no conversion to become metabolically active.

A study of 10 patients with *endothelial dysfunction* showed complete reversal of endothelial impairment after **5-MTHF** supplementation compared with healthy control patients.⁴

People with elevated homocysteine levels have a greater risk of cognitive decline.⁵ Unlike folic acid, **5-MTHF** is able to cross the blood-brain barrier, which is especially important for people with cognitive difficulties to enhance the synthesis of *acetylcholine* in the brain—the neurotransmitter associated with memory.

Studies also show that the effectiveness of **5-MTHF** can be further enhanced by co-supplementing with methylcobalamin (the active form of vitamin B12),⁶ vitamin B6, and riboflavin.⁷

5-MTHF is seven times more bioavailable than regular folic acid.

A bottle containing **100** vegetarian capsules of **Optimized Folate** providing 1,000 mcg of bioactive 5-MTHF in each capsule retails for \$28. If a member buys four bottles, the cost is only **\$18.75 per bottle**.



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

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SUPER FOODS

BY WILLIAM GAMONSKI

Grapes: Rich in Polyphenols

In recent years, grapes have gained scientific validation as a top-notch defender against cardiovascular disease, cancer, and age-related cognitive decline.¹

The benefits associated with grape consumption are related to its unique and diverse composition of antioxidants called **polyphenols**. The skin of the grape is a rich source of the cancer-fighting compound **resveratrol** and its seeds are heavily concentrated in **proanthocyanidins**,

which possess **50** times more antioxidant power than vitamin C.² In addition, the vibrant color of grapes, grape juice, and red wine reflects dense amounts of **anthocyanins**.

A study in the *Journal of Agricultural and Food Chemistry* revealed that grape juice has the third highest antioxidant potency out of twelve tested antioxidant beverages.³



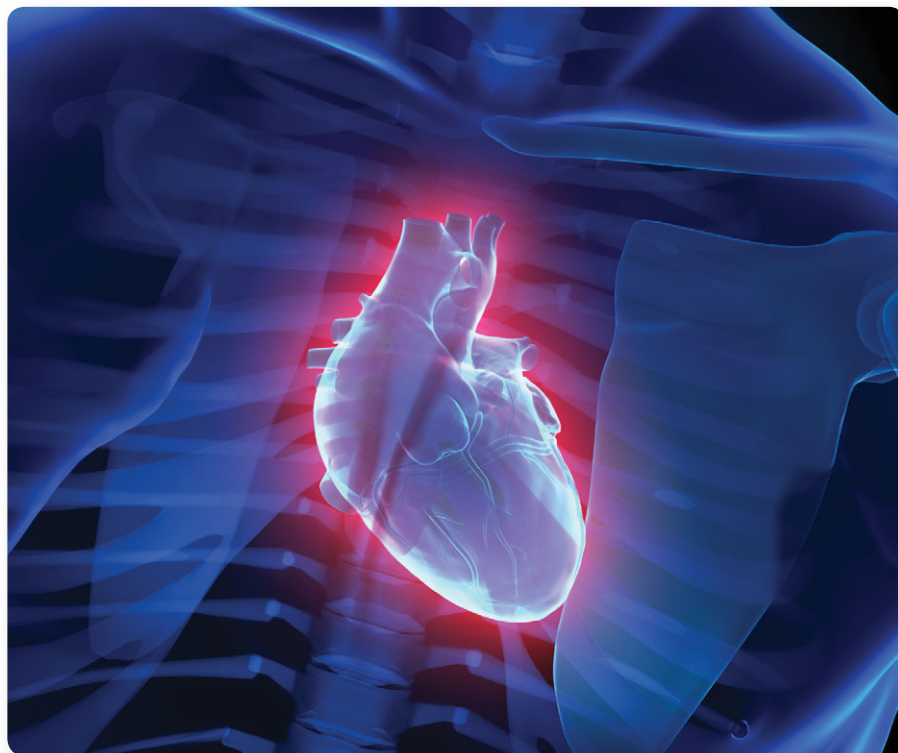
Fighting Cardiovascular Disease

Grape and its products combat atherosclerosis and cardiovascular disease through multiple mechanisms including modulating oxidative stress, stimulating endothelial and platelet derived nitric oxide, inhibiting LDL oxidation, and lowering blood pressure.

While free radicals are a normal byproduct of metabolism, an excess of these unstable molecules can produce oxidative stress that induces damage and dysfunction of the endothelium (inner lining of blood vessels), one of the early events of atherosclerosis.⁴ Grape polyphenols can effectively combat free radicals, in turn lowering oxidative stress and endothelial dysfunction. In one study, pre- and post- menopausal women consuming **36 grams** of grape powder (corresponds to **1.5 cups** of fresh grapes) per day for four weeks had significantly reduced levels of F2-isoprostanes, a marker of oxidative stress.⁵

One of the ways oxidative stress causes **endothelial dysfunction** is by interfering with the production or activity of **nitric oxide**, one of the essential protective factors released by the endothelium.⁶ This molecule signals the smooth muscle cells in the artery wall to relax and dilate, thereby increasing optimal blood flow. In the laboratory, treatment of endothelial cells that line the arteries of the heart with grape juice activated the enzyme nitric oxide synthase, resulting in the generation of nitric oxide.⁷

In addition to its role in arterial dilation, nitric oxide also possesses strong anti-inflammatory and platelet inhibitory properties. The latter benefit was reported in the journal *Circulation* as human



volunteers consuming grape juice for two weeks experienced a **71%** increase in nitric oxide release from platelet cells, suppressing platelet “stickiness” responsible for thrombosis and heart attacks. This beneficial effect was attributed to a **35%** reduction in superoxide radicals, which enhanced nitric oxide availability.⁸

Even in people with a high degree of endothelial dysfunction, grape juice shows promise in improving blood vessel health. Patients with heart disease ingesting grape juice for 14 days recorded nearly a **3-fold** increase in the flow-mediated vasodilation of the brachial artery, an indicator of endothelial function, compared to baseline.⁹

It’s well-established that LDL oxidation is a key initiator of early atherosclerosis. Oxidized LDL cholesterol is more readily attracted into the arterial wall, triggering a cascade of events that stimulates inflammation and eventually

the formation of atherosclerotic lesions. In a study published in the *American Journal of Clinical Nutrition*, scientists found that healthy subjects drinking grape juice daily for two weeks reduced their rate of LDL oxidation by **9%**.¹⁰

Several studies have documented the efficacy of grapes to lower high blood pressure. A University of Connecticut study showed that **46 grams** of grape powder (equivalent to 2 servings of fresh grapes) per day for 30 days improved endothelial function and nitric oxide availability in participants with metabolic syndrome, leading to a reduction in mean systolic blood pressure of **6 mmHg** and mean diastolic blood pressure of **9 mmHg** compared to a placebo.¹¹ In a second study involving hypertensive men, ingesting grape juice daily for eight weeks dropped systolic blood pressure by an average **7 mmHg** and diastolic pressure by **6 mmHg**.¹²



Selecting and Storing Grapes¹

1. Grapes are available all-year round, but growing season is from July to December.
2. Choose fully ripe grapes that are firm and plump.
3. Grapes should be firmly attached to the stem, wrinkle free, and not leaking juice.
4. Store in a container or plastic bag in the refrigerator for up to 5 days to retain freshness.

Protecting Against Cancer

Mounting evidence indicates that grapes are front-line fighters against cancer. At the cellular level, grape antioxidants neutralize free radicals that damage DNA and produce mutations that transform healthy cells into cancerous ones. This was demonstrated in an 8-week study as healthy subjects ingesting **16 ounces** of grape juice daily increased their plasma antioxidant activity and reduced free radical levels by **15%**. This resulted in a **21%** reduction in lymphocyte DNA damage.¹³

After lung cancer, breast cancer is the leading cause of cancer mortality among women.¹⁴ An in vitro study using extract from grapes inhibited breast cancer cell growth by up to **72%** and enhanced apoptosis (cell death) by up to **33%**.¹⁵ This effective combination might be the reason for the results of an epidemiological study that revealed that women with the highest grape consumption were **34%** less likely to develop breast cancer compared to those with the lowest intakes.¹⁶

Grape seed extract might also protect against prostate cancer, the most common cancer among men.¹⁷ In a study published in *Nutrition and Cancer*, researchers studied the relationship between long-term dietary supplement use and prostate cancer in more than 32,000 men aged 50 to 76.

Compared to non-users, those who supplemented with grape seed extract slashed their risk of prostate cancer by **41%**.¹⁸

Tumor cells rely on the formation of new blood vessels (angiogenesis) for nourishment and growth. Colon cancer cells treated with grape seed proanthocyanidins in the laboratory showed inhibition of the vascular endothelial growth factor (VEGF) and angiopoietin 1 (Ang1), thereby blocking blood supply to tumor cells.¹⁹

The tendency for pancreatic cancer to invade adjacent tissues and spread to other organs in the body makes it one of the deadliest cancers. Grape seed **proanthocyanidins** were shown to reduce the invasion potential of pancreatic cancer cells by beneficially altering the gene expression of matrix metalloproteases, according to a study reported in the journal *Pancreas*.²⁰



Improving Cognitive Function

Grape juice's ability to reduce oxidative stress in the brain might enhance memory and improve cognition with aging, according to a study published in the *British Journal of Nutrition*. Older adults supplemented with grape juice daily for 16 weeks showed a significant improvement on verbal memory tests, whereas the placebo group showed no improvement.²¹

Summary

Grapes and their products possess a wealth of anthocyanins and proanthocyanidins that have been shown to provide top-notch protection against cardiovascular disease, cancer, and age-related cognitive decline. ●

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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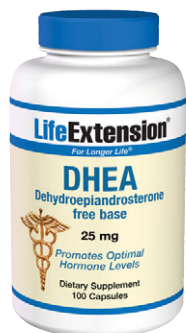


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Most Popular DHEA Dosages

DHEA is a critically important hormone, but its production declines sharply as we age. Scientists are discovering numerous health benefits when aging people restore their DHEA to youthful ranges. Life Extension offers a wide range of DHEA supplements to satisfy individual needs.



Item #00335

DHEA 25 mg • 100 Capsules

The minimum dose of DHEA for most healthy aging people is 25 mg a day, though optimal doses are often higher in men. 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 \$18; if a member orders four bottles, the price is reduced to **\$11.25 per bottle**.
Contains rice.



Item #00882

DHEA 50 mg • 60 Capsules

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 \$19; if a member orders four bottles, the price is reduced to **\$12.75 per bottle**.
Contains rice.



Item #00454

DHEA 15 mg • 100 Capsules

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 \$14; if a member orders four bottles, the price is reduced to **\$9 per bottle**.



Item #00607

DHEA 25 mg • 100 Dissolve-in-Mouth Tablets

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 **\$8.81 per bottle**.
Some people want to take DHEA in sublingual tablet form to avoid first pass through the liver, though published studies show that swallowing DHEA capsules consistently boosts blood DHEA levels already within normal range.

CAUTION: Do not use DHEA if you are at risk for or have been diagnosed as having any type of hormonal cancer, such as prostate or breast cancer.

To order the DHEA supplement that's right for you,
call 1-800-544-4440 or visit www.LifeExtension.com

Take a Bite Out of your **Appetite**



To order **Optimized Saffron with Satiereal®**, call 1-800-544-4440 or visit www.LifeExtension.com

People who struggle with weight loss often point to several “Achilles’ heels” that **sabotage their efforts** to keep off the pounds: *eating between meals*, *grazing at night*, and a *constant desire to snack*, are among the most common.

The *fantastic news* is that a proprietary extract of **saffron**, called **Satiereal®**, is *clinically proven* to deal with nearly all of the above issues. In fact, women involved in **Satiereal®** studies experienced the following **amazing results**¹⁻⁶:

- **100% reduction in the desire to snack**
- **50% fewer instances of eating between meals**
- **Less hunger**
- **Moderate weight loss**
- **More energy**
- **Better mood**

Say goodbye to “kitchen raids” and say hello to “weight control” with **Optimized Saffron with Satiereal®**.

A bottle containing 60 vegetarian capsules of **Optimized Saffron with Satiereal®** retails for \$36. If a member buys four bottles, the cost is just **\$24** per bottle.



Item #01432

References

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Satiereal® is a registered trademark of INORÉAL. International patents pending.

The fact that Satiereal® induced significant reductions (100%) in the desire to snack, but with only moderate weight loss, is further support for the multi-pronged approach needed to effectively manage weight that has long been espoused by Life Extension®.

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

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.

Advanced RESVERATROL Formula

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

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

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

High-Potency Resveratrol with Synergistic Activators

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

A bottle containing 60 vegetarian capsules of **Optimized Resveratrol with Synergistic Grape-Berry Actives** retails for \$46. If a member buys four bottles, the price is reduced to **\$31** per bottle. The suggested dose of one capsule a day provides:

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

Item # 01430



CAUTION: If you are taking anti-coagulant or anti-platelet medications or have a bleeding disorder, consult your healthcare provider before taking this product.

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**To order Optimized Resveratrol with Synergistic
Grape-Berry Actives, 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.



Blood testing provides the ultimate information regarding correctable risk factors that may predispose you to disorders such as cancer, diabetes, cardiovascular disease, and more. Information about general health and nutritional status can also be gained through standard blood analysis. Standing behind the belief that blood testing is an essential component of any program designed to attain optimal health and longevity, *Life Extension®* offers this innovative and convenient service at a very affordable price. Not only is comprehensive blood testing an important step in safeguarding your health, it is a simple process from virtually anywhere in the United States.

Five Easy Steps:

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.lifeextension.com.
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 sent 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 5990 North Federal Highway, Ft. Lauderdale, FL, 33308-2633.

Blood Testing The Ultimate Information

MOST POPULAR PANELS

Life Extension Member Pricing

<p>○ COMPREHENSIVE PANELS</p> <p>MALE LIFE EXTENSION PANEL (LC322582) \$269</p> <p>Chemistry Profile includes glucose, cholesterol, LDL, HDL, triglycerides, liver and-kidney function tests PLUS 20 additional tests. CBC includes immune (white) cell count, red blood cell count and platelet count. Also includes:</p> <p>DHEA-S C-Reactive Protein Homocysteine TSH for thyroid function Free Testosterone Estradiol Total Testosterone Vitamin D 25- hydroxy PSA (prostate-specific antigen)</p>	<p>○ THE CBC/CHEMISTRY PROFILE (LC381822) \$35</p> <p>OVER 40 PARAMETERS TESTED</p> <p>CARDIOVASCULAR RISK PROFILE</p> <p>Total Cholesterol Cholesterol/HDL Ratio HDL Cholesterol Estimated CHD Risk LDL Cholesterol Glucose Triglycerides Iron</p> <p>LIVER FUNCTION PANEL</p> <p>AST (SGOT) Total Bilirubin ALT (SGPT) Alkaline Phosphatase LDH</p>
<p>LIMITED TIME OFFER (February 1-March 25, 2013) now includes: Fibrinogen and HbA1C</p> <p>○ FEMALE LIFE EXTENSION PANEL (LC322535) \$269</p> <p>Chemistry Profile includes glucose, cholesterol, LDL, HDL, triglycerides, liver and-kidney function tests PLUS 20 additional tests. CBC includes immune (white) cell count, red blood cell count and platelet count. Also includes:</p> <p>DHEA-S C-Reactive Protein Homocysteine TSH for thyroid function Free Testosterone Estradiol Total Testosterone Progesterone Vitamin D 25- hydroxy</p>	<p>KIDNEY FUNCTION PANEL</p> <p>BUN BUN/Creatinine Ratio Creatinine Uric Acid</p> <p>BLOOD PROTEIN LEVELS</p> <p>Total Protein Globulin Albumin Albumin/Globulin Ratio</p> <p>BLOOD COUNT/RED AND WHITE BLOOD CELL PROFILE</p> <p>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</p>
<p>LIMITED TIME OFFER (February 1-March 25, 2013) now includes: Fibrinogen and HbA1C</p> <p>○ MALE WEIGHT LOSS PANEL (LCWLM) \$299</p> <p>Chemistry Profile includes glucose, cholesterol, LDL, HDL, triglycerides, liver and-kidney function tests PLUS 20 additional tests. CBC includes immune (white) cell count, red blood cell count and platelet count. Also includes:</p> <p>DHEA-S C-Reactive Protein SHBG Insulin Estradiol Free Testosterone Free T3 Total Testosterone TSH for thyroid function Free T4 PSA (prostate-specific antigen)</p>	<p>BLOOD MINERAL PANEL</p> <p>Calcium Sodium Potassium Chloride Phosphorus Iron</p> <p>NOTE: CBC/Chemistry profile is included in the Male and Female Life Extension panels and Weight Loss Panels.</p>
<p>○ FEMALE WEIGHT LOSS PANEL (LCWLF) \$299</p> <p>Chemistry Profile includes glucose, cholesterol, LDL, HDL, triglycerides, liver and-kidney function tests PLUS 20 additional tests. CBC includes immune (white) cell count, red blood cell count and platelet count. Also includes:</p> <p>DHEA-S C-Reactive Protein Insulin Progesterone Free Testosterone Estradiol Total Testosterone Free T3 Free T4 TSH for thyroid function SHBG</p>	<p>○ GENERAL HEALTH</p> <p>HEMOGLOBIN A1C (HBA1C) (LC001453) \$31</p> <p>Hemoglobin A1C evaluates long-term blood sugar control. Serum glucose sometimes reacts with important proteins in the body rendering them nonfunctional. Since this process, known as glycation is one of the leading theories of aging, Life Extension® believes everyone should check their A1C level.</p>
<p>○ MALE HORMONE ADD-ON PANEL (LCADDM)* \$155</p> <p>Pregnenolone and Dihydrotestosterone (DHT)</p> <p>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 valuable information about a testosterone metabolite that can affect the prostate, and the mother hormone that acts as a precursor to all other hormones.</p>	<p>○ VITAMIN D (25OH) (LC081950) \$47</p> <p>This test is used to rule out vitamin D deficiency as a cause of bone disease. It can also be used to identify hypercalcemia.</p>
<p>○ FEMALE HORMONE ADD-ON PANEL (LCADDF)* \$125</p> <p>Pregnenolone and Total Estrogens</p> <p>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 valuable information about total estrogen status, and the mother hormone that acts as a precursor to all other hormones.</p>	<p>○ FOOD SAFE ALLERGY TEST** (LCM73001) \$198</p> <p>This test measures delayed (IgG) food allergies for 95 common foods.</p>
<p>○ LIFE EXTENSION THYROID PANEL (LC304131) \$75</p> <p>TSH, T4, Free T3, Free T4.</p>	<p>○ ASPIRINWORKS™* (LC501620) \$149</p> <p>Taking aspirin to prevent heart attack? Is it working? This is a random urine test used to measure your resistance to aspirin.</p>
<p>○ FEMALE COMPREHENSIVE HORMONE PANEL* (LC100011) \$299</p> <p>CBC/Chemistry Profile (see description above), DHEA-S, Estradiol, Total Estrogens, Progesterone, Pregnenolone, Total and Free Testosterone, SHBG, TSH, Free T3.</p>	<p>○ OMEGA SCORE™*** (LCOMEGA) \$131.25</p> <p>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.</p>
<p>○ MALE COMPREHENSIVE HORMONE PANEL* (LC100010) \$299</p> <p>CBC/Chemistry Profile (see description above), DHEA-S, Estradiol, DHT, PSA, Pregnenolone, Total and Free Testosterone, SHBG, TSH, Free T3.</p>	<p>○ COQ10* (COENZYME Q10) (LC120251) \$145</p> <p>This test is used to check the blood level of CoQ10 and will enable more precise dosing for anyone seeking to achieve and maintain high levels of this critical antioxidant.</p>

* This test requires samples to be shipped to the lab on dry ice for customers using a Blood Draw Kit and will incur an additional \$35 charge. If the customer is having blood drawn at a LabCorp facility, this extra charge does not apply.

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



Other Popular Panels Life Extension Member Pricing

- ☐ **ENERGY PROFILE (LC100005)** \$375
CBC/Chemistry Profile (see description), Epstein –Barr Virus antibodies (IgG and IgM), Cytomegalovirus Antibodies (IgG and IgM), Ferritin, Total and Free Testosterone, DHEA-S, Free T3, Free T4, Cortisol, C-Reactive Protein (high sensitivity), Vitamin B12, Folate, Insulin.
- ☐ **ANEMIA PANEL (LC100006)** \$86
CBC/Chemistry Profile (see description), Ferritin, Total Iron Binding Capacity (TIBC), Vitamin B12, Folate, Reticulocyte Count.
- ☐ **INFLAMMATION PANEL (LC100007)** \$135
CBC/Chemistry Profile (see description above), C-Reactive Protein (high sensitivity), Sedimentation Rate, Rheumatoid (RA) Factor, Antinuclear Antibodies (ANA) Screen.
- ☐ **THYROID ANTIBODY PROFILE (LC100004)** \$99
Thyroid Antithyroglobulin Antibody (ATA) and Thyroid Peroxidase Antibody (TPO).

Popular Single Tests

- HORMONES**
- ☐ **CORTISOL (LC004051)** \$39
This test is to measure adrenal function.
- ☐ **DHEA-SULFATE (LC004020)** \$61
This test shows if you are taking the proper amount of DHEA. This test normally costs \$100 or more at commercial laboratories.
- ☐ **DIHYDROTESTOSTERONE (DHT)* (LC500142)** \$99
Measures serum concentrations of DHT.
- ☐ **ESTRADIOL (LC004515)** \$33
For men and women. Determines the proper amount in the body.
- ☐ **INSULIN FASTING (LC004333)** \$42
Can predict those at risk of diabetes, obesity, and heart and other diseases.
- ☐ **PREGNENOLONE* (LC140707)** \$116
Used to determine ovarian failure, hirsutism, adrenal carcinoma, and Cushing's syndrome.
- ☐ **PROGESTERONE (LC004317)** \$55
Primarily for women. Determines the proper amount in the body.
- ☐ **SEX HORMONE BINDING GLOBULIN (SHBG) (LC082016)** \$33
This test is used to monitor SHBG levels which are under the positive control of estrogens and thyroid hormones, and suppressed by androgens.
- ☐ **SOMATOMEDIN C (IGF-1) (LC010363)** \$75
Indicates growth hormone secretion levels. Low levels have been associated with atherosclerosis as well as all-cause mortality.

**Blood tests available only in the continental United States.
Not available in Maryland.**

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

- CARDIAC RISK**
- ☐ **Lp-PLA2 (PLAC TEST)* (LC123240)** \$125
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.
- ☐ **C-REACTIVE PROTEIN (HIGH-SENSITIVITY) (LC120766)** \$42
Measures inflammation factors in arteries. Recent studies indicate that C-reactive protein may be the most accurate risk factor for predicting heart attack and stroke.
- ☐ **CARDIAC PLUS* (LC100008)** \$145
CBC/Chemistry profile (see description), Vitamin D 25-hydroxy, C-Reactive Protein (high sensitivity), Fibrinogen, Homocysteine.
- ☐ **VAP PLUS* (LC100009)** \$330
VAP, C-Reactive Protein (high sensitivity), Homocysteine, Fibrinogen, PLAC® Test (Lp-PLA2), Vitamin D 25-hydroxy.
- ☐ **FIBRINOGEN* (LC001610)** \$31
High levels of this blood-clotting factor increase the risk of heart attack and stroke.
- ☐ **HOMOCYSTEINE (LC706994)** \$64
Can indicate if you are likely to have a heart attack or stroke. Even if you take folic acid, you still may have dangerously high levels of this artery-clotting metabolic debris that can be lowered with high doses of TMG, vitamin B6, and vitamin B12.
- ☐ **VAP™ TEST* (LC804500)** \$90
The VAP cholesterol test provides a more comprehensive coronary heart disease (CHD) risk assessment than the conventional lipid profile. Direct measurements, not estimations, are provided for total cholesterol, LDL, HDL, VLDL, and cholesterol subclasses.
- MALE HEALTH**
- ☐ **PSA (PROSTATE-SPECIFIC ANTIGEN) (LC010322)** \$31
Can provide an early warning sign for prostate disorders and possible cancer.
- ☐ **FREE-PSA (INCLUDES TOTAL PSA)* (LC480780)** \$61
Recommended to determine if an elevated PSA is indicative of prostate cancer.
- BONE HEALTH**
- ☐ **OSTEOCALCIN* (LC010249)** \$91
Osteocalcin is often used as a biochemical marker, or biomarker, for the bone formation process. It has been routinely observed that higher serum osteocalcin levels are relatively well correlated with bone diseases characterized by increased bone turnover, especially osteoporosis.
- ☐ **DPD CROSS LINK URINE TEST (LC511105)** \$79
The deoxypyridinoline (DPD) urine test can be used to measure bone re-absorption rates in healthy individuals and in those with enhanced risk of developing metabolic bone diseases. Deoxypyridinoline can be used to monitor therapies (which may include bisphosphonate drugs) in people diagnosed with osteoporosis.

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

ORDER LIFE-SAVING 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

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☐ Male ☐ Female

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(required) / /

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Expiration Date /

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

PRODUCTS

AMINO ACIDS

Acetyl-L-Carnitine
Acetyl-L-Carnitine-Arginate
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D, L-Phenylalanine Capsules
GABA Powder
Glycine Capsules
Glycine Powder
L-Arginine Capsules
L-Arginine Free Base Powder
Arginine/L-Ornithine Capsules
L-Carnitine Capsules
L-Carnitine Powder Natural Lemon Flavor
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-L-Cysteine Capsules
Optimized Carnitine with GlycoCarn®
PharmaGABA
Super Carnosine Capsules
Taurine Capsules

BONE & JOINT HEALTH

ArthroMax™ with Theaflavins and AprèsFlex™
ArthroMax™ Advanced with UC-II® and AprèsFlex™
Bone-Up™
Bone Restore
Bone Restore w/Vitamin K2
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
Ginkgo Biloba Certified Extract™
Huperzine A
Lecithin with B5 and BHA
Lecithin Granules
Methylcobalamin Lozenges
Neuro-Mag™ Magnesium L-Threonate
Optimized Ashwagandha Extract
Phosphatidylserine Capsules
Rhodiola Extract
Super Ginkgo Extract
Vinpocetine

DIGESTIVE

Bifido GI Balance
Bromelain Powder
Carnosoothe w/PicroProtect
Digest RC™
Enhanced Super Digestive Enzymes
Extraordinary Enzymes
Life Flora™
Natural EsophaGuard
Pancreatin
Probiotic All-Flora®
Probiotic Anti-Aging
Probiotic Colon™
Regimint
Theralac Probiotics

DURK AND SANDY PRODUCTS

Blast™
Dual-C
Inner Power™
Memory Upgrade™

EYE CARE

Bilberry Extract
Brite Eyes III
Eye Pressure Support with Mirtogenol®
Overxcast Polarized Sunglasses
Solarshield Sunglasses
Super Zeaxanthin with Lutein & Meso-Zeaxanthin Plus Astaxanthin and C3G

Super Zeaxanthin with Lutein & Meso-Zeaxanthin and C3G
Vision Optimizer

FIBER

AppleWise Polyphenol
Fiber Food
Hi-Lignan® Nutri-Flax®
TruFiber®
WellBetX PGX® Soluble Fiber Blend

FOOD

Rich Rewards Spicy Cruciferous Vegetable Soup
Rich Rewards Cruciferous Vegetable Soup
Rich Rewards Lentil Soup
Rich Rewards Coffee

HAIR CARE

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

HEART HEALTH

AppleWise Polyphenol
Advanced Lipid Control
Aspirin (Enteric Coated)
Cardio Peak™ w/Standardized Hawthorn and Arjuna Cho-Less™
D-Ribose Capsules
D-Ribose Powder
Endothelial Defense™ with Full-Spectrum Pomegranate™
Fibrinogen Resist
Forskolin
Homocysteine Resist
Krill Healthy Joint Formula
Natural BP Management
Olive Leaf Vascular Support
Peak ATP® with GlycoCarn®
PhosphOmega®
Policosanol
Pycnogenol® French Maritime Pine Bark Extract
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
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
Floradix® Iron & Herbs
Floravital® Iron & Herbs
Full-Spectrum Pomegranate™
Grapeseed Extract with Resveratrol & Pterostilbene
Huperzine A
Kyolic® Garlic Formula 105
Kyolic® Reserve
Mega Green Tea Extract
Mega Green Tea Extract (Decaffeinated)
(also w/ CoffeeGenic™ Green Coffee Extract)
Mega Lycopene Extract
Nutrim
Optimized Ashwagandha Extract
Optimized Garlic
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 Ginkgo Extract
Triple Action Cruciferous Vegetable Extract
Venotone
Whole Grape Extract

HORMONES

Advanced Natural Sex for Women® 50+
Cordyceps CS-4
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
ProgestaCare for Women
Pure IGF
Super Miraforte with Standardized Lignans

IMMUNE ENHANCEMENT

AHCC® (Active Hexose Correlated Compound)
Black Cumin Seed Oil
Black Cumin Seed Oil w/Bio-Curcumin®
Buffered Vitamin C Powder
Echinacea Extract
Enhanced Life Extension Whey Protein
i26 Hyperimmune Egg
Immune Protect with PARACTIN®
Lactoferrin
Maitake SX-Fraction
Norwegian Shark Liver Oil
Optimized Fucoidan w/Maritech® 926
Primal Defense™
ProBoost™ Thymic Protein A
Pure Gar™
Reishi Extract Mushroom Complex
Sambu® Guard
Thymic Immune Factors
Vitamin C with Dihydroquercetin
Zinc Lozenges with Vitamin C

INFLAMMATORY REACTIONS

Arthro-Immune Joint Support
ArthroMax™ with Theaflavins
Boswella
Boswella™ Topical Cream
Bromelain (Specially-coated)
DHA (Vegetarian Sourced)
Emulsified Norwegian Cod Liver Oil
Emulsified Super Twin EPA/DHA
Fast Acting Joint Formula
Ginger Force
Krill Oil
5-LOX Inhibitor w/AprèsFlex™
Mega EPA/DHA
Mega GLA with Sesame Lignans
MSM
Natural Relief 1222™ Cream
Omega-3 Whirl
Serrafazyme
SODzyme™ with GliSODin® and Wolfberry
Super Omega-3 EPA/DHA with Sesame Lignans & Olive Fruit Extract
Tart Cherry
Udo's Choice Oil
Zyflamend® Tiny Caps®

LIVER HEALTH

Branch Chain Amino Acids
N-Acetyl Cysteine
Liver Force
Liver Efficiency Formula
Certified European Milk Thistle
Hepatopro
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
Floradix® Iron & Herbs
Floravital® Iron & Herbs
Iodoral
Iron Protein Plus
Magnesium
Magnesium Citrate
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

Blender
Blood Pressure Monitor Arm Cuff Medium
Cell Sensor Gauss Meter™
CR Way Edition Advanced Dietary Software
Empty Gelatin Capsules
The Capsule Filler Machine

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

Adrenal Energy Formula
Bioactive Milk Peptides
L-Theanine
5 HTP
Enhanced Natural Sleep® w/ Melatonin
Enhanced Natural Sleep® w/o Melatonin
Natural Stress Relief
Stabilium® 200
SAME
St. John's Wort Extract

MOUTH CARE

Advanced Oral Hygiene
Mist Oral III™ with CoQ10
Mouthwash w/Pomegranate
Toothpaste

MULTIVITAMIN

Children's Formula Life Extension Mix
Comprehensive Nutrient Packs Basic
Comprehensive Nutrient Packs Advanced
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

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

Advanced Under Eye Serum with Stem Cells
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
Bio-Collagen w/Patented UC-II®
Bioflavonoid Cream
Broccoli Sprout
Corrective Clearing Mask
DermaWhey
DNA Repair Cream
Dual-Action MicroDermAbrasion
Elastin Collagen Body Firming Lotion
Essential Plant Lipids Reparative Serum
Face Master® Platinum
Face Rejuvenating Antioxidant Cream
Enhanced FernBlock® with Sendara®
Fine Line-Less
Hair Suppress Formula
Healing Formula All-in-One Cream
Healing Mask
Hyaluronic Facial Moisturizer
Hydrating Anti-oxidant Face Mist
Hydroderm®
Lavilin Underarm Deodorant
Lifting & Tightening Complex
Lycopene Cream
Melatonin Cream
Mild Facial Cleanser
Neck Rejuvenating Antioxidant Cream
Peel Off Cleansing Mask
Pigment Correcting Cream
(Ultra) Rejuvenex®
Rejuvenex® Body Lotion
Rejuvenex® Factor
Rejuvenex® Factor Firming Serum
Rejuvenating Serum
Resveratrol Anti-Oxidant Serum
Skin Lightening Serum
Skin Restoring Phytoceramides w/Lipowheat™
Skin Stem Cell Serum
Stem Cell Cream w/Alpine Rose
Supercritical Omega 7™
Total Sun Protection Cream
Ultra Rejuvenex®
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 E-ssential Cream
Vitamin K Healing Cream

SOY

Natural Estrogen w/Pomegranate
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
Green Coffee Extract CoffeeGenic™ (also w/Glucose control)
Coriolus Super Strength
CR Mimetic Longevity Formula
Cinsulin® w/InSea2® and Crominex® 3+
EDTA
European Leg Solution Diosmin 95
Fem Dophilus
Femmenessence MacaPause®
GlucFit™
Hearos™ Ear Plugs
Ideal Bowel Support 299
Maitake SX-Fraction™

Migra-eeze™
Natural Female Support
Organic Total Body Cleanse
Pecta-Sol®
Potassium Iodide
PQQ Caps w/BioPQQ™
PteroPure™
Prelox® Natural Sex for Men®
Pyridoxal 5' - Phosphate
Rosmarinic Acid Extract
Ultra Natural Prostate w/AprèsFlex™ and Standardized Lignans

SPORTS PERFORMANCE

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

VITAMINS

Ascorbic Acid Powder
Ascorbyl Palmitate Capsules
B1
B2
B12
Beta-Carotene
Biotin Capsules
Biotin Powder
Buffered Vitamin C Powder
Complete B Complex
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
Supercritical Omega 7™
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
Advanced Anti-Adipocyte Formula w/AdipoStat & Integra Lean®
Anti-Adipocyte Formula w/AdipoStat
Calorie Control Weight Management™ Formula w/CoffeeGenic™ Green Coffee Extract
CoffeeGenic™ Weight Management™ with Green Coffee Extract
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
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					
01524	ACETYL-L-CARNITINE - 500 mg, 100 veg. caps	\$34.00	\$25.50		
	Buy 4 bottles, price each	30.00	22.50		
01525	ACETYL-L-CARNITINE ARGINATE - 100 veg. caps	59.00	44.25		
	Buy 4 bottles, price each	50.99	38.24		
01628	ADRENAL ENERGY FORMULA - 60 veg. caps	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
01630	ADRENAL ENERGY FORMULA - 120 veg. caps	46.00	34.50		
	Buy 4 bottles, price each	42.00	31.50		
01308	ADVANCED LIPID CONTROL - 60 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01521	ADVANCED ORAL HYGIENE - 60 veg. mint lozenges	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		
00681	AHCC - 500 mg, 30 caps	59.98	44.99		
	Buy 4 bottles, price each	53.33	40.00		
*46925	ALI® 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		
01510	ANTI-ADIPOCYTE FORMULA w/ADIPOSTAT - 60 veg. caps	35.00	26.25		
	Buy 4 bottles, price each	32.00	24.00		
01509	ANTI-ADIPOCYTE FORMULA w/ADIPOSTAT & INTEGRA LEAN® (ADVANCED) - 60 veg. caps	39.00	29.25		
	Buy 4 bottles, price each	36.00	27.00		
01625	APPLEWISE POLYPHENOL EXTRACT - 600 mg, 30 veg. caps	21.00	15.75		
	Buy 4 bottles, price each	19.00	14.25		
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		
01624	(L)-ARGININE CAPS - 700 mg, 200 veg. caps	26.50	19.88		
	Buy 4 bottles, price each	23.25	17.44		
01025	(L)-ARGININE FREE-FORM POWDER - 100 grams	15.98	11.99		
	Buy 4 bottles, price each	14.31	10.73		
01617	ARTHRONAX™ w/THEAFLAVINS & APRESFLEX™ - 120 veg. caps	44.00	33.00		
	Buy 4 bottles, price each	40.00	30.00		
01618	ARTHRONAX™ ADVANCED w/UC-II® & APRESFLEX™ - 60 caps	36.00	27.00		
	Buy 4 bottles, price each	32.00	24.00		
01404	ARTHRO-IMMUNE JOINT SUPPORT - 60 veg. caps	32.00	24.00		
	Buy 4 bottles, price each	28.00	21.00		
00919	ARTICHOKE LEAF EXTRACT - 500 mg, 180 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	25.38	19.04		
00080	ASCORBIC ACID POWDER - 454 grams	38.00	28.50		
	Buy 4 bottles, price each	34.93	26.20		
01533	ASCORBYL PALMITATE - 500 mg, 100 veg. 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

MARCH 2013

No.		Retail Each	Member Each	Qty	Total
B					
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	11.25	8.44		
	Buy 4 bottles, price each	10.13	7.60		
00653	BETTERWOMAN® - 40 caps	40.00	30.00		
	Buy 4 bottles, price each	38.00	28.50		
01622	BIFIDO GI BALANCE - 60 veg. caps	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		
01073	BILBERRY EXTRACT - 100 mg, 100 veg. caps	42.00	31.50		
	Buy 4 bottles, price each	38.00	28.50		
01512	BIOACTIVE MILK PEPTIDES - 30 caps	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
01631	BIO-COLLAGEN w/PATENTED UC-II® - 60 caps	36.00	27.00		
	Buy 4 bottles, price each	32.00	24.00		
*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		
01709	BLACK CUMIN SEED OIL - 60 softgels	16.00	12.00		
	Buy 4 bottles, price each	14.00	10.50		
01710	BLACK CUMIN SEED OIL w/BIO-CURCUMIN® - 60 softgels	32.00	24.00		
	Buy 4 bottles, price each	30.00	22.50		
01008	BLAST™ - 600 grams of powder	26.95	20.21		
51526	BLENDER - 28 oz bottle	8.99	6.74		
70000	BLOOD PRESSURE MONITOR - ARM CUFF (medium)	99.95	64.97		
70004	BLOOD PRESSURE MONITOR - WRIST (travel size)	69.95	52.46		
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		
01611	BONE RESTORE - 150 caps	22.50	16.88		
	Buy 4 bottles, price each	19.50	14.63		
01711	BONE RESTORE w/VITAMIN K2 - 150 caps	26.00	19.50		
	Buy 4 bottles, price each	23.00	17.25		
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		
01680	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		

SUB-TOTAL OF COLUMN 2

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

To order online visit: www.LifeExtension.com

Buyers Club Order Form

No.		Retail Each	Member Each	Qty	Total
00202	BOSWELLA - 100 caps Buy 4 bottles, price each	\$38.00 30.00	\$28.50 22.50		
00258	BOSWELLA TOPICAL CREAM - 4 oz Buy 4 jars, price each	15.00 13.00	11.25 9.75		
01253	BRANCHED CHAIN AMINO ACIDS - 90 veg. caps Buy 4 bottles, price each	19.50 17.00	14.63 12.75		
01699	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					
01653	CALCIUM CITRATE w/VITAMIN D - 300 veg. caps Buy 4 bottles, price each	\$24.00 21.25	\$18.00 15.94		
01651	CALCIUM D-GLUCARATE - 200 mg, 60 veg. caps Buy 4 bottles, price each	18.00 15.00	13.50 11.25		
01693	CALORIE CONTROL WEIGHT MANAGEMENT FORMULA w/COFFEEGENIC™ GREEN COFFEE EXTRACT BLUEBERRY FLAVOR - 414 grams powder Buy 4 jars, price each Buy 8 jars, price each	60.00 54.00 50.00	45.00 40.50 37.50		
01694	CALORIE CONTROL WEIGHT MANAGEMENT FORMULA w/COFFEEGENIC™ GREEN COFFEE EXTRACT BLUEBERRY FLAVOR - 60 individual packs Buy 4 boxes, price each Buy 8 boxes, price each	64.00 60.00 56.00	48.00 45.00 42.00		
00118	CAPSULE FILLER MACHINE FOR "00" CAPSULES Buy 4 machines, price each	18.95 18.25	14.21 13.69		
00613	CAPSULE FILLER MACHINE FOR "0" CAPSULES Buy 4 machines, price each	18.95 18.25	14.21 13.69		
01700	CARDIO PEAK™ w/STANDARDIZED HAWTHORN & ARJUNA - 120 veg. caps Buy 4 bottles, price each	36.00 32.00	27.00 24.00		
00916	CARNITINE w/GLYCOCARN® (OPTIMIZED) - 60 veg. caps Buy 4 bottles, price each	36.00 32.00	27.00 24.00		
01532	L-CARNITINE - 500 mg, 30 veg. caps Buy 4 bottles, price each	15.00 13.20	11.25 9.90		
01719	L-CARNITINE POWDER NATURAL LEMON FLAVOR - 114 grams Buy 4 jars, price each	28.00 24.00	21.00 18.00		
01258	CARNOSOOTHE w/PICROPROTECT™ - 60 veg. caps Buy 4 bottles, price each	29.95 27.00	22.46 20.25		
01687	CARNOSINE (SUPER) - 500 mg, 90 veg. caps Buy 4 bottles, price each	66.00 60.00	49.50 45.00		
01003	CAT MIX - 100 grams powder Buy 4 jars, price each	15.00 12.00	11.25 9.00		
01659	CDP CHOLINE CAPS - 250 mg, 60 veg. 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		
01571	CHLOROPHYLLIN w/ZINC - 100 mg, 100 veg. caps Buy 4 bottles, price each	24.00 20.00	18.00 15.00		

SUB-TOTAL OF COLUMN 3

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

No.		Retail Each	Member Each	Qty	Total
01359	CHO-LESS™ - 90 capsules	\$32.50	\$24.38		
00541	CHOLINE CHLORIDE - 16 oz liquid Buy 4 bottles, price each	12.95 12.17	9.71 9.13		
00364	CHONDROITIN SULFATE CONCENTRATE - 400 mg, 60 tablets Buy 4 bottles, price each	19.95 18.00	14.96 13.50		
01477	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		
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	17.63 16.40	13.22 12.30		
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		
00050	COD LIVER OIL (EMULSIFIED) - 12 fl oz (355 ml) Buy 4 bottles, price each	15.59 13.10	11.69 9.83		
00293	COD LIVER OIL (EMULSIFIED) - 100 softgels (Emulsified) Buy 4 bottles, price each	10.97 10.34	8.23 7.76		
01707	COFFEEGENIC™ WEIGHT MANAGEMENT™ w/GREEN COFFEE EXTRACT - 90 veg. caps Buy 4 bottles, price each	48.00 42.00	36.00 31.50		
01697	COGNITEX® w/PREGNENOLONE & NEUROPROTECTION COMPLEX - 90 softgels Buy 4 bottles, price each Buy 8 bottles, price each	74.00 66.60 58.89	55.50 49.95 44.17		
01696	COGNITEX® w/o PREGNENOLONE w/NEUROPROTECTION COMPLEX - 90 softgels Buy 4 bottles, price each Buy 8 bottles, price each	72.00 64.00 56.96	54.00 48.00 42.72		
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		
01795	COMPREHENSIVE NUTRIENT PACKS BASIC - 30 packs Buy 4 boxes, price each	48.00 44.00	36.00 33.00		
01796	COMPREHENSIVE NUTRIENT PACKS ADVANCED - 30 packs Buy 4 boxes, price each	90.00 82.00	67.50 61.50		
00119	COPPER CAPSULES - 2 mg, 100 caps Buy 4 bottles, price each	9.91 8.96	7.43 6.72		
00949	COQ10™ w/ #LIMONENE (SUPER ABSORBABLE) - 50 mg, 60 softgels Buy 4 bottles, price each Buy 10 bottles, price each	25.00 22.00 20.00	18.75 16.50 15.00		
00950	COQ10™ w/ #LIMONENE (SUPER ABSORBABLE) - 100 mg, 100 softgels Buy 4 bottles, price each Buy 10 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 10 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 10 bottles, price each	62.00 56.00 52.00	46.50 42.00 39.00		

SUB-TOTAL OF COLUMN 4

MARCH 2013

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					
01425	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -50 mg, 100 softgels	\$58.00	\$43.50		
	Buy 4 bottles, price each	53.00	39.75		
	Buy 10 bottles, price each	50.00	37.50		
01427	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -50 mg, 30 softgels	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		
01431	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -200 mg, 30 softgels	62.00	46.50		
	Buy 4 bottles, price each	56.00	42.00		
	Buy 10 bottles, price each	52.00	39.00		
01397	CORDYCEPS CS-4™ - 60 veg. caps	29.99	22.49		
01053	CORIOLUS SUPER STRENGTH - 600 mg, 150 veg. caps	99.95	74.96		
80140	COSMESIS ADVANCED UNDER EYE SERUM w/STEM CELLS - .33 oz	49.00	36.75		
	Buy 2 bottles, price each	42.00	31.50		
80139	COSMESIS AMBER SELF MICRODERMABRASION - 2 oz	49.00	36.75		
	Buy 2 jars, price each	42.00	31.50		
80118	COSMESIS ANTI-AGING MASK - 2 oz	72.00	54.00		
	Buy 2 bottles, price each	63.36	47.52		
80134	COSMESIS ANTI-GLYCATION SERUM - 1 oz W/BLEUBERRY & POMEGRANATE EXTRACTS	33.00	24.75		
	Buy 2 bottles, price each	31.35	23.51		
80133	COSMESIS ANTIOXIDANT FACIAL MIST - 2 oz	32.00	24.00		
	Buy 2 bottles, price each	30.40	22.80		
80127	COSMESIS ANTIOXIDANT REJUVENATING FOOT CREAM - 2 oz	45.00	33.75		
	Buy 2 jars, price each	42.80	32.10		
80128	COSMESIS ANTIOXIDANT REJUVENATING FOOT SCRUB - 2 oz	59.00	44.25		
	Buy 2 jars, price each	51.92	38.94		
80117	COSMESIS ANTIOXIDANT REJUVENATING HAND CREAM - 2 oz	64.00	48.00		
	Buy 2 jars, price each	57.49	43.12		
80121	COSMESIS ANTIOXIDANT REJUVENATING HAND SCRUB - 2 oz	58.00	43.50		
	Buy 2 jars, price each	51.04	38.28		
80105	COSMESIS ANTI-REDNESS & BLEMISH LOTION - 1 oz	74.50	55.88		
	Buy 2 bottles, price each	65.56	49.17		
80147	COSMESIS BIOFLAVONOID CREAM - 1 oz jar	46.00	34.50		
	Buy 2 jars, price each	39.00	29.25		
80144	COSMESIS BROCCOLI SPROUT CREAM - 1 oz	46.00	34.50		
	Buy 2 jars, price each	39.00	29.25		
80120	COSMESIS CORRECTIVE CLEARING MASK - 2 oz	64.50	48.38		
	Buy 2 jars, price each	56.76	42.57		
80141	COSMESIS DNA REPAIR CREAM - 1 oz jar	49.00	36.75		
	Buy 2 jars, price each	42.00	31.50		
80108	COSMESIS ESSENTIAL PLANT LIPIDS REPARATIVE SERUM - 1 oz	74.95	56.21		
	Buy 2 bottles, price each	65.95	49.46		
80123	COSMESIS FACE REJUVENATING ANTIOXIDANT CREAM - 2 oz	69.50	52.13		
	Buy 2 jars, price each	61.16	45.87		
80107	COSMESIS FINE LINE-LESS - 1 oz	74.50	55.88		
	Buy 2 bottles, price each	65.56	49.17		
80131	COSMESIS HAIR SUPPRESS FORMULA - 4 oz	59.00	44.25		
	Buy 2 bottles, price each	51.92	38.94		
80137	COSMESIS HEALING FORMULA ALL-IN-ONE CREAM - 1 oz	53.00	39.75		
	Buy 2 jars, price each	45.43	34.07		
80115	COSMESIS HEALING MASK - 2 oz	64.50	48.38		
	Buy 2 bottles, price each	56.76	42.57		
80102	COSMESIS HEALING VITAMIN K CREAM - 1 oz	79.50	59.63		
	Buy 2 bottles, price each	69.96	52.47		
80109	COSMESIS HYALURONIC FACIAL MOISTURIZER - 1 oz	58.00	43.50		
	Buy 2 bottles, price each	51.04	38.28		

SUB-TOTAL OF COLUMN 5

MARCH 2013

No.		Retail Each	Member Each	Qty	Total
80110	COSMESIS HYALURONIC OIL-FREE FACIAL MOISTURIZER - 1 oz	\$58.00	\$43.50		
	Buy 2 bottles, price each	51.04	38.28		
80138	COSMESIS HYDRATING ANTI-OXIDANT FACE MIST - 4 oz	39.95	29.96		
	Buy 2 bottles, price each	38.00	28.50		
80103	COSMESIS LIFTING & TIGHTENING COMPLEX - 1 oz	74.50	55.88		
	Buy 2 tubes, price each	65.56	49.17		
80146	COSMESIS LYCOPENE CREAM - 1 oz jar	28.00	21.00		
	Buy 2 jars, price each	25.40	19.05		
80135	COSMESIS MELATONIN CREAM - 1 oz	33.00	24.75		
	Buy 2 jars, price each	27.10	20.33		
80114	COSMESIS MILD FACIAL CLEANSER - 8 oz	59.00	44.25		
	Buy 2 bottles, price each	51.92	38.94		
80122	COSMESIS NECK REJUVENATING ANTIOXIDANT CREAM - 2 oz	64.00	48.00		
	Buy 2 jars, price each	56.32	42.24		
80111	COSMESIS PIGMENT CORRECTING CREAM - 1/2 oz	74.00	55.50		
	Buy 2 bottles, price each	65.12	48.84		
80106	COSMESIS REJUVENATING SERUM - 1 oz	74.50	55.88		
	Buy 2 bottles, price each	65.56	49.17		
80142	COSMESIS RESVERATROL ANTI-OXIDANT SERUM - 1 oz	46.00	34.50		
	Buy 2 bottles, price each	39.00	29.25		
80112	COSMESIS SKIN LIGHTENING SERUM - 1/2 oz	85.00	63.75		
	Buy 2 bottles, price each	74.80	56.10		
80130	COSMESIS SKIN STEM CELL SERUM - 1 oz	74.00	55.50		
	Buy 2 bottles, price each	69.00	51.75		
80143	COSMESIS STEM CELL CREAM W/ALPINE ROSE - 1 oz jar	66.00	49.50		
	Buy 2 jars, price each	58.00	43.50		
80116	COSMESIS ULTRA LIP PLUMPER - 1/3 oz	64.00	48.00		
	Buy 2 bottles, price each	56.32	42.24		
80101	COSMESIS ULTRA WRINKLE RELAXER - 1 oz	89.95	67.46		
	Buy 2 bottles, price each	79.76	59.82		
80113	COSMESIS UNDER EYE REFINING SERUM - 1/2 oz	74.50	55.88		
	Buy 2 bottles, price each	65.56	49.17		
80104	COSMESIS UNDER EYE RESCUE CREAM - 1/2 oz	74.50	55.88		
	Buy 2 bottles, price each	65.56	49.17		
80129	COSMESIS VITAMIN C SERUM - 1 oz	85.00	63.75		
	Buy 2 bottles, price each	74.80	56.10		
80136	COSMESIS VITAMIN D LOTION - 4 oz	36.00	27.00		
	Buy 2 bottles, price each	33.66	25.25		
80145	COSMESIS VITAMIN E-ESSENTIAL CREAM - 1 oz	28.00	21.00		
	Buy 2 jars, price each	26.00	19.50		
00862	CRAN-MAX® - 500 mg, 60 veg. caps	17.50	13.13		
	Buy 4 bottles, price each	15.00	11.25		
01424	CRAN-MAX® with UTIA202™ (OPTIMIZED) - 60 veg. caps	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
00609	CREATINE CAPSULES - 120 caps	10.95	8.21		
	Buy 4 bottles, price each	9.25	6.94		
00610	CREATINE POWDER - 500 grams	33.00	24.75		
	Buy 4 bottles, price each	30.00	22.50		
01646	CREATINE WHEY GLUTAMINE POWDER - 454 grams (vanilla)	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01429	CR MIMETIC LONGEVITY FORMULA - 60 veg. caps	39.00	29.25		
	Buy 4 bottles, price each	36.00	27.00		
*33840	CRWAY GREAT GLUCOSE CONTROL CD	98.00	82.00		
**CRWAY	CR WAY OPTIMAL HEALTH PROGRAM SOFTWARE	195.00	195.00		
00407	CURCUMIN® (SUPER BIO) - 400 mg, 60 veg. caps	38.00	28.50		
	Buy 4 bottles, price each	35.00	26.25		

SUB-TOTAL OF COLUMN 6

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

No.		Retail Each	Member Each	Qty	Total
D					
01313	DERMAWEHY - 400 mg, 60 caps Buy 4 bottles, price each	\$65.00 59.00	\$48.75 44.25		
00658	7-KETO® DHEA METABOLITE - 25 mg, 100 caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		
01479	7-KETO® DHEA METABOLITE - 100 mg, 60 veg. caps Buy 4 bottles, price each	40.00 36.00	30.00 27.00		
01640	DHA (VEGETARIAN SOURCED) - 200 mg, 30 veg. softgels Buy 4 bottles, price each	20.00 18.00	15.00 13.50		
00607	DHEA - 25 mg, 100 tablets (dissolve in mouth) Buy 4 bottles, price each	14.00 11.75	10.50 8.81		
01478	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	18.00 15.00	13.50 11.25		
00454	DHEA - 15 mg, 100 caps Buy 4 bottles, price each	14.00 12.00	10.50 9.00		
00882	DHEA - 50 mg, 60 caps Buy 4 bottles, price each	19.00 17.00	14.25 12.75		
01689	DHEA - 100 mg, 60 veg. caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		
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		
00034	D,L-PHENYLALANINE CAPSULES - 500 mg, 100 veg. 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		
00059	DMG - 125 mg, 60 tablets Buy 4 boxes, price each	22.80 21.00	17.10 15.75		
01570	DNA PROTECTION FORMULA - 60 veg. caps Buy 4 bottles, price each	34.00 32.00	25.50 24.00		
00544	DOG MIX - 100 grams powder Buy 4 jars, 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		
00899	DUAL-ACTION MICRODERMABRASION ADV. EXFOLIATE - 2.4 oz Buy 4 jars, price each	39.95 38.95	29.96 29.21		
01672	DUAL-C - 90 veg. caps Buy 4 bottles, price each	12.00 10.50	9.00 7.88		
E					
01528	ECHINACEA EXTRACT - 250 mg, 60 veg. caps Buy 4 bottles, price each	\$14.35 12.50	\$10.76 9.38		
01395	EDTA - 500 mg, 60 caps	9.98	7.49		
01321	ELASTIN & COLLAGEN BODY FIRING LOTION - 8 fl. oz.	10.00	7.50		
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		
01042	EUROPEAN LEG SOLUTION DIOSMIN 95 - 600 mg, 30 veg. tabs Buy 4 bottles, price each	20.00 18.00	15.00 13.50		
01706	EXTRAORDINARY ENZYMES - 60 caps Buy 4 bottles, price each	26.00 24.00	19.50 18.00		

SUB-TOTAL OF COLUMN 7

No.		Retail Each	Member Each	Qty	Total
01514	EYE PRESSURE SUPPORT w/MIRTOGENOL® - 30 veg. caps Buy 4 bottles, price each	\$38.00 34.00	\$28.50 25.50		
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		
20055	FEM DOPHILUS® - 60 caps	39.95	29.96		
01064	FEMMENESSENCE 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		
01670	FIBER FOOD CAPS - 200 veg. caps Buy 4 bottles, price each Buy 10 bottles, price each	16.00 14.00 13.00	12.00 10.50 9.75		
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		
01384	FLORADIX® IRON & HERBS - 17 fl. oz	43.99	35.19		
01382	FLORAVITAL® IRON & HERBS - 17 fl. oz	43.99	35.19		
01439	FOLATE (OPTIMIZED) (L-METHYLFOLATE) 1000 mcg - 100 veg. caps Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
01641	FOLIC ACID + B12 CAPSULES - 200 veg. 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		
01394	(OPTIMIZED) GARLIC - 200 veg. caps Buy 4 bottles, price each	24.95 21.00	18.71 15.75		
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		
01658	GINKGO BILOBA CERTIFIED EXTRACT™ - 120 mg, 365 veg. caps Buy 2 bottles, price each	46.00 43.50	34.50 32.63		
01648	GINKGO EXTRACT 28/7 (SUPER) - 120 mg, 100 veg. 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	22.00 20.00	16.50 15.00		

SUB-TOTAL OF COLUMN 8

Buyers Club Order Form

No.		Retail Each	Member Each	Qty	Total
00522	GLUCOSAMINE/CHONDROITIN CAPSULES - 100 caps	\$38.00	\$28.50		
	Buy 4 bottles, price each	32.00	24.00		
00512	GLUCOFIT™ - 100 softgels	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
00113	GLUTATHIONE, CYSTEINE & C - 750 mg, 100 caps	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
00314	L-GLUTATHIONE (MEGA) - 250 mg, 60 caps	39.64	29.73		
	Buy 4 bottles, price each	35.68	26.76		
01669	GLYCINE - 1,000 mg, 100 veg. caps	12.00	9.00		
	Buy 4 bottles, price each	10.80	8.10		
00128	GLYCINE POWDER - 300 grams	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
01091	GRAPE EXTRACT w/RESVERATROL (WHOLE) - 60 veg. caps	36.00	27.00		
	Buy 4 bottles, price each	34.00	25.50		
01411	GRAPE SEED EXTRACT w/RESVERATROL & PTEROSTILBENE - 100 mg, 60 veg. caps	36.00	27.00		
	Buy 4 bottles, price each	34.00	25.50		
01604	GREEN COFFEE EXTRACT COFFEEGENIC™ - 200 mg, 90 veg. caps	25.00	18.75		
	Buy 4 bottles, price each	22.00	16.50		
01620	GREEN COFFEE EXTRACT COFFEEGENIC™ - 400 mg, 90 veg. caps	38.00	28.50		
	Buy 4 bottles, price each	34.00	25.50		
00953	GREEN TEA EXTRACT (MEGA) - lightly caffeinated - 100 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	26.50	19.88		
00954	GREEN TEA EXTRACT (MEGA) - decaffeinated - 100 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	26.50	19.88		
H					
01074	5 HTP - 100 mg, 60 caps	\$27.95	\$20.96		
00010	HAIR CONDITIONER - 16 oz	6.00	4.50		
	Buy 4 bottles, price each	4.50	3.38		
01675	HCA - 90 veg. caps	18.00	13.50		
	Buy 4 bottles, price each	15.50	11.63		
01629	HEAROS™ EAR PLUGS - 1 pack - regular size	14.00	10.50		
01635	HEAROS™ EAR PLUGS - 1 pack - small size	14.00	10.50		
01393	HEPATOPRO - 900 mg, 60 softgels	50.00	37.50		
	Buy 4 bottles, price each	46.00	34.50		
01435	HOMOCYSTEINE RESIST - 100 caps	24.00	18.00		
	Buy 4 bottles, price each	21.60	16.20		
01527	HUPERZINE A - 200 mcg, 60 veg caps	40.00	30.00		
	Buy 4 bottles, price each	36.00	27.00		
00661	HYDRODERM® - 1 oz	79.95	59.96		
	Buy 2 bottles, price each	65.33	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	29.50	22.13		
	Buy 4 bottles, price each	26.55	19.91		
01049	INNERPOWER™ - 555 grams powder	42.00	31.50		
00155	INOSINE - 500 mg, 60 caps	22.95	17.21		
	Buy 4 bottles, price each	21.00	15.75		
01674	INOSITOL CAPSULES - 1000 mg, 360 veg. caps	52.00	39.00		
	Buy 4 bottles, price each	48.00	36.00		
00108	INOSITOL POWDER - 100 grams	18.00	13.50		
	Buy 4 bottles, price each	16.88	12.66		

SUB-TOTAL OF COLUMN 9

MARCH 2013

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
01292	INTEGRA-LEAN® IRVINGIA - 150 mg, 60 veg. caps	\$28.00	\$21.00		
	Buy 4 bottles, price each	24.00	18.00		
01002	IODORAL® - 180 tabs	50.00	37.50		
01677	IRON PROTEIN PLUS - 300 mg, 100 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	26.00	19.50		
01492	IRVINGIA W/PHASE 3™ - 120 veg. caps CALORIE CONTROL COMPLEX (OPTIMIZED)	56.00	42.00		
	Buy 4 bottles, price each	48.00	36.00		
J, K					
00056	JARRO-DOPHILUS EPS™ - 60 veg. caps	\$21.95	\$16.46		
01387	JARRO-DOPHILUS ORAL PROBIOTIC GUM - Pom-Berry flavor, 8 pieces	4.95	3.71		
01388	JARRO-DOPHILUS ORAL PROBIOTIC LOZENGE - Pom-Berry flavor, 8 pieces	4.95	3.71		
01724	K w/ADVANCED K2 COMPLEX (SUPER) - 90 softgels	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01600	KRILL HEALTHY JOINT FORMULA - 30 softgels	32.00	24.00		
	Buy 4 bottles, price each	29.00	21.75		
01050	(NKO) KRILL OIL - 60 softgels	33.95	25.46		
00316	KYOLIC® GARLIC FORMULA 102 - 200 caps	23.95	17.96		
	Buy 4 bottles, price each	20.50	15.38		
00214	KYOLIC® GARLIC FORMULA 105 - 200 caps	22.95	17.21		
	Buy 4 bottles, price each	18.25	13.69		
00789	KYOLIC® RESERVE - 600 mg, 120 caps	24.75	18.56		
	Buy 4 bottles, price each	21.45	16.09		
L					
01681	LACTOFERRIN (APOLACTOFERRIN) CAPS - 60 caps	\$48.00	\$36.00		
	Buy 4 bottles, price each	44.00	33.00		
00017	LAVILIN UNDERARM DEODORANT - 12.5 grams cream	16.99	12.74		
	Buy 4 jars, price each	15.75	11.81		
00020	LECITHIN - 16 oz. granules	15.00	11.25		
	Buy 4 jars, price each	12.50	9.38		
01755	LIFE EXTENSION MIX™ - 315 tablets	98.00	73.50		
	Buy 4 bottles, price each	86.00	64.50		
	Buy 10 bottles, price each	69.50	52.13		
01757	LIFE EXTENSION MIX™ W/EXTRA NIACIN - 315 tablets	98.00	73.50		
	Buy 4 bottles, price each	86.00	64.50		
	Buy 10 bottles, price each	69.50	52.13		
01754	LIFE EXTENSION MIX™ - 490 caps	110.00	82.50		
	Buy 4 bottles, price each	98.00	73.50		
	Buy 10 bottles, price each	85.00	63.75		
01756	LIFE EXTENSION MIX™ POWDER - 14.81 oz	98.00	73.50		
	Buy 4 bottles, price each	86.00	64.50		
	Buy 10 bottles, price each	72.00	54.00		
01765	LIFE EXTENSION MIX™ - 315 tablets w/o copper	98.00	73.50		
	Buy 4 bottles, price each	86.00	64.50		
	Buy 10 bottles, price each	69.50	52.13		
01767	LIFE EXTENSION MIX™ W/EXTRA NIACIN 315 tablets w/o copper	98.00	73.50		
	Buy 4 bottles, price each	86.00	64.50		
	Buy 10 bottles, price each	69.50	52.13		
01764	LIFE EXTENSION MIX™ - 490 caps w/o copper	110.00	82.50		
	Buy 4 bottles, price each	98.00	73.50		
	Buy 10 bottles, price each	85.00	63.75		
01766	LIFE EXTENSION MIX™ POWDER - 14.81 oz w/o copper	98.00	73.50		
	Buy 4 bottles, price each	86.00	64.50		
	Buy 10 bottles, price each	72.00	54.00		

SUB-TOTAL OF COLUMN 10

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

To order online visit: www.LifeExtension.com

No.		Retail Each	Member Each	Qty	Total
00263	LIFE FLORA™ - 300 mg, 120 caps Buy 4 bottles, price each	\$20.50 18.75	\$15.38 14.06		
01608	LIVER EFFICIENCY FORMULA - 30 veg. caps Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
01227	LIVER FORCE - 60 veg. caps	34.95	26.21		
01639	5-LOX INHIBITOR W/APRESFLEX™ - 100 mg, 60 veg. caps Buy 4 bottles, price each	22.00 20.00	16.50 15.00		
01678	L-LYSINE - 620 mg, 100 veg. caps Buy 4 bottles, price each	9.00 8.00	6.75 6.00		
00129	L-LYSINE POWDER - 300 grams Buy 4 bottles, price each	16.00 13.75	12.00 10.31		
01470	LURALEAN® CAPS SPECIAL PROPOLMANNAN PARTICLE SIZE - 120 veg. caps Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
00455	LYCOPENE EXTRACT (MEGA) - 15 mg, 90 softgels Buy 4 bottles, price each	35.00 30.00	26.25 22.50		
M					
01369	MAGNESIUM CAPS - 500 mg, 100 veg. caps Buy 4 bottles, price each	\$10.00 9.00	\$7.50 6.75		
01682	MAGNESIUM CITRATE - 160 mg, 100 veg. caps Buy 4 bottles, price each	9.00 7.50	6.75 5.63		
00704	MAITAKE™ SX-FRACTION - 90 veg. tablets	49.95	37.46		
01668	MELATONIN - 300 mcg, 100 veg. caps Buy 4 bottles, price each	5.75 5.00	4.31 3.75		
01083	MELATONIN - 500 mcg, 200 veg. caps Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00329	MELATONIN - 1 mg, 60 caps Buy 4 bottles, price each	5.00 4.63	3.75 3.47		
00330	MELATONIN - 3 mg, 60 caps Buy 4 bottles, price each	8.00 6.88	6.00 5.16		
01086	MELATONIN - 3 mg, 60 time-release caps Buy 4 bottles, price each	10.50 9.38	7.88 7.04		
00331	MELATONIN - 10 mg, 60 caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		
00332	MELATONIN - 3 mg, 60 veg. lozenges Buy 4 bottles, price each	8.00 6.88	6.00 5.16		
01087	MELATONIN TIME RELEASE - 300 mcg, 100 veg. caps Buy 4 bottles, price each	6.25 5.63	4.69 4.22		
01088	MELATONIN TIME RELEASE - 750 mcg, 60 caps Buy 4 bottles, price each	5.75 5.00	4.31 3.75		
01009	MEMORY UPGRADE™ - 600 grams powder	26.95	20.21		
01536	METHYLCOBALAMIN - 1 mg, 60 lozenges (vanilla) Buy 4 bottles, price each	9.95 8.00	7.46 6.00		
01537	METHYLCOBALAMIN - 5 mg, 60 lozenges (vanilla) Buy 4 bottles, price each Buy 10 bottles, price each	32.00 25.00 23.00	24.00 18.75 17.25		
00709	MIGRA-EZE™ (BUTTERBUR) - 60 softgels Buy 4 bottles, price each	29.50 26.33	22.13 19.75		
01522	MILK THISTLE (CERTIFIED EUROPEAN) - 750 mg, 60 veg. caps Buy 4 bottles, price each	34.00 30.00	25.50 22.50		
01517	MILK THISTLE (CERTIFIED EUROPEAN) - 120 veg. caps Buy 4 bottles, price each	52.00 48.00	39.00 36.00		

SUB-TOTAL OF COLUMN 11

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

Buyers Club Order Form

No.		Retail Each	Member Each	Qty	Total
01673	MINERAL FORMULA FOR MEN - 100 veg. caps Buy 4 bottles, price each Buy 12 bottles, price each	\$15.00 12.50 10.83	\$11.25 9.38 8.13		
01539	MINERAL FORMULA FOR WOMEN - 100 veg. caps Buy 4 bottles, price each Buy 12 bottles, price each	15.00 12.50 10.83	11.25 9.38 8.13		
01698	MIRAFORTE w/STANDARDIZED LIGNANS (SUPER) - 120 caps Buy 4 bottles, price each	62.00 56.00	46.50 42.00		
01569	MITOCHONDRIAL BASICS w/BIOPQQ™ - 30 caps Buy 4 bottles, price each	52.00 46.00	39.00 34.50		
01568	MITOCHONDRIAL ENERGY OPTIMIZER w/BIOPQQ™ - 120 caps Buy 4 bottles, price each	94.00 84.00	70.50 63.00		
00803	MIST ORAL III w/COQ10 - 2 fl oz Buy 4 bottles, price each	28.00 25.33	21.00 19.00		
00065	MK-7 - 90 mcg, 60 softgels Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
01279	MOUTHWASH w/POMEGRANATE - 16 oz Buy 4 bottles, price each	18.50 17.00	13.88 12.75		
00451	MSM (METHYLSULFONYLMETHANE) - 1000 mg, 100 caps Buy 4 bottles, price each	14.00 11.95	10.50 8.96		
N					
01534	N-ACETYL-L-CYSTEINE - 600 mg, 60 veg. caps Buy 4 bottles, price each	\$14.00 13.50	\$10.50 10.13		
00066	NATTOKINASE - 60 softgels	25.50	19.13		
00891	NATURAL APPETITE CONTROL - 90 softgels Buy 4 bottles, price each	28.00 25.20	21.00 18.90		
00984	NATURAL BP MANAGEMENT - 60 tablets Buy 4 bottles, price each	42.00 37.80	31.50 28.35		
00913	NATURAL ESOPHAGUARD - 10 softgels Buy 2 boxes, price each	19.95 19.00	14.96 14.25		
01692	NATURAL ESTROGEN w/POMEGRANATE EXTRACT - 60 caplets Buy 4 bottles, price each	38.00 33.00	28.50 24.75		
01221	NATURAL FEMALE SUPPORT - 30 veg. caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		
01471	NATURAL GLUCOSE ABSORPTION CONTROL - 60 veg. caps Buy 4 bottles, price each	39.00 36.00	29.25 27.00		
00698	NATURAL RELIEF 1222™ - 2 oz Buy 4 tubes, price each	28.00 25.00	21.00 18.75		
01626	NATURAL SEX FOR WOMEN® 50+ (ADVANCED) - 90 veg. caps Buy 4 bottles, price each	59.00 45.33	44.25 34.00		
01084	NATURAL SLEEP® - 3 mg, 60 veg. caps Buy 4 bottles, price each	12.99 10.00	9.74 7.50		
01507	NATURAL SLEEP® (ENHANCED) w/ MELATONIN - 30 caps Buy 4 bottles, price each	22.00 20.00	16.50 15.00		
01511	NATURAL SLEEP® (ENHANCED) w/O MELATONIN - 30 caps Buy 4 bottles, price each	20.00 18.00	15.00 13.50		
01085	NATURAL SLEEP MELATONIN® - 5 mg, 60 caps Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00987	NATURAL STRESS RELIEF - 30 veg. caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		
01603	NEURO-MAG™ MAGNESIUM L-THREONATE - 90 veg. caps Buy 4 bottles, price each	40.00 36.00	30.00 27.00		

SUB-TOTAL OF COLUMN 12

MARCH 2013

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					
01602	NEURO-MAG™ L-THREONATE W/CALCIUM & VITAMIN D 205 grams - Lemon flavor	\$40.00	\$30.00		
	Buy 4 bottles, price each	36.00	27.00		
00373	NO-FLUSH NIACIN - 800 mg, 100 caps	19.00	14.25		
	Buy 4 bottles, price each	17.00	12.75		
01035	NUTRIM - 225 grams powder	25.95	19.46		
O					
01623	OLIVE LEAF VASCULAR SUPPORT - 500 mg, 60 veg. caps	\$22.00	\$16.50		
	Buy 4 bottles, price each	20.00	15.00		
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		
01485	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) - 60 enteric coated softgels	18.00	13.50		
	Buy 4 bottles, price each	16.50	12.38		
	Buy 10 bottles, price each	15.00	11.25		
01619	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) (SMALL SOFTGEL)	32.00	24.00		
	Buy 4 bottles, price each	28.00	21.00		
	Buy 10 bottles, price each	24.90	18.68		
01632	OMEGA-3 LEMON WHIRL - 16 oz bottle	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
01633	OMEGA-3 TROPICAL WHIRL - 16 oz bottle	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
01701	ONE-PER-DAY - 60 tablets	22.00	16.50		
	Buy 4 bottles, price each	20.00	15.00		
01328	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		
P					
00107	PABA CAPS - 500 mg, 100 caps	\$15.42	\$11.57		
	Buy 4 bottles, price each	13.59	10.19		
00073	PANCREATIN - 500 mg, 50 caps	13.22	9.92		
	Buy 4 bottles, price each	12.12	9.09		
01323	PEAK ATP® WITH GLYCOCARN® - 60 veg. caps	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		
01676	PHOSPHATIDYL SERINE CAPS - 100 mg, 100 veg. caps	54.00	40.50		
	Buy 4 bottles, price each	48.00	36.00		
01390	PHOSPHOMEGA® - 60 softgels	39.95	26.96		

SUB-TOTAL OF COLUMN 13

MARCH 2013

No.		Retail Each	Member Each	Qty	Total
00561	POLICOSANOL - 10 mg, 60 tablets	\$24.00	\$18.00		
	Buy 6 bottles, price each	18.00	13.50		
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/BIOPQQ™ - 10 mg, 30 veg. caps	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
01647	PQQ CAPS W/BIOPQQ™ - 20 mg, 30 veg. caps	40.00	30.00		
	Buy 4 bottles, price each	36.00	27.00		
00302	PREGNENOLONE - 50 mg, 100 caps	26.00	19.50		
	Buy 4 bottles, price each	22.00	16.50		
00700	PREGNENOLONE - 100 mg, 100 caps	28.00	21.00		
	Buy 4 bottles, price each	24.00	18.00		
***01373	PRELOX® NATURAL SEX FOR MEN® - 60 tablets	52.00	39.00		
	Buy 4 bottles, price each	48.00	36.00		
00571	PRIMAL DEFENSE™ - 90 caplets	49.95	37.46		
	Buy 4 bottles, price each	48.50	36.38		
01329	PROBIOTIC ALL-FLORA® - 60 veg. caps	25.95	19.46		
01326	PROBIOTIC ANTI-AGING™ - 90 veg. caps	30.95	23.21		
01322	PROBIOTIC COLON™ - 90 veg. caps	30.95	23.21		
00525	PROBOOST THYMIC PROTEIN A™ - 4 mcg, 30 packets	59.95	44.96		
01441	PROGESTACARE FOR WOMEN - 4 oz cream	34.95	26.21		
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		
01695	PROSTATE FORMULA W/APRESFLEX™ 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		
01642	PROTEIN - VANILLA - (Enhanced Life Extension) -1 lb. powder	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01643	PROTEIN - CHOCOLATE - (Enhanced Life Extension) -1 lb. powder	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01644	PROTEIN - NATURAL - (Enhanced Life Extension) -1 lb. powder	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01645	PROTEIN - BERRY - (Enhanced Life Extension) -1 lb. powder	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01508	PTEROPURE™ - 50 mg Pterostilbene 60 veg. caps	32.00	24.00		
	Buy 4 bottles, price each	30.00	22.50		
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/ISOFLAVONES (WATER-SOLUBLE) - 60 veg. caps	22.00	16.50		
	Buy 4 bottles, price each	20.00	15.00		
01637	PYCNOGENOL® FRENCH MARITIME PINE BARK EXTRACT -100 mg, 60 veg. caps	64.00	48.00		
	Buy 4 bottles, price each	60.00	45.00		
01217	PYRIDOXAL 5'-PHOSPHATE - 100 mg, 60 veg. caps	22.00	16.50		
	Buy 4 bottles, price each	19.80	14.85		

SUB-TOTAL OF COLUMN 14

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

To order online visit: www.LifeExtension.com

No.		Retail Each	Member Each	Qty	Total
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	17.50	13.13		
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		
01708	REISHI EXTRACT MUSHROOM COMPLEX - 60 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01448	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		
01621	REJUVENEX® FACTOR FIRMING SERUM - 1.7 oz	65.00	48.75		
	Buy 2 bottles, price each	50.66	38.00		
	Buy 6 bottles, price each	38.52	28.89		
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		
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		
01609	RICH REWARDS™ BREAKFAST GROUND COFFEE - 12 oz. bag	13.00	9.75		
01610	RICH REWARDS™ DECAFFEINATED ROAST GROUND COFFEE - 12 oz. bag	14.00	10.50		
01530	RICH REWARDS™ CRUCIFEROUS VEGETABLE SOUP - 32 oz. bottle	11.95	8.96		
	Buy 6 bottles, price each	11.25	8.44		
01531	RICH REWARDS™ (SPICY) CRUCIFEROUS VEGETABLE SOUP - 32 oz. bottle	11.95	8.96		
	Buy 6 bottles, price each	11.25	8.44		
01705	RICH REWARDS™ LENTIL VEGETABLE SOUP - 32 oz. bottle	13.00	9.75		
	Buy 6 bottles, price each	12.25	9.19		
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		

SUB-TOTAL OF COLUMN 15

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

Buyers Club Order Form

No.		Retail Each	Member Each	Qty	Total
S					
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	17.79	14.23		
00358	SAME (S-ADENOSYL-METHIONINE) - 200 mg, 20 enteric coated tablets	16.00	12.00		
	Buy 8 boxes, price each	14.00	10.50		
00453	SAME (S-ADENOSYL-METHIONINE) - 200 mg, 50 enteric coated tablets	36.00	27.00		
	Buy 4 bottles, price each	32.00	24.00		
00557	SAME (S-ADENOSYL-METHIONINE) - 400 mg, 20 enteric coated tablets	28.00	21.00		
	Buy 6 boxes, price each	24.00	18.00		
01055	SAME (S-ADENOSYL-METHIONINE) - 400 mg, 50 enteric coated tablets	66.00	49.50		
	Buy 4 bottles, price each	60.00	45.00		
01543	SEA-IODINE™ - 1000 mcg, 60 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		
01679	SE-METHYL L-SELENOCYSTEINE - 200 mcg, 100 veg. 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		
01684	SILYMARIN - 100 mg, 50 veg. caps	9.25	6.94		
	Buy 4 bottles, price each	8.25	6.19		
01596	SKIN RESTORING PHYTCERAMIDES w/LIPOWHEAT™ - 30 veg. 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		
01099	STABILUM® 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		
01396	ST. JOHN'S WORT EXTRACT - 300 mg, 60 veg. 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		
00747	SUNGLASSES (OVERCAST POLARIZED) - gray color, large	27.00	20.25		
	Buy 2 pairs, price each	21.00	15.75		
00748	SUNGLASSES (OVERCAST POLARIZED) - gray color, medium	27.00	20.25		
	Buy 2 pairs, price each	21.00	15.75		
01649	SUPER ABSORBABLE SOY ISOFLAVONES - 60 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
01381	SUPERCritical OMEGA 7™ - 60 softgels caps	56.95	42.71		

SUB-TOTAL OF COLUMN 16

MARCH 2013

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					
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		
01407	SUPER SAW PALMETTO W/BETA-SITOSTEROL - 30 softgels	15.00	11.25		
	Buy 12 bottles, price each	12.00	9.00		
01778	SUPER SELENIUM COMPLEX - 200 mcg, 100 veg. caps	14.00	10.50		
	Buy 4 bottles, price each	12.00	9.00		
	Buy 12 bottles, price each	11.00	8.25		
00674	SYTRINOL™ - 60 softgels	32.00	24.00		
	Buy 4 bottles, price each	28.00	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	8.95	6.71		
	Buy 4 bottles, price each	8.00	6.00		
00133	TAURINE POWDER - 300 grams	20.00	15.00		
	Buy 4 bottles, price each	16.88	12.66		
01304	THEAFLAVIN STANDARDIZED EXTRACT - 30 veg. caps	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
01683	(L) THEANINE - 100 mg, 60 veg. caps	24.00	18.00		
	Buy 4 bottles, price each	20.50	15.38		
01038	THERALAC PROBIOTICS - 30 caps	47.95	35.96		
00224	THYMIC IMMUNE FACTORS - 100 caps	18.00	13.50		
	Buy 4 bottles, price each	14.00	10.50		
00668	THYROID FORMULA™ (METABOLIC ADVANTAGE) - 100 caps	21.95	16.46		
00349	TMG POWDER - 50 grams	14.00	10.50		
	Buy 4 bottles, price each	11.00	8.25		
00359	TMG - 500 mg, 180 tablets	18.00	13.50		
	Buy 4 bottles, price each	15.50	11.63		
00781	TOCOTRIENOLS WITH SESAME LIGNANS - 60 softgels	38.00	28.50		
	Buy 4 bottles, price each	36.00	27.00		
01400	TOCOTRIENOLS (SUPER-ABSORBABLE) - 60 softgels	30.00	22.50		
	Buy 4 bottles, price each	28.00	21.00		
01278	TOOTHPASTE - 4 oz (Mint)	9.50	7.13		
	Buy 4 tubes, price each	8.67	6.50		
01274	TOTAL SUN PROTECTION CREAM W/BETA GLUCAN - 4 oz	28.00	21.00		
	Buy 4 tubes, price each	25.20	18.90		
01468	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT - 60 veg. caps	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
01469	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT W/RESVERATROL - 60 veg. caps	32.00	24.00		
	Buy 4 bottles, price each	29.60	22.20		
01386	TRUFIBER® - 180 grams	32.95	24.71		
01389	TRUFLOA PROBIOTICS & ENZYMES - 32 veg. caps	42.95	32.21		
01716	TWO-PER-DAY - 60 tablets	10.50	7.88		
	Buy 4 bottles, price each	9.50	7.13		
01715	TWO-PER-DAY - 120 tablets	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		
01714	TWO-PER-DAY - 120 caps	22.00	16.50		
	Buy 4 bottles, price each	20.00	15.00		
00326	L-TYROSINE - 500 mg, 100 tablets	12.98	9.74		
	Buy 4 bottles, price each	11.81	8.86		

SUB-TOTAL OF COLUMN 17

MARCH 2013

No.		Retail Each	Member Each	Qty	Total
U					
* 00310	UDO'S OIL 3-6-9 BLEND - 17 fl oz	\$27.79	\$22.23		
* 00311	UDO'S 3-6-9 OIL BLEND - 180 caps	34.79	27.83		
V					
00213	VANADYL SULFATE - 7.5 mg, 100 tablets	\$15.00	\$11.25		
	Buy 4 bottles, price each	12.50	9.38		
00408	VENOTONE - 60 caps	18.95	14.21		
	Buy 4 bottles, price each	16.00	12.00		
01327	VINPOCETINE - 10 mg, 100 tablets	18.00	13.50		
	Buy 4 bottles, price each	14.00	10.50		
01033	VISION OPTIMIZER - 90 caps	29.95	22.46		
01219	VITAMIN A NUTRISORB - 0.6 fl oz	27.00	20.25		
00091	VITAMIN B1 CAPS - 500 mg, 100 caps	18.73	14.05		
	Buy 4 bottles, price each	17.00	12.75		
00093	VITAMIN B2 CAPS - 100 mg, 100 caps	14.32	10.74		
	Buy 4 bottles, price each	13.00	9.75		
01526	VITAMIN B3 NIACIN - 1,000 mg, 100 veg. caps	12.75	9.56		
	Buy 4 bottles, price each	12.00	9.00		
00372	VITAMIN B3 NIACIN - 500 mg, 100 caps	7.65	5.74		
	Buy 4 bottles, price each	6.65	4.99		
00098	VITAMIN B5 - 500 mg, 100 caps (Pantothenic Acid)	10.50	7.88		
	Buy 4 bottles, price each	9.38	7.04		
00556	VITAMIN B6 - 250 mg, 100 caps	12.50	9.38		
	Buy 4 bottles, price each	11.00	8.25		
00361	VITAMIN B12 - 500 mcg, 100 lozenges	8.75	6.56		
	Buy 4 bottles, price each	7.25	5.44		
01634	VITAMIN C w/ DIHYDROQUERCETIN - 1000 mg, 60 tablets	10.00	7.50		
	Buy 4 bottles, price each	9.00	6.75		
00927	VITAMIN C w/ DIHYDROQUERCETIN - 1000 mg, 250 tablets	25.50	19.13		
	Buy 4 bottles, price each	23.25	17.44		
00084	VITAMIN C (BUFFERED) POWDER - 454.6 grams	23.95	17.96		
	Buy 4 bottles, price each	22.00	16.50		
00864	VITAMIN D3 - 2000 IU, 1 fl oz	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
01751	VITAMIN D3 - 1000 IU, 250 softgels	12.50	9.38		
	Buy 4 bottles, price each	11.25	8.44		
01713	VITAMIN D3 - 5000 IU, 60 softgels	11.00	8.25		
	Buy 4 bottles, price each	9.90	7.43		
01718	VITAMIN D3 - 7000 IU, 60 softgels	14.00	10.50		
	Buy 4 bottles, price each	12.60	9.45		
01573	VITAMIN D3 w/SEA-IODINE™ - 5000 IU, 60 caps	14.00	10.50		
	Buy 4 bottles, price each	12.50	9.38		
01572	VITAMINS D AND K w/SEA-IODINE™ - 60 caps	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
01663	VITAMIN E (PURE NATURAL) - 400 IU, 100 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	28.00	21.00		
	Buy 10 bottles, price each	26.00	19.50		
01225	VITAMIN K2 (LOW-DOSE) - 45 mcg, 90 softgels	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		

SUB-TOTAL OF COLUMN 18

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

To order online visit: www.LifeExtension.com

No.		Retail Each	Member Each	Qty	Total
Z					
01686	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		
01685	ZEAXANTHIN w/LUTEIN & MESO-ZEAXANTHIN AND C3G (SUPER) - 60 softgels	22.00	16.50		
	Buy 4 bottles, price each	19.80	14.85		
00061	ZINC LOZENGES - 75 lozenges	9.50	7.13		
	Buy 4 bottles, price each	6.75	5.06		
01051	ZYFLAMEND® WHOLE BODY - 120 softgels	60.95	45.71		
01029	ZYFLAMEND® TINY CAPS® - 180 softgels	31.95	23.96		

SUB-TOTAL OF COLUMN 19

* These products are not 25% off retail price.

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

***Due to license restrictions, this product is not for sale to customers outside of the USA.

*Member pricing not valid on this item.

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

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

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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.

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A Partnership in Heart Health

New Chapter Zyflamend & Life Extension Super Omega-3

A Holistic Approach to Cardiovascular Health

Maintaining heart health and a strong cardiovascular system are vital to a healthy body. Diet and exercise are the most important factors. Scientists and doctors both agree that a program of preventive health today is preferable to a treatment program tomorrow. But unfortunately, most Americans don't eat enough heart-healthy foods or get enough exercise. We now know that there are several additional factors that can support cardiovascular health, including:

- Supporting the body's healthy inflammation response*
- Consuming "good fats" such as Omega-3 fatty acids

What is the Inflammation Response?

Our body's inflammation response is a natural healing process. We often think of the inflammation response as something we can feel—such as in our joints and muscles where there are large numbers of sensitive nerve endings. But we can also have a response we can't feel, where sensitive nerves aren't concentrated—including in the heart and blood vessels. Whether we're aware of it or not, this inflammation response can affect every organ and cell.

Extensively Researched Herbal Blend

New Chapter's Zyflamend represents a scientific breakthrough in supporting a healthy inflammation response.* Zyflamend is formulated based on a large body of scientific research showing its ten herbs and spices contain hundreds of plant compounds that support a healthy inflammation response.* Just as important as a daily multivitamin, Zyflamend is the patented herbal protocol to help your whole body's natural inflammation process stay balanced and healthy every day.* Zyflamend has been studied at leading research institutions and shown to benefit multiple areas of health, including heart health.*



Super Omega-3
120 Softgels Item #01482
Retail Price: ~~\$32.00~~
Member Price: **\$24.00**

Zyflamend
120 Softgels Item #01051
Retail Price: ~~\$60.95~~
Member Price: **\$45.71**

Omega-3 is Important for Cardiovascular Health

Life Extension's Super Omega-3 is a premium, scientifically validated fish oil concentrate. Super Omega-3 EPA/DHA with Sesame Lignans and Olive Fruit Extract promotes a healthy heart.* 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.¹ 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.^{2**}

1. *Biochem Biophys Acta*. 2004 Jun 1;1682(1-3):80-91.
2. *Nutrition*. 2005 Feb;21(2):131-6.

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* According to 2012 SPINS® Market Research

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

To order Zyflamend or Super Omega-3, call
1-800-544-4440 or visit www.LifeExtension.com

 **NEWCHAPTER®**

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RAISING THE STANDARD.

Theralac® and **TruFlora®** pack powerful help for digestive health.

Powerful Pair.

Theralac®

- + Bio-Replenishing® Action
- + Colonizes the intestinal lining in the large and small intestines
- + Five clinically proven probiotic strains
- + High Bifido bacteria count to help with colon health



TruFlora®

- + Bio-Cleansing Action
- + Colonizes the contents of the G.I. Tract
- + Three probiotic strains and two enzymes
- + Contains enzymes that help digest problematic yeast cell walls



Both Theralac® and TruFlora® offer powerful probiotic action for total digestive balance. Because they differ, they can be used alternatively for maximum digestive biodiversity. Both are covered by four U.S. Patents that ensure delivery through the harsh stomach acid and active prebiotic stimulation of the probiotics with Lactostim®, found only in Master Supplements products.

Call your *Life Extension®* advisor to learn more.

Call Life Extension to place your order today.

1-800-544-4440



Bio-Replenishing Probiotic



Bio-Cleansing Probiotic



Soluble Fiber with Enzymes

Theralac®
30 capsules
Item# 01038
Retail: \$47.95

TruFlora®
32 capsules
Item# 01389
Retail: \$42.95

TruFiber®
6.2 OZ
Item# 01386
Retail: \$32.95

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INCORPORATED

SUPPORT FOR THE IMMUNE SYSTEM

Reishi mushroom has been traditionally used to boost immune system vitality. Its broad-spectrum benefits have been demonstrated in thousands of studies.¹

An advanced extraction technology has resulted in a new **Reishi extract** that make its active compounds even more bio-available.

REISHI SUPPORTS A HEALTHY IMMUNE SYSTEM

An abundance of evidence demonstrates that **Reishi** constituents enhance the protective activity of the body's **hematopoietic stem cells, T-cells**, and other crucial immune factors.²⁻⁹

Reishi's immune-supporting compounds include an array of unique **polysaccharides, triterpenes**, and other constituents,^{10,11} many of which assist activation of the cell surface receptors that modulate normal immunity.¹²

The **Reishi** mushroom also supports the body's production of endogenous antioxidant enzymes—such as **superoxide dismutase (SOD), catalase**, and **glutathione**—which, in turn, support the body's natural immune defenses against free radical damage!^{13,14}

ADVANCED EXTRACTION TECHNOLOGY

Reishi Extract Mushroom Complex delivers powerful compounds and represents the **next generation** of natural immune support. Reishi extracts standardized to polysaccharides have been available for years, but most do not standardize for triterpenes and include the spores. This full-spectrum extract has multiple components that have shown to support healthy immune function and enhanced longevity in a natural experimental aging model.¹⁵



Item# 01708

The suggested 2 capsules a day of
Reishi Extract Mushroom Complex provide:

Reishi mushroom (<i>Ganoderma lucidium</i>) extract (Fruit body)	980 mg
[standardized to 13.5% polysaccharides (132.3mg) and 6% triterpenes (58.8mg)]	
Shell-broken Reishi mushroom (<i>Ganoderma lucidium</i>) spore	150 mg

A bottle containing 60 vegetarian capsules of **Reishi Extract Mushroom Complex** retails for \$30. If a member buys four bottles, the price reduced to **\$20.25**.

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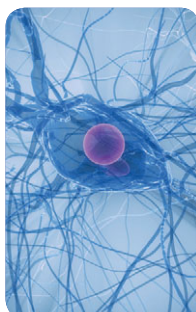
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