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December 2011

Bureaucratic Assault on Life Saving Cancer Treatments

**Case Histories of
Calorie Restrictors**

**Hidden Long-Term
Effects of Cancer
Radiation Therapy**

**Role of Alcoholic
Beverages in
Cancer Initiation**

***SUZANNE
SOMERS***

***Uses Novel Stem Cell
Therapy During
Breast Rejuvenation***



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HISTORIC BRAND PRICE:

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LOW-COST GENERIC EQUIVALENT:

Losartan 50 mg • 30 tablets \$15.83

REPORTS



24 CONSUMERS DO CRAVE HEALTHY FOODS!

A year ago *Life Extension*® posed the question, “Do consumers really want healthy foods?” The answer was a resounding **Yes!** Even though these **cruciferous vegetable** recipes cost more than **glucose-spiking** commercial soups, initial sales were **six times** greater than projected. Here we offer the rationale behind our painstaking efforts to make recently *improved* versions of **Cruciferous Vegetable** and **Asian Cruciferous Vegetable** soups.



58 THE LINK BETWEEN ALCOHOL AND CANCER INITIATION

A 2011 European study found that alcohol intake accounted for one in ten cancer cases for men and one in thirty for women, even in moderate amounts. The reason? Alcohol is metabolized by the body into a DNA-mutating compound called **acetaldehyde**. Fortunately, a number of nutrients have been shown to *neutralize* acetaldehyde, ideally taken before you drink or before going to sleep if excessive alcohol is consumed.



70 CALORIE RESTRICTION SUCCESS STORIES

From a top New York executive to a surgeon in Birmingham, England, members of **LivingTheCRWay** are proving that **calorie restriction** can result in remarkable and rapid improvements in overall health. Using CR regimens suited to *their* specific needs and temperaments, one woman lost **100 lbs** in 18 months, while an aging man completely reversed his **osteoarthritis**.



82 OUTRAGEOUS FDA DELAY ENDANGERS MELANOMA VICTIMS

Melanoma is almost completely curable if caught in time, yet **30%** of malignant lesions go undetected due to human error. With a **98%** accuracy rate, you would think a breakthrough, non-invasive diagnostic device called **MelaFind**® would gain swift FDA approval. In this exposé, we reveal why this technology languished in limbo for years—and how stifling agency bias and negligence are sending similar innovations overseas.

38 EXCLUSIVE INTERVIEW: SUZANNE SOMERS USES STEM CELL THERAPY TO RESTORE BREAST TISSUE

For most breast cancer survivors, the only options available to reverse disfigurements are implants or painful, often unsuccessful reconstructive procedures. **Suzanne Somers** has led the way in finding an alternative to these approaches. In this exclusive interview, Suzanne reveals to **William Faloon** the intimate, challenging, ultimately successful experiences that helped her reclaim her health, femininity, and well-being using a **non-FDA-approved** stem cell procedure pioneered in Japan!

44 EXCLUSIVE INTERVIEW: THE SURGEON WHO IMPLANTED ADIPOSE-DERIVED STEM CELLS INTO SUZANNE SOMERS' BREAST

Joel Aronowitz, MD, is the surgeon who performed the groundbreaking **Cell-Assisted Lipotransfer** procedure on **Suzanne Somers**. In this exclusive interview, Dr. Aronowitz discusses the scientific intricacies of this procedure with Life Extension research scientist **Greg Fahy, PhD**.

50 HIDDEN LONG-TERM EFFECTS OF INTENSE RADIATION

The long-term side effects of cancer radiation therapy are revealed, along with documented methods to mitigate them.

DEPARTMENTS

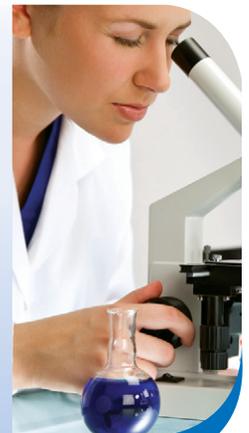


7 BUREAUCRATIC ASSAULT ON NEW CANCER THERAPIES

One American dies every hour from **melanoma**. Non-Hodgkin **lymphoma** claimed over **20,000** US lives in 2010. Yet FDA barriers are delaying approval of innovative approaches that could have saved these fellow human beings. While technological advances are routine in virtually all disciplines, clinical medicine is the exception. It has devolved into a bureaucratic monstrosity that suffocates innovation while rewarding the politically well connected. How much longer will Americans tolerate a system that is a proven failure?

17 IN THE NEWS

B12 status affects brain function and volume; curcumin reduces head and neck tumor growth; magnesium protects against diabetes; and more.



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Bone Restore combines critical **bone boosting** nutrients into one superior formula.

Bone Restore includes highly *absorbable* forms of **calcium**, a *bioavailable* form of **boron**, along with **vitamin D3**, **magnesium**, **zinc**, **manganese**, and **silicon**.

Bone Restore now contains **magnesium citrate**, which is one of the most absorbable forms of magnesium.

The retail price for 150 capsules of **Bone Restore** is \$22.50. If a member buys four bottles, the price is reduced to just **\$14.63** per bottle.



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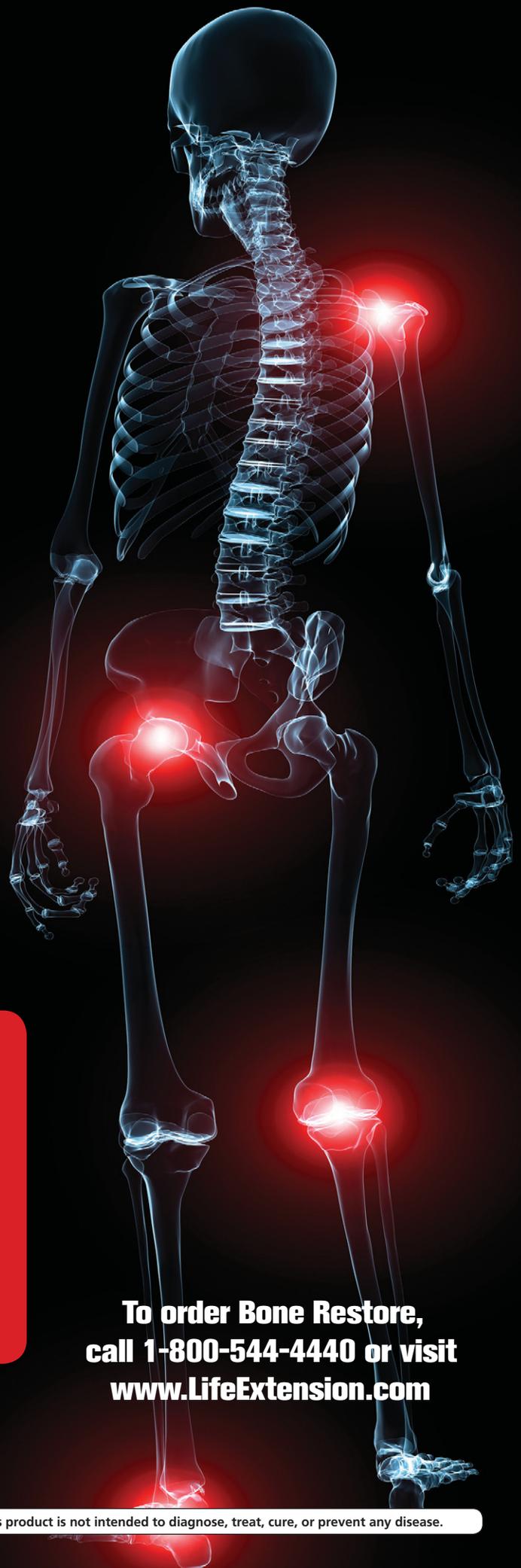
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Vitamin D3	1,000 IU
Magnesium (as magnesium citrate)	100 mg
Boron (calcium fructoborate as patented Fruitex B® OsteoBoron®)	3 mg
Zinc	2 mg
Manganese	1 mg
Silicon	5 mg



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

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

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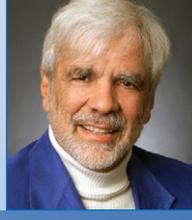
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Introducing

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**[®] introduces **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 successful human clinical trials.

References

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9. *J Nutr Biochem.* 2010 May;21(5):381-9.

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).



Item # 01600

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

Bureaucratic Assault On New Cancer Therapies



BY WILLIAM FALOON



One American dies *every* hour from melanoma.¹ Incidences of this deadly skin cancer are on the *increase*.

Although no cure exists for advanced melanoma, virtually 100% of its victims can be saved if the malignancy is caught early.²

The problem is that dermatologists cannot accurately diagnose a melanoma based on a visual examination alone. A biopsy is needed to definitely ascertain if a skin lesion is a melanoma.

Biopsies require expenditure of money and time, along with some minor trauma. Patients and dermatologists have to make decisions as to whether a particular skin lesion warrants a biopsy.

In a clinical trial involving 23 dermatologists around the US, a hand-held non-invasive scanning device called **MelaFind**[®] was tested on suspicious lesions. Its accuracy in detecting melanoma was **98%**—which equaled or bested the top doctors in avoiding unnecessary biopsies.³

MelaFind[®] was submitted for FDA approval in **June 2009**. Despite clinical trial results documenting its unprecedented (98%) ability to detect early stage melanoma, the FDA refused to approve it and insisted on further review.^{4,5}

AS WE SEE IT

FDA's Lethal Illogic

According to bureaucratic illogic, the FDA was concerned that non-dermatologists might use **MelaFind**[®] to screen for melanoma, even though the company promised to only sell it to dermatologists. Since the FDA cannot regulate doctors, the agency felt that the best way of keeping **MelaFind**[®] out of the hands of non-dermatologists was to not approve it at all.

The FDA expressed other concerns such as its misuse by dermatologists. This is rather bizarre since dermatologists are the most highly trained in our society to diagnose and treat skin diseases, yet the FDA did not want them to use this new device that was **98%** accurate in diagnosing melanoma.^{6,7}

The Real World of Medical Practice

FDA bureaucrats live in a cave when it comes to the intricacies and expenses involved in the real-world medical setting.

Hurried people too often ignore suspicious skin lesions until it's too late.

Patients often go to their primary care doctor when it comes to suspicious skin lesions. More enlightened individuals visit a dermatologist.

Either way, medical efficiency comes into play when deciding whether a suspicious lesion should be biopsied or merely kept an eye on. A dermatologist charges for each biopsy, and there is a separate expense for the pathology lab. Return visits are often needed. All this adds up to medical costs that **MelaFind**[®] could otherwise render far more efficient.

MelaFind[®] is not 100% accurate. That means it may miss a

few (2%) suspicious lesions that a dermatologist would then have to decide warranted a biopsy nonetheless. The FDA is using this as another reason not to approve it. Using this logic, MRI and ultrasound testing would never have been approved because these are not 100% reliable diagnostic tools either.

If ever approved, **MelaFind**[®] will provide doctors with an efficient method to detect early stage melanoma. According to some dermatologists, it has the potential to "save many lives."⁸

There were **68,130** new cases of melanoma in 2010 and **8,700** deaths.⁹ These numbers show that melanoma can be easily cured—if caught in the early stages before it infiltrates and metastasizes.

We at *Life Extension*[®] envision a day when devices like **MelaFind**[®] will be used in large screening campaigns where early stage melanomas can be easily detected and removed. None of this will happen as long as the FDA is allowed to erect bureaucratic barriers that suppress this kind of medical innovation.

FDA Approves Expensive Melanoma Drug

Cynical individuals might question the timing of the FDA's denial of **MelaFind**[®], a device that could spare thousands of agonizing deaths from metastatic melanoma.

Just a few weeks after saying no to **MelaFind**[®], the FDA approved a new drug by pharmaceutical giant Bristol-Meyers Squibb to treat advanced melanoma trademarked **Yervoy**[™].¹⁰

In a study involving 676 patients with advanced melanoma, those receiving **Yervoy**[™] survived for **10 months** compared to **6.4 months** for those who did not receive it. Fourteen patients died from side effects caused by **Yervoy**[™].¹¹ The FDA hailed this as a breakthrough and granted approval for widely spread melanoma.

Shares of Bristol-Meyers Squibb surged as analysts predicted a **\$1.7 billion** blockbuster.¹² The reason so much money will be made is that it will cost each patient an astounding **\$120,000** for the four-course treatment.⁴ For what used to be the price of a nice home, one





with terminal melanoma can buy an extra **108 days** of life. The average cost per day of added life will be over **\$1,000**—further exacerbating today’s health care cost crisis!

The generic name for **Yervoy™** is *ipilimumab*. If you ever wonder why you cannot pronounce the names of new compounds (like *ipilimumab*), it is because pharmaceutical companies intentionally create names that no one can readily comprehend. Pharmaceutical companies do this to make it harder for future generic drug makers to enter the market with lower-cost versions, since virtually no one can pronounce the generic name.

The reason that **Yervoy™** (*ipilimumab*) is expected to sell so well is that current FDA-approved therapies have not been shown to substantially extend survival, but the FDA allowed them to be used for decades anyway.

We are not against the FDA’s approval of Yervoy™ as it may prove to work better when treating less advanced melanoma. What bothers us are the bureaucratic barriers. They are so cumbersome that few new therapies ever get approved. This enables companies to charge extortionist prices for the few that receive the FDA’s coveted anointment.

FDA Fails to Approve Effective Lymphoma Drug

Each year about **65,000** Americans are diagnosed with **non-Hodgkin lymphoma**.¹³ It is estimated to have killed over **20,000** in the US in 2010.¹⁴ **Jackie Kennedy Onassis** died from non-Hodgkin lymphoma at the age of 64.¹⁵

Non-Hodgkin lymphoma is one of the few cancers where establishment medicine can brag about treatment breakthroughs. Over the

past 50 years, survival rates have more than doubled.¹⁶ Often overlooked are long-term side effects like cumulative heart muscle damage that precludes long-term use of certain conventional treatments.¹⁷

Lymphoma patients who fail treatment with FDA-approved chemotherapy have a life expectancy measured in weeks or months.

A next-generation compound called **pixantrone** is designed to be less toxic and more effective than current anthracycline chemo drugs. It has successfully gone through phase I and phase II human clinical trials.

In **2004**, a randomized phase III trial mandated by the FDA was initiated. Pixantrone was administered to non-Hodgkin lymphoma patients who had already failed conventional therapy. The control group received whatever their oncologist thought would work best for them.

In these extremely difficult-to-treat lymphoma patients, **20%** of those receiving **pixantrone** showed a complete response, compared to only **6%** receiving conventional care.¹⁸ A follow-up analysis of the data showed **24%** of patients attaining complete response status as opposed to **7%** in the standard group.¹⁹ These are unprecedented findings!

A complete response is not a cure, but it can buy a patient precious time in remission and the opportunity to identify potential curative therapies.

Despite almost four years of phase III clinical studies showing that **pixantrone** works **three times better** than what’s available today, the FDA declined to approve it. In an FDA briefing as to why pixantrone was not approved, the FDA stated:

“The study was not stopped at a planned interim analysis and early study stopping invalidated the applicant’s Special Protocol Assessment.”²⁰

The “Special Protocol Assessment” is an agreement between the FDA and a drug maker regarding how a clinical study should be done.²¹ It originally envisioned enrolling 320 patients over a 36-month time period. For various reasons, it took 45 months to recruit 140 patients.²² This is not unusual as some 60% of phase III studies do not meet patient recruitment objectives, but nonetheless generate statistically significant data that are used to approve a new drug.

Pixantrone Not Owned by Big Pharma

Unlike Bristol-Meyers Squibb, which had the wherewithal to fund a huge clinical study and whose stock soared in response to the FDA’s approval of Yervoy™,²³ the maker of pixantrone’s auditors handed management a notice that the company (Cell Therapeutics) may not be able

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to continue as a going concern in response to the FDA's refusal to approve their drug.^{24,25}

Cell Therapeutics' initial challenge in enrolling enough study subjects was convincing oncologists and hematologists that pixantrone might work. Patient incentive to participate was minimized because the FDA mandated that only 50% of the study subjects would receive the promising drug (pixantrone).

Despite these limitations, Cell Therapeutics believes it generated statistically significant data and has taken the unusual step of appealing the FDA's denial of pixantrone. The reason appeals are seldom filed is fear of FDA retaliation on future drug applications. In the case of Cell Therapeutics, which is not part of Big Pharma, it may have little to risk in asking for a common-sense review of the impressive data it generated in terminally ill lymphoma patients.

The inability of Cell Therapeutics to adhere to the FDA's impossible-to-achieve dictates is an example of a federal agency that went out of its way to railroad a promising cancer therapy.

The Real Issue...

The way this country tolerates FDA behavior, it is as if only large pharmaceutical companies are capable of discovering effective new drugs. Those without deep pockets are often shut out of today's Byzantine approval process, where it can cost over \$100 million to have a new compound "approved" for sale.

Most troubling is what this is doing to medical innovation across the entire spectrum. We at *Life Extension* know of pioneering physicians who have discovered and are utilizing novel therapeu-

tic protocols to treat the diseases of aging. Yet these inventions have virtually no chance of making it out of these private practices because of FDA overregulation.

To see how much more efficient an unregulated environment functions, look no further than the breakthroughs that have been made in the treatment of **AIDS**. This disease appeared in America around **1980**. It took several years just to identify the **HIV virus** as the cause. In the first half of the 1980s, virtually everyone who contracted AIDS died within 1-2 years.

How Life Extension is Helping to Accelerate Melanoma Treatment

Scientists supported by the Life Extension Foundation® long ago discovered a novel method of treating advanced melanoma (stages 3 and 4).

In an FDA-approved clinical trial, a topical cream (called *imiquimod*) is applied to the exposed tumor twice a day for a total of six weeks. At weeks two and four, the doctors expose the area to an infrared laser. The topical **imiquimod** cream binds with receptors on cancer cells and stimulates them to activate proteins that "broadcast" the presence of the tumor cells to the immune system. In essence, the patient's own tumor cells become a unique anti-tumor vaccine.

The laser portion of the treatment is designed to hyper-activate the imiquimod with the objective of inducing a systemic immune response against metastatic melanoma cells. Imiquimod is an FDA-approved drug and this is an FDA-approved clinical trial. To inquire about participating, call Meghan Dubina, MD, at (312) 695-6786 or email m-dubina@northwestern.edu. (This study is referenced by the ClinicalTrials.gov identifier: NCT00758797. Study details can be found on the FDA-approved clinical trials website: www.clinicaltrials.gov.)

You may not qualify to participate in this clinical study or may not want to be bothered with the bureaucratic red tape. Fortunately, this same protocol is being done in the Bahamas for melanoma, and a modified version is being studied to treat breast cancer. In order for this treatment to be administered, a tumor lesion must be present near the surface of your skin, such as a breast lump, a chest wall breast lesion, or a superficial melanoma tumor. To inquire about clinical programs being offered in the Bahamas, call the International Strategic Cancer Alliance (ISCA) at **610-628-3419** or visit www.is-canceralliance.com

The difference was that AIDS activists were acutely aware that FDA-mandated randomized clinical trials were the roadblock to the discovery of effective therapies. Unlike cancer support groups who too often capitulate to FDA suppression, AIDS activists rebelled and forced the FDA to back down from restricting *any* therapy that might be effective.

Removed from the artificial constraints of controlled trials designed by uncaring and incompetent bureaucrats, front-line doctors and researchers were able to

collect data from actual medical practice on AIDS patients and had the flexibility of trying whatever therapy might work. **Life Extension**[®] partnered with these groups early on and witnessed the miraculous results that occurred when doctors could prescribe therapies without regard to FDA dictates.

When **Life Extension** attempted to introduce this same strategy to dying cancer patients, the FDA stood in the way and said absolutely not!

Look at the Difference between AIDS and Cancer

Those afflicted with AIDS today are prescribed an armamentarium of medications and take huge quantities of dietary supplements to keep their infections under control. What used to be a near-certain death sentence has turned into a manageable chronic disease for most people. That happened more than a decade ago!

Contrast this with cancer, where a melanoma drug that gives patients an extra **108 days** of life (that costs **\$120,000**¹⁰) is hailed as a breakthrough in **2011**. Americans have been dying of melanoma for hundreds of years.

The FDA's approval of expensive and mediocre drugs like **Yervoy**[™] and suppression of common-sense approaches (like MelaFind[®] and pixantrone) are stark examples of the FDA's bureaucratic assault on novel cancer therapies.

At the June 2011 conference of the American Society of Clinical Oncology (ASCO), the results from several human studies were announced about new compounds that prolong the lives of advanced melanoma patients.²⁶ Despite an unusual amount of enthusiasm shown by oncology researchers,



Low CoQ10 Levels Associated with 790% Increased Risk of Melanoma Metastasis

In a study published in the *Journal of the American Academy of Dermatology*, plasma **coenzyme Q10** levels were measured in 117 consecutive **melanoma** patients upon enrollment. One hundred twenty five matched volunteers without any clinically suspected pigmented lesions were utilized as the control group.

Researchers found that CoQ10 levels were significantly lower in melanoma patients compared to control subjects. Further, it was noted that for melanoma patients with CoQ10 blood levels of less than **0.6 mg per liter**, the risk of developing metastatic disease increased by **790%**, compared to those melanoma patients with blood levels of **0.6 mg per liter** or higher. In addition, melanoma patients with higher blood levels had a metastasis-free interval that was almost double compared to patients with lower levels.²⁹

Of the 82 patients with low CoQ10 levels, **17** died during the study, compared to none of the 35 patients with higher CoQ10. CoQ10 levels did not vary by sex.²⁹

Levels of CoQ10 correlated well with tumor thickness, which is currently the best indicator of melanoma progression. Specifically, lower CoQ10 levels correlated with increased tumor thickness and poorer prognosis.²⁹

The study notes that abnormally low plasma levels of CoQ10 previously have been known in patients with cancer of the breast, lung, and pancreas. This study may be the first to indicate that lower blood levels of CoQ10 can have an extremely adverse effect. The lead author of the study concluded that analysis of their findings suggested baseline CoQ10 levels are a powerful and independent prognostic factor that can be used to estimate risk for melanoma progression.

Statin drugs are known to lower CoQ10 levels. Will we find that melanoma progression is another side effect of statins? If so, this side effect can be readily overcome with CoQ10 supplements.

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it may take years before the FDA will allow combinations of these compounds to be used in desperately ill melanoma patients... who are **dying** at the rate of one each hour.

One of the new targeted melanoma drugs featured at the June ASCO meeting is called *vemurafenib* and is being developed by Roche Holding AG and Daiichi Sankyo's Plexxikon unit.²⁷ It inhibits a mutated form of a gene called BRAF found in more than half of patients with advanced melanoma.²⁷ It has virtually no benefit on patients with a normal version of the gene.

Results from a 675-patient trial showed that those taking vemurafenib were **63% less likely** to die over a six-month period compared to those taking chemotherapy called dacarbazine.²⁸ The median time before the disease progressed for patients on vemurafenib was 5.3 months compared with 1.6 months on dacarbazine chemotherapy.

Based on this trial, we believe that melanoma patients with a mutated BRAF gene should have been allowed immediate access to vemurafenib if they were willing to sign a disclaimer acknowledging that it is not yet FDA-approved. Instead, thousands of melanoma patients are dying prematurely in the FDA's waiting room.

My Grandmother's Funeral

At age 13, I stood over the casket of my grandmother, who had died a horrific death from melanoma. She was only 54 and suffered terribly as metastatic lesions invaded every part of her body.

Her death was preventable, as she ignored a melanoma lesion on her leg for many years.

At that funeral in **1968**, no one would have predicted that more Americans than ever would be dying of melanoma in **2011**—43 years later! Like others back then, our family believed that medicine

would advance and find a cure for cancer, just like antibiotics wiped out most bacterial infections.

While major technological advances are routine in virtually all disciplines, clinical medicine is the exception. It has devolved into a bureaucratic monstrosity that suffocates innovation while rewarding the politically well-connected.

How much longer will Americans tolerate a system that is a proven failure?

As a member of the **Life Extension Foundation**[®], you help support our ongoing campaign to educate the public that most deaths today could be avoided if it were not for the bureaucratic assault on novel therapies erected by our own government.

For longer life,



William Faloon

AS THIS ARTICLE WAS BEING FINALIZED...

FDA **PARTIALLY** CAPITULATES ON MELAFIND[®]

In response to intense legal and political pressure put on the FDA, a limited conditional approval has just been granted for the **MelaFind**[®] skin cancer detection device.³⁰

This pending approval comes after a **seven-year battle** between the company that makes MelaFind[®] and the FDA.

After FDA rejected MelaFind[®] last year, the company filed a **citizen's petition** with FDA Commissioner Margaret Hamburg seeking to overturn the denial.

The **House of Representatives** held a hearing in the summer of 2011 where the FDA's top device regulator acknowledged the agency *mishandled* the MelaFind[®] application. The error occurred when the FDA denied approval of MelaFind[®] before it held a meeting of its own scientific advisors—talk about bureaucratic mix-up!

This does not mean that MelaFind[®] will definitely become available, but the FDA is at least moving off its refusal to approve it at all. MelaFind[®] did win approval in early September in **27** European nations.

In order for MelaFind[®] to be approved in the US, the FDA needs to agree on the device's final labeling, a user guide, details of a training program for doctors, and the design of a post-approval clinical trial.

The CEO of the company that makes MelaFind[®] was uncertain about when the FDA would approve MelaFind[®] and was careful to downplay if and when the company can begin selling the device. He acknowledged that discussions with the FDA were still going "back and forth" and therefore not complete.

Before MelaFind[®] can be sold in the US, the FDA wants additional "beta tests"

with doctors to be conducted to make technical and usability improvements to the device. The FDA insists that MelaFind[®]'s label be longer and more complicated than the company ever envisioned.

Until these issues are resolved, MelaFind[®] will not be allowed on the American market.

There are examples of other products in the past that received this kind of conditional FDA approval but never made it to the market, though it seems the political heat has forced the FDA in a direction regarding **MelaFind**[®] that it previously refused to consider.

If you ever wonder why medical advances take so long and then cost so much, the expense and delay in pushing MelaFind[®] through the FDA's cumbersome bureaucracy provides a stark example.

Sick-care costs are *bankrupting* the United States. **Fight Back Against Incompetent Bureaucrats!**

In a just-released report, the average annual cost of **medical insurance** for a family exceeded the **\$15,000** mark for the first time.* This represents a **9% increase** over the previous year—an unsustainable escalation that exceeds inflation.

American citizens and businesses have to allocate more of their scarce resources to pay health insurance premiums. At the same time, higher co-pays and deductibles force consumers to use their own money for what insurance used to pay.

A typical family cannot afford basic health care, neither can many employers, and certainly not debt-laden state and federal governments.

Health Care Cost Crisis is a Hoax

There is no real health care cost crisis. It is instead the consequence of **incompetent** and **corrupt** government policies that cause medical costs to be artificially overpriced.

Congress can amend the law to allow **free-market forces** to drive down sick-care costs, better enable prevention of disease, and facilitate rapid discovery of improved therapies.

Pharmocracy provides factual documentation to reform the broken health care system that plagues the United States. It is more than 300 pages long because there are at least that many underlying reasons why medicine costs far more than it should.

Implementing **free-market** approaches described in **Pharmocracy** can spare **Medicare** and **Medicaid** from insolvency while significantly improving the health and productivity of the American public.

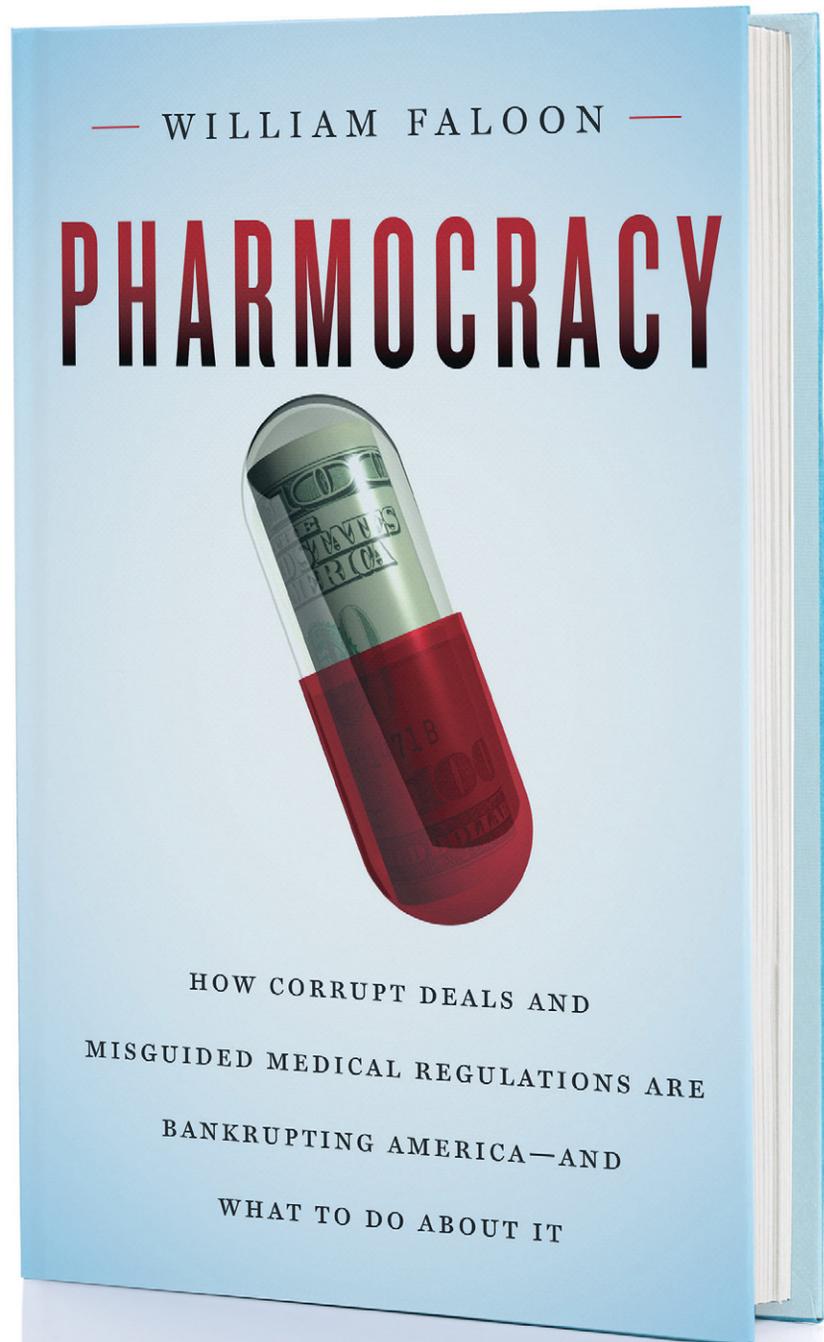
How Citizens Can Combat Inflated Health Care Costs

The cover price for **Pharmocracy** is \$24. To get this hardcover book into the hands of as many policy-makers as possible, **Life Extension®** is making it available at the incredible low price of just **\$8** a copy when four or more copies are ordered.

Health freedom advocates are encouraged to send this eye-opening book to their representative, two senators, and give it away as **gifts** to enlighten those they know about the **health care farce** that is rendering this nation insolvent.

Reference

* Annual poll of employers performed by the Kaiser Family Foundation and the Health Research and Education Trust.



Cover price: \$24
Single copy member price: \$9.60

To order four or more copies of **Pharmocracy** for only **\$8** each, call **1-800-544-4440** or visit **www.lef.org/pharm** today.

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Most people don't get enough oil-based nutrients like **vitamin K**, **lycopene**, and **gamma tocopherol**. This problem is solved with a one-per-day softgel called Life Extension® **Super Booster**. It provides high potencies of **fat-soluble** compounds lacking in dry powder formulas, along with other nutrients.

Just one **SUPER BOOSTER** provides:

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

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



Item # 01590

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

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

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

JUST ONE SOFTGEL OF SUPER BOOSTER SUPPLIES:

Vitamin K2 (as menaquinone-7)	100 mcg	Ginkgo extract	120 mg	Selenium (as Se-Methyl L-Selenocysteine)	67 mcg
Vitamin K2 (as menaquinone-4)	1000 mcg	Chlorophyllin	100 mg	Selenium (as L-Selenomethionine)	67 mcg
Vitamin K1 (as phytonadione)	1000 mcg	Sesame lignans	20 mg	Selenium (as Sodium selenite)	67 mcg
Mixed tocopherols	359 mg	Lycopene	10 mg	Vitamin B12	300 mcg
(providing Gamma Tocopherol 230 mg)		Lutein	2 mg	Vitamin C	95 mg
				Zinc	10 mg

A bottle of 60 **Super Booster** softgels retails for \$42. If a member buys four bottles, the price is reduced to just **\$28.50** per bottle.

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

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FULL-SPECTRUM POMEGRANATE™ FORMULA

Few nutritional sources have gained as much scientific validation as **pomegranate**.¹

The vast majority of research has focused on extracts from the *fruit*. Only recently have scientists identified the synergistic action of compounds specific to other parts of the pomegranate—most notably its **seeds** and **flowers**.

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Life Extension® offers an advanced, cutting-edge pomegranate formula that brings together novel phytonutrients for the first time in a unique, high-potency blend.

Full-Spectrum Pomegranate™ combines standardized extracts from the **whole fruit and flower**, along with pomegranate **seed oil**, to support system-wide health. In addition to the highly absorbable antioxidant powerhouses found in pomegranate fruit,²⁻⁴ **Full-Spectrum Pomegranate™** augments these polyphenols with newly discovered biologically *active* compounds from other parts of the pomegranate plant.

These little-known nutrients include: **punicanolic acid**, a member of the **triterpene** family of essential oils that provides cellular support to help with inflammation,⁵ and **pomegranatate**, to combat age-related metabolic changes.⁶

This superior formula supplies the **complete** nutritional profile of the pomegranate plant. Just one softgel of **Full-Spectrum Pomegranate™** provides polyphenols equivalent to 12.3 ounces of pomegranate juice (or 24 pomegranates) *plus* a proprietary blend of **seed oil** and **flower extract**.

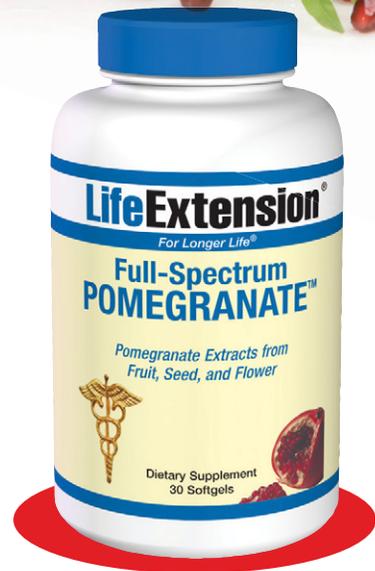
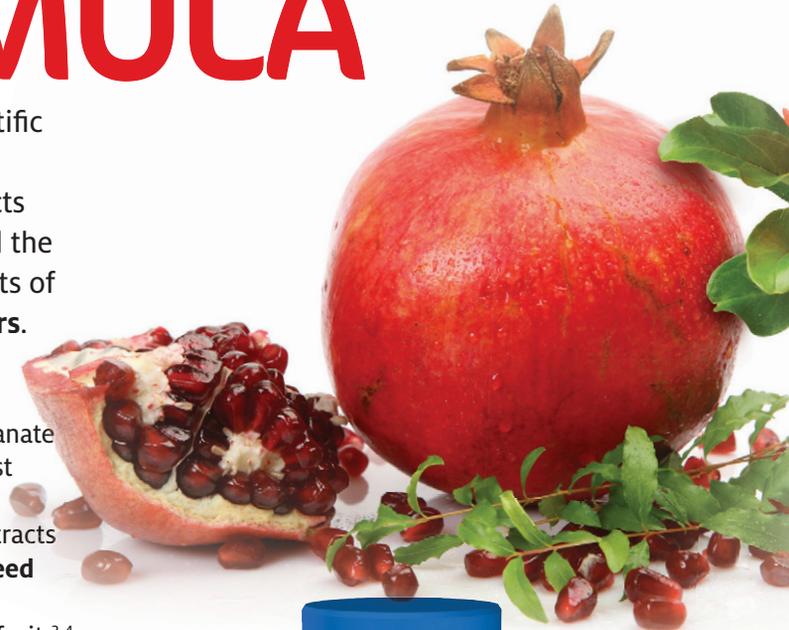
One softgel of **Full-Spectrum Pomegranate™** contains:

POMELLA® Pomegranate	400 mg
(Punica granatum) Extract (fruit) [std. to 30% punicalagins (120 mg)]	
PomComplete™ Pomegranate	137.5 mg
(Punica granatum) Blend [flower extract and seed oil (standardized to 22% (30 mg) punicic acid)]	

Full-Spectrum Pomegranate™

A bottle containing 30 softgels of **Full-Spectrum Pomegranate™** retails for \$24. If a member buys four bottles, the price is reduced to just **\$15.75** per bottle. **Item # 01423**

Contains soybeans.



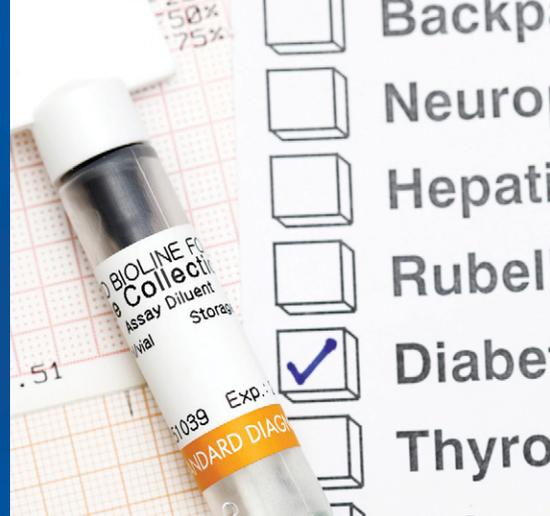
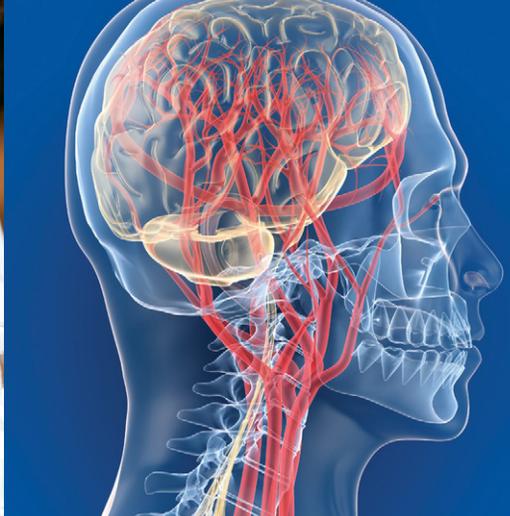
To order **Full-Spectrum Pomegranate™**,
call **1-800-544-4440**
or visit **www.LifeExtension.com**

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6. *Fitoterapia.* 2006 Dec;77(7-8):534-7.

POMELLA® extract is covered under U.S. Patent 7,638,640 and POMELLA® is a registered trademark of Verdure Science, Inc. Socell SA, France is the owner of U.S. Patents Nos. 6,045,808 and 6,426,881 and trademark of GliSodin®.

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

Meta-Analysis Affirms Protective Effect for Magnesium Against Diabetes

The results of a meta-analysis published in the journal *Diabetes Care* found a significantly reduced risk of type 2 diabetes among men and women whose intake of magnesium was high compared to those with a lower intake.*

Researchers at Soochow University in China and the University of North Carolina reviewed 13 prospective studies that included a total of 536,318 participants. Study follow-up periods ranged from four to twenty years, during which 24,516 cases of diabetes were diagnosed.

A 22% lower risk of diabetes was found for those whose intake was highest compared to those whose consumption of the mineral was lowest. Each 100 milligram-per-day increase in magnesium was associated with a 14% lower risk of developing the disease. Further analysis revealed a more pronounced effect for the mineral among those whose body mass index was more than 25 kg/m².

Editor's Note: "It is plausible that high magnesium intake may have greater effects on improving insulin sensitivity in overweight individuals who are prone to insulin resistance," Jia-Yi Dong and colleagues remark.

- D. Dye

* *Diabetes Care*. 2011 Sep; 34:2116-22.

Higher Lignan Levels Improve Breast Cancer Survival

In an article in the *Journal of Clinical Oncology*, German researchers report that high serum levels of enterolactone, a biomarker of lignan intake, are associated with a significantly greater chance of surviving postmenopausal breast cancer in comparison with having low levels.* Lignans are phytoestrogen compounds found in flax, Norway spruce (*Picea abies*) and other plants. These compounds are converted in the colon to enterolactone, which is then absorbed into the bloodstream.

Serum enterolactone levels were measured in blood samples obtained from 1,140 postmenopausal women with breast cancer. Incidences of metastasis or patient death were documented over a 6.1 year median follow-up period.

One hundred sixty-two deaths occurred over follow-up. Women whose enterolactone levels were among the top 25% of participants had a 42% lower risk of dying over follow-up compared to those whose levels were among the lowest fourth. Subjects whose lignan intake was highest experienced a similarly reduced risk of undergoing metastasis.

Editor's Note: Further analysis determined a protective effect for enterolactone on estrogen receptor-negative tumors as opposed to those which were receptor-positive.

- D. Dye

* *J Clin Oncol*. 2011 Sep 6.



Chondroitin Sulfate Improves Hand Arthritis in Clinical Trial

In an article published in the journal *Arthritis & Rheumatism*, Swiss researchers report the results of a trial that uncovered a benefit for supplementation with chondroitin sulfate in men and women with osteoarthritis of the hand.*

The Finger osteoArthritis Chondroitin Treatment Study enrolled 162 patients with osteoarthritis verified by X-ray, visual, and functional evaluation. Cem Gabay, MD, and his associates divided the participants to receive 800 milligrams chondroitin sulfate or a placebo daily for six months. At the end of the treatment period, subjects who received chondroitin sulfate had less hand pain, improved hand function, and less morning stiffness compared to the placebo group.

"Our findings show chondroitin sulfate is a safe and effective treatment for patients with hand osteoarthritis," Dr. Gabay concluded. "Alternative therapies, such as nonsteroidal anti-inflammatory drugs, provide similar pain reducing effects, but with considerably more long-term toxicities."

Editor's Note: Chondroitin sulfate is a component of joint cartilage and is available as a prescription drug in Europe. The compound is available as an over-the-counter supplement in the United States.

- D. Dye

* *Arthritis Rheum.* 2011 Sep 6.

Review Finds Effectiveness for Non-Drug Therapies in Hypertension

A review published in the *Journal of Clinical Hypertension* concludes that lifestyle interventions such as the Dietary Approaches to Stop Hypertension (DASH) diet, as well as nutritional supplements including coenzyme Q10 and potassium, are viable alternatives to drugs prescribed to help lower blood pressure.*

Kevin J. Woolf, MD, and John D. Bisognano, MD, PhD, discuss the value of the low-sodium DASH diet, which provides greater amounts of fruit and vegetables and less fat than the average Western diet. Limiting smoking and alcohol consumption may also help reduce high blood pressure.

Possible antihypertensive dietary supplements mentioned in the review included potassium, calcium, vitamin D, folate, CoQ10, soy protein, flavonoids, fish oil, and garlic. Herbal supplements discussed included forskolin, mistletoe, and hawthorn. The authors also described devices such as the Rheos device, the Symplicity® catheter, the RESPeRATE device, and the Zona Plus dynamometer, which could be used by some patients in lieu of drug treatments.

Editor's Note: Dr. Woolf observed that, "Coenzyme Q10 has a pretty profound effect on blood pressure," an observation that reflects the findings of a recent meta-analysis.

Second editor's note: Life Extension® reiterates its longstanding recommendation for most people to target 24-hour blood pressure readings around 115/75 mmHg. If lifestyle changes and supplements fail to achieve optimal blood pressure readings of approximately 115/75, then anti-hypertensive medications such as losartan or Benicar® are strongly suggested.

- D. Dye

* *J Clin Hyperten.* 2011 Aug 25.

Curcumin Shows Promise in Reducing Head and Neck Tumor Growth

The journal *Clinical Cancer Research* published the outcome of a study conducted by researchers at UCLA that demonstrated a potential for curcumin, a compound that occurs in the spice turmeric, to suppress a pathway involved in head and neck cancer growth.*

Marilene Wang and her associates tested the effects of curcumin in a study involving 21 patients with head and neck cancers. Prior to and immediately after chewing tablets that provided 1,000 milligrams curcumin, the subjects provided saliva samples that were analyzed for proinflammatory cytokines that fuel cancer growth. Samples obtained one hour later were evaluated for the activity of IKKB kinase, an enzyme involved in inflammation that activates nuclear factor-kappaB (NF-kB), which increases cancer growth.

Dr. Wang and colleagues found a reduction in salivary proinflammatory cytokines as well as inhibition of the cell signaling pathway involving IKKB kinase following administration of curcumin.

Editor's Note: Dr. Wang noted that the amount of curcumin necessary to elicit a response is much greater than that which would be found in food that has been flavored with turmeric.

- D. Dye

* *Clin Cancer Res.* 2011 Sep 15;17(18):5953-61.





Doubling Vitamin D Level Could Add Two Years to Life Expectancy

In the *European Journal of Clinical Nutrition*, W. B. Grant of the Sunlight, Nutrition and Health Research Center in San Francisco concludes that doubling one's serum level of vitamin D might increase life expectancy by an average of two years.*

Dr. Grant utilized epidemiologic studies, randomized controlled clinical trials and meta-analyses for his review. He calculated that increasing serum vitamin D from 22 to 44 ng/mL (or 54 to 110 nanomoles per liter) would lower the mortality rates of diseases that are sensitive to vitamin D by approximately 20%. When deaths from all causes over a given period were considered, doubling vitamin D would result in 7.6% fewer deaths for African females and 17.3% fewer deaths among European females, with males having reductions that averaged 0.6% less than these amounts. The total increase in life expectancy associated with doubling the population's vitamin D level averaged two years.

Editor's Note: Dr. Grant listed several ways to raise serum vitamin D, including food fortification, supplementation, and increased ultraviolet B exposure. Life Extension has recommended that members keep their serum vitamin D (measured as 25-hydroxyvitamin D) levels above 50 ng/mL, which may confer a greater longevity-boosting effect.

- D. Dye

* *Eur J Clin Nutr.* 2011 Sep;65(9):1016-26.

Current Vitamin D Recommendations Inadequate for African-Americans and Others

The results of a study reported at the American Association of Cancer Research's Fourth Annual Health Disparities Conference reveal a need for vitamin D among African-Americans that is far greater than the current recommendation of 600 international units per day.*

Adam Murphy, MD, of Northwestern University Feinberg School of Medicine, along with Rick Kittles, MD, of the University of Illinois, analyzed serum 25-hydroxyvitamin D levels of 492 men aged 40 to 79 who resided in the Chicago area. Skin melanin levels, sun exposure and vitamin D intake were determined, and body mass index was calculated.

Sixty-three percent of African-American men were found to be deficient in vitamin D, with levels of less than 20 nanograms per milliliter, in contrast with 18% of the Caucasian participants. In addition to African heritage, having a high body mass index and failing to supplement with the vitamin were associated with deficiency.

Editor's Note: Dr. Murphy recommended that men increase their level of vitamin D supplementation if they live in the northern third of the United States "From Northern California all the way to Virginia."

- D. Dye

* American Association of Cancer Research's Fourth Annual Health Disparities Conference, September 18-21, 2011, Washington, D.C.

Poor Vitamin B12 Status Impacts Brain Volume and Function

A recent issue of *Neurology* reveals an association between unfavorable serum markers of vitamin B12 status and reduced brain volume and cognitive function.*

The current investigation by Dr. Tangney was limited to 121 participants in the Chicago Health and Aging Project who had magnetic resonance imaging (MRI) scans of their brains performed several years after undergoing tests of cognitive function. The tests included measures of episodic memory, visuospatial ability or perceptual organization, perceptual speed, semantic memory, and working memory. Stored serum samples were analyzed for vitamin B12 and the vitamin B12 markers methylmalonic acid (MMA), 2-methylcitric acid, homocysteine, and cystathionine (generated from homocysteine).

While serum vitamin B12 itself was not associated with cognitive function or measures of brain volume, other indicators of vitamin B12 insufficiency were associated with poor global cognitive test scores and a decrease in brain volume revealed by MRI findings, compared to those with better B12 status.

Editor's Note: "Findings from a British trial with B vitamin supplementation are also supportive of these outcomes," Dr. Tangney remarked.

- D. Dye

* *Neurol.* 2009 Jan 27;72(4):361-7.



Americans Lacking in Effort to Cut Hypertension, Cholesterol

A new report by the Centers for Disease Control states that about two-thirds of adults in the United States who have high cholesterol levels and almost half who have high blood pressure are not being treated as effectively as they should be.*

Bill Hendricks of *WebMD Health News* summarizes the report by stating that more than 80% of people whose blood pressure or LDL “bad” cholesterol is not under control have either private or public health insurance, indicating that a lack in vigilance and effort may contribute to countless unnecessary deaths.

Heart attacks, strokes, and related vascular diseases kill more than 800,000 Americans annually, more than any other condition. Of those, 150,000 are younger than age 65.

CDC Director Thomas R. Frieden, MD, MPH, says that tens of thousands of lives could be saved with simple, low-cost treatments to reduce blood pressure and cholesterol levels.

“Although we’re making some progress, the United States is failing to prevent the leading cause of death—cardiovascular disease—despite the existence of low cost, highly effective treatments,” Frieden says in a news release. “We need to do a better job of improving care and supporting patients to prevent avoidable illness, disability, and death.”

- J. Finkel

* Available at: <http://www.webmd.com/cholesterol-management/news/20110201/cholesterol>. Accessed September 27, 2011.

Shark Molecule May Wipe Out Human Liver Viruses

A recent article featured on *LiveScience.com* covers research done by Michael Zasloff, of the Georgetown University Medical Center, that may prove that certain shark molecules can aid in wiping out certain serious liver diseases like hepatitis.*

Zasloff discovered the molecule, squalamine, in 1993 in the dogfish shark, a small- to medium-size shark found in the Atlantic, Pacific, and Indian Oceans. Staff writer Jennifer Welsh interviewed Zasloff for the piece, and he stated that, “Sharks are remarkably resistant to viruses.” He further explained that the compound the researchers discovered is a potent antibacterial and has shown efficacy in treating human cancers and an eye condition known as macular degeneration, which causes blindness. Past research has also uncovered that certain sharks also contain a number of other squalamine-like molecules that may have significant health benefits for humans.

“I believe that each of those compounds renders those tissues resistant and the day will come when we will be in a position to administer a compound to a human being and render certain organs selectively resistant against particular viruses,” Zasloff explained.

Editor’s Note: Life Extension® has been discussing the anti-bacterial and potential anti-cancer effects of shark liver oil for more than a decade. Life Extension members have used Norwegian shark liver oil for members who want to attain these benefits.

- J. Finkel

* Available at: <http://www.livescience.com/16126-shark-molecule-kills-viruses.html>. Accessed September 27, 2011.



GREEN TEA EXTRACT

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

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

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

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

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

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

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

Contains rice.



Item # 00953

Item # 00954

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

These supplements 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. These products are not intended to diagnose, treat, cure, or prevent any disease.

Take a Bite Out of your Appetite

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**.

References

1. *Food in Medieval Times*. Greenwood Publishing; 2004.
2. *Saffron (Crocus sativus) Production and Processing*. Science Publishers; 2006.
3. *Hum Reprod*. 1997 Jun;12(6):1142-51.
4. *BMC Complement Altern Med*. 2004 Sep 2;4:12.
5. *J Ethnopharmacol*. 2005 Feb 28;97(2):281-4.
6. *Prog Neuropsychopharmacol Biol Psychiatry*. 2007 Mar 30;31(2):439-42.



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

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.

Are You Getting Curcumin's Benefits?

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 organic, 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 study³ indicated powerful support for heart health using a comparable extract.

Unrivaled 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 **7 times higher concentration** in the blood than standard curcumin.⁴

Absorption studies further demonstrate that just **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 4 bottles, the price is reduced to only **\$26.25** per bottle.

References

1. *Int J Pharmacol.* 2009;5(6):333-45.
2. *J Food Nutr Res.* 2009;48(3):148-52.
3. *Arch Gerontol Geriatr.* 2002;34:37-46.
4. *Indian J Pharm Sci.* 2008 Jul-Aug;70(4):445-9.

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

Contains rice.

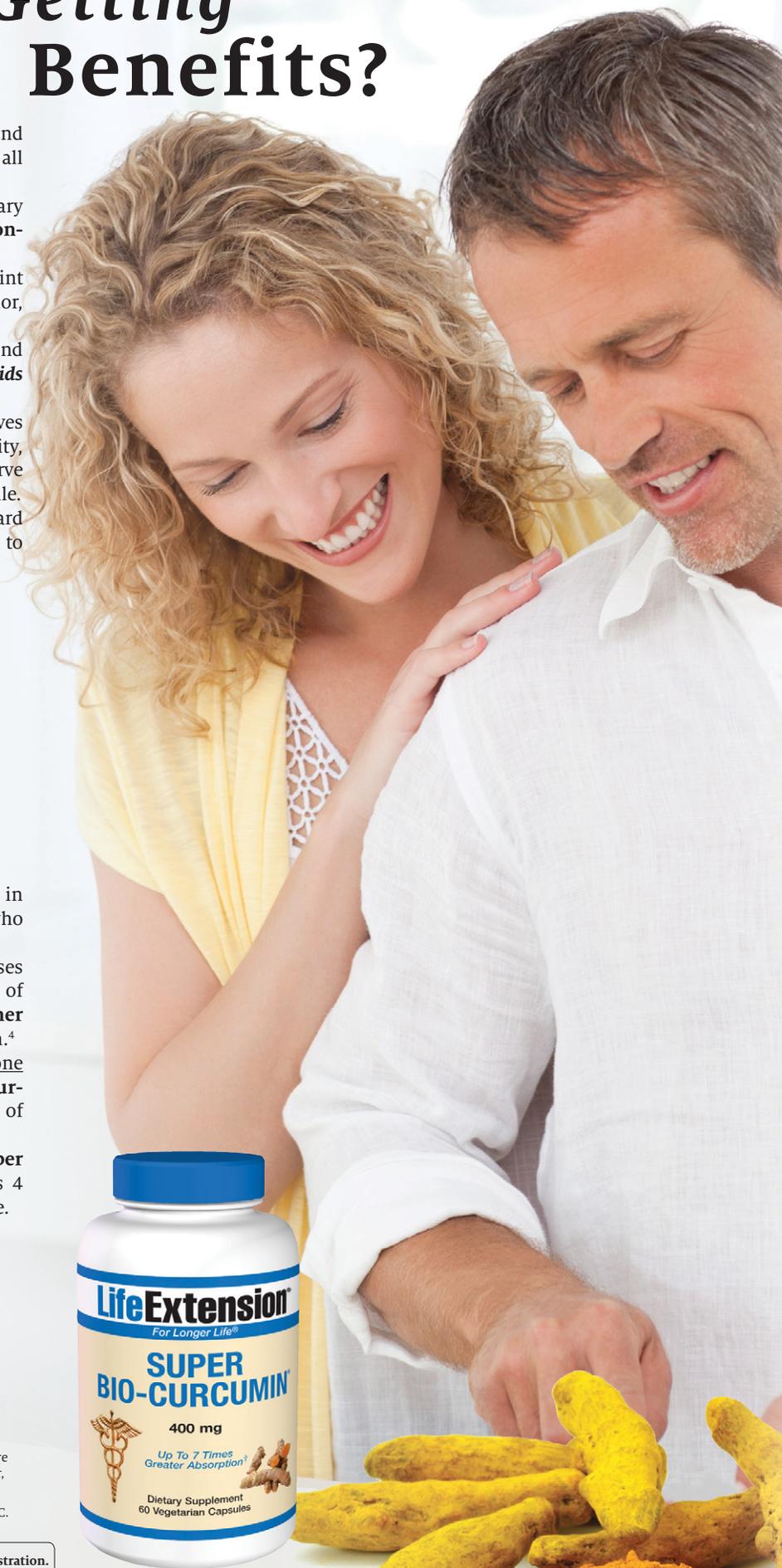
CAUTION: Do not take if you have gallbladder problems or gallstones. If you are taking anti-coagulant or anti-platelet medications, or have a bleeding disorder, consult your healthcare provider before taking this product.

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.

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 # 00407





Consumers Do Crave Healthy Foods!

BY WILLIAM FALOON

Last year at this time, I wrote an editorial titled “***Do Consumers Really Want Healthy Foods?***”

I asked this question because we were working on **vegetable soup** recipes that contained only healthy ingredients, but cost more than commercial soups.

For instance, the price of the **cruciferous vegetables** and **extra virgin olive oil** contained in our soups was higher than **pasta, potatoes, rice, corn**, and other **glucose-spiking** ingredients used in commercial soups.

In response to our introduction of these “***only healthy ingredient***” soups, **Life Extension®** members answered my question with a resounding YES! We sold **six times more** of these **cruciferous vegetable soups** than anticipated.

The first problem was we could not come close to keeping up with consumer demand. The second issue was the manufacturer we contracted with had never made bulk soups that contained vegetables like broccoli, cauliflower, Brussels sprouts, and asparagus.

Production problems delayed delivery for months. The third setback was that we could not find a reliable company to make the contaminant-free pouches to conveniently package these healthy soups.

When we finally delivered the soups, there was strong re-order demand, with **75%** of customers who tried our **Cruciferous Vegetable Soup** stating they liked the taste and wanted to make it part of their regular diet.

Rather than hurriedly trying to make more of these soups—and not knowing if there would be further production issues—we sought out a larger manufacturer and spent months improving them.

The result of our pursuit is **new** versions of the **Cruciferous Vegetable** and **Asian Cruciferous Vegetable Soup** with improved consistency and taste.

This article describes our rationale for painstakingly developing these soups that contain ingredients that are associated with maintaining a healthy lifestyle.>>



Consumers are frustrated that it is nearly impossible to buy prepared foods at grocery stores that contain only ingredients that have been shown to protect against common degenerative disorders.

The front side of labels promotes many foods as being healthy, but a quick look at the ingredient panel reveals the opposite.

Scientists long ago documented that eating certain vegetables is associated with reduced risks of serious health issues. Commercial soups, however, contain virtually no cauliflower,¹ broccoli,²⁻⁶ asparagus,⁷ Brussels sprouts,⁸⁻¹⁰ or other vegetables that provide these benefits.

In fact, most vegetable soups are loaded with starches (potatoes, rice, or pasta) that spike **blood sugar levels**. We know most adults already suffer from high *after-meal* glucose surges that contribute to many health problems. The **glycemic index** of *cruciferous* vegetables, on the other hand, is extremely low.¹¹

Life Extension thus embarked on a mission to prepare soups that contain plant ingredients shown to promote health. The objective is to provide a broad-spectrum of cruciferous and other low-calorie vegetables with no starches, preservatives or added sugars. The results are two soup recipes that provide the healthy vegetables that nutrition experts recommend Americans consume more of.

Extra Virgin Olive Oil

The multiple benefits of the *monounsaturated* fats and other constituents of olive oil are well documented in published scientific studies.¹²⁻¹⁴

Findings reveal that consumption of **virgin olive oils** results in reductions in markers of serious health conditions.¹⁵⁻⁴⁷

The favorable effects on human health from virgin olive oils are so persuasive that Life Extension long

ago added a *standardized olive fruit concentrate* to the popular **Super Omega-3** fish oil supplement. We reasoned that any member seeking the benefits of highly concentrated **fish oil** would not want to miss out on the additive protective effects available from the **olive fruit**.

We start our recipe for the two vegetable soups with **extra virgin olive oil** to provide both taste fullness and health benefits.

Cruciferous Vegetables

A huge volume of scientific data documents how *cruciferous vegetables* protect against a wide range of age-related disorders.⁴⁸⁻⁵⁹ Since the early **1980s**, *Life Extension*[®] has published the results from findings showing that those who eat cruciferous and certain other vegetables can help prevent serious health issues.⁶⁰⁻⁷⁷

The problem is that most Americans don't consume broccoli, cauliflower, asparagus, Brussels sprouts, and cabbage on a regular basis to obtain these health benefits.

You would think that at least one commercial food company would recognize that when consumers are choosing a *vegetable* soup, they would want a variety that contains cruciferous vegetables with proven disease-protective effects.

On the contrary, profit-hungry processed food companies use the lowest-cost ingredients they can find. Since high-calorie potatoes, rice, pasta, and corn can be termed "vegetables," these are often the dominant ingredients in soups consumers are saddled with. Remember that corn is fed to cattle to fatten them up. Our soups contain health-promoting cruciferous plants such as **broccoli, cauliflower, cabbage, and Brussels sprouts**.

Healthy Non-cruciferous Vegetables

The plant kingdom provides aging humans with a wealth of nutrients that scientists have identified as having potent health supporting properties.

In addition to cruciferous vegetables, the soups that our chef formulated contain **asparagus**,⁷⁸⁻⁸⁰ **peppers**,⁸¹⁻⁸⁵ **celery**,⁸⁶⁻⁹⁰ **carrots**,⁹¹⁻⁹³ **garlic**,⁹⁴⁻⁹⁹ **spinach**,^{91,100-103} **thyme**,¹⁰⁴⁻¹¹⁰ **parsley**,¹¹¹⁻¹¹³ **basil**,¹¹⁴⁻¹¹⁶ and **tomatoes**¹¹⁷⁻¹²² to provide the greatest variety of health-promoting plants in one satiating recipe.

Fight Back Against Food Fraud

The “food fraud” perpetrated by processed food companies is unconscionable. They load supposedly healthy vegetable soups with rice, potatoes, pasta, and other high-glycemic ingredients. More than **80%** of the American public has higher-than-optimal blood glucose levels,^{123,124} yet even when they try to eat better by consuming a can of commercial vegetable soup, they wind up with mostly glucose-spiking starches.

The American diet is overloaded with dangerous **sugars** that contribute to a growing health epidemic.¹²⁵⁻¹²⁸ By intentionally spiking vegetable soups with cheap sugars and starchy ingredients, processed food companies reap enormous profits while consumers pay the price with a shortened life span. Is it any wonder why Americans are accumulating so many fat pounds?

A pouch of **Life Extension Vegetable Soups** provides more than **one pound** of vegetables that will satiate most appetites—while delivering only **80 to 90 calories** per serving.

There are **3.5 servings** in each pouch, with each serving providing a **full serving** of **healthy vegetables**.

Life Extension's Vegetable Soups can be used as a mini-meal by those seeking to reduce their calorie intake, or as a vegetable side dish to serve three or more people with a single pouch.

Compare the healthy calories in these soups to the garbage foods you see endlessly advertised on TV. You'll easily see how commercial food companies are robbing Americans of their health by promoting foods that harm rather than protect.

Why Our Soups Don't Come in Cans

There is a concern that the lining of canned foods with **bisphenol-A** (found in 92% of canned foods) represents a health risk.¹⁴⁷⁻¹⁴⁸ It has been shown to be a “hormone disrupter,” which raises concern about potential cancer risk.^{149,150}

Healthy Vegetable Soups

- It is difficult to find prepared foods containing ingredients that protect against common health issues.
- Most commercially available vegetable soups are full of cheap starches like potatoes, corn, pasta, and rice that spike blood sugar levels.
- Consuming vegetables like broccoli, cauliflower, Brussels sprouts, asparagus, and tomatoes is associated with a reduced risk of some cell disorders.
- Life Extension has developed two good-tasting vegetable soups full of health-promoting ingredients including cruciferous vegetables, extra virgin olive oil, asparagus, tomatoes, celery, peppers, garlic, thyme, parsley, and basil.
- The soups are not only delicious, they are low-calorie and have a low glycemic index, so they help maintain healthy blood sugar levels already within normal range.
- Life Extension soups are packaged in advanced polymer pouches that are free from dangerous chemicals known as bisphenol-A and phthalates.



The FDA says bisphenol-A is safe, but we have little confidence in a government agency that is so beholden to the financial interests to processed food companies.

Life Extension's new vegetable soups are packaged in an advanced bisphenol-A and phthalate-free polymer pouch to not only preserve the integrity of the cruciferous vegetables, but also protect our members against bisphenol-A exposure.

Life Extension Members Recognize Value

The nearly two-year development of these unique cruciferous soup recipes has cost the Life Extension Buyers Club® an enormous amount of money. While pessimists suggested early on that we abandon the project and stick with our expertise in nutritional supplements, we persevered nonetheless.

We proved cynics wrong from the start when Life Extension members overwhelmed us with orders for the first production run of these cruciferous vegetable soups... even though we needed to charge a retail price of **\$11.95 per two-pound pouch**.

Even at the discounted price members pay (as low as **\$8.44** per pouch), these vegetable soups are higher priced than what is typically found in grocery stores. The question was whether consumers wanted to continue using vegetable soups laden with sugar-starches and other mediocre ingredients? Our members sure didn't, as orders and re-orders poured in for these cruciferous vegetable soups.

TV commercials endlessly promote the unhealthiest of foods, but consumers have woken up to the high price one pays when a toxic diet destroys their precious health.

We have spent the last year improving the taste and consistency of our **Cruciferous Vegetable** and **Asian Cruciferous Vegetable** soups and believe they are superior to anything else on the market. No prepared food comes close to providing this broad-spectrum of healthy ingredients—with none of the cheap fillers and starches that create biological havoc in aging individuals.

Life Extension looks forward to expanding into a broader line of health-promoting foods... and lowering prices in the process.

The following page fully describes the new and improved cruciferous vegetable soups that are finally available. ●

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



What's Missing From Cooked Vegetables?

There is one important *caveat* about cooked vegetables you should know about. During the heating process required to make any soup, some of the beneficial compounds contained in the vegetables are invariably lost.

Those concerned about certain health issues often rely on supplements that contain *standardized potencies* of nutrients found in healthy vegetables such as **indole-3-carbinol (I3C)**,^{66,129-132} **diindolylmethane (DIM)**,¹³¹⁻¹³⁷ **sulforaphane**,¹³⁸⁻¹⁴² and **apigenin**.¹⁴³⁻¹⁴⁶

Even when including cooked vegetables in your diet, it is still important to obtain *standardized potencies* of cruciferous and other vegetable extracts from your supplements and/or carefully steamed vegetables.

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The World's Healthiest Vegetables
Only Healthy Ingredients • No Starches or Harmful Fats

Vegetable Soup
Cruciferous



New Improved Taste

SERVING
SUGGESTION

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.

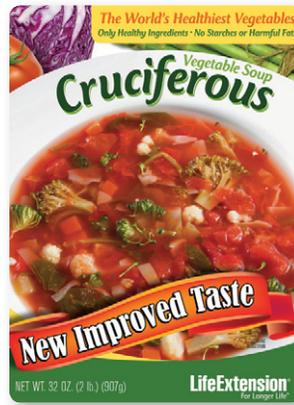
Life Extension® has formulated two vegetable soups that contain only healthy ingredients, including loads of **cruciferous vegetables** (cauliflower, broccoli, cabbage, etc.), **extra-virgin olive oil**, and a host of other beneficial **plant foods**.

Each serving of **Cruciferous Vegetable** and **Asian Cruciferous Vegetable** soup contains only **80 to 90 calories** of the best-documented foods to maintain your precious health. You can consume the entire contents as a healthy lunch or dinner, or use a smaller portion of the soup as part of a meal for you (or several people).

Each **80-90 calorie** serving of these new soups provides a **full serving** of the world's healthiest vegetables. The entire pouch supplies about **3.5 servings** of these vegetables—with none of the cheap starch fillers found in commercial soups.

The retail price of either the **Cruciferous Vegetable** or **Asian Cruciferous Vegetable** soups is \$11.95. Member price is **\$8.96**. If a **Life Extension®** member purchases any assortment of six pouches, the price is reduced to **\$8.44** per pouch.

To order your fresh supply of
Life Extension's
Cruciferous Vegetable or
the Asian Cruciferous Vegetable soups,
 call **1-800-544-4440**
 or visit **www.lef.org/soup**



Item # 01519



Item # 01520

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.

These soups provide unique garden-fresh ingredients, such as cruciferous vegetables, tomatoes, carrots, and other beneficial plant foods plus heart-healthy extra virgin olive oil.

You can consume the entire contents as a lunch or dinner, or use a smaller portion as a starter. The convenient resealable package will help keep your soup fresh and fresh tasting, and without the BPA found in many canned soups.

Each of these soups provides:

A full serving of vegetables per serving (or about 3.5 servings of healthy vegetables per pouch)

Less than 100 calories per serving

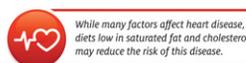
No added starches, preservatives, or sugars!

Excellent source of cruciferous vegetables

Low total fat per serving

No saturated fat or cholesterol

0g trans fat



Cruciferous Vegetable Soup

Nutrition Facts

Serving Size 1 cup (245g)
 Servings Per Container about 3.5

Amount Per Serving		% Daily Value *	
Calories	90	Calories from Fat	30
Total Fat	3g		5%
Saturated Fat	0g		0%
Trans Fat	0g		
Cholesterol	0mg		0%
Sodium	190mg		8%
Total Carbohydrate	12g		4%
Dietary Fiber	2g		8%
Sugars	8g		
Protein	3g		

Vitamin A 80% • Vitamin C 80%

Calcium 6% • Iron 10%

*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

Calories per gram:
 Fat 9 • Carbohydrates 4 • Protein 4

Ingredients: Diced Tomatoes in Juice (tomatoes, tomato juice, citric acid, calcium chloride), Water, Tomato Paste, Carrots, Celery, Cauliflower, Green Cabbage, Red Cabbage, Broccoli, Spinach, Brussels Sprouts, Chicken Broth, Asparagus, Extra Virgin Olive Oil, Red Bell Pepper, Garlic, Parsley, Thyme, Basil, Bay Leaf, Black Pepper.

01089A Rev.10/10

Asian Cruciferous Vegetable Soup

Nutrition Facts

Serving Size 1 cup (245g)
 Servings Per Container about 3.5

Amount Per Serving		% Daily Value *	
Calories	80	Calories from Fat	20
Total Fat	2g		3%
Saturated Fat	0g		0%
Trans Fat	0g		
Cholesterol	0mg		0%
Sodium	210mg		9%
Total Carbohydrate	12g		4%
Dietary Fiber	2g		8%
Sugars	8g		
Protein	3g		

Vitamin A 60% • Vitamin C 80%

Calcium 4% • Iron 10%

*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

Calories per gram:
 Fat 9 • Carbohydrates 4 • Protein 4

Ingredients: Diced Tomatoes in Juice (tomatoes, tomato juice, citric acid, calcium chloride), Water, Tomato Paste, Bok Choy, Broccoli, Red Cabbage, Cauliflower, Carrots, Onion, Red Bell Pepper, Green Onion, Chicken Broth, Extra Virgin Olive Oil, Cilantro, Garlic, Pepper Sauce (aged red peppers, distilled vinegar, salt), Ginger, Black Pepper.

01089A Rev.10/10

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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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.



Go Green, Get Healthy,

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

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

For those who don’t have the time to consume each of the above vegetables each and every day, **Triple Action Cruciferous Vegetable Extract with Apigenin** is the perfect solution to making sure your body gets the important extracts it needs from these crucial food sources. For those weighing less than 160 pounds, just one vegetarian capsule a day provides optimal potencies. Those weighing over 160 pounds should consider taking two capsules a day. A 60-vegetarian capsule bottle of **Triple Action Cruciferous Vegetable Extract** retails for \$24. If a member buys four bottles, the price is reduced to only **\$16.50 per bottle**.

Those who want to obtain the benefits of **resveratrol** can order **Triple Action Cruciferous Vegetable Extract with Resveratrol**. Each capsule provides **20 mg of resveratrol** in addition to the **vegetable extracts** and retails for \$32 per 60-capsule bottle. When a member buys four bottles, the price is reduced to only **\$22.20 per bottle**.



Item #01468

Item #01469

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

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

Contains yeast and corn.

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5. *J Clin Biochem Nutr*. 2009 May;44(3):260-5.

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



SUZANNE SOMERS

Uses Novel Stem Cell Therapy During Breast Rejuvenation

BY WILLIAM FALON

Breast cancer strikes more than **200,000** American women each year.¹ About **40,000** die from metastatic disease, leaving **160,000** women alive... but with **missing** or **disfigured breasts**.²

For most women, the principal options to reverse the mutilating impact of conventional therapy (**lumpectomy** or **mastectomy** plus **radiation**) are reconstructive surgery using synthetic breast implants or, for women who don't want artificial implants, surgical stripping of abdominal or back muscles which are then used to reconstruct the breast.

Both of these reconstructive procedures can involve side effects such as chronic pain and discomfort not only in the breast area, but from hernias and weakness from the donor site of the body, including muscles in the back or abdomen that are surgically removed.³⁻⁶

Seldom do any of these conventional reconstruction choices restore the desired sensation, mobility, comfort, and appearance of the original healthy breast.

There is, however, another option used by some plastic surgeons in the past called **autologous fat grafting**, or fat transplantation. This procedure utilizes the patient's own subcutaneous fat tissue from other regions of the body and implants it into the breast. A major concern with this kind of breast restoration is that scientific studies have failed to show clear evidence of long-term viability of the fat transplanted into the breast.⁷ That's why the concept of enriching transplanted fat with **concentrated stem cells** offers such incredible potential.

Actress **Suzanne Somers** was diagnosed with breast cancer in 2001. She had a **lumpectomy** to remove the tumor, followed by intense **radiation therapy**. >>

For those who don't know, the destructive effects of surgery combined with **high-dose radiation** can cause severe **disfigurement** to breast tissues. Even breast conserving/reconstruction surgeries don't always restore and maintain post-treatment breasts anywhere near their original appearance.

Those who know **Suzanne Somers** understand that she does not make important medical decisions in a conventional way. Rather than submitting to traditional breast reconstructive surgery, she scoured the world to identify researchers who were using advanced techniques to improve autologous fat transplantation as a long-term restorative procedure for the breast.

Though preliminary, the results thus far have been impressive. Using an advanced technique conceived by Dr. Kotaro Yoshimura in Japan, Suzanne's American surgeon utilized a novel strategy known as **Cell-Assisted Lipotransfer**.⁸ Dr. Yoshimura's protocol utilizes **autologous adipose-derived stem cells** in combination with liposuction techniques.

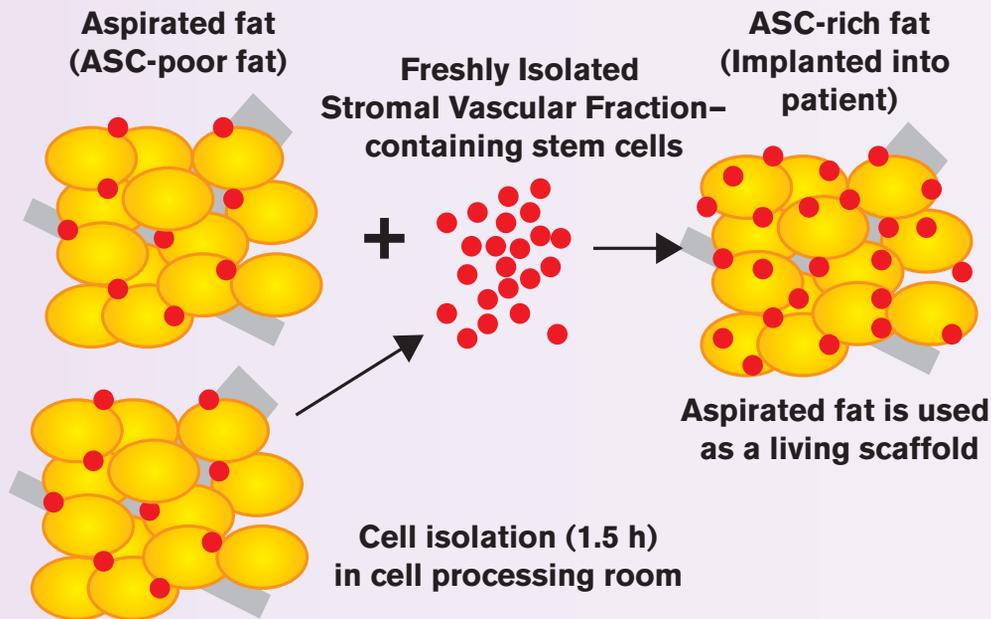
With the **Cell-Assisted Lipotransfer** strategy, autologous adipose-derived stem cells are used to enhance survival rate of the fat grafts and to reduce postoperative atrophy (shrinkage).

Using the novel **Cell-Assisted Lipotransfer technology**, half the volume of the aspirated fat is processed to isolate the stromal vascular fraction-containing **stem cells**. During the isolation process, the other half of the aspirated fat is prepared for grafting. Freshly isolated stromal vascular fraction **stem cells** are attached to the aspirated fat, with the fat acting as a living "scaffold" before transplantation. Finally, the stromal vascular fraction-supplemented fat is injected into the breast. Therefore, stem cell-poor fat is converted to stem cell-rich fat in the preparation process of the injectable material.^{9,10}

The scientific intricacies of this procedure are discussed in an interview on page 44 with the American surgeon who performed this **Cell-Assisted Lipotransfer on Suzanne Somers**.

In this exclusive interview, Bill Faloon discusses this approach in lay terms with Suzanne and the ramifications it has not only for breast cancer survivors, but also healthy women considering breast implants for cosmetic purposes who may soon have the option of tissue regeneration using their own adipose-derived stem cells.

Cell-Assisted Lipotransfer



Scientists use fat obtained from liposuction that is relatively poor in stem cells (this is called "adipocyte-stem cell poor fat" (ASC-poor fat) and convert it into "adipocyte stem cell-rich" (ASC-rich fat). This procedure is done by taking one half of the fat obtained from liposuction and concentrating its stem cells. These stem cells (ASC-rich fat) are then attached to the

other half (ASC-poor fat) of the aspirated fat before it is implanted into the patient. This other half of the aspirated fat (ASC-poor fat) thus acts as a scaffold for the stem cell concentrate (ASC-rich fat). By enriching transplanted fat with stem cells using this procedure, the survival rates of the fat grafts is enhanced and post-operative atrophy reduced.

Bill Faloon (BF): I've always admired the way you detail in your books the battle you waged against cancer and why you refused to accept everything mainstream oncologists insisted on. In *The Sexy Years*, you disclosed a lot about the treatments you investigated and emotional challenges you confronted. After your lumpectomy, it seemed like the mutilation to your breast was not overly harsh. Was it the follow-up radiation that caused the severe disfigurement that eventually occurred?

Suzanne Somers (SS): There should be a book written on the realities of radiation and all the things that are never mentioned beforehand. With radiation, the breast gradually gets flatter and flatter until it looks as though there has been a complete mastectomy. In addition, the asymmetry causes severe pain because in order to look "even" in clothing one side of the bra has to be pulled up so high that it injures the breast and removing the bra becomes excruciating.

BF: What is the best way of describing the damage the lumpectomy plus intense follow-up radiation inflicted on your breast?

SS: The lumpectomy at first was swollen and didn't look too radical. The treated breast was smaller than the other one but nothing that would make you feel horrified to look at yourself. But when the swelling subsided it was considerably smaller than I had at first realized, and then it began to degrade, gradually losing more and more volume until it became non-existent. Getting dressed became a challenge, and frankly, as a woman with a sexy image in the public arena, it was demoralizing for me.

BF: In addition to cosmetic disfigurement, did you experience any mobility problems as a result of the lumpectomy plus intense radiation therapy?

SS: I was in constant pain. As I said, in order to wear a bra, the full damaged breast needed to be worn high enough to create evenness. This injured the breast, making bra removal an excruciating experience. Also, as someone who enjoys sex (due to my perfect hormonal balance), having painful breasts was not conducive to that activity. In time, I was always in pain. Something had to be done.

BF: You probably investigated a lot of breast reconstruction options. What made you decide against trying any of them?

SS: As an avid participant in anti-aging and alternative medicine, the idea of a foreign object in my body was unacceptable. Plus, at the time of my cancer diagnosis, the options presented to me were "implants"

in both breasts to assure evenness and symmetry. I absolutely refused to do this.

The other option presented to me was the Tram Flap procedure, which was also unacceptable. I have seen the end result of Tram Flap and it is not pretty, plus the recovery time is long and arduous, and it weakens the removal area of the body. It's like trading a headache for a stomach ache.

BF: Where did you first learn about the use of stem cells in growing new breast tissue?

SS: I interviewed Dr. Robin Smith of the Neostem Company, a stem cell banking company, for my book titled *Breakthrough*. I was fascinated by the notion that we bank our stem cells while we are healthy and store them cryogenically for later use. I had also asked Dr. Smith if it was possible to use stem cells for a breast regrowth and she said yes, that there were companies focused on this procedure and medical

Dr. Joel Aronowitz, Suzanne Somers' physician who performed her surgery, is a graduate of the Accelerated MD program at Baylor College of Medicine in Texas, where he performed his General and Plastic Surgery residency training.



Dr. Aronowitz is certified as a Diplomate of the American Board of Plastic Surgery and is an Ambassador of the American Society of Plastic Surgeons. Additionally, he is a member of the American Society of Bariatric Plastic Surgeons as well as the California Society of Plastic Surgeons. Dr. Aronowitz is also a Clinical Assistant Professor of Plastic Surgery at the USC Keck School of Medicine and the Medical Director of the University Stem Cell Center in Santa Monica.

His medical interests include improvements to cosmetic surgery, minimally invasive techniques for breast rejuvenation, and cosmetically superior breast cancer surgery. He participates in clinical studies of adult stem cells. His research advances have translated directly to patient care with the recent opening of the first Outpatient Surgical Center Stem Cell Laboratory and University Stem Cell Center. His office suite is located adjacent to prestigious Cedars-Sinai Medical Center in Los Angeles. To contact Dr. Aronowitz, visit www.aronowitzmd.com

literature demonstrating positive results such as from Dr. Kotaro Yoshimura at the University of Tokyo in Japan. While Dr. Smith made it perfectly clear that there were no current US FDA-approved therapies for breast reconstruction, as an optimist I banked my stem cells with the Neostem Company in 2009, hoping on being able to use these cells one day in the future for this procedure.

BF: Since the Cell-Assisted Lipotransfer procedure used in your breast rejuvenation is not FDA approved, how did you get this done in the United States?

SS: In order for Hollywood Presbyterian Hospital to agree to participate in this groundbreaking procedure, they insisted I obtain an Institutional Review Board (IRB) approval qualifying me for a clinical trial. Under this bureaucratic restraint, the FDA would not allow me to use my banked stem cells, only stem cells taken from my fat on the spot. I agreed to work with Dr. Joel Aronowitz, a famous surgeon in Los Angeles with expertise in adult stem cell technology and breast rejuvenation, and together we successfully were able to perform this advanced procedure using enriched adipose-derived stem cells. Other doctors around the country are doing autologous fat transplantation for cosmetic breast surgery, but I am the first to have Dr. Yoshimura's advanced technique utilized, legally, using only my fat enriched with adipose-derived stem cells.

BF: Were you able to use your stem cells to regenerate any other areas of your body?

SS: After the breast procedure, my doctor requested from NeoStem a portion of my banked adult stem cells that originated in my adult bone marrow but were obtained through my blood. He used these to improve the appearance of the skin on my neck by regenerating the skin, giving me, in essence, a stem cell neck lift, using my fetal banked stem cells. This mix of cells which contain VSELS (very small embryonic-like stem cells) have many regenerative properties. The result is natural new smooth skin, not requiring surgery. These are all great advancements, the best use of scientific breakthroughs, a modern approach to beauty and safer and less invasive than cosmetic surgery.

BF: How many women in Japan have had their breasts regenerated using this stem cell technique?

SS: Dr. Yoshimura is the pioneer in Asia having completed over 400 procedures using his advanced technique with adipose-derived stem cells in Japan.

BF: In lay terms, can you explain how this stem cell breast regeneration therapy is done?

SS: In layman terms, they removed the fat by liposuction from my abdominal area. They took that fat and spun it at supersonic speed, separating it into three layers (like a mousse). The first layer was fat, second, blood, third, stem cells. They took the stem cells, cleaned them, separated them, discarding the weak ones, then converged the strongest stem cells back into the fat and whipped those strong stem cells which were now in high concentrations together, and with a "turkey baster" (my terms) injected the stem cell laden fat into my breast until it was of the correct volume. Poof! There it was.

BF: So fat removed from the abdomen provides the cells that are then sorted in a laboratory to provide stem cells vibrant enough to regenerate breast tissue?

SS: Correct. But the fat can be taken from any part of the body. I would imagine each individual woman would have her favorite places for removal; love handles, thighs, inner thighs. Really the whole procedure is a win, win, win; you get a new real breast, plus you get rid of unwanted fat!

BF: Was the removal of fat from your abdomen the first step?

SS: Yes and I have to say, liposuction is not for sissies. The recovery from liposuction is the painful part.

BF: How long did it take for your doctors to separate the strong stem cells in the laboratory?

SS: The cell processing procedure takes about 90 minutes to complete.⁹

BF: By what route were these stem cells administered back into your body?

SS: Dr. Aronowitz can give you the technical terms but I looked at it and thought, "turkey baster!"

BF: What should breast cancer patients tell their doctors if they plan on using this stem cell technique to restore their breast tissues?

SS: The important thing for women to know is that if they are having a lumpectomy or a mastectomy, it is crucial to maintain the skin and nipple. The mastectomies of yesteryear removed everything, skin and nipple included, so this procedure would not be possible. Today they approach it differently, and if there is no cancer in the nipple or skin it is left intact and that makes a regrowth possible.

BF: How would you compare your restored breast to the healthy one you had before the lumpectomy/radiation?

SS: If I can brag a little, it is beautiful—high and firm and real and soft and unscarred. Talk about reverse aging. My breasts look like they're from a young woman. I cannot tell you what this has done for me psychologically.

I did not do this for aesthetics. I did it for two reasons: medical progress and the positive effect it would have for women of this country, and also to relieve my personal pain and regain symmetry.

BF: Why are you the first American to legally benefit from this remarkable technology?

SS: Because I researched and persevered. I never gave up. It took me three years to obtain legal permission. I did it right and this is a merger, a true integrative procedure, the best of western and alternative medicine coming together.

BF: You could have gone to Japan to have this done, but instead spent a considerable amount of time persuading an American doctor to learn the methodology and then use you as his first patient. Do you think this might wake up our medical authorities about the need to allow therapies from other countries to be used in the United States sooner?

SS: Absolutely. Why are Americans spending their life savings to go to far-away places, Dominican Republic, Asia, to name a couple, when we have doctors with knowledge and enthusiasm in our country who want to do these procedures? That is why I wanted to do it here, so it would be an American achievement, and that American women could benefit.

We have the best doctors on the planet in the United States, yet in so many cases our doctors have their hands tied behind their backs, legally prohibiting them from being all that they can be. I am hoping my procedure will help in untying those hands.

BF: A number of women today are undergoing cosmetic breast augmentation using either saline or silicone implants. There are sometimes surgical complications and many suffer chronic pain, discomfort, and loss of mobility. These artificial implants last about ten years and then the procedure often needs repeating. Do you see the stem cell approach you used eventually replacing the use of cosmetic artificial implants?

SS: Yes I do. Maybe this is why obtaining permission was such a long and difficult road. But I ask you, why would any woman ever want to have foreign objects inserted into their bodies when this new procedure is available? Implants are laden with side effects and problems, and degrade health simultane-

ously. Instead, women could utilize a safe procedure of taking fat from their own body (and who doesn't want a little fat removed) from which they remove the stem cells, and then use their own stem cells (which their body cannot reject) to re-grow their breast and do a better job?

BF: A question a lot of our readers are going to ask is when is your next book coming out?

SS: How sweet of you to ask. I plan on my next book being a blockbuster on redefining aging and will be published in 2012. I am not revealing the title yet but it's a good one. Hopefully you will grace me with yet another cover on your magazine so everyone will be aware of it. Life Extension® is and has been of vital importance to me, informing me, educating me, and when I am featured in your magazine it allows me to reach the constituency that is most interested in what I have to say.

For this new book, I have assembled an incredible group of doctors, some I've interviewed before and some for the first time. As always, writing these books is a learning experience, and I believe the information will inform my global constituency of the incredible advancements that are coming and how to get ready in order to be able to access these advancements. ●

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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CELL-ASSISTED LIPOTRANSFER BREAST RESTORATION

*Discussion of the Underlying Science
with Suzanne Somers' Surgeon*

BY GREG FAHY, PhD

Dr. Joel Aronowitz is the surgeon who performed the groundbreaking Cell-Assisted Lipotransfer procedure on Suzanne Somers.

His new clinical trial, of which Suzanne Somers is the first enrollee, is based on promising earlier results of Kotaro Yoshimura, MD, and colleagues in Japan.

In their pioneering paper published in *Aesthetic Plastic Surgery*,* Dr. Yoshimura's group reported that their best procedure, which is similar to Dr. Aronowitz's method but involved less enrichment of stem cells in the transplant, increased breast size by more than twice as much as fat transfusion alone six months after the treatment (4-8 cm versus 2-3 cm).

This calculation is based on an increase in the difference between chest circumference at the nipple level and chest circumference just under the breast. The improvement was apparently due to less loss of injected mass when the transplanted fat was enriched in stem cells.

Dr. Aronowitz's method builds upon and extends these initial promising results and is believed to be the first such method to be introduced in a clinical trial in the United States. In addition, whereas the Yoshimura trial examined women who used this procedure only for cosmetic enhancement, Dr. Aronowitz's trial explored Cell-Assisted Lipotransfer for the first time in a post-lumpectomy patient, where there was severe post-radiation damage to the breast.

In this exclusive interview, Life Extension research scientist Greg Fahy, PhD, discusses the scientific intricacies of this procedure with Suzanne's surgeon Joel Aronowitz, MD.>>

Dr. Grag Fahy (GF): Dr. Aronowitz, from what Suzanne described, the therapy you administered depends on stem cells that are naturally present in abdominal fat. How plentiful are these stem cells?

Dr. Joel Aronowitz (JA): Suzanne's operation is a paradigm shift in surgery because it is natural regrowth of her breast based on the specific cells which control and direct repair and regeneration. All tissues of the body contain cells which direct regeneration after injury and replace aged cells over time. For example, cardiac muscle contains stem cells in a ratio of 1:40,000 (or one stem cell for each 40,000 mature cardiac cells). The subcutaneous fat of the abdomen and hips contains a much higher concentration of stem cells by comparison, about 1:4 (or one stem cell for each 4 fat cells). These stem cells in fat tissue are therefore very plentiful. In numbers, Suzanne's abdominal and hip fat contains about 1,000,000 stem cells per cubic cm of tissue. These cells are identified by size and immunologic markers such as CD34 on flow cytometry.

GF: Are these mesenchymal stem cells?

JA: Yes, they are mesenchymal type cells. This means that they are capable of differentiating into a wide variety of tissue types with the right stimulation. In this process we do not add any unnatural or outside stimulation to direct differentiation toward a specific tissue type. Since the adipose-derived cells we are using ordinarily live in fat of the abdomen and hips and are placed into the fat tissue of the breast, the signals they receive naturally stimulate them to regenerate fat tissue, the perfect tissue to fill a woman's breast.

GF: Are these stem cells naturally present in the breast as well?

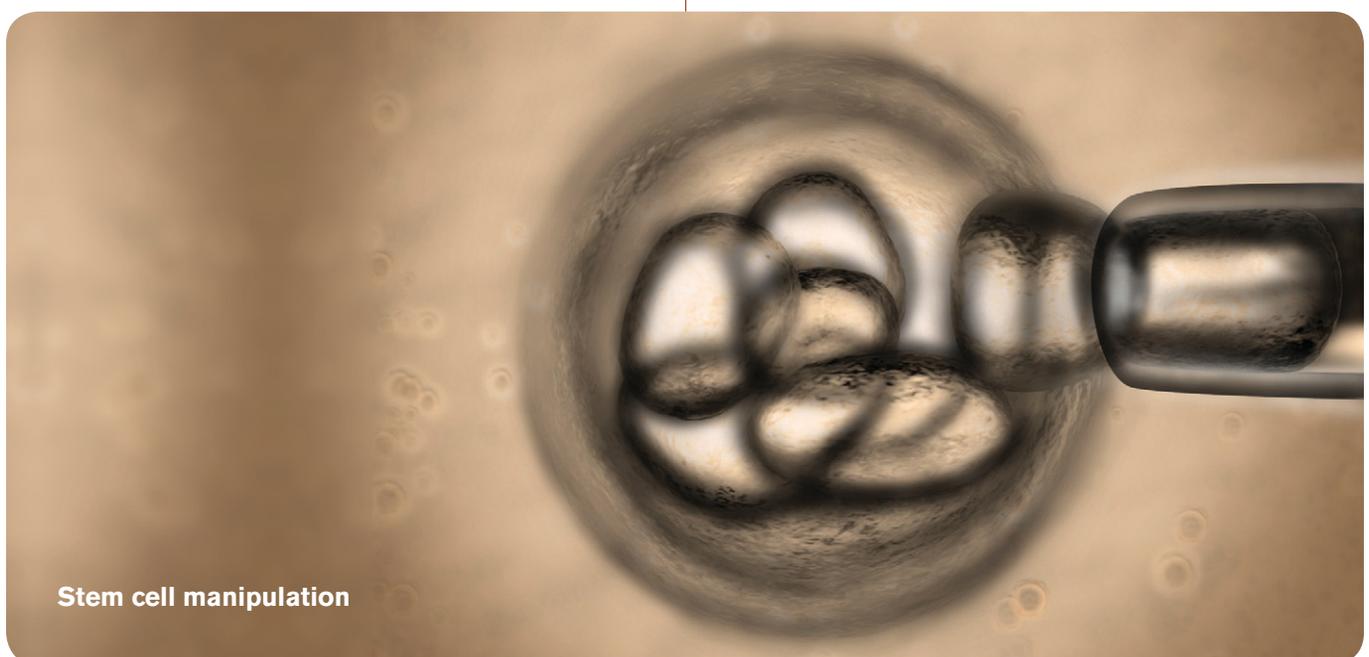
JA: The breast does contain some of these cells, but in lower concentrations because fat makes up only a fraction of the tissue in a typical breast.

GF: You first separated the stem cells from abdominal fat cells so you could give them back in concentrated form. How much more concentrated were the stem cells when they were re-injected than when they were residing unconcentrated in normal fat?

JA: I harvested a total of 1,000 cubic centimeters (cc) of Suzanne's adipose tissue using a liposuction technique modified for the unique nature of this special operation. We took 400 cc of the fat, washed and prepared for grafting, and the remaining tissue was used to extract the stem cells. The separation process is done routinely in the laboratory, but for Suzanne's case we used a special laboratory system assembled in the operating room. The cells were concentrated from a volume of 600 cc of fat tissue to 5 cc's of adipose-derived stem cells.

GF: A liter (1000 cc) of fat is considerable. Are there some women who might not have enough body fat to enable them to take advantage of the procedure you performed?

JA: Our full study will be the first to use stem cell enhanced fat grafts to achieve full breast regrowth in a direct, controlled, comparison study. Since Suzanne is the first participant, I wanted to have as many stem



Stem cell manipulation

cells as possible to demonstrate the effect of the stem cells on both the volume of the breast regrowth and improvement in the quality of the radiated skin. Most women have adequate extra fat tissue. One thousand cc equals only 2.2 lbs of fat, and most women consider the liposuction harvest a positive side effect of the procedure. Future study participants, however, will include women with only 100 to 200 cc of extra fat.



otherwise. These 400 million cells fit into a small test tube because they are separated from unneeded connective tissue and much larger mature fat cells. The number of stem cells in the fat graft was therefore actually doubled in comparison to ordinary fat, the ratio of stem cells to fat cells increasing from 1 to 4 to 1 to 2.

GF: How many patients are planned for your full study?

JA: Our initial design is slated for 100 patients.

GF: How soon after a lumpectomy or mastectomy can this treatment be applied?

JA: In the future, it should be possible to apply the procedure as soon as six weeks after breast cancer surgery, or ultimately, even immediately. However, in my study, the patient has to be 5 years beyond breast cancer surgery in order to be enrolled.

GF: If a woman wants to enroll in your study, is there any cost to her to do so?

JA: The study allows for no cost or reduced cost to the patient in certain circumstances. Many patients who have a serious breast deformity as a result of surgery or congenital condition will find that their health insurance covers a portion of the cost. While we will strive to keep the expenses reasonable, other patients in the current study will bear the cost themselves.

GF: To review, you collected 1,000 cc of fat and gave back 400 cc of fat plus 5 cc of purified stem cells. But if the original 400 cc of fat contained approximately 100 cc of stem cells (ignoring size differences between fat cells and stem cells), your stem cell enrichment was only about 5% beyond just transplanting ordinary fat. What was the rationale for that approach?

JA: This surgery, for the first time, is based on a new understanding of cellular function and uses a cellular approach. The number of stem cells in the 400 cc of fat injected is approximately 400 million. Our technicians obtained approximately 400 million additional cells from fat that would have been discarded

GF: Is the main function of the stem cells in this procedure to speed the growth of new blood vessels, or do they also participate in reconstructing normal breast structure?

JA: Evidence points to stem cells as beneficial in several ways. First, they are believed to reduce inflammation. Second, they stimulate regrowth of small blood vessels. Third, these cells appear to direct surrounding cells to regenerate the architecture of adipose (fat) tissue, even directing the differentiation of white blood cells such as macrophages to become adipose cells. Finally, adipose tissue stem cells can differentiate into fat cells. They do not direct growth of breast tissue with ducts and glands, rather they produce adipose or fat tissue.

GF: Were you able to observe any clear signs that the stem cell augmentation improved the outcome in comparison to what would be expected for fat cell transplantation alone? Or will that take more time?

JA: The qualitative results of this procedure are striking, an improvement in the texture and appearance of the radiated skin, the softness of the damaged breast and an immediate and *lasting* significant increase in volume. My opinion, supported by a host of other credible physicians, is that our study will help to demonstrate the advantages Suzanne immediately recognized after her surgery over fat grafting alone in a scientific manner recognized by our thoughtful and appropriately cautious medical community.

GF: The breast contains a lot more than just fat and blood vessels. It also has a lot of fibrous tissue that helps to give it suppleness, a normal texture, and shape. How were you able to restore a natural shape without this tissue, and does the fibrous structure of the breast eventually grow back?

JA: Fortunately, Suzanne's previous breast cancer surgery preserved the basic shape of her breast and this contributed to her excellent result. We know from prior study in the laboratory that stem cells direct the regeneration of the complex tissue architecture of adipose tissue. The fibrous connective tissue is also regrown and supports the adipose tissue in Suzanne's regenerated breast. Of course, the breast glandular and ductal cells are not present in the graft and are not regrown by the stem cells.

GF: The way Suzanne described her experience, you were able to restore her breast to close to its normal volume and shape in a single operation. That is extraordinary. Were there any small changes in breast size after the initial operation caused, for example, by either cell division or cell death before new blood vessels could grow back in, or maybe by temporary inflammation?

JA: Suzanne's breast appeared almost normal in size and shape immediately after surgery. She actually was very excited when she took a peek at her breast in the recovery room. The natural fat regrowth gradually replaced the postoperative swelling over a period of 6-8 weeks postoperatively. This is the expected postoperative course experienced in the cases of our collaborator, Dr. Yoshimura, at the University of Tokyo.

GF: How much breast bruising and pain is associated with this procedure, and how long does it last?

JA: Suzanne experienced some pain and bruising of the breast and donor site in the abdomen and hips. The bruising resolved within 2 weeks, and mild bruising lasting 2 weeks is typical.

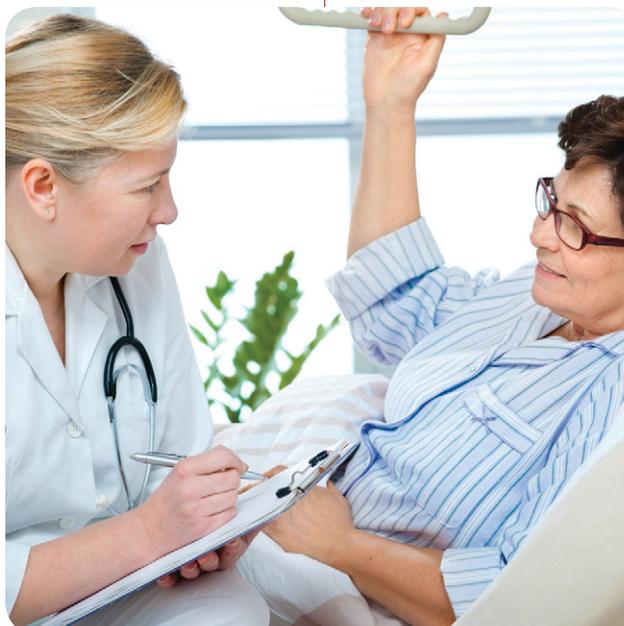
GF: There seems to be considerable evidence that fat-derived stem cells can stimulate the regrowth of small blood vessels in the breast, which may be why the procedure works so well to preserve the transplanted fat cells. However, these blood vessels might also provide oxygen, nutrients, growth factors, and other forms of support to any residual cancer cells that might have been missed by the surgeon. Could this be a cause for concern?

JA: All remaining breast tissue is at risk for developing recurrent or new breast cancer regardless of how it may be treated. This is why I teach oncologic surgeons that it is best to remove as much breast tissue as possible, whether we label the procedure lumpectomy, mastectomy, or breast conservation. The principle is removal of as much breast tissue as possible because it too frequently develops cancer, but with conservation of the external skin envelope in which the breast resides so that it can be re-filled with soft natural fat tissue, which rarely forms cancer itself. Even if cancer cells remain after removal of the tumor, there is no indication that fat grafts assist the growth of these abnormal cells even though normal fat grafting involves a lower but still significant concentration of stem cells. As a standard procedure for a variety of reconstructive and cosmetic purposes, no evidence is reported of a cancer-causing or stimulating effect of fat transplants. Fat simply rarely becomes cancerous. Of course, a woman with active breast cancer is not a candidate for cell-assisted regrowth of her breast or any other breast reconstruction procedure. The cancer must be removed first.

GF: Would you recommend this procedure to most women who require breast reconstruction?

JA: I have spent much of my career working to improve the results of breast cancer surgery and have been active in stem cell research with my partners here at Cedars-Sinai, Hollywood Presbyterian Hospital, and USC, as well as my colleagues in Korea and Japan. Adipose-derived stem cells were first identified here in Los Angeles and much important basic research was done in America. Regulatory barriers

to clinical translation of this research slowed our progress compared to the common use of stem cells abroad. I hope that our groundbreaking study, and Suzanne's tenacity in seeking out this new treatment for breast regrowth and courage in being our very first study participant will empower other women to insist on the best option for their situation. Currently, women have a choice of an implant or a fairly invasive flap operation for reconstruction of the breast. This operation will add another





option, not reconstruction but actual regrowth of the breast. When this method is combined with oncologic surgery to remove cancer or high risk breast tissue prophylactically, women will be able to have a fully regrown, natural breast. I think our study and future research will demonstrate that this operation is an attractive option for the majority of women who are treated surgically for breast cancer and for women who seek to have a prophylactic mastectomy because of a high risk of breast cancer.

GF: Thank you, Dr. Aronowitz.

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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Editor's note:

While preliminary cosmetic results appear promising with Cell-Assisted Lipotransfer (CAL), an advanced and novel method of adipose-derived stem cell enrichment of autologous fat for transplantation, long-term results are still uncertain until sufficient numbers of patients have the procedure and are subsequently followed. CAL appears to improve graft survival, likely due to the increased potential for angiogenesis and neovascularization (new blood vessel formation) with adipose-derived stem cells. This capacity for new blood vessel formation within the transplanted fat enriched with adipose-derived stem cells seems to enhance graft viability. However, given the potential for angiogenesis, and the known role of new blood vessel formation in tumor growth and proliferation, CAL should not be performed in patients with active cancer, or any evidence of ongoing malignancy. As with any new medical technology, safety must be evaluated over time.



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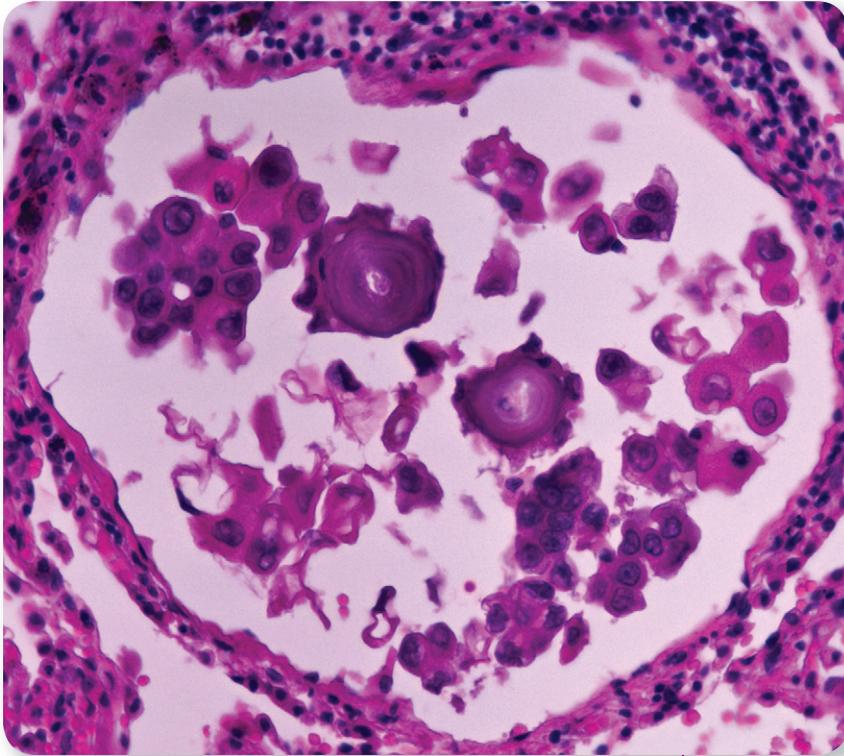
BY WILLIAM FALOON

In a shocking exposé of the cancer establishment, Dr. Ralph Moss in his frequently updated book *The Cancer Industry* revealed the sordid history of radiation therapy.

The first victims were researchers and physicians who succumbed to radiation's lethal effects without even suspecting it posed a danger to them. The next set of medical victims was patients who received severe burns from radiation overdoses that left them painfully mutilated or dead from acute radiation poisoning.

As radiation doses were refined, the cancer establishment proclaimed a major treatment breakthrough. Yet the statistics were manipulated to cover up what was really happening to irradiated patients. For instance, patients with progression-free survival of 5 years (or less) are often listed as successes even if the same cancer later returns.^{1,2}

Most disturbing are statistical methods that ignore lethal side effects such as *radiation necrosis* in the brain that kills the majority of its victims, but are not always officially tabulated as cancer deaths.^{3,4} This enables statisticians to say the radiation "cured" the patient of cancer, while omitting the fact that the therapy itself killed the patient. >>



Photomicrograph of the lung showing radiation pneumonitis, section, H & E stain, mag. 75x (at 24 x 36 mm). This inflammation of the lungs is caused by exposure to radiation, typically from radiation treatment for cancer. Pneumonitis may eventually cause permanent scarring (radiation fibrosis).

Radiation therapy is an important part of treating certain head and neck tumors and is often used after surgery.⁵ But lethal radiation necrosis to the brain is one potential side effect.⁶ Radiation therapy is routinely used to treat primary brain tumors. The cure rate for the most common brain tumors is disturbingly low,⁷ but even in those fortunate enough to have their brain tumors destroyed by the radiation, a large percentage succumb shortly thereafter to **radiation necrosis** of the brain.⁸

The more prevalent and omitted cover-up relates to the long-term impact of radiation therapy. For example, another danger of radiation therapy to the head is increased risk of stroke.⁹ A study of head and neck cancer patients who received radiation therapy found that stroke rates were **five times greater** than expected.¹⁰ This elevated stroke risk was found many years after administration of radiation. The average time between radiation treatment and stroke was **10.9 years**, but the increased risk of stroke persisted for **15 years** after radiation therapy.

For cancer patients treated with radiation therapy that later die from a stroke, the official cause of death is stroke, even though the radiation therapy often caused the stroke. This is an example of how cancer cure statistics are misleading. The government contends that radiation therapy is curing cancer patients, yet long-term radiation side effects cause many deaths that are not attributed to cancer.

The government claims that more cancer victims are living beyond five years, but ignores the fact that the toxic therapies used to eradicate cancer can themselves cause premature death.¹¹

High-dose radiation to the chest cavity increases heart disease risk... and this side effect may not occur for 20 years or later.¹²

Some of the side effects from radiation therapy to the breast include a breakdown of the skin or such severe pain in the breast that surgery is needed for treatment.¹³ Radiation therapy given to the axillary lymph nodes can increase the risk of patients developing arm swelling ("lymphedema") following axillary (armpit) dissection.¹⁴⁻¹⁷ Radiation to this area can cause numbness, tingling, or even pain and loss of strength in the hand and arm years after treatment.^{14,16} Some patients develop "radiation pneumonitis," a lung reaction that causes a cough, shortness of breath, and fevers three to nine months after completing treatment.¹⁶ These side effects may go away within a relatively short time or persist over an extended period.

The primary concern with radiation therapy is that it may initiate secondary cancers years or decades after the primary cancer was "cured." This does not mean that all cancer patients should refuse radiation therapy, as it often adds years or decades to their lives, and is in many cases curative.

But as Ralph Moss, PhD, graphically described in his *Cancer Industry* books, oncology researchers are

motivated to achieve complete responses that they can later claim to be cancer “cures.” Overlooked from the statistics are horrific long-term side effects that leave patients permanently mutilated, in constant pain with loss of bodily functions, and under chronic medical care to deal with the damage inflicted by the “cancer cure.” Patients suffering side effects from conventional treatments are often never the same again, yet the cancer establishment uses these cases to create statistical models to pretend their toxic therapies are a panacea.

In **Suzanne Somers’** case, she has long regretted her submission to radiation therapy after her lumpectomy. While she made the right choice in saying “no” to chemotherapy, she has suffered for ten years from the destructive effects caused by the intense amount of radiation delivered to her breast and surrounding tissues.

How Radiation Causes Long-term Damage to Breast Tissues

Radiation therapy has long been used to treat breast cancer. For patients who choose breast-conserving surgery, have multiple positive lymph nodes, or have a local recurrence, radiation therapy will likely be part of the treatment plan.

Radiation acts directly on the cell nucleus. Cancer cells grow rapidly compared to normal cells, so by radiating the cancerous area, cancer cells are damaged and many of them destroyed. Unfortunately, radiation also has a negative effect on normal cells. By mutating genes in the nucleus of healthy cells, these normal cells are more likely to later develop into cancer.



This damage to genes in the cells’ nucleus also causes the expression of pro-inflammatory factors that result in a constant bombardment (inflammatory fires) by one’s immune cytokines against the irradiated cells. As the cells initially damaged by radiation are destroyed, the “inflammatory fires” spread to nearby healthy cells and create a chain reaction whereby more healthy cells come under chronic cytokine-inflammatory attack.

Radiation damages the blood supply to normal skin at a microscopic level. This results in a significantly greater risk of complications following surgery. These risks include infection, delayed healing, wound breakdown, and fat necrosis, as well as implant-related problems.¹⁸ Radiation therapy can be the source of serious problems when it comes to breast reconstruction.

This Explains Why Suzanne Somers Stated:

“There should be a book written on the realities of radiation and all the things that are never mentioned beforehand. With radiation, the breast gradually gets flatter and flatter until it looks as though there has been a complete mastectomy... when the swelling subsided it was considerably smaller than I had at first realized, and then it (Suzanne’s breast) began to degrade, gradually losing more and more volume until it became non-existent.”

Important Summary

This article is not meant to dissuade cancer patients from utilizing radiation therapy, as when properly used against specific tumors it can produce significantly higher cure rates that offset the risk of side effects. For instance, if you are diagnosed with Hodgkin lymphoma in the chest cavity, radiation has a high probability of curing you. Even though your risk of heart disease increases because of the radiation, it can buy you decades of additional life and you can take assertive steps to reduce your odds of suffering a heart attack knowing that you are at increased risk.^{12,19-21} Same for stroke risk in those who receive radiation to the head. Aggressive stroke prevention may enable you to avoid the five-fold increase in stroke risk caused by the radiation.^{10,22,23}

For women with breast cancer, there are established criteria for determining if radiation therapy is likely to provide a benefit that offsets the side effect risks. A careful analysis of one’s individual breast cancer that include primary tumor molecular profiling, tumor size, lymph node involvement, presence of circulating tumor cells, whole-body PET scans and CT scans, and many other diagnostics are critical to determining if radiation therapy is an appropriate choice.



Life Extension® published an extensive **Cancer Radiation Protocol** long ago that provides validated methods of improving the ability of radiation to eradicate cancer cells, while sparing healthy cells from radiation's many potential side effects. One can access the most recent version of the **Cancer Radiation Protocol** by logging on to www.lef.org (currently accessible at: http://www.lef.org/radiation_therapy). ●

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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Preserve Optimal BREAST HEALTH

Women today face a growing number of health issues, including the need to support DNA gene structure in the breast. Detrimental factors such as the aging process, along with the daily bombardment of damaging environmental estrogen-like compounds, demonstrate the need to support a woman's breast cellular structure.

A wealth of research shows that specific **plant extracts** can positively influence cellular status and remove some of the anxiety women face about maintaining a healthy balance of estrogens.

Two important metabolites that estrogen is broken down to in the body are: the **good 2-hydroxyestrone** and the **bad 16 alpha-hydroxyestrone**. Scientists have identified nutrients like **indole-3-carbinol (I3C)** that can tip the delicate balance of estrogens in favor of the good form.

Women seeking to proactively restore their youthful hormonal balance can now take a new, phytonutrient-based formula that helps support healthy estrogen activity and detoxification. Some of the active ingredients in the Breast Health Formula are:

- **Phytoestrogens** that function as *selective estrogen receptor modifiers* help block certain estrogen receptor sites on cells, thus preventing bad estrogen from exerting its harmful effects
- **Plant lignans** that boost beneficial enterolactone levels and favorably alter estrogen metabolism
- **Cruciferous Vegetable Extracts** (such as I3C) that effectively increase 2-hydroxyestrone while reducing undesirable 16 alpha-hydroxyestrone
- **Calcium D-Glucarate** to safely facilitate the removal of harmful estrogen from the body
- **Vitamin D** to restore healthy genetic regulatory switching to aging cells

Breast Health Formula provides nutrients that have demonstrated broad-spectrum support for preserving optimal breast health.

The daily dose of two capsules supplies:

Phytoestrogens (isoflavones) and Group-B Saponins (from 111.5 mg SoySelect® soybean (<i>Glycine max</i>) 70:1 extract)	34.5 mg
Indole-3-Carbinol (I3C)	100 mg
DIM (3,3'-Diindolylmethane)	14 mg
Calcium D-Glucarate	137.5 mg
Vitamin D3 (as cholecalciferol)	1000 IU
Enterolactone Precursors Proprietary Blend HMRLignan™ Norway spruce (<i>Picea abies</i>) standardized lignan extract (knot wood) and Secoisolariciresinol diglucoside from ActiFlax™ flax (<i>Linum usitatissimum</i> L.) lignan extract (seed)	25 mg
Iodine (as potassium iodide)	2 mg
Cruciferous Vegetable Proprietary Blend Broccoli (<i>Brassica oleracea</i> L.) GMO-free Extract [standardized to 4% glucosinolates] Watercress (<i>Nasturtium officinale</i>) 4:1 extract (leaf) Sawasabi™ Wasabi (<i>Wasabia japonica</i>) powder (rhizome) [standardized to 12,000 ppm Total Isothiocyanate]	550 mg

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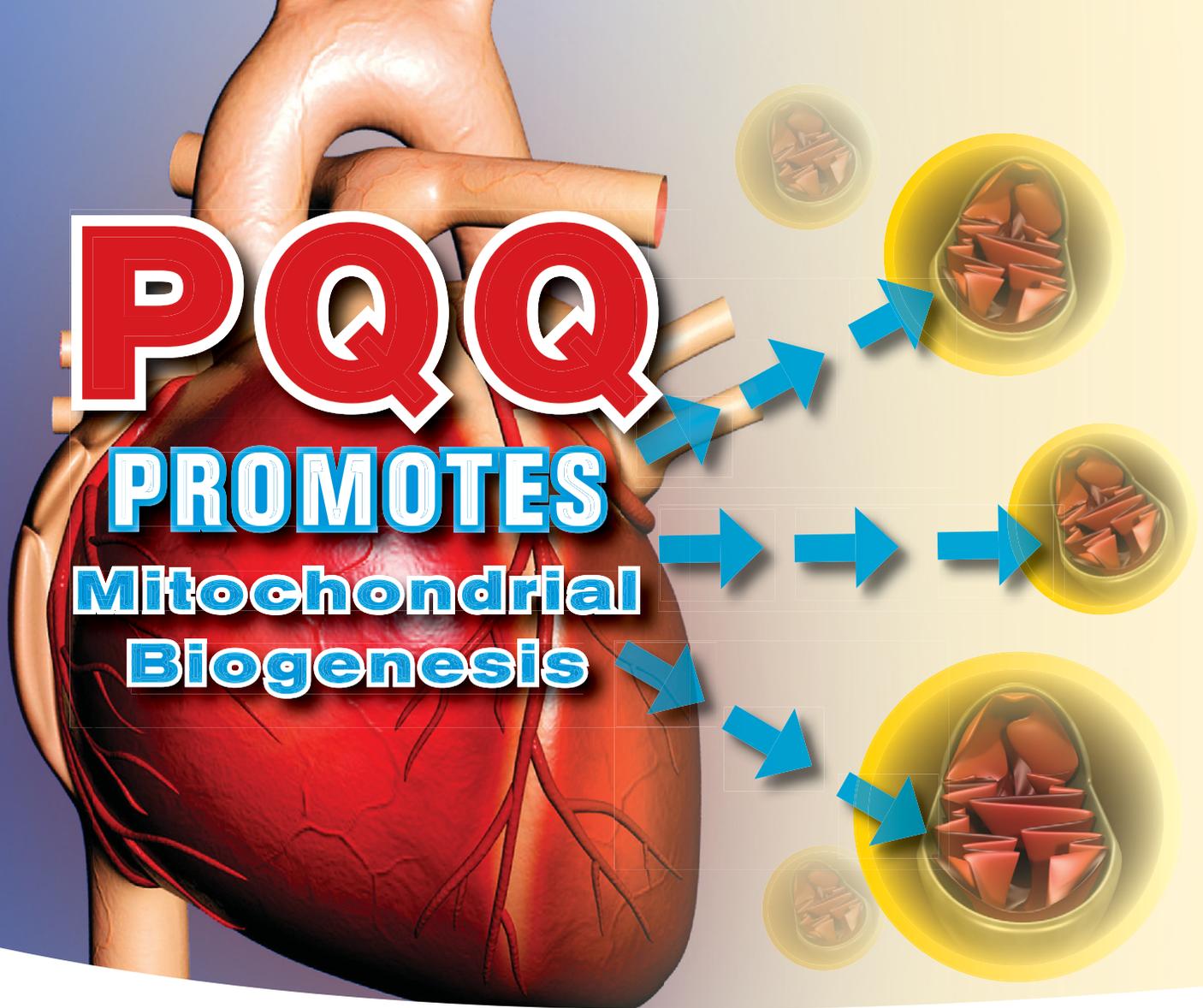


To order, call toll-free
1-800-544-4440 or visit
www.LifeExtension.com/breasthealth

The retail price for 60 vegetarian capsules of **Breast Health Formula** is \$34. If a member buys four bottles, the price is reduced to only \$22.50 per bottle. Contains soybeans, corn, and rice.

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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.



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.

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 mitochondria⁷—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

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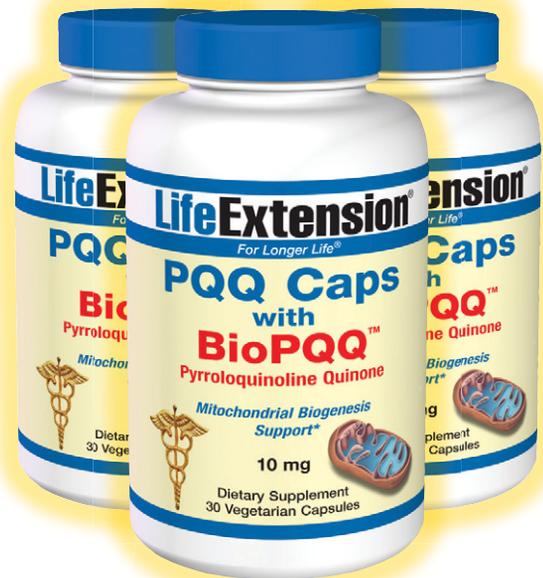
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A Breakthrough Weapon in the Battle Against Aging

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

A bottle containing **30 10 mg** vegetarian capsules of **PQQ Caps with BioPQQ™** retails for \$24. If a member buys four bottles, the price is reduced to just **\$16.50** per bottle.

A 10 mg dose of **PQQ** is also included in the **Mitochondrial Energy Optimizer with BioPQQ™** and **Mitochondrial Basics with BioPQQ™** formulas. Contains rice.



Item #01500

To order
PQQ Caps with BioPQQ™
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Link Between ALCOHOL and Cancer Death

BY MICHELLE FLAGG

Those who consume no alcohol are at higher risk of heart attack and ischemic stroke. Yet many of us drink more alcoholic beverages than is safe.

Problem drinking is defined as **12-15 drinks** a week by the National Institutes of Health.¹

Yet according to the latest research, alcohol in more *moderate* amounts can be deadly.

In one of the largest analyses of its kind, a 2011 epidemiological study of eight Western European countries revealed that drinking alcohol accounted for **1 out of 10 cancer cases** in men and 1 in 30 for women, who tend to drink less.²

These included colorectal and breast cancer, along with cancers of the upper gastrointestinal tract and liver. Cancer incidence was not confined to heavy drinkers. Even those who had **one to two drinks** a day were at risk.

How could this happen?

You won't hear this from most doctors, but the body converts alcohol into a DNA-destroying metabolite called **acetaldehyde**. It is a compound sufficiently dangerous to be officially classified as a carcinogen by the International Agency for Research on Cancer.³⁻⁸ The good news is that specific nutrients many **Life Extension**[®] members already take have been shown to *neutralize* the cancer-causing effects of acetaldehyde before they take hold.

In this article, a scientifically validated, comprehensive anti-alcohol nutritional regimen is detailed. You will discover how acetaldehyde interferes with biological and cellular processes to induce functional and metabolic abnormalities that lead to cancer.

You will also learn nutrient interventions that operate via multiple pathways to protect against alcohol's most dangerous effects when taken before or after you drink. >>

When you drink alcohol, some of it converts to a metabolite called **acetaldehyde**, which is a highly reactive molecule that causes cancer through a variety of mechanisms. Acetaldehyde is also a primary factor involved in unpleasant next-day aftereffects of excess ethanol ingestion.⁹

Acetaldehyde binds to DNA, causing mutations that can initiate cancer development.^{5,10,11} It produces reactive oxygen species (ROS) that lead to inflammation, promoting tumor development once a cancerous cell has formed.^{7,8} Acetaldehyde impairs cells' natural antioxidant defense systems, making them still more vulnerable to cancer-causing oxidant damage.⁸ It depletes cells of vitamin B6, further impairing cells' abilities to battle oxidation.¹² And acetaldehyde interferes with

folic acid, blocking cells' natural DNA repair mechanisms and further promoting cancer growth.¹³

The most effective strategy for reducing alcohol-related cancer risk is to cut back alcohol consumption.¹⁴

But alcohol occupies a complicated place in today's health consciousness. It provides some definite benefits to cardiovascular health when used in small to moderate amounts.¹⁵ And, for many, alcohol produces both psychological and biological dependency, making it difficult to simply quit drinking.¹⁶ In addition, much of our social interaction occurs with some levels of alcohol.

Fortunately, there are proven nutrients that afford powerful antioxidant protection, while others directly interfere with acetaldehyde production in liver cells. Still others can restore the body's waning stores of essential nutrients.

Together these effects can help you lower your cancer risk if you choose to consume alcohol.

Antioxidant Vitamins

One of the best and most general ways to fight the acetaldehyde-induced oxidative stress that follows alcohol consumption is to assure that one has an adequate regular intake of key antioxidant vitamins.¹⁷ (See Table 1) In general, the higher the intake of these vitamins, the lower the risk of most cancers.^{18,19} Alcohol drinkers are especially vulnerable to this effect: the combination of high alcohol intake and low antioxidant vitamin intake increases the risk of colon cancer more than **6-fold**.^{20,21}

Treatment with antioxidant nutrients and vitamins can protect delicate DNA from cancer-inducing damage and reduce the inflammation that promotes cancer development in people who use alcohol chronically.^{22,23} A 2010 Harvard study demonstrated that intakes of vitamins A, C, and E from food alone did not reduce colon cancer risk.²⁴ When intakes from supplements were included, the risk dropped by 19% for vitamin C intake and by 22% from vitamin E.²⁴ The same study demonstrated a 12% decrease in cancer risk from multivitamin and folate supplementation. Similar effects have been demonstrated for other cancer types, including a variety of brain tumors.²⁵

Selenium

Selenium is an essential dietary component for human life, and it has been shown to be protective against cancer.²⁶ It is a vital constituent of the so-called selenoproteins that are necessary for proper antioxidant and DNA repair function of several important



Table 1. Oral Cancer Risk Reduction from Antioxidant Vitamins and Nutrients¹⁷

Vitamin	Percent Reduction in Cancer Risk
Vitamin B6	41%
Carotene	39%
Folic Acid	39%
Niacin	38%
Vitamin C	37%
Vitamin E	26%
Thiamine	18%
Vitamin D	17%
Riboflavin	13%
Zinc	11%
Lycopene	9%

intracellular systems.²⁶ Selenium deficiency leads to increased DNA damage and increased likelihood of cancer in laboratory animals, whereas dietary selenium reduces formation of pre-cancerous tissue.^{27,28}

In humans, low selenium status is associated with increased risk of colon cancer.²⁹ Selenium levels tend to be reduced in people who drink alcohol regularly.³⁰ That is especially concerning because selenium deficiency is a major risk factor for liver cancer; conversely, people with the highest levels of selenium in their tissues have a **50% reduction** in their risk of this cancer.³¹

Glutathione and N-Acetyl Cysteine (NAC)

Oxidative stress combined with acetaldehyde causes a profound impairment of the body's natural antioxidant systems, by depleting stores of a compound called glutathione.³² Restoring cellular healthy glutathione levels, therefore, seems to be a natural strategy to prevent alcohol-related cancers.

N-acetyl cysteine (NAC) powerfully replenishes glutathione levels in tissues, helping to fend off the consequences of acute oxidative stress.^{33,34} It is widely used in conventional medicine to fight the impact of toxic ingestions, such as acetaminophen (Tylenol®) overdose.³⁵ Rats supplemented with NAC prior to treatment with acetaldehyde are potently protected against toxicity and death; the effect is even more powerful when combined with vitamin C and thiamine.³⁶ Independently, NAC binds acetaldehyde directly, further preventing its damaging effects.³⁷

Benfotiamine

Benfotiamine is a fat-soluble form of thiamine (vitamin B1).³⁸ It is best known for its protective effects against formation of **advanced glycation end products** (AGEs) in people with diabetes or the metabolic syndrome.³⁹ Since AGEs are known to play a major role in cancer formation (by promoting oxidative damage and inflammation),⁴⁰ benfotiamine is finding a role in cancer prevention as well. By a separate mechanism, benfotiamine also directly prevents cell damage arising from alcohol use.⁴¹ And benfotiamine has significant antioxidant effects, preventing induction of cancer-causing DNA damage in laboratory studies.^{39,42}

Folic Acid and SAMe

In addition to toxic acetaldehyde production, alcohol consumption depletes the body of certain important nutrients. Deficiencies of folic acid, zinc, and the sulfur-containing amino acid methionine are frequent among drinkers.^{6,43,44} Cells that lack



What You Need to Know

Alcohol and Cancer Death

- A landmark 2011 study revealed that drinking alcohol may account for **1 out of 10 cancer cases** in men, and 1 in 30 for women.
- Even modest alcohol consumption was found to increase risk for most forms of cancer. This occurs owing to a little-known process in which your body converts alcohol into **acetaldehyde**, a known carcinogen.
- You can help your body battle the cancer-causing effects of alcohol by choosing a regimen of nutrients and phytonutrients that effectively *neutralizes* alcohol's toxic effects, including silymarin from milk thistle extract, resveratrol, grape seed extract, and barley grass.
- Other compounds can help you restore nutrients and minerals depleted from your body as a result of alcohol consumption, including selenium and benfotiamine.



these nutrients cannot suppress cancer genes called proto-oncogenes, often resulting in the initiation of a cancer.^{10,45} Compared with non-drinkers, men who consume more than two alcohol drinks daily have a 64% increased risk of colon cancer, while women have an 84% increase.¹¹ But those with the highest folic acid and methionine intakes have an approximately one-third lower risk of colon cancer.¹¹

Supplementation with folic acid, zinc, and S-adenosylmethionine (SAME) is an effective way of preventing these widespread alcohol-related deficiencies and potentially lowering cancer risk.⁴⁶⁻⁴⁹ SAME has additional value because, like NAC, it helps restore depleted glutathione in alcohol-damaged cells, providing additional antioxidant protection.^{50,51}

Chlorophyllin

Chlorophyllin is a water-soluble form of the green plant pigment chlorophyll.^{52,53} It has been evaluated as a chemopreventive agent in populations at high risk for liver cancer, one of the most common tumors known, and one that is frequently caused by ingested toxins.⁵²⁻⁵⁴ Chlorophyllin is a large molecule thought to bind to many carcinogens and toxins, enhancing their excretion from the body before they damage DNA.^{54,55} Binding to toxins in the intestine prevents their uptake, further reducing their cancer-producing effects.⁵⁴ Chlorophyllin also induces important enzymes that protect against oxidants arising from toxins such as acetaldehyde, while also reducing expression of inflammatory mediators.^{56,57}

Grape Seed Extracts

Extracts of grape seeds are known to be powerful antioxidants with health benefits on many tissues. In both animal and human studies, these extracts reduce markers of oxidative damage and enhance natural antioxidant mechanisms to protect cells and DNA from injury.⁵⁸⁻⁶² Grape seed extracts have been shown to prevent alcohol-induced oxidative damage in all tissues examined in animal studies.^{63,64} These extracts are highly bioavailable in humans, making them especially appealing in combating the cancer-causing effects of alcohol.^{65,66}

Silymarin (from Milk Thistle)

Silymarin is a compound extracted from the milk thistle plant. It has long been used to improve liver health and enhance excretion of toxins, particularly those that are related to alcohol toxicity. Silymarin is a powerful antioxidant and protects DNA from cancer-inducing damage, especially in alcohol-induced liver disease.^{22,67} It inhibits conversion of ethanol to acetaldehyde and reduces cell proliferation in laboratory models of liver cancer.⁶⁸

Silymarin also stabilizes cell membranes and promotes normal liver cell regeneration.^{67,69} It reduces inflammatory mediators that otherwise help to promote cancer growth.^{67,69,70} Long-term administration of silymarin significantly increases survival time of patients with liver cirrhosis, a frequent precursor of liver cancer.⁶⁹ Laboratory studies reveal that

silymarin reduces tumor cell proliferation and new blood vessel growth, helping to starve tumors of vital nutrients and oxygen.⁶⁹ Finally, silymarin has been shown to inhibit development of tumor metastases, helping limit spread of cancer.⁶⁹

Picrorhiza

Picrorhiza kurroa is a member of the figwort family, with a long history of use in traditional south Asian medical systems.⁷¹ Picrorhiza extracts given to laboratory animals following chronic alcohol ingestion reverse most of the deleterious biochemical changes induced by alcohol.^{72,73} A powerful antioxidant,⁷¹ picrorhiza also has specific anti-cancer effects, inhibiting toxin-induced cancer generation and increasing life span of tumor-afflicted animals.^{74,75} Picrorhiza also very specifically modifies the inflammatory “master molecule” called **nuclear factor-kappaB**, reducing production of inflammatory cytokines that can promote tumor growth.⁷⁶ That mechanism, along with others, also promotes cancer cell death by apoptosis.^{71,76}

Barley Grass

Barley is a fiber- and antioxidant-rich grain with a number of chemopreventive properties of particular interest in the context of cancer.⁷⁷ Toxin-induced gastrointestinal tumors in mice can be prevented using extracts of barley grain or bran.^{77,78} A powerful cancer-

suppressing protein called lunasin, first identified in soy protein, has now been discovered to be abundant in barley as well.^{79,80} Barley lunasin suppresses formation of tumor cell colonies and protects DNA from cancer-inducing changes.^{79,80} Barley grass extracts also serve a prebiotic function, modifying the intestinal environment to prevent toxin-induced colon cancers.⁸¹

Resveratrol

Resveratrol is a versatile polyphenol derived from grapes and other plants. Like most polyphenols, resveratrol is also a powerful antioxidant and protector of DNA and mitochondria against alcohol's toxic effects.^{64,82,83} Even after DNA damage has occurred, resveratrol switches on essential DNA repair mechanisms to heal the injury before it can trigger cancerous change.⁸³

But resveratrol has other unrelated beneficial health effects attained through its positive regulation of a control molecule called SIRT1. Resveratrol activates SIRT1 in vitro and produces changes that mimic caloric restriction—the best-studied mechanism to maximize life span in living organisms.⁸⁴ SIRT1 switches off production of many inflammatory cytokines that contribute to cancer promotion.⁸⁵ When cells are co-cultured with resveratrol before exposure to alcohol metabolites, they produce many fewer inflammatory cytokines—the result of SIRT1 activation.⁸⁵ Together all of these mechanisms contribute to resveratrol's potent anticancer effects.



Summary

A landmark 2011 study revealed that drinking alcohol may account for 1 out of 10 cancer cases in men and 1 in 30 for women. Even *modest* alcohol consumption was found to increase risk for most forms of cancer. This occurs owing to a little-known process in which your body converts alcohol into *acetaldehyde*, an officially classified carcinogen.

Acetaldehyde boosts cancer risk by inflicting oxidative stress that damages DNA, prevents DNA repair, and triggers a pro-inflammatory cascade.

You can help neutralize these cancer-inducing effects through a comprehensive nutritional regimen. These include plant-based compounds like silymarin from milk thistle extract, resveratrol, grape seed extract, and barley grass. Increasing intake of specific vitamins and minerals can help you restore those depleted from your body as a result of alcohol consumption, including selenium, vitamin B6 and folic acid.

It is especially important to take nutrients like benfotiamine, N-acetyl cysteine (NAC), vitamin C and SAME before or while ingesting alcohol. If you forget, take these nutrients immediately after alcohol ingestion. ●

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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Table 2. Smoking- and Alcohol-Related Cancer Risk: 1965-2008

Smoking prevalence in US, 1965	40%⁸⁶
Smoking prevalence in US, 1987	29%⁸⁶
Percent of cancers preventable by elimination of cigarette smoking	30%⁸⁶
Percent of mouth, esophagus, and lung cancer preventable by not smoking	90%⁸⁶
Reduction in deaths from smoking, cholesterol, blood pressure, and physical inactivity, 2000 vs. 1980	308,900⁸⁷
Life-years gained through reduction in smoking, cholesterol, blood pressure, and physical inactivity	2,770,500 life-years⁸⁷
Reduction in smoking-attributable cancer deaths, 1979-2005	8.9%⁸⁸
Reduction in smoking-attributable cancer deaths in California (state-sponsored tobacco control program), 1979-2005	25.7%⁸⁸
Percent of cancers related to alcohol consumption, 2008	Up to 44%⁸⁸

Despite plummeting rates of smoking-related cancers, alcohol-related cancer rates remain high.



Table 3. Impact of Alcohol Drinking on Cancer Rates, 2011⁸⁸

	Men	Women
Cancer Incidence Attributable to Alcohol Consumption (Total)	10%	3%
For Oral, Esophageal, and Tracheal Cancers	44%	25%
For Liver Cancer	33%	18%
For Colorectal Cancer	17%	4%
Female Breast Cancer	-	5%
Percentage of Total Alcohol-Related Cancers Attributable to Alcohol Consumption Greater than Recommended Upper Limit	19%	4%

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

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

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

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

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

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

Super K formula provides in just one daily softgel:

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



Item #01224

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

Contains tree nuts (coconut).

Warning to Coumadin® (warfarin) Drug Users

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

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

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

Unleash the Power of the Milk Thistle Seed

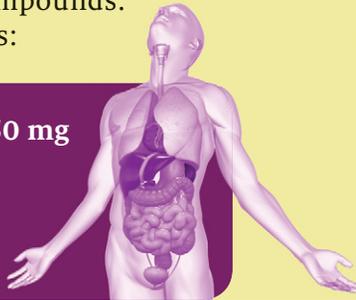


Milk thistle extract has long been thought of as one of nature's most potent weapons to support *human health*, but until recently, the technology hasn't been available to fully harness this plant's potential. Among the compounds waiting to be unlocked are a slew of *nourishing antioxidants* and flavonolignans valued for their role in *ensuring healthy liver function*.^{1*}

Life Extension® has uncovered an advanced extraction technology that has enabled scientists to isolate silymarin constituents and to test their efficacy against various cell lines. Among the compounds tested, silymarin constituents **isosilybin A and B** proved to be the most efficient in maintaining healthy cell division.²

Certified European Milk Thistle is the first milk thistle extract to contain standardized, high potencies of **silymarin, silibinins, and isosilybin A and B**—providing the full spectrum of milk thistle's liver and prostate protective compounds. Each capsule of this advanced formula provides:

Milk Thistle (*Silybum marianum*) Extract (seed) 750 mg
[std. to 80% Silymarin (600 mg),
30% Silibinins (225 mg),
and 8% Isosilybin A and Isosilybin B (60 mg)]



A 120 vegetarian capsule bottle of **Certified European Milk Thistle** retails for \$52. If a member buys four bottles, the cost is reduced to only **\$36** per bottle—a **savings of nearly one third!** Each bottle will last a healthy person for at least three months.

Compare the price of **Certified European Milk Thistle** to commercial silymarin supplements, and members will see that this new formula is available at one of the lowest costs per milligram—with standardized concentrations of **silibinins** and **isosilybin A and B** not found in other milk thistle extracts!

Reference

1. *Pak J Pharm Sci*. 2008 Jul;21(3):249-54
2. *Cancer Res*. 2005 May 15;65(10):4448-57.

Contains rice.



Item # 01517

To order
Certified European Milk Thistle
call 1-800-544-4440
or visit
www.LifeExtension.com

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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 **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 the **ANTI-ALCOHOL ANTIOXIDANTS with HepatoProtection Complex** provides:

Vitamin C (as ascorbic acid)	3000 mg
Vitamin E (as d-alpha tocopheryl)	50 IU
Thiamine (vitamin B1) (as thiamine HCl)	100 mg
Zinc (as zinc oxide)	8 mg
Selenium (as sodium selenate)	25 mcg
N-acetyl-L-cysteine	1200 mg
Glutathione (reduced)	50 mg
Benfotiamine	750 mg
HEPATO PROTECTION COMPLEX	
Chlorophyllin (from sodium magnesium chlorophyllin)	20 mg
Leucoselect® grape seed (<i>Vitis vinifera</i>) extract (seeds)	20 mg std. proanthocyanidins
Silymarin [from Milk Thistle (<i>Silybum marianum</i>) extract (seed)]	20 mg
Picroliv® (<i>Picrorhiza kurroa</i>) extract (root) std. kutkin	15 mg
Barley Grass (<i>Hordeum vulgare</i>) whole powder (leaves)	15 mg
Trans-resveratrol [from <i>Polygonum cuspidatum</i> (root) and whole red grape (<i>Vitis vinifera</i>) extracts] [also supplying glycosides (polydatin)]	5 mg

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2. *Artery*. 1995;21(6):312-6.
3. *Biochem Pharmacol*. 1994 Aug 3;48(3):621-4.
4. *Alcohol*. 1999 Feb;17(2):163-8.
5. *Fiziol Zh*. 1996;42(1-2):65-72.
6. *Neuroreport*. 1999 Jun 3;10(8):1799-801.

Contains soybeans and rice.

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.

CR Way™



Success Stories

Real People Who Have Changed Their Lives by Altering Calorie Intake

BY PAUL MCGLOTHIN AND MEREDITH AVERILL

Have you ever wondered what it would be like to go back in time—to recapture the vigor and looks you had at a time when you were younger? And if you suffer from a disease, imagine what it would be like to reverse the course of that disease. Perhaps you could stop taking an expensive medication or protect against hereditary ailments that run in your family and spend time enjoying life more.

This is not the stuff of science fiction, but the reality that many members of LivingTheCRWay.com experience. While there are no guarantees, this is what many LivingTheCRWay members are living: They have learned how to put the science of calorie restriction (CR) into practice in their lives—in a way that fits *their* temperaments and needs.

This article describes individuals who have made remarkable strides in extending healthy life span by reducing calorie intake. >>

Success Stories

What if you are young—late teens or early twenties, for example? How would you like to preserve your ability to think and function at youthful levels many years longer than you had ever thought possible?

Anthony

Just the right time to meet Anthony Graziano, a 25-year-old self-employed Web marketer and consultant in metropolitan New Jersey with wide-ranging interests, from science and health to philosophy, psychology, and fashion. Anthony's story is not one of before and after but rather one of unusual insight: At age 15 he noticed that he felt better when he ate less, so he decided to eat less more purposefully.

At that age Anthony measured 5'9.5" and weighed 160 pounds, giving him a body mass index (BMI*) of 23.3—perfectly healthy. "While I could have summed up my goals as 'live long and prosper,' I did especially value cognitive enhancement—not fully understood or realized at age 15 but subtly noticed and sought out—including substantial elevations in overall mood. And who am I kidding? Pure vanity: I loved to look good. Feeling better and looking better feed an infinite loop of sorts— aspiring toward constant improvement of both by any means available after acquiring the knowledge to do so."

"As for attaining my goals, I feel that every cleared hurdle is the starting point for the next one. I've attained

all that I've attained, and I consider that complete success for what it is and an unshakable foundation for further progress."

We asked Anthony what aspects of the CR Way™ help him the most regarding the lifestyle itself:

1. "As is recommended, I intentionally exercise moderately, splitting my time between strength training and low intensity aerobics with brief high-intensity bursts."
2. "For me, stress management is an automatic background process. Close your eyes and focus your mind (and thus your actions) properly and the stress will wash away as effortlessly as rinsing dirt from one's hands."
3. "Regular, sound sleep is near-perfect."
4. "I have ALWAYS looked for the science behind the benefits of any activity that I pursue for my health. I relate very strongly to this aspect of the CR Way™."

"My response to the overall nature of the lifestyle started upon finding Paul and Meredith's CR Way™: Wow! For the first time, here's an approach that reflects 'getting it' and really understanding things with full integration very seldom seen—the kind of mental integration I felt I had, was constantly working to improve, and desperately wanted to see more of in others: I'd found it!"



We then asked Anthony about his current CR goals and how his height and weight has changed since age 15. “I am 5’11” and 145 pounds, so my BMI is 20.2 now. I’m always observing the current research and looking for ways to improve upon things. Current goals at this point involve maintaining as best I can and for as long as I can my present state of robust, excellent health and mental well-being. Central to this is maintaining and enhancing my cognitive capabilities. Based on my reading of the literature and personal experimentation, the most important factor for this involves keeping the overall rate of calorie absorption slow—with the absolute amounts somewhat lower as well.”

“Everyone focuses on the various ‘indexes’ for carbohydrates. The same concept applies to fats and proteins. A high-nutrient, moderately reduced-calorie diet, with reduction across the macronutrients, has granted me a higher level of mental acuity than I ever thought possible. It seems to me that many people live with a level of ‘brain fog’ that is essentially accepted as normal. Occasionally they experience bursts of clarity; ‘one of my better days.’ Increase the intensity of that clarity further still and imagine having that as your constant state of awareness! That is how I feel, and I think *Life Extension*® readers can too.”

Wendy

Now, we’d like to introduce Wendy Silverman.

She is the married mother of three boys—including twins in nursery school—while also being a top New York publishing executive. Wendy is an appealing person to meet, and to tell you her success story, we asked her some questions:

What was your BMI before starting to practice the CR Way™? “Two years after I had the (four-year-old) twins, my BMI was still 31 (this is considered medically obese). That’s when I started the CR Way™—a year and a half ago.”

What were your initial goals? “My very clear goal was to eat whole foods—which, in turn, would improve my weight and health. I had this goal before learning about CR. And I’ve attained this goal 100%. I’ve been eating just about all unprocessed foods: I’m healthier than ever, and my BMI is now 21.7, tops.”

What aspects of the CR Way™ have helped you most? “To start at the beginning: I love that instead of rigidity, the CR Way™ specializes in flexibility, saying that it’s best if we each develop the CR Way™ *our* way. So I started by simply telling myself to eat as much as I wanted of foods with only one ingredient. When you look at food that way, you really notice just how many ingredients are needlessly added.”



What You Need to Know

The CR Way™

- Caloric restriction is an effective way to recapture the vigor of youth while boosting energy, reducing the markers of aging, and potentially lengthening life span.
- Many individuals find support for following a CR lifestyle through LivingTheCRWay.com and *The CR Way*™.
- Individuals who practice caloric restriction report a wealth of health benefits ranging from healthy body weight and body fat to optimized cholesterol and blood pressure, as well as increased mental clarity, elevated mood, and renewed physical energy.
- The CR Way™ can be customized to fit your preferences and lifestyle, ensuring your success as you pursue this groundbreaking way of life.

“Now, looking back, I am so humbled by what I have accomplished and learned from practicing the CR Way™. Unlike at any other time in my life, I am very clear today about the effects that different foods have on my body and health. I have read *The CR Way™* about five times and continue to pick it up for a refresher whenever I forget something.”

What are your current CR Way™ goals? “I would like to maintain my health and happiness—which is almost a given when you follow the CR Way™. I am confident that I will always follow this path, so my goals are to continue to improve upon the healthy stats (lab test results) I have already attained.”

Wendy went on to tell us that she finds the reactions of others quite interesting: “I often hear ‘I could never eat that,’ or ‘I enjoy food too much,’ or ‘You are getting too thin.’ The truth is that I am enjoying food more than I ever have in my life—really experiencing it. And my weight is completely in the normal range: I’m just thinner than lots of other people. On the other hand, I am constantly being asked what I am doing, and people take great interest in my answer. And they buy *The CR Way™* when I tell them about it.”

Bhavani

Our third success story is from Bhavani Lorraine Nelson of Lenox, MA, an inspiring spiritual teacher of meditation, stress management, and the healing power of sound. At 70 years young, she leads workshops at Kripalu Center for Yoga and Health and around the globe. She is also a Distinguished Toastmaster in Toastmasters International. She tells us her story:

“I was heavy from childhood, but always fairly fit. Like many, I struggled with my weight ‘issue’ and would periodically slim down on a particular eating regimen—some more healthful than others—then, with stressors probably not so unique to me, the weight would come back, and then some.”

“Between 2005 and 2008, I experienced three leg-fracture accidents that put me in a wheelchair for long periods of inactivity. That wreaked havoc on my muscle strength and bone density, and caused an unhealthy weight gain. In early 2009 my BMI was 45.3 (this is medically classified as morbidly obese) and my fat percentage, which to me is an even more important metric of health, was 47% on a DEXA scan. But in March of that year, I began doing better with my eating habits, and in May I started serious weightlifting, guided by a trainer.”

“I had been curious for years about the research done on CR with animals and then with humans, and had thought about trying that approach. I was looking for a program that was sound scientifically—something that produced optimum health for a lifetime, not

a diet to go ‘on’ for weight loss and then go ‘off.’ I researched the topic on the Internet and found the CR Society and various books, including *The CR Way™* by Paul McGlothlin and Meredith Averill, which I purchased.”

“Then I discovered that by joining the LivingTheCRWay website as a paying member, I could have Paul and Meredith as my personal CR lifestyle trainers, and **that changed everything**. Through full access to the website and their telephone conferences, I soon got that there was a lot more to an effective CR lifestyle than simply limiting calories.”

“In the fall and winter of 2009, I began incorporating more CR Way™ principles and in January 2010 began taking advantage of Paul and Meredith’s Living The CR Way™ teleconferences, which made a huge difference for me. Not only was I benefiting from the knowledge in the book, but I got to join a community of people who are on a similar journey.”

“What **I appreciate about Paul and Meredith** is that they are not just ‘up’ on all the current research in this field, they are the subjects of much of the research and have initiated some of it, so you know you are getting the latest findings.”

“I also benefit from hearing others’ questions and comments on the calls. And they remind me that I’m part of a world-wide community of people who are interested in pursuing this way of healthful living for health and longevity.”

“I’m certainly not perfect in following all the principles of the CR Way™, but Paul and Meredith always graciously say that we should each live the CR Way™ in our *own* way. Talking with them and with the whole group on the Living The CR Way™ teleconferences has become a wonderful part of my CR Way™ life.”



Bhavani Lorraine Nelson,
Before picture: Bhavani at 264 lbs.
After picture: Bhavani currently at 154 lbs.

“My initial goal was to get strong and healthfully fit again. I didn’t have an exact goal for my weight, though I did have a series of small goals to mark milestones on my way. I knew that the more healthfully I ate and the more consistently I worked out, the more my body would find its way to its preferred healthful weight. I was more concerned with my body fat percentage. I was and still am aiming for a fat percentage of 22%.”

“In September 2010, 18 months after beginning my weight-loss journey and a year after beginning to travel the CR Way™, I **achieved a weight loss of 100 pounds**. At this point I’ve lost another ten, and have totally attained my goal of being strong again and healthfully fit. I now hop up curbs and climb stairs easily. Along the way I bade farewell to blood pressure- and cholesterol-lowering medications and my biomarkers are now pretty terrific. My current BMI is 26.4 and my percentage of fat from the latest DEXA scan is 29%.”

“With a few physical setbacks—sprained feet from mountain climbing and now a torn rotator cuff to deal with, my weight loss has stalled for the moment, but **my goal** is to keep eating the best way I can and exercising wisely so that the body can continue its journey to maximum health.”

“I believe **one of the reasons I was able to succeed** and can look forward to continued success with my eating plan is that the CR Way™ provides a different mindset. I’m not ‘dieting.’ Instead I’m eating in a way that makes me really healthy—and may even enable me to live longer. With all the latest research information provided by Paul and Meredith, I feel I’ve brought my way of being with food into the 21st century. It’s a great joy. The results are visible—and I feel terrific!”

The before pictures show her at 264 pounds and the (current) after photos at 154.

Greg

With that inspiration, consider the life-changing results gained by Dr. Greg Fickert, dental surgeon in his forties from Birmingham, UK:

What was your BMI before starting the CR Way™? And what were your initial goals? “In mid-January 2009 my BMI was 26.2. I’ve always been interested in good health. My experience with marathon running led me to believe that I was over-exercising, and it occurred to me that the CR Way™ might have a lot to teach me.”

How closely would you say that you have attained your goals? “Very closely: I’m in the best health of my adult life. Besides getting my weight to a healthy level, I no longer suffer from osteoarthritis. Before living the CR Way™, stair climbing required both feet to be on a step before going to the next one.”



What aspects of the CR Way™ have helped you most? “I especially appreciate the lifestyle’s foundation of science.”

What is your BMI now? And what are your current CR Way™ goals? “My weight stabilized that same year in early November at a BMI of 21.8. My natural goal became to maintain my improved health and get even healthier.”

When we first met Greg, it became clear that he had several foods in his diet that were not optimal. He also probably was exercising too much to activate CR biochemistry. Rather than say “Don’t do this” and “Don’t do that,” we just introduced basic CR Way™ principles to Greg and he took it from there. Greg was smart: He tested his biomarkers regularly (see “*The CR Way™ Benchmarks Panel*”),¹ making sure that his dietary changes had the desired effect. And, perhaps most important, he did not try to make huge dietary changes at first. Rather, he moved at his own pace, letting go of certain foods when he was ready. This is so important: The CR Way™ is most effective when people design a CR program that works for them—one that they can stick with. Chapter 3 of *The CR Way™*, “CR As You Like It”² can be a place to start.

Greg was kind enough to give us permission to share his results. (See chart on next page.)

Greg's CR Way™ Benchmarks Panel

	1/16/09	11/5/09	Change
Weight	170 lbs	141.5 lbs	28.5 lbs
This is a perfect weight. Thinner is not better.			
Lower Body Fat	21.4%	14.0%	down 7.4%
Upper Body fat %	23.3%	14.9%	down 8.4%
Upper Body Fat Weight	36.6 lbs	22.1 lbs	down 14.5 lbs. (Impedance measurement)
BMI	26.2	21.8	down 4.4—from the overweight range to the normal weight range
His BMI is almost exactly the same as Ralph Cornell, our CR Way™ mentor who lived more than 104 years—one of the longest-lived CR Way™ followers so far!			
Systolic BP	103	94	down 9 mmHg
Diastolic BP	87	72	down 15 mmHg
Super blood pressure: it may drop more as he continues.			
Resting Heart Rate	75	41	down 34
RHR is perfect.			
Ear Temperature	35.3C/ 95.5F	34.9C/ 94.8F	down 0.7F
Normal ear temperature range: 96.4°F to 100.4°F. Greg's lower body temp corresponds to other CR practitioners ³ and with animal studies, ⁴⁻⁶ showing that CR lowers body temperature, which is associated with longer life.			

2009	
Foods eliminated or very substantially reduced	
January	Alcohol
February	Cheese
March	Pastry and batter
April	Crisps/chips
May	Doughnuts, sweet pastry, naughty desserts
June	All fatty foods (1 cheat meal a week)
July	Carbohydrates (1 cheat meal a week) This means simple carbohydrates, not complex carbs. This is recommended for traveling the CR Way™ and is similar to the diet of long-lived Okinawans. ⁷
August	Eggs
September	Dairy
October	Anything not fully vegan
November	Processed foods

Other Lifestyle Changes

Exercise: reduction in running miles to around 50%: twice daily short runs to office and back (1 mile x 2) + 10k once a week.

This is a bit more than we recommend. However, continuing to do things you enjoy is very important. No one knows exactly how much exercise is best.⁸⁻¹²

Daily weight-lifting so each body part is exercised twice per week (12 reps x 2 as heavy as possible). Daily stretching or yoga 15 minutes. Karate 5 minutes a day + 2 hours on Sundays.

This is exactly the heavy weight routine recommended for traveling the CR Way™. Yoga and daily meditation are also recommended.

Motivating observations from Greg: “The positive effects of the less easily quantifiable results interests me most, e.g., mood status, libido, energy, stress management, for example. In addition, I keep waking up earlier than usual. In my “pre-CR” life this would be due to stress. Now it results from increased energy. I am sure my memory has improved as I seem able to recall and quote scientific papers, telephone numbers, names, and the like. At 46, I expected my eyesight to slowly deteriorate but it has actually IMPROVED! All these benefits cannot be coincidences.”

Greg is a highly motivated, accomplished individual in his personal life. Seeing him carry that into his CR practice—achieving a great deal in a short time—is wonderful. We imagine that he will enjoy even more benefits in the years to come, amazing his friends and family with his youthful life as the years roll by.

These successes can forecast yours. The CR Way™ is about practicing calorie restriction “as you like it.” It encourages molding proven CR science to individual needs. ●



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

Notes:

* **Body Mass Index (BMI)** is a measure that relates one's weight to height: The normal range starts at 18.5; overweight at 25; and obesity at 30.

To learn more about the CR Way™ or the CR Society International, visit www.LivingTheCRWay.com or www.CRSociety.org.

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MORE THAN JUST RESVERATROL

Life Extension® introduced **resveratrol** in 2003 to favorably alter **genes** that respond to **calorie restriction**. Since then, *additional* compounds have been discovered that enable cellular **DNA** to exhibit more youthful **gene expression**.

Just two capsules a day of **CR Mimetic Longevity Formula** supply:

Trans-Resveratrol is the form of resveratrol used in scientific studies documenting remarkable longevity-enhancing effects. You would have to drink many bottles of red wine to obtain a fraction of the **trans-resveratrol** (250 mg) found in **CR Mimetic Longevity Formula**.

Quercetin inhibits the actions of enzymes in the liver from rapidly breaking down resveratrol in the bloodstream, thus enabling **resveratrol** to remain active **longer** in the body.

Fisetin is an extract from strawberries that “switches on” cell signaling molecules that support youthful expression of longevity genes and works in synergy with resveratrol. You would have to eat two cups of **strawberries** to obtain the amount of **fisetin** contained in the **CR Mimetic Longevity Formula**.



Item # 01429

Pterostilbene directly activates genes “**downstream**” from the sites of resveratrol’s action, providing a powerful **complementary stimulus** to resveratrol’s ability to induce *youthful* gene expression. You would have to eat **135 cups of blueberries** to obtain the amount of **pterostilbene** contained in the **CR Mimetic Longevity Formula**.

Grape seed extract provides **proanthocyanidins** that have multiple health benefits and work together with resveratrol to trigger favorable **gene expression** changes.

Theaflavins from **black tea** suppress the deadly pro-inflammatory transcription factor NF-kB¹ and stimulate the longevity factor Forkhead box 1 (FOXO1) in invertebrate and mammalian cells.^{2,3} You would have to drink **12 six ounce cups of black tea** each day to obtain the amount of theaflavins contained in **CR Mimetic Longevity Formula**.

Two capsules a day of **CR Mimetic Longevity Formula** provide:

Trans-Resveratrol	250 mg	Pterostilbene	3 mg
Black Tea decaffeinated Theaflavins	300 mg	Fisetin	48 mg
Grape Seed Polyphenols	50 mg	Quercetin	150 mg

A bottle containing 60 vegetarian capsules of **CR Mimetic Longevity Formula** retails for \$39. If a member buys four bottles, the price is reduced to just **\$27** per bottle. The cost of taking the highly purified plant extracts individually would be significantly higher compared to the optimal doses found in **CR Mimetic Longevity Formula**.

References: 1. *Mol Nutr Food Res.* 2011;55:198-208 • 2. *Cancer Res.* 2000;60:6465-71 • 3. *Aging Cell.* 2008;7(1):69-77.

To order **CR Mimetic Longevity Formula**
call **1-800-544-4440** or visit **www.LifeExtension.com**

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

the CR way



CR Way Optimal Health Membership

LIVE BETTER LONGER!

Membership Benefits

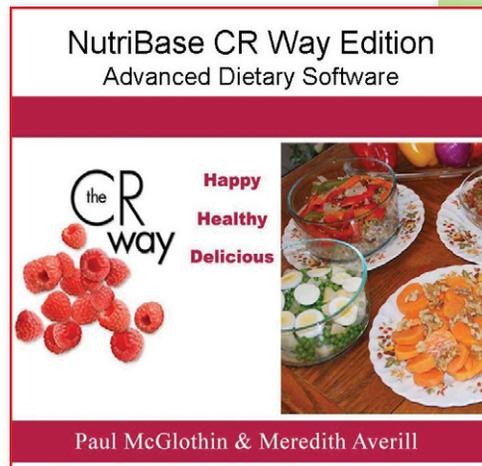
Expert Guidance!

CR Way™ experts Paul McGlothlin & Meredith Averill help you achieve your goals for better health. Join these renowned leaders in twice-monthly member teleconferences where you can ask the questions you need answers to.

Advanced Dietary Software!

Members receive the NutriBase CR Way Edition Software, the advanced diet and lifestyle manager that downloads in minutes to your home computer. Delicious recipes and food suggestions come preloaded.

Use it to help make it easy to lose weight, improve heart health, prevent or fight major diseases, lower blood sugar, manage exercise, and even improve your mood.



Quick-start Guide Speeds You on Your Way Happily!

You get online access to the *CR Way to Happy Dieting*, which shows you how to use your food and lifestyle to increase happiness, making a healthful diet satisfying and fun to follow. Using the quick-start guide lowers your stress and helps you avoid disease, too. It even offers a CR Way to Fast Foods Meal Plan for busy people who have no time to fix food but don't want to sacrifice their health.

This is a perfect holiday gift—even for yourself!

Become a CR Way Optimal Health Member

Call 1-800-544-4440 or visit www.LifeExtension.com/CR

Full Access to Life-transforming Content on LivingTheCRWay.com!

Protection From Disease

Help in preventing or fighting cancer; diabetes; osteoporosis; migraine headaches; muscle loss; and heart, kidney, Alzheimer's, and Parkinson's diseases!

The CR Way To Peak Performance

Your diet and lifestyle coach for performing at your best.

Getting Smarter

A blueprint for improving your brain power.

Long, Healthy Life

Introduction to the beneficial cellular changes that the CR Way is based on.

A Happier You

Strategies to relieve your stress and increase your happiness.

The Longevity Guide

Pointers for living to 100 and beyond!

Science Behind The Benefits

Description of the solid science that supports the benefits of Living the CR Way.

If you've priced top-level software packages, electronic diet guides, teleconferences with experts, and membership websites—you probably assume that the CR Way Optimal Health Membership costs thousands of dollars per year. Instead, we welcome you to get it all for **\$195!**

Begin your journey to a longer, healthier life!



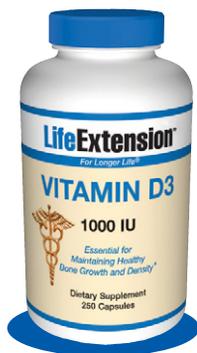
**OPTIMAL HEALTH
MEMBERSHIP**

Which VITAMIN D is Right for You?

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

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

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



Vitamin D3 1,000 IU 250 capsules

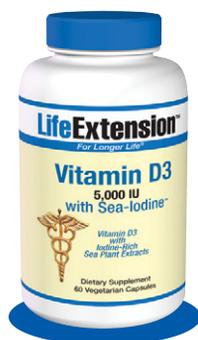
Retail: \$12.50

Four-bottle Member Price: \$8.44 ea.

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

Item # 00251

Please refer to website for allergen information.



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

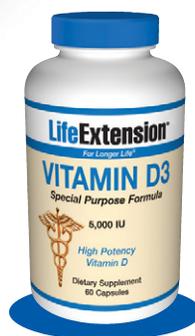
Retail: \$14

Four-bottle Member Price: \$9.38 ea.

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

Item # 01372

Please refer to website for allergen information.



Vitamin D3 5,000 IU 60 capsules

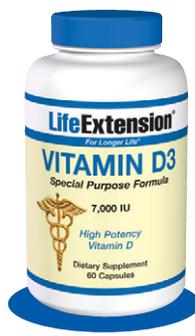
Retail: \$11

Four-bottle Member Price: \$7.43 ea.

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

Item # 00713

Please refer to website for allergen information.



Vitamin D3 7,000 IU 60 capsules

Retail: \$14

Four-bottle Member Price: \$9.45 ea.

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

Item # 01418

Please refer to website for allergen information.



Vitamin D3 Liquid Emulsion 2,000 IU 1 ounce

Retail: \$28

Four-bottle Member Price: \$18.75 ea.

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

Item # 00864

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

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

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

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

PURE, HEART HEALTHY Super Omega-3 EPA/DHA



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

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

Sesame Lignans and Standardized Olive Fruit Extract for Enhanced Benefits

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

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

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

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

A bottle containing 120 softgels of **Super Omega-3 EPA/DHA with Sesame Lignans and Olive Fruit Extract** retails for \$32. If a member buys four bottles, the price is reduced to just \$21 per bottle. If **10 bottles** are purchased, the cost is just **\$18.68** per bottle. Item # 01482

Item # 01482

Item # 01484

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

EPA Pure+™ Extract (eicosapentaenoic acid)	1400 mg
DHA Pure+™ Extract (docosahexaenoic acid)	1000 mg
Olive Fruit Extract [std. to 6.5% polyphenols (39 mg), 1.73% hydroxytyrosol/tyrosol (10.4 mg), 0.5% verbascoside/oleuropein (3 mg)]	600 mg
Sesame Seed Lignan Extract	20 mg

For those with sensitive stomachs, **Super Omega-3** is also available with **enteric coating** and retails for **\$34**. If a member buys four bottles, the price is reduced to **\$23.25** per bottle. If **10 bottles** are purchased, the cost is just **\$21** per bottle. Item # 01484

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

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

References:

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

IFOS™ certification mark is a registered trademark of Nutrasource Diagnostics, Inc. These products have been tested to the quality and purity standards of the IFOS™ program conducted at Nutrasource Diagnostics, Inc.





Outrageous FDA Delay Endangers Melanoma Victims

BY AIMEE DINGWELL

Of the three main types of skin cancer, **melanoma** is by far the most dangerous. One American dies of melanoma every hour, yet it is virtually 100% curable if detected in time.¹

Unfortunately, dermatologists may be missing up to **30%** of curable melanomas.¹

So you would think that when the FDA is presented with a **completely safe, non-invasive** device that can help diagnose early melanoma almost instantly, it would receive swift approval.

You would be wrong.

In this article, you will learn of the agency's ongoing and *unconscionable* two-year delay in approving **MelaFind**[®], a technologically advanced optical device that boasts a **98%** melanoma detection rate.

You will also discover how even as the FDA cited baseless concerns over MelaFind[®]'s "safety", they *fast-tracked* approval for a costly, mediocre melanoma drug costing **\$30,000 per dose** with potentially lethal side effects.

You will also find out how FDA bureaucracy and bias are sending lifesaving medical innovations like MelaFind[®] overseas—and *out of reach* for most Americans. >>

Melanoma Detection: Methods, Flaws, and Advances

Unlike other cancers that start inside the body, melanoma begins on the skin's surface and is typically curable if caught early. But early detection is often dependent on a doctor's ability to make educated decisions on which moles they feel are necessary to biopsy.

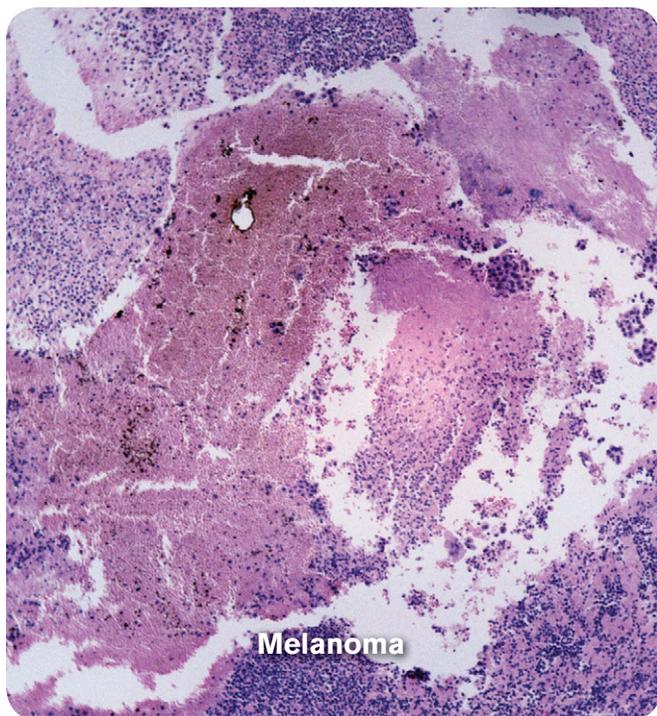
Dermatologists consider whether or not to biopsy the hardest decision they have to make on an hourly basis.

The reason?

The average middle-aged Caucasian has **50 to 60** variously colored moles, or lesions, all over the surface of his or her body. While there may be some that squarely fit the profile of a melanoma, frequently patients present with five, ten, or *more* suspicious moles.

To biopsy every suspicious lesion is cost-prohibitive and leaves the patient with multiple incisions and scars for life. Yet the only way to know for sure if a suspicious skin lesion is or is not an early-stage melanoma is to do a biopsy. Dermatologists are thus confronted with critical decisions as to which lesions to biopsy.

In that decision, according to Dr. Joseph V. Gulfo, CEO of the company that developed MelaFind®, dermatologists today are missing at least **30%** of curable melanomas. They also have to biopsy **50** benign lesions for every melanoma they do find. "Think about that. The value of a false positive is a minimal concern compared to missing a melanoma. Yet doctors are still



missing cancerous lesions. They don't want to miss, but they are."

Contrast this with **MelaFind®**, a multi-spectral camera combined with sophisticated algorithms and software to image each potentially cancerous lesion. The image is then compared against a database of more than **10,000** biopsied lesions and **600** confirmed melanomas to provide the dermatologist with an immediate reading.

Each lesion is categorized as: 1) unreadable; 2) positive (biopsy); or 3) negative. According to Gulfo, study results show that the device's positive reading is associated with a detection rate of more than **98%**, while the negative result is associated with a biopsy ratio of **7.6:1**. This means that with MelaFind® dermatologists only have to biopsy **7.6** suspicious lesions to diagnose **one** melanoma. "Right now you have doctors at a **70%** detection rate and up to a **50:1** biopsy rate," says Gulfo. "The number of lives saved would be impressive."

Without advanced technological devices like **MelaFind®**, dermatologists will continue to decide which moles should be biopsied—with the same rate of human error. This means they will have to do about 50 expensive, mutilating and time-consuming biopsies for every one melanoma diagnosed. In terms of health care cost efficiency alone, MelaFind® represents a much-needed productivity advance.

For this reason, researchers consider MelaFind® to be a lifesaving innovation, one the medical community welcomes. "I can speak for my colleagues," said Dr. Darrell Rigel, a professor of clinical dermatology at New York University. "The first response when hearing about MelaFind® is 'When is it going to be available?'"

Bureaucratic Inefficiency Blocks Innovation

While **MelaFind®** is safe and non-invasive, it is the first of its kind. The device is an enormous advance.

Knowing this could prompt extra interest by regulatory officials, Gulfo, who is a veteran of drug development, decided to be more aggressive than most device applications. He spent a year upfront with the FDA, meeting with the agency three times to determine the best study design and define parameters for safety and effectiveness.

The product's application received expedited review status by the FDA's Center for Devices and Radiologic Health and the company successfully entered into a binding protocol agreement, of which only about 10-12 have ever been agreed to by the FDA, noted Gulfo.

The company then conducted the largest study ever done for melanoma diagnosis. “We approached this with the discipline, the rigor, the stringency of a drug and biologic,” he said. “The approval pathway is very similar to a cancer drug or biologic cancer trial. You need one pivotal trial. And that’s what we did,” he said.

Gulfo submitted the product for approval in **June 2009**, limiting its use to dermatologists. The FDA later asked Gulfo to expand the scope of the device to general physicians as well. In November 2010, an FDA panel voted **8-7** (with one abstention) to approve the diagnostic, with members objecting on grounds of safety, stating that the risk of a misdiagnosis from an “unequivocal finding” outweighed the benefit of the significant improvement in early detection. Overlooked by the FDA are the suspicious lesions that are not biopsied because of a judgment error on the part of a dermatologist.

Under the FDA’s review process Advisory Panel Committee votes are used as recommendations for approval to the Commissioner.

Positive panel votes do not guarantee approval—and approval has yet to be granted by the FDA.

Citizens Petition for Lifesaving Technology

The company has since filed two amendments to the application to address the FDA’s concerns with the device, including now limiting its scope to dermatologists and creating a training program, but has had no FDA response despite repeated requests for a meeting.

This silence prompted the company to file a first-ever Citizens Petition in May 2011, which legally demands current FDA Commissioner Dr. Margaret Hamburg to provide a response within 180 days. “We’re inviting the commissioner to shine as big a light as possible on the review, because we want transparency,” said Gulfo. “We have done everything we can to make the benefit-risk evaluation as emphatically positive as possible for the product and stop one American an hour dying from melanomas being missed. Now it is up to the FDA.”

Despite all this, the **MelaFind**® device is *still* under review, some two years after submission to the FDA’s Center for Devices and Radiological Health.

Ultimately the FDA claims its reasoning for withholding approval is *safety*.

The agency wants an additional trial to be conducted despite having previously outlined approval requirements as part of the initial protocol agreement. Certain members of the committee were concerned that a non-dermatologist would misinterpret



Melanoma

- One American dies of melanoma every hour, yet it is 100% curable if detected in time.
- Owing to flawed methodology, dermatologists may be missing up to **30%** of curable melanomas.
- An application was filed in June 2009 for **MelaFind**®, a completely safe, non-invasive device that can help diagnose early melanoma with **98%** accuracy.
- Citing concerns over “safety,” the FDA is still reviewing the application for this lifesaving technology, while fast-tracking approval for ipilimumab (Yervoy™), a \$30,000-per-dose, largely ineffective melanoma drug with potentially lethal side effects, including **enterocolitis, hepatitis, dermatitis, and neuropathy**.
- MelaFind® was readily approved by the European Union in September 2011, while the technology languishes here in the US thanks to the FDA.
- Reports show that FDA bureaucracy and bias are sending other lifesaving innovations like MelaFind® overseas and out of reach for most Americans.



the device's unreadable findings as an absence of disease, an assertion that Gulfo and other dermatologists find to be out of touch with how real-world medicine works and infuriating given the device was originally intended to be used only by dermatologists.

"Their concern was that a non-dermatologist would not know what to do with unequivocal results," said Gulfo. "I do not agree with that at all. That would be like an OB/GYN saying that because a mammogram is unreadable, there is nothing to worry about. The correct response for an OB/GYN is to state 'I am sorry. I need you to come back for another mammogram or even better, obtain a far more accurate MRI of the breasts that does not emit cancer-causing radiation.'"

Dangerous \$30,000-Per-Dose-Drug Approved in Record Time

Meanwhile, in March 2011, the FDA's Center for Biologics Evaluation and Research approved a drug called Yervoy™ (ipilimumab) to treat advanced melanoma, based on data that the drug extended survival by about *four months*.

Yet it has potentially life-threatening side effects that are so severe that the FDA required manufacturer Bristol-Myers Squibb to place a boxed warning on its prescribing information and documentation.

The side effects relate to immune-mediated adverse reactions due to T-cell activation and proliferation, including **enterocolitis, hepatitis, dermatitis, neuropathy, and endocrinopathy**.

Still, Yervoy™ was approved in record time under priority review in just seven months. "I'm a huge fan of anything that can help patients," said Gulfo. "But the data are that, while there were some great responders, overall ipilimumab (Yervoy™) added just four months of life. Four months of the least productive, lowest quality, and most expensive life." Yervoy™ costs about **\$120,000** for four doses. That equates to **\$30,000** dollars a month of life riddled with horrific side effects, though use of Yervoy™ in earlier-stage melanoma patients might eventually prove to be more cost effective.

"Detect melanoma at the earliest, most curable stage," noted Gulfo, "and you'll have forty years of high quality life! One of the massive ironies here is there is a tremendous disconnect between the FDA's laudable goals and what is happening as they stymie innovation that could save lives," Gulfo said. "It's almost as if the FDA didn't get the memo."

Bureaucratic Resistance Exports Innovation Overseas

Gulfo blames the delay on what he calls "innovation inertia," fostered in part by the FDA's long history of turnover and unstable leadership. In the last nine years, the beleaguered agency has had four commissioners, dotted by excessive periods of no leadership in between posts. "Yes, continuity is a big problem at the FDA," said Gulfo, "and it is worse on the device side." In February, FDA's Center for Devices and Radiologic

Europeans Benefit As Americans Die

In September 2011, **MelaFind®** was approved for use by dermatologists throughout the European Union, with initial introduction into the German healthcare system.

Incidence of melanoma has *doubled* in Germany over the past 10 years, where melanoma mortality rates are the highest in Europe. Approximately 20,000 Germans will be diagnosed with melanoma by 2016.²

Compare that to the US, where melanoma rates have risen steadily over the past 30 years, with an expected **70,230**³ new cases in 2011 alone.

Thanks to the European Union's enlightened approval process, driven by hard science and public interest rather than profiteering and industry bias, Germans will now benefit from a technology that may *eliminate* skin cancer deaths.

American melanoma victims in the meantime run a higher risk of missed diagnoses and death as the **98% accurate** MelaFind® technology languishes in the limbo of the FDA's irrational and *irresponsible* approval process.



Health (CDRH) Director Dr. Jeffrey Shuren testified before the Subcommittee on Health of the Committee on Energy and Commerce that high rates of turnover were affecting the center's ability to efficiently approve product applications.⁴ The result is stymied innovation and unnecessary delays in the availability of life-saving products for the public.

Just weeks before, FDA and CRDH launched the "Innovation Pathway" program, "a priority review program for new, breakthrough medical devices designed to encourage cutting-edge technologies among medical device manufacturers," according to an FDA press release.⁵ The program is meant to "accelerate the development and regulatory evaluation of innovative medical devices."

"So here you have another irony," said Gulfo. "We have just what the innovative program is stated to be looking for and it is right in front of them."

While the FDA appears to want to fuel innovation, the reality is that it is more comfortable approving a toxic, late-stage cancer drug—a familiar model in drug development—than approving a safe, non-

invasive diagnostic device because it is novel. "Yervoy™ is a pretty common story in cancer drug approval," said Gulfo. "Drug developed for late-stage disease shows some reasonable benefit. In fact, that is every story in cancer drug approval. But we are a breakthrough."

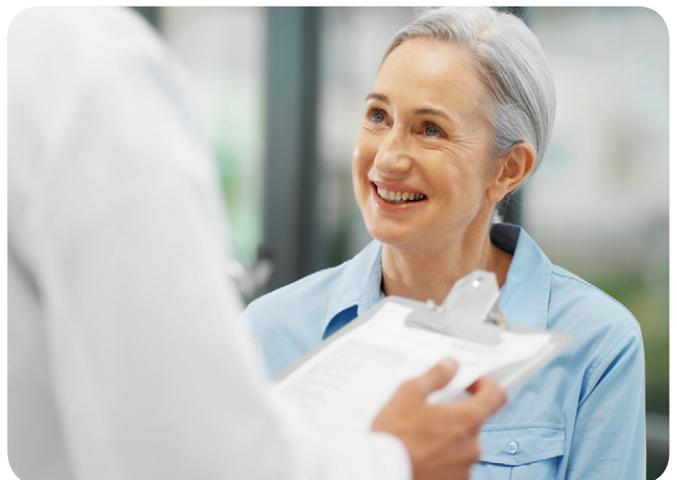
It is this apparent aversion to progress and bureaucratic nitpicking that is causing patient groups, industry groups, and investment groups to sound the alarms that FDA's policies and procedures are burdensome, unclear, and threatening medical innovation itself. "Venture capitalists are openly saying they won't invest in companies if trials are done in the United States because they don't want their returns to be based on an FDA decision," said Gulfo. "So innovation is leaving America. Not even the big companies are doing their innovative work here."

Earlier this year, a report by investment house PriceWaterhouseCoopers showed that medical technology innovation, long centered in the United States, is moving offshore and that US consumers could eventually be the last to have access to innovative medical technology.⁶

A second survey of more than 350 medical device development experts sponsored by the Institute for Health Technology Studies at Northwestern University found that two-thirds of small medical device and diagnostic firms look to Europe for their first regulatory clearances.⁷

Not surprisingly, **MelaFind®** has already been approved for use in the European Union. (See Sidebar.)

"We are a test case. Everybody is watching this. We hit every endpoint and we hit every part of the innovation program. If FDA doesn't approve this—we say innovation is leaving, investment is drying up—it's all gone," said Gulfo. "If this doesn't get approved, it's the death knell. This case is much bigger than just **MelaFind®**. I believe a whole industry is at stake."



Summary

One American dies of melanoma every hour, yet it is virtually 100% curable if detected in time. Owing to flawed methodology, dermatologists may be missing up to 30% of curable melanomas.

An application was filed in June 2009 for **MelaFind®**, a completely safe, advanced optical diagnostic device that can help diagnose early melanoma with **98%** accuracy. Citing concerns over “safety,” the FDA is still reviewing the application for this lifesaving technology, while *fast-tracking* approval for ipilimumab (Yervoy™), a \$30,000-per-dose, largely ineffective melanoma drug with potentially lethal side effects.

MelaFind® was approved by the European Union in September 2011, while the technology languishes here in the US thanks to the FDA. Numerous reports show that FDA bureaucracy and bias are sending other life-saving medical innovations like MelaFind® overseas and out of reach for most Americans. ●

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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BREAKING NEWS AS WE GO TO PRESS

FDA Succumbs to Pressure, MelaFind® Now “Approvable”

The FDA's seven-year war against common sense and logic in the case of MELA Sciences Inc.'s MelaFind® device may be finally coming to an end. After nearly a decade of ignorance and obstruction, the FDA is reversing an earlier decision that flatly rejected the MelaFind® device, costing untold lives in the process. In a *Wall Street Journal* article that appeared on September 27th, 2011, written by Thomas M. Burton, it was revealed that the FDA sent a letter to MELA Sciences Inc. stating its intention to review the device for approval. Inherent in this reversal is the acknowledgement by Dr. Jeffrey Shuren, the FDA's top regulator, that his staff “made the wrong call” when they decided to reject the device before ever holding a meeting of its advisors to discuss it.¹⁰

The government ineptitude on display should come as no shock to readers of this magazine. The original decision carried with it lethal consequences for sufferers of cancerous lesions that may have been detected earlier with the advanced technology offered by MelaFind®. Thankfully, the company filed a citizen's petition that forced the FDA to review the case and acknowledge its error. As we wait for the government to move at its normal excruciatingly slow pace to get this device in the hands of dermatologists, MelaFind® has already won approval for marketing in 27 European nations.

What is Melanoma?

Melanoma is the deadliest form of skin cancer, and if not caught early, it is one of the deadliest of *all* cancers, as there is no effective treatment for late-stage disease.

What's more troubling is melanoma is on the rise. Over the last 25 years, the incidence of melanoma in the US has nearly quadrupled, according to the National Cancer Institute. Last year, **68,130** Americans were diagnosed with melanoma, and **8,700** lost their lives to this deadly skin cancer. Its main risk factors? Sun exposure and family history.⁹

So what is melanoma? We all have freckles and moles. Melanomas are atypical moles. Excessive sun exposure can cause the uncontrolled growth of skin pigment cells called melanocytes, leading to lesions that may look like harmless, slightly irregular moles, when, in fact, a serious cancer is growing just under the skin. And while melanomas typically appear on the shoulders, legs and hips, they can show up anywhere on the body, including the scalp, between the toes, and rarely, internally.

The hallmark characteristics of a melanoma mole have been labeled the **ABCDEs** of melanoma:⁹

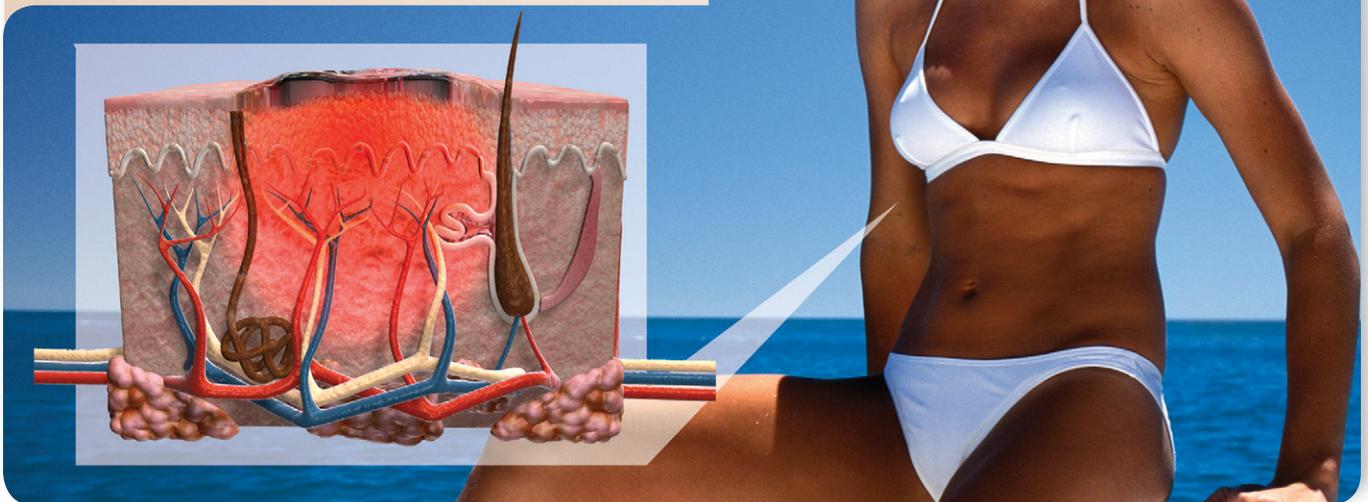
- A – Asymmetry** (one half of the mole is different than the other half)
- B – Border irregularity** (mole has uneven, fuzzy, notched or scalloped edges)
- C – Color changes** or multiple colors (usually blue, black, or dark brown)
- D – Diameter** greater than 6 mm (larger than the width of a pencil eraser)
- E – Evolving** (a change in ABC or D within weeks or months)

If caught early, however, melanoma is almost **100%** curable. But the line between life and death is very thin, literally. According to Dr. Darrell Rigel, a professor of clinical dermatology at New York University's Langone Medical Center, the most important prognostic factor for survival in melanoma is the thickness of the mole, or how far down the melanoma has penetrated into the skin.

Most people will survive having a melanoma if it is removed when it is 1/32nd of an inch, or .75 mm deep. However, less than **50%** of people will survive a melanoma that is 1/8th of an inch deep.

You are at an increased risk for melanoma if you have fair skin, many irregular moles, a personal or family history of melanoma or other skin cancers, or a history of excessive sun exposure, severe sunburns, or frequent use of tanning beds. *However, studies have shown that about 50% of people who develop melanoma have no risk factors.*

For these reasons, taking preventive measures, like wearing SPF clothing and adequate sunscreen whenever you plan to be in the sun, eating right, exercising, and being vigilant about early detection, are essential to defending against melanoma and saving your life.



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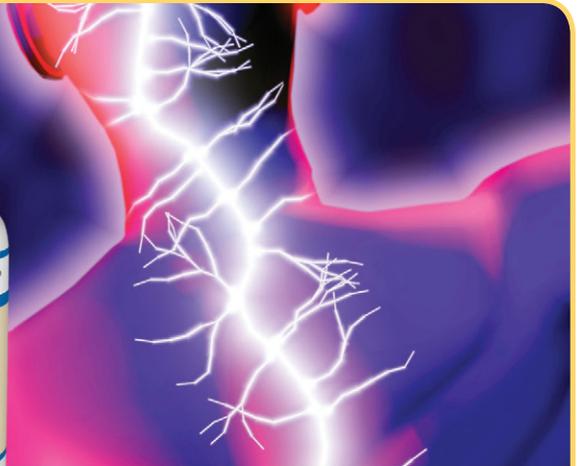
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Estradiol Homocysteine
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BUN BUN/Creatinine Ratio
Creatinine Uric Acid</p> <p>BLOOD PROTEIN LEVELS
Total Protein Globulin
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This test is used to rule out vitamin D deficiency as a cause of bone disease. It can also be used to identify hypercalcemia.</p> <p>○ FOOD SAFE ALLERGY TEST (LCM73001) \$174
This test measures delayed (IgG) food allergies for 95 common foods.</p> <p>○ CYTOKINE PANEL (LCCYT)* \$399
Includes TNF-alpha, IL-6, IL-1 beta and IL-8. Cytokines are proteins that modulate the inflammatory response. This panel is used to identify elevated levels of specific cytokines.</p> <p>○ OMEGA SCORE™™™ (LCOMEGA) \$131.25
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>○ COQ10* (COENZYME Q10) (LC120251) \$145
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.



MOST POPULAR SINGLE TESTS

Life Extension Member Pricing

- | | | | |
|---|----------------|--|--------------|
| <input type="radio"/> HORMONES
CORTISOL (LC004051)
This test is to measure adrenal function. | \$39 | <input type="radio"/> CARDIAC RISK
Lp-PLA2 (PLAC TEST)* (LC123240)
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. | \$125 |
| <input type="radio"/> ADRENOCORTICOTROPIC HORMONE (ACTH)* (LC004440)
A pituitary function test useful in evaluating adrenocortical dysfunction. | \$91.50 | <input type="radio"/> C-REACTIVE PROTEIN (HIGH-SENSITIVITY) (LC120766)
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. | \$42 |
| <input type="radio"/> DHEA-SULFATE (LC004020)
This test shows if you are taking the proper amount of DHEA. This test normally costs \$100 or more at commercial laboratories. | \$61 | <input type="radio"/> APOLIPOPROTEIN ASSESSMENT (APO A1 + APO B + RATIO) (LC216010)
This ratio correlates with risk of coronary artery disease and is useful in the presence of borderline elevations of cholesterol. | \$55 |
| <input type="radio"/> DIHYDROTESTOSTERONE (DHT)* (LC500142)
Measures serum concentrations of DHT. | \$99 | <input type="radio"/> FIBRINOGEN* (LC001610)
High levels of this blood-clotting factor increase the risk of heart attack and stroke. | \$31 |
| <input type="radio"/> ESTRADIOL (LC004515)
For men and women. Determines the proper amount in the body. | \$33 | <input type="radio"/> HOMOCYSTEINE (LC706994)
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 and vitamin B6. | \$64 |
| <input type="radio"/> INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 3 (IGFBP3) (LC140152)
Elevated levels in hypertensive individuals have been associated with a nine-fold increase of carotid arteriosclerosis. | \$47 | <input type="radio"/> VAP™ TEST (LC804500)
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. | \$90 |
| <input type="radio"/> INSULIN FASTING* (LC004333)
Can predict those at risk of diabetes, obesity, and heart and other diseases. | \$42 | <input type="radio"/> MALE HEALTH
PSA (PROSTATE-SPECIFIC ANTIGEN) (LC010322)
Can provide an early warning sign for prostate disorders and possible cancer. | \$31 |
| <input type="radio"/> PREGNENOLONE* (LC140707)
Used to determine ovarian failure, hirsutism, adrenal carcinoma, and Cushing's syndrome. | \$116 | <input type="radio"/> FREE-PSA (INCLUDES TOTAL PSA)* (LC480780)
Recommended to determine if an elevated PSA is indicative of prostate cancer. | \$61 |
| <input type="radio"/> PROGESTERONE (LC004317)
Primarily for women. Determines the proper amount in the body. | \$55 | <input type="radio"/> BONE HEALTH
OSTEOCALCIN* (LC010249)
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. | \$91 |
| <input type="radio"/> SEX HORMONE BINDING GLOBULIN (SHBG) (LC082016)
This test is used to monitor SHBG levels which are under the positive control of estrogens and thyroid hormones, and suppressed by androgens. | \$33 | <input type="radio"/> DPD CROSS LINK URINE TEST (LC511105)
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. | \$79 |
| <input type="radio"/> SOMATOMEDIN C (IGF-1) (LC010363)
Indicates growth hormone secretion levels. Low levels have been associated with atherosclerosis as well as all-cause mortality. | \$75 | | |
| <input type="radio"/> TOTAL AND FREE TESTOSTERONE (LC140103)
Determines whether testosterone replacement should be considered as a therapy for depression, abdominal obesity, low energy, poor mental performance, or loss of libido. | \$99 | | |

Blood tests available only in the continental United States.

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

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

ORDER 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

MEMBER NO.

Male

Female

Name

Date of Birth (required)

/ /

Address

City

State

Zip

Phone

Credit Card No.

Expiration Date

/

Mail your order form to:

LifeExtension
NATIONAL DIAGNOSTICS, INC.

3600 West Commercial Boulevard
Fort Lauderdale, FL 33309

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

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

Products

AMINO ACIDS

Acetyl-L-Carnitine
Acetyl-L-Carnitine-Arginate
Branched Chain Amino Acids
D, L-Phenylalanine Capsules
GABA Powder
Glycine Capsules
Glycine Powder
Arginine Capsules
L-Arginine Free Base Powder
Arginine/L-Ornithine Capsules
L-Carnitine Capsules
L-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
Tryptopure® Tryptophan
(Optimized) Tryptopure® Plus

BONE & JOINT HEALTH

ArthroMax™ with Theaflavins and AprèsFlex™
ArthroMax™ Advanced with UC-II® and
AprèsFlex™
Bone-Up™
Bone Restore™
Bone Strength Formula w/KoAct™
Chondroitin Sulfate
Chondrox
Fast Acting Joint Formula
Glucosamine Chondroitin Capsules

BRAIN HEALTH

Acetyl-L-Carnitine
Acetyl-L-Carnitine-Arginate
CDP Choline Capsules
Cognitex® with NeuroProtection Complex
Cognitex® with Pregnenolone &
NeuroProtection Complex
Cognitex® Basics
DMAE
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

Bromelain Powder
Carnosoothe w/PicroProtect
Daily Ginger®
Digest RC™
Enhanced Super Digestive Enzymes
Florastor
Intact Digest
Life Flora™
Natural EsophaGuard
N-Zimes™
Pancreatin
Primal Defense™
Probiotic All-Flora®
Probiotic Anti-Aging
Probiotic Cleanse™
Probiotic Colon™
Regimint
Saccharomyces Boulardii+mos
Theralac Probiotics

DURK AND SANDY PRODUCTS

Blast™
Dual-C
Inner Power™
Memory Upgrade™

EYE CARE

Bilberry Extract
Blackcurrant Freeze Dried Extract
Brite Eyes III

Eye Pressure Support with Mirtogenol®
Overexcast Polarized Sunglasses
Solarshield Sunglasses
Super Zeaxanthin with Lutein &
Meso-Zeaxanthin and C3G
(Plus Astaxanthin also available)
Vision Optimizer

FIBER

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

FOOD

Asian Cruciferous Vegetable Soup
Cruciferous Vegetable Soup

HAIR CARE

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

HEART HEALTH

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

HERBAL/PHYTO PRODUCTS

Artichoke Leaf Extract
Astaxanthin
Berry Complete
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 with Natural Vitamin E
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

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

IMMUNE ENHANCEMENT

Agave Digestive-Immune Support
AHCC® (Active Hexose Correlated Compound)
Aloe Vera Force™
Buffered Vitamin C Powder
Echinacea
Enhanced Life Extension Whey Protein
i26 Hyperimmune Egg
Immune Protect with PARACTIN®
Lactoferrin
Lifesield® Immunity™
Maitake SX-Fraction
Norwegian Shark Liver Oil
Optimized Fucoidan w/Maritech® 926
Primal Defense™
ProBoost™ Thymic Protein A
Pure Gar™
Sambu® Guard
Supercritical Oreganoforce™
Thymic Immune Factors
Ultimate Flora Advanced Immunity
Vitamin C with Dihydroquercetin
Zinc Lozenges with Vitamin C

INFLAMMATORY REACTIONS

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

LIVER HEALTH

Branch Chain Amino Acids
N-Acetyl Cysteine
Liver Force
Certified European Milk Thistle
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

Products

Floravital® Iron & Herbs
Iodoral
Iron Protein Plus
Magnesium
Magnesium Citrate
Mineral Formula for Men
Mineral Formula for Women
Only Trace Minerals
Optimized Chromium w/Crominex® 3+
OptiZinc
Sea-Iodine™
Selenium
Se-Methyl L-Selenocysteine
Strontium
Vanadyl Sulfate
Zinc/Vitamin C Lozenges

MISCELLANEOUS

Blender
Blood Pressure Monitor Arm Cuff Medium
Cell Sensor Gauss Meter™
CR Way Edition Advanced Dietary Software
Empty Gelatin Capsules
LifeShield® Breathe™
The Capsule Filler Machine
The Pill Cutter and Grinder

MITOCHONDRIAL SUPPORT

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

MOOD RELIEF

Bioactive Milk Peptides
Holy Basil
LifeShield® Cordyceps
L-Theanine
5 HTP
Enhanced Natural Sleep® w/ Melatonin
Enhanced Natural Sleep® w/o Melatonin
Natural Stress Relief
Optimized Tryptopure™ Plus
Stabilium® 200
SAmE
St. John's Wort Extract
Tryptopure™ L-Tryptophan

MOUTH CARE

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

MULTIVITAMIN

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

PET CARE

Cat Mix
Dog Mix

PROSTATE & URINARY HEALTH

BetterWOMAN®
Optimized Cran-Max® with UTIRose™
5-LOXIN®
(Water-Soluble) Pumpkin Seed Extract
Super Saw Palmetto with Beta-Sitosterol
Super Saw Palmetto/Nettle Root Formula
w/Beta-Sitosterol
Ultra Natural Prostate Formula

SKIN CARE

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
Cellulite Suppress™ Formula
Corrective Clearing Mask
DermaWhey
DNA Repair Cream
Dual-Action MicroDerm Abrasion
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
LifeShield® Reishi
Melatonin Cream
Mild Facial Cleanser
NaPCA w/Aloe Vera
Neck Rejuvenating Antioxidant Cream
New Face Solution
Peel Off Cleansing Mask
Pigment Correcting Cream
(Ultra) Rejuvenex®
Rejuvenex® Body Lotion
Rejuvenex® Factor
Rejuvenating Serum
Resveratrol Anti-Oxidant Serum
Skin Lightening Serum
Skin Restoring Ceramides w/Lipowheat™
Skin Stem Cell Serum
Supercritical Omega 7™
Sun Protection Spray
Total Sun Protection Cream
Ultra Rejuvenex®
Ultra RejuveNight® w/ Progesterone
Ultra RejuveNight® w/o Progesterone
Ultra Lip Plumper
Ultra Wrinkle Relaxer
Under Eye Refining Serum
Under Eye Rescue Cream
Vitamin C Serum
Vitamin D Lotion
Vitamin K Healing Cream

SOY

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

SPECIAL PURPOSE FORMULA

Anti-Alcohol Antioxidants w/HepatoProtection Complex
Benfotiamine w/Thiamine
Breast Health Formula
Butterbur Extract w/Standardized Rosmarinic Acid
Chlorella
Chlorophyllin w/Zinc
Cleanse Smart
Green Coffee Extract CoffeeGenic™ (also w/Glucose control)
Coriolus Super Strength
CR Mimetic Longevity Formula
Derma-Vits™
Cinsulin® w/InSea2™ and Crominex® 3+
EDTA
European Leg Solution Diosmin 95
Fem Dophilus
Femmenessence MacaPause®
Flush & Be Fit
GlucFit™
Ideal Bowel Support 299

Maitake SX-Fraction™
Menopause Solutions
Migra-eeze™
Natural Female Support
Organic Total Body Cleanse
Pecta-Sol®
Potassium Iodide
PQQ Caps with BioPQQ™
PteroPure™
Prelox® Natural Sex for Men®
Pyridoxal 5' - Phosphate
Rosmarinic Acid Extract
Ultra Prostate w/AprèsFlex™ 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™
7-Keto DHEA
DHEA Complete
Fucoxanthin Slim™
HCA
Integra-Lean® Irvingia
LuraLean® Caps Special Propolmannan Particle Size
Optimized Irvingia w/Phase 3™ Calorie Control Complex
Optimized Saffron with Satiereal®
Natural Appetite Control
Natural Glucose Absorption Control
Stevia Liquid Extract
Super CLA Blend w/Guarana and Sesame Lignans
Super CLA Blend w/Sesame Lignans
Udo's Choice Wholesome Fast Food Blend
WellBetX PGX® Soluble Fiber Blend

Buyers Club Order Form

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
A					
00449	ACETYL-L-CARNITINE - 500 mg, 100 caps	\$56.00	\$42.00		
	Buy 4 bottles, price each	46.66	35.00		
00788	ACETYL-L-CARNITINE ARGINATE - 100 caps	59.00	44.25		
	Buy 4 bottles, price each	50.99	38.24		
01308	ADVANCED LIPID CONTROL - 60 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01300	ADVANCED ORAL HYGIENE - 60 veg. mint lozenges	20.00	15.00		
	Buy 4 bottles, price each	18.00	13.50		
00681	AHCC - 500 mg, 30 caps	59.98	44.99		
	Buy 4 bottles, price each	53.33	40.00		
*46925	ALLI® REFILL PACK - 120 caps	69.95	58.00		
01375	ALOE VERA FORCE™ - 60 veg. caps	31.95	23.96		
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		
00105	APPLE PECTIN POWDER - 227 grams	14.75	11.06		
	Buy 4 bottles, price each	13.75	10.31		
01012	ARGININE CAPS - 800 mg, 200 caps	26.50	19.88		
	Buy 4 bottles, price each	23.25	17.44		
01039	ARGININE/ORNITHINE - 500/250, 100 caps	16.00	12.00		
	Buy 4 bottles, price each	14.50	10.88		
00038	ARGININE/ORNITHINE POWDER - 150 grams	22.95	17.21		
	Buy 4 bottles, price each	19.00	14.25		
01025	(L)-ARGININE FREE-FORM POWDER - 100 grams	15.98	11.99		
	Buy 4 bottles, price each	14.31	10.73		
01617	ARTHRONAX™ w/THEAFLAVINS & APRÈSFLEX™ - 120 veg. caps	44.00	33.00		
	Buy 4 bottles, price each	40.00	30.00		
01618	ARTHRONAX™ ADVANCED w/UC-II® & APRÈSFLEX™ - 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		
00082	ASCORBYL PALMITATE - 500 mg, 100 caps	22.50	16.88		
	Buy 4 bottles, price each	20.00	15.00		
00888	ASHWAGANDHA EXTRACT (OPTIMIZED) - 60 veg. caps	10.00	7.50		
	Buy 4 bottles, price each	9.00	6.75		

SUB-TOTAL OF COLUMN 1

No.		Retail Each	Member Each	Qty	Total
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		
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	10.98	8.24		
	Buy 4 bottles, price each	9.83	7.37		
00653	BETTERWOMAN® - 40 caps	40.00	30.00		
	Buy 4 bottles, price each	38.00	28.50		
01073	BILBERRY EXTRACT - 100 mg, 100 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
01512	BIOACTIVE MILK PEPTIDES - 30 caps	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
*01006	BIOSIL™ - 5 mg, 30 veg. caps	18.95	15.16		
*01007	BIOSIL™ - 1 fl oz	29.99	23.99		
00102	BIOTIN - 600 mcg, 100 caps	7.50	5.63		
	Buy 4 bottles, price each	6.50	4.88		
00145	BIOTIN POWDER - 30 grams	12.50	9.38		
	Buy 4 bottles, price each	11.00	8.25		
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		
70001	BLOOD PRESSURE MONITOR-WRIST (travel size)	69.95	45.47		
01214	BLUEBERRY EXTRACT - 60 veg. caps	22.50	16.88		
	Buy 4 bottles, price each	20.00	15.00		
01438	BLUEBERRY EXTRACT w/ POMEGRANATE - 60 veg. caps	30.00	22.50		
	Buy 4 bottles, price each	27.00	20.25		
01506	BONE FORMULA (DR. STRUM'S INTENSIVE) - 300 veg. caps	56.00	42.00		
	Buy 4 bottles, price each	50.00	37.50		
01611	BONE RESTORE - 150 caps	22.50	16.88		
	Buy 4 bottles, price each	19.50	14.63		
01211	BONE STRENGTH FORMULA w/KOACT® - 120 caps	42.00	31.50		
	Buy 4 bottles, price each	38.00	28.50		
00313	BONE-UP® - 240 caps	24.95	18.71		
	Buy 4 bottles, price each	22.50	16.88		
01379	BOOSTER - 60 softgels	48.00	36.00		
	Buy 4 bottles, price each	44.00	33.00		
01590	BOOSTER w/ADVANCED K2 COMPLEX (SUPER) - 60 softgels	42.00	31.50		
	Buy 4 bottles, price each	38.00	28.50		
00621	BORON - 3 mg, 100 caps	5.95	4.46		
	Buy 4 bottles, price each	5.25	3.94		
00202	BOSWELLA - 100 caps	38.00	28.50		
	Buy 4 bottles, price each	30.00	22.50		
00258	BOSWELLA TOPICAL CREAM - 4 oz	15.00	11.25		
	Buy 4 jars, price each	13.00	9.75		

SUB-TOTAL OF COLUMN 2

No.		Retail Each	Member Each	Qty	Total
01253	BRANCHED CHAIN AMINO ACIDS - 90 veg. caps Buy 4 bottles, price each	\$19.50 17.00	\$14.63 12.75		
00999	BREAST HEALTH FORMULA - 60 veg. caps Buy 4 bottles, price each	34.00 30.00	25.50 22.50		
00893	BRITE EYES III - 2 vials, 5 ml each Buy 4 boxes, price each	34.00 32.00	25.50 24.00		
00136	BROMELAIN POWDER - 100 grams Buy 4 bottles, price each	21.00 18.75	15.75 14.06		
01203	BROMELAIN (SPECIALLY-COATED) - 500 mg, 60 enteric coated tablets Buy 4 bottles, price each	21.00 19.00	15.75 14.25		
00884	BUTTERBUR EXT. w/STANDARDIZED ROSMARINIC ACID - 60 softgels Buy 4 bottles, price each	44.00 39.60	33.00 29.70		
C					
01015	CALCIUM CITRATE w/VITAMIN D - 300 caps Buy 4 bottles, price each	\$24.00 21.25	\$18.00 15.94		
00535	CALCIUM D-GLUCARATE - 200 mg, 60 caps Buy 4 bottles, price each	18.00 15.00	13.50 11.25		
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 stick 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	17.95 17.25	13.46 12.94		
00613	CAPSULE FILLER MACHINE FOR "0" CAPSULES Buy 4 machines, price each	17.95 17.25	13.46 12.94		
00916	CARNITINE w/GLYCOCARN® (OPTIMIZED) - 60 veg. caps Buy 4 bottles, price each	29.00 26.10	21.75 19.58		
01041	L-CARNITINE - 500 mg, 30 caps Buy 4 bottles, price each	15.00 13.20	11.25 9.90		
01258	CARNOSOOTHE w/PICROPROTECT™ - 60 veg. caps Buy 4 bottles, price each	29.95 27.00	22.46 20.25		
01287	CARNOSINE (SUPER) - 500 mg, 90 caps Buy 4 bottles, price each	66.00 60.00	49.50 45.00		
01003	CAT MIX - 100 grams powder Buy 4 bottles, price each	15.00 12.00	11.25 9.00		
00390	CDP CHOLINE CAPS - 250 mg, 60 caps Buy 4 bottles, price each	36.00 34.00	27.00 25.50		
00998	CELL SENSOR-EMF DETECTION METER	39.95	29.95		
01370	CHILDREN'S FORMULA LIFE EXTENSION MIX™ - 100 chewable tablets Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00550	CHLORELLA - 500 mg, 200 tablets Buy 4 bottles, price each	23.50 21.00	17.63 15.75		
01549	CHLOROPHYLLIN w/ZINC - 100 veg. caps Buy 4 bottles, price each	24.00 20.00	18.00 15.00		
*01359	CHO-LESS™ - 90 capsules	32.50	24.38		
00541	CHOLINE CHLORIDE - 16 oz liquid Buy 4 bottles, price each	14.95 14.00	11.21 10.50		
00364	CHONDROITIN SULFATE CONCENTRATE - 400 mg, 60 tablets Buy 4 bottles, price each	19.95 18.00	14.96 13.50		
01218	CHROMIUM ULTRA - 100 veg. caps Buy 4 bottles, price each	24.00 21.00	18.00 15.75		

SUB-TOTAL OF COLUMN 3

No.		Retail Each	Member Each	Qty	Total
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	16.79 15.56	12.59 11.67		
00818	CLA BLEND W/SESAME LIGNANS (SUPER) - 1000 mg, 120 softgels Buy 4 bottles, price each Buy 10 bottles, price each	36.00 33.00 26.33	27.00 24.75 19.75		
00819	CLA BLEND w/GUARANA & SESAME (SUPER) -1000 mg, 120 softgels Buy 4 bottles, price each	42.00 38.33	31.50 28.75		
01078	CLEANSE SMART - 60 caps	31.99	23.99		
00050	COD LIVER OIL (EMULSIFIED) - 12 fl oz (355 ml) Buy 4 bottles, price each	10.97 10.34	8.23 7.76		
00293	COD LIVER OIL (EMULSIFIED) - 100 softgels (Emulsified) Buy 4 bottles, price each	10.97 10.34	8.23 7.76		
00922	COGNITEX® w/PREGNENOLONE & NEUROPROTECTION COMPLEX - 90 softgels Buy 4 bottles, price each Buy 12 bottles, price each	74.00 66.60 64.00	55.50 49.95 48.00		
00921	COGNITEX® w/o PREGNENOLONE w/NEUROPROTECTION COMPLEX - 90 softgels Buy 4 bottles, price each Buy 12 bottles, price each	72.00 64.00 62.00	54.00 48.00 46.50		
01421	COGNITEX® BASICS - 60 softgels Buy 4 bottles, price each Buy 12 bottles, price each	38.00 35.00 32.00	28.50 26.25 24.00		
00110	COMPLETE B-COMPLEX - 180 caps Buy 4 bottles, price each	21.50 18.00	16.13 13.50		
01575	COMPREHENSIVE NUTRIENT PACK - 30-day supply Buy 4 bottles, price each	189.00 171.00	141.75 128.25		
00119	COPPER CAPSULES - 2 mg, 100 caps Buy 4 bottles, price each	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		
01425	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -50 mg, 100 softgels Buy 4 bottles, price each Buy 10 bottles, price each	58.00 53.00 50.00	43.50 39.75 37.50		
01427	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -50 mg, 30 softgels Buy 4 bottles, price each	20.00 18.00	15.00 13.50		
01431	COQ10 w/ENH MITOCHONDRIAL SUPPORT™ (SUPER UBIQUINOL) -200 mg, 30 softgels Buy 4 bottles, price each Buy 10 bottles, price each	62.00 56.00 52.00	46.50 42.00 39.00		

SUB-TOTAL OF COLUMN 4

Buyers Club Order Form

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
C CONTINUED					
*01053	CORIOLUS SUPER STRENGTH - 600 mg, 150 veg. caps	\$99.95	\$74.96		
00857	COROMEGA CHILD BRAIN & BODY - (Lemon Lime) 30 packets Buy 4 boxes, price each	25.00 22.50	18.75 16.75		
80140	COSMESIS ADVANCED UNDER EYE SERUM w/STEM CELLS - 33 oz Buy 2 bottles, price each	49.00 42.00	36.75 31.50		
80139	COSMESIS AMBER SELF MICRODERMABRASION - 2 oz Buy 2 jars, price each	49.00 42.00	36.75 31.50		
80118	COSMESIS ANTI-AGING MASK - 2 oz Buy 2 bottles, price each	72.00 63.36	54.00 47.52		
80134	COSMESIS ANTI-GLYCATION SERUM - 1 oz W/BLEUBERRY & POMEGRANATE EXTRACTS Buy 2 bottles, price each	33.00 31.35	24.75 23.51		
80133	COSMESIS ANTIOXIDANT FACIAL MIST - 2 oz Buy 2 bottles, price each	32.00 30.40	24.00 22.80		
80127	COSMESIS ANTIOXIDANT REJUVENATING FOOT CREAM - 2 oz Buy 2 jars, price each	45.00 42.80	33.75 32.10		
80128	COSMESIS ANTIOXIDANT REJUVENATING FOOT SCRUB - 2 oz Buy 2 jars, price each	59.00 51.92	44.25 38.94		
80117	COSMESIS ANTIOXIDANT REJUVENATING HAND CREAM - 2 oz Buy 2 jars, price each	64.00 57.49	48.00 43.12		
80121	COSMESIS ANTIOXIDANT REJUVENATING HAND SCRUB - 2 oz Buy 2 jars, price each	58.00 51.04	43.50 38.28		
80105	COSMESIS ANTI-REDNESS & BLEMISH LOTION - 1 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80120	COSMESIS CORRECTIVE CLEARING MASK - 2 oz Buy 2 jars, price each	64.50 56.76	48.38 42.57		
80141	COSMESIS DNA REPAIR CREAM - 1 oz jar Buy 2 jars, price each	49.00 42.00	36.75 31.50		
80108	COSMESIS ESSENTIAL PLANT LIPIDS REPARATIVE SERUM - 1 oz Buy 2 bottles, price each	74.95 65.95	56.21 49.46		
80123	COSMESIS FACE REJUVENATING ANTIOXIDANT CREAM - 2 oz Buy 2 jars, price each	69.50 61.16	52.13 45.87		
80107	COSMESIS FINE LINE-LESS - 1 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80131	COSMESIS HAIR SUPPRESS FORMULA - 4 oz Buy 2 bottles, price each	59.00 51.92	44.25 38.94		
80137	COSMESIS HEALING FORMULA ALL-IN-ONE CREAM - 1 oz Buy 2 jars, price each	53.00 45.43	39.75 34.07		
80115	COSMESIS HEALING MASK - 2 oz Buy 2 bottles, price each	64.50 56.76	48.38 42.57		
80109	COSMESIS HYALURONIC FACIAL MOISTURIZER - 1 oz Buy 2 bottles, price each	58.00 51.04	43.50 38.28		
80110	COSMESIS HYALURONIC OIL-FREE FACIAL MOISTURIZER - 1 oz Buy 2 bottles, price each	58.00 51.04	43.50 38.28		
80138	COSMESIS HYDRATING ANTI-OXIDANT FACE MIST - 4 oz Buy 2 bottles, price each	39.95 38.00	29.96 28.50		
80103	COSMESIS LIFTING & TIGHTENING COMPLEX - 1 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80135	COSMESIS MELATONIN CREAM - 1 oz Buy 2 jars, price each	33.00 27.10	24.75 20.33		
80114	COSMESIS MILD FACIAL CLEANSER - 8 oz Buy 2 bottles, price each	59.00 51.92	44.25 38.94		
80122	COSMESIS NECK REJUVENATING ANTIOXIDANT CREAM - 2 oz Buy 2 jars, price each	64.00 56.32	48.00 42.24		

SUB-TOTAL OF COLUMN 5

No.		Retail Each	Member Each	Qty	Total
80111	COSMESIS PIGMENT CORRECTING CREAM - 1/2 oz Buy 2 bottles, price each	\$74.00 65.12	\$55.50 48.84		
80106	COSMESIS REJUVENATING SERUM - 1 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80142	COSMESIS RESVERATROL ANTI-OXIDANT SERUM - 1 oz Buy 2 bottles, price each	46.00 39.00	34.50 29.25		
80112	COSMESIS SKIN LIGHTENING SERUM - 1/2 oz Buy 2 bottles, price each	85.00 74.80	63.75 56.10		
80130	COSMESIS SKIN STEM CELL SERUM - 1 oz Buy 2 bottles, price each	74.00 69.00	55.50 51.75		
80116	COSMESIS ULTRA LIP PLUMPER - 1/3 oz Buy 2 bottles, price each	64.00 56.32	48.00 42.24		
80101	COSMESIS ULTRA WRINKLE RELAXER - 1 oz Buy 2 bottles, price each	89.95 79.76	67.46 59.82		
80113	COSMESIS UNDER EYE REFINING SERUM - 1/2 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80104	COSMESIS UNDER EYE RESCUE CREAM - 1/2 oz Buy 2 bottles, price each	74.50 65.56	55.88 49.17		
80129	COSMESIS VITAMIN C SERUM - 1 oz Buy 2 bottles, price each	85.00 74.80	63.75 56.10		
80136	COSMESIS VITAMIN D LOTION - 4 oz Buy 2 bottles, price each	36.00 33.66	27.00 25.25		
80102	COSMESIS VITAMIN K HEALING CREAM - 1 oz Buy 2 bottles, price each	79.50 69.96	59.63 52.47		
00862	CRAN-MAX® - 500 mg, 60 veg. caps Buy 4 bottles, price each	17.50 15.00	13.13 11.25		
01424	CRAN-MAX® with UTIROS®™ (OPTIMIZED) - 60 veg. caps Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00609	CREATINE CAPSULES - 120 caps Buy 4 bottles, price each	10.95 9.25	8.21 6.94		
00610	CREATINE POWDER - 500 grams Buy 4 bottles, price each	29.00 26.63	21.75 19.97		
01096	CREATINE WHEY GLUTAMINE POWDER - 1000 grams (vanilla) Buy 4 bottles, price each	45.00 42.00	33.75 31.50		
~01519	CRUCIFEROUS VEGETABLE SOUP - 32 oz. pouch Buy 6 pouches, price each	11.95 11.25	8.96 8.44		
~01520	(ASIAN) CRUCIFEROUS VEGETABLE SOUP - 32 oz. pouch Buy 6 pouches, price each	11.95 11.25	8.96 8.44		
01429	CR MIMETIC LONGEVITY FORMULA - 60 veg. caps Buy 4 bottles, price each	39.00 36.00	29.25 27.00		
***CRWAY	CR WAY OPTIMAL HEALTH PROGRAM SOFTWARE	195.00	195.00		
00407	CURCUMIN® (SUPER BIO) - 400 mg, 60 veg. caps Buy 4 bottles, price each	38.00 35.00	28.50 26.25		
D					
01376	DAILY GINGER® - 90 veg. caps	\$21.95	\$16.46		
01063	DERMA-VITS™ - 90 caps	14.99	11.24		
01313	DERMAWHEY - 400 mg, 60 caps Buy 4 bottles, price each	65.00 59.00	48.75 44.25		
00856	DHA (BARLEAN'S KID'S) 8 fl. oz (Fruit Punch) Buy 4 bottles, price each	22.00 20.00	16.50 15.00		
00995	DHA 240 - 240 mg, 60 softgels Buy 4 bottles, price each	19.00 17.00	14.25 12.75		
00658	7-KETO® DHEA METABOLITE - 25 mg, 100 caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		

SUB-TOTAL OF COLUMN 6

No.		Retail Each	Member Each	Qty	Total
01271	7-KETO® DHEA METABOLITE - 100 mg, 60 veg. caps Buy 4 bottles, price each	\$40.00 36.00	\$30.00 27.00		
00607	DHEA - 25 mg, 100 tablets (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	15.00 12.50	11.25 9.38		
00454	DHEA - 15 mg, 100 caps Buy 4 bottles, price each	12.00 10.00	9.00 7.50		
00882	DHEA - 50 mg, 60 caps Buy 4 bottles, price each	16.00 14.00	12.00 10.50		
00883	DHEA - 100 mg, 60 caps Buy 4 bottles, price each	22.50 19.00	16.88 14.25		
01358	DIGEST RC - 30 tablets Buy 4 boxes, price each	19.95 17.00	14.96 12.75		
01272	DIGESTIVE ENZYMES (ENHANCED SUPER) - 100 veg. caps Buy 4 bottles, price each	18.95 16.00	14.21 12.00		
00034	D,L-PHENYLALANINE CAPSULES - 500 mg, 100 caps Buy 4 bottles, price each	18.75 16.00	14.06 12.00		
00257	DMAE BITARTRATE - 150 mg, 200 caps Buy 4 bottles, price each	14.00 10.50	10.50 7.88		
00059	DMG - 125 mg, 60 tablets Buy 4 boxes, price each	18.50 17.00	13.88 12.75		
01547	DNA PROTECTION FORMULA - 60 veg. caps Buy 4 bottles, price each	30.00 28.00	22.50 21.00		
00544	DOG MIX - 100 grams powder Buy 4 bottles, price each	19.50 16.00	14.63 12.00		
00321	DR. PROCTOR'S ADVANCED HAIR FORMULA - 2 oz Buy 4 bottles, price each	39.95 32.00	29.96 24.00		
00320	DR. PROCTOR'S HAIR FORMULA SHAMPOO - 8 oz Buy 4 bottles, price each	24.95 22.00	18.71 16.50		
00376	DR. TUNG'S TONGUE CLEANER Buy 4 bottles, price each	8.45 8.05	6.34 6.04		
00899	DUAL-ACTION MICRODERMABRASION ADV. EXFOLIATE - 2.4 oz Buy 4 jars, price each	39.95 38.95	29.96 29.21		
00240	DUAL-C - 90 caps Buy 4 bottles, price each	12.00 10.50	9.00 7.88		
E					
00388	ECHINACEA EXTRACT - 250 mg, 60 caps Buy 4 bottles, price each	\$14.35 12.50	\$10.76 9.38		
01395	EDTA - 500 mg, 60 caps	9.98	7.49		
01321	ELASTIN & COLLAGEN BODY FIRING LOTION - 8 fl. oz.	10.00	7.50		
00048	EMULSIFIED SUPER TWIN EPA/DHA - 12 fl. oz.	23.57	17.68		
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		
01514	EYE PRESSURE SUPPORT w/MIRTOGENOL® - 30 veg. caps Buy 4 bottles, price each	38.00 34.00	28.50 25.50		

SUB-TOTAL OF COLUMN 7

No.		Retail Each	Member Each	Qty	Total
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	FEMMESENCE MACAPAUSE® - 120 veg. caps	34.99	26.24		
*01311	FERNBLOCK® w/SENDARA™ (ENHANCED) - 30 veg. caps Buy 4 bottles, price each	39.00 35.00	29.25 26.25		
00229	FIBER FOOD CAPS - 200 caps Buy 4 bottles, price each Buy 10 bottles, price each	15.00 12.50 11.90	11.25 9.38 8.93		
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	32.99		
01200	FLORASTOR® - 250 mg, 50 caps	55.15	41.36		
01382	FLORAVITAL® IRON & HERBS - 17 fl. oz	43.99	32.99		
01212	FLUSH + BE FIT - 2- week cleanse for women	29.99	22.49		
01439	FOLATE (OPTIMIZED) (L-METHYLFOLATE) 1000 mcg - 100 veg. caps Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
00347	FOLIC ACID + B12 CAPSULES - 200 caps Buy 4 bottles, price each	10.50 9.50	7.88 7.13		
00300	FORSKOLIN - 10 mg, 60 caps Buy 4 bottles, price each	15.00 12.50	11.25 9.38		
01513	FUCOIDAN w/MARITECH® 926 (OPTIMIZED) - 60 veg. caps Buy 4 bottles, price each	36.00 33.00	27.00 24.75		
00993	FUCOXANTHIN-SLIM™ - 90 softgels Buy 4 bottles, price each	44.00 39.00	33.00 29.25		
G					
00127	GABA POWDER - 100 grams Buy 4 bottles, price each	\$23.75 22.50	\$17.81 16.88		
00559	GAMMA E TOCOPHEROL/TOCOTRIENOLS - 60 softgels Buy 4 bottles, price each	42.00 37.00	31.50 27.75		
00759	GAMMA E TOCOPHEROL w/SESAME LIGNANS - 60 softgels Buy 4 bottles, price each	32.00 29.00	24.00 21.75		
01394	(OPTIMIZED) GARLIC - 200 veg. caps Buy 4 bottles, price each	24.95 21.00	18.71 15.75		
01378	GARLIC FORCE™ - 30 softgels	31.95	23.96		
00117	GELATIN CAPSULES - 1000 empty caps size "00" Buy 4 bags, price each	19.00 18.00	14.25 13.50		
01301	GH PITUITARY SUPPORT DAY FORMULA - 120 vegetarian tabs Buy 4 bottles, price each	48.00 44.00	36.00 33.00		
01302	GH PITUITARY SUPPORT NIGHT FORMULA - 120 veg. caps Buy 4 bottles, price each	25.00 22.50	18.75 16.88		
01228	GINGER FORCE - 60 softgels	29.95	22.46		
00778	GINKGO BILOBA CERTIFIED EXTRACT™ - 120 mg, 365 caps Buy 2 bottles, price each	46.00 43.50	34.50 32.63		
00504	GINKGO EXTRACT (SUPER) - 120 mg, 100 caps Buy 4 bottles, price each	29.00 26.50	21.75 19.88		
01032	(PANAX RED) GINSENG - 60 veg. caps	29.99	22.49		
00756	GLA WITH SESAME LIGNANS (MEGA) - 60 softgels Buy 4 bottles, price each	19.50 18.00	14.63 13.50		
00345	(L) GLUTAMINE CAPSULES - 500 mg, 100 caps Buy 4 bottles, price each	14.95 13.50	11.21 10.13		
00141	(L)-GLUTAMINE POWDER - 100 grams Buy 4 bottles, price each	19.00 16.88	14.25 12.66		

SUB-TOTAL OF COLUMN 8

Buyers Club Order Form

To order call: 1.954.766.8433 or 1.800.544.4440

No.		Retail Each	Member Each	Qty	Total
G CONTINUED					
00522	GLUCOSAMINE/CHONDROITIN CAPSULES - 100 caps Buy 4 bottles, price each	\$38.00 32.00	\$28.50 24.00		
00512	GLUCOFIT™ - 100 softgels Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
00113	GLUTATHIONE, CYSTEINE & C - 750 mg, 100 caps Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00314	L-GLUTATHIONE (MEGA) - 250 mg, 60 caps Buy 4 bottles, price each	39.64 35.68	27.03 26.76		
00795	GLYCINE - 1000 mg, 100 caps Buy 4 bottles, price each	12.00 10.80	9.00 8.10		
00128	GLYCINE POWDER - 300 grams Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
01091	GRAPE EXTRACT w/RESVERATROL (WHOLE) - 60 veg. caps Buy 4 bottles, price each	36.00 34.00	27.00 25.50		
01411	GRAPE SEED EXTRACT w/RESVERATROL & PTEROSTILBENE - 100 mg, 60 veg. caps Buy 4 bottles, price each	36.00 34.00	27.00 25.50		
01604	GREEN COFFEE EXTRACT COFFEEGENIC™ - 200 mg, 90 veg. caps Buy 4 bottles, price each	25.00 22.00	18.75 16.50		
01620	GREEN COFFEE EXTRACT COFFEEGENIC™ - 400 mg, 90 veg. caps Buy 4 bottles, price each	38.00 34.00	28.50 25.50		
01607	GREEN COFFEE EXTRACT COFFEEGENIC™ - 90 veg. caps w/GLUCOSE CONTROL COMPLEX Buy 4 bottles, price each	58.00 52.00	43.50 39.00		
00953	GREEN TEA EXTRACT (MEGA) - lightly caffeinated - 100 veg. caps Buy 4 bottles, price each	28.00 26.50	21.00 19.88		
00954	GREEN TEA EXTRACT (MEGA) - decaffeinated - 100 veg. caps Buy 4 bottles, price each	28.00 26.50	21.00 19.88		
01606	GREEN TEA W/COFFEEGENIC™ GREEN COFFEE EXTRACT (MEGA) 120 veg. caps, low caffeine Buy 4 bottles, price each	32.00 28.00	24.00 21.00		
01605	GREEN TEA W/COFFEEGENIC™ GREEN COFFEE EXTRACT (MEGA) 120 veg. caps Buy 4 bottles, price each	32.00 28.00	24.00 21.00		
H					
01074	5 HTP - 100 mg, 60 caps	\$27.95	\$20.96		
00010	HAIR CONDITIONER - 16 oz Buy 4 bottles, price each	6.00 4.50	4.50 3.38		
00230	HCA - 90 caps Buy 4 bottles, price each	18.00 15.50	13.50 11.63		
01393	HEPATOPRO - 900 mg, 60 softgels Buy 4 bottles, price each	50.00 46.00	37.50 34.50		
01433	HOLY BASIL - 60 softgel caps	34.95	26.21		
01434	HOLY BASIL - 120 softgel caps	54.95	41.21		
01435	HOMOCYSTEINE RESIST - 100 caps Buy 4 bottles, price each	24.00 21.60	18.00 16.20		
00067	HOODIA GORDONII - 60 caps	14.00	10.50		
00627	HUPERZINE A W/NATURAL VITAMIN E - 50 mcg, 60 caps Buy 4 bottles, price each	27.95 24.00	20.96 18.00		
00661	HYDRODERM® - 1 oz Buy 2 bottles, price each	79.95 65.33	59.96 49.00		
I					
^01060	i26 HYPERIMMUNE EGG - 140 grams powder	\$49.99	\$42.00		
^01319	i26 HYPERIMMUNE EGG - 135 capsules	31.99	25.59		
^01318	i26 HYPERIMMUNE EGG CHEWABLES - (vanilla) 45 tablets	31.99	25.59		
01065	IDEAL BOWEL SUPPORT 299V - 30 veg. caps	21.95	16.46		

SUB-TOTAL OF COLUMN 9

No.		Retail Each	Member Each	Qty	Total
00955	IMMUNE PROTECT W/PARACTIN® - 30 veg. caps Buy 4 bottles, price each	\$29.50 26.55	\$22.13 19.91		
01049	INNERPOWER™ - 555 grams powder	42.00	31.50		
00155	INOSINE - 500 mg, 60 caps Buy 4 bottles, price each	22.95 21.00	17.21 15.75		
00410	INOSITOL CAPSULES - 1000 mg, 360 caps Buy 4 bottles, price each	48.00 43.75	36.00 32.81		
00108	INOSITOL POWDER - 100 grams Buy 4 bottles, price each	18.00 16.88	13.50 12.66		
01021	INTACT DIGEST™ - 8 fl oz Buy 4 bottles, price each	35.00 33.00	26.25 24.75		
01292	INTEGRA-LEAN® IRVINGIA - 150 mg, 60 veg. caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		
01002	IODORAL® - 180 tabs	50.00	37.50		
00563	IRON PROTEIN PLUS - 300 mg, 100 caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		
01492	IRVINGIA W/PHASE 3™ - 120 veg. caps CALORIE CONTROL COMPLEX (OPTIMIZED) Buy 4 bottles, price each	56.00 48.00	42.00 36.00		
J, K					
00056	JARRO-DOPHILUS EPS™ - 60 veg. caps	\$21.95	\$16.46		
01224	K w/ADVANCED K2 COMPLEX (SUPER) - 90 softgels Buy 4 bottles, price each	26.00 23.00	19.50 17.25		
01600	KRILL HEALTHY JOINT FORMULA - 30 softgels Buy 4 bottles, price each	32.00 29.00	24.00 21.75		
01050	(NKO) KRILL OIL - 60 softgels	33.95	25.46		
00316	KYOLIC® GARLIC FORMULA 102 - 200 caps Buy 4 bottles, price each	23.95 20.50	17.96 15.38		
00214	KYOLIC® GARLIC FORMULA 105 - 200 caps Buy 4 bottles, price each	22.95 18.25	17.21 13.69		
00789	KYOLIC® RESERVE - 600 mg, 120 caps Buy 4 bottles, price each	24.75 21.45	18.56 16.09		
L					
00513	LACTOFERRIN (APOLACTOFERRIN) CAPS - 60 caps Buy 4 bottles, price each	\$40.00 36.00	\$30.00 27.00		
00017	LAVILIN UNDERARM DEODORANT - 12.5 grams cream Buy 4 jars, price each	15.00 13.75	11.25 10.31		
00020	LECITHIN - 16 oz. granules Buy 4 jars, price each	15.00 12.50	11.25 9.38		
01655	LIFE EXTENSION MIX™ - 315 tablets Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 69.50	73.50 64.50 52.13		
01657	LIFE EXTENSION MIX™ W/EXTRA NIACIN - 315 tablets Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 69.50	73.50 64.50 52.13		
01654	LIFE EXTENSION MIX™ - 490 caps Buy 4 bottles, price each Buy 10 bottles, price each	110.00 98.00 85.00	82.50 73.50 63.75		
01656	LIFE EXTENSION MIX™ POWDER - 14.81 oz Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 72.00	73.50 64.50 54.00		
01665	LIFE EXTENSION MIX™ - 315 tablets w/o copper Buy 4 bottles, price each Buy 10 bottles, price each	98.00 86.00 69.50	73.50 64.50 52.13		

SUB-TOTAL OF COLUMN 10

No.		Retail Each	Member Each	Qty	Total
01667	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		
01664	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		
01666	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		
00263	LIFE FLORA™ - 300 mg, 120 caps	20.50	15.38		
	Buy 4 bottles, price each	18.75	14.06		
01377	LIFESHIELD® BREATHE™ - 60 veg. caps	34.95	26.21		
01349	LIFESHIELD® CORDYCEPS - 60 veg. caps	34.95	26.21		
01314	LIFESHIELD® IMMUNITY™ - 60 veg. caps	39.95	29.96		
01339	LIFESHIELD® REISHI™ - 60 veg. caps	34.95	26.21		
01227	LIVER FORCE - 30 veg. caps	34.95	26.21		
01639	5-LOX INHIBITOR W/APRESFLEX™ - 100 mg, 60 veg. caps	22.00	16.50		
	Buy 4 bottles, price each	20.00	15.00		
01013	L-LYSINE - 620 mg, 100 caps	9.00	6.75		
	Buy 4 bottles, price each	8.00	6.00		
00129	L-LYSINE POWDER - 300 grams	16.00	12.00		
	Buy 4 bottles, price each	13.75	10.31		
01470	LURALEAN® CAPS SPECIAL PROPOLMANNAN PARTICLE SIZE - 120 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
00455	LYCOPENE EXTRACT (MEGA) - 15 mg, 90 softgels	35.00	26.25		
	Buy 4 bottles, price each	30.00	22.50		
M					
01369	MAGNESIUM CAPS - 500 mg, 100 veg. caps	\$10.00	\$7.50		
	Buy 4 bottles, price each	9.00	6.75		
00502	MAGNESIUM CITRATE - 160 mg, 100 caps	9.00	6.75		
	Buy 4 bottles, price each	7.50	5.63		
00704	MAITAKE™ SX-FRACTION - 90 veg. tablets	49.95	37.46		
00547	MELATONIN - 300 mcg, 100 caps	5.75	4.31		
	Buy 4 bottles, price each	5.00	3.75		
01083	MELATONIN - 500 mcg, 200 veg. caps	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
00329	MELATONIN - 1 mg, 60 caps	5.00	3.75		
	Buy 4 bottles, price each	4.63	3.47		
00330	MELATONIN - 3 mg, 60 caps	8.00	6.00		
	Buy 4 bottles, price each	6.88	5.16		
01086	MELATONIN - 3 mg, 60 time-release veg. caps	10.50	7.88		
	Buy 4 bottles, price each	9.38	7.04		
00331	MELATONIN - 10 mg, 60 caps	28.00	21.00		
	Buy 4 bottles, price each	24.00	18.00		
00332	MELATONIN - 3 mg, 60 lozenges	8.00	6.00		
	Buy 4 bottles, price each	6.88	5.16		
01087	MELATONIN TIME RELEASE - 300 mcg, 100 veg. caps	6.25	4.69		
	Buy 4 bottles, price each	5.63	4.22		

SUB-TOTAL OF COLUMN 11

No.		Retail Each	Member Each	Qty	Total
01088	MELATONIN TIME RELEASE - 750 mcg, 60 veg. caps	\$5.75	\$4.31		
	Buy 4 bottles, price each	5.00	3.75		
01009	MEMORY UPGRADE™ - 600 grams powder	26.95	20.21		
01047	MENOPAUSE SOLUTIONS - 120 tablets	49.95	37.46		
00536	METHYLCOBALAMIN - 1 mg, 60 lozenges (vanilla)	9.95	7.46		
	Buy 4 bottles, price each	8.00	6.00		
00537	METHYLCOBALAMIN - 5 mg, 60 lozenges (vanilla)	32.00	24.00		
	Buy 4 bottles, price each	25.00	18.75		
	Buy 10 bottles, price each	23.00	17.25		
00709	MIGRA-EETZ™ (BUTTERBUR) - 60 softgels	29.50	22.13		
	Buy 4 bottles, price each	26.33	19.75		
01517	MILK THISTLE (CERTIFIED EUROPEAN) - 120 veg. caps	52.00	39.00		
	Buy 4 bottles, price each	48.00	36.00		
00623	MINERAL FORMULA FOR MEN - 100 caps	15.00	11.25		
	Buy 4 bottles, price each	12.50	9.38		
	Buy 12 bottles, price each	10.83	8.13		
00624	MINERAL FORMULA FOR WOMEN - 100 caps	15.00	11.25		
	Buy 4 bottles, price each	12.50	9.38		
	Buy 12 bottles, price each	10.83	8.13		
01315	MIRAFORTE w/STANDARDIZED LIGNANS (SUPER) - 120 caps	62.00	46.50		
	Buy 4 bottles, price each	56.00	42.00		
01569	MITOCHONDRIAL BASICS w/BIOPQQ™ - 30 caps	52.00	39.00		
	Buy 4 bottles, price each	46.00	34.50		
01568	MITOCHONDRIAL ENERGY OPTIMIZER w/BIOPQQ™ - 120 caps	94.00	70.50		
	Buy 4 bottles, price each	84.00	63.00		
00803	MIST ORAL III w/COQ10 - 2 fl oz	28.00	21.00		
	Buy 4 bottles, price each	25.33	19.00		
00065	MK-7 - 90 mcg, 60 softgels	28.00	21.00		
	Buy 4 bottles, price each	25.00	18.75		
01279	MOUTHWASH W/POMEGRANATE - 16 oz	18.50	13.88		
	Buy 4 bottles, price each	17.00	12.75		
00451	MSM (METHYLSULFONYLMETHANE) - 1000 mg, 100 caps	14.00	10.50		
	Buy 4 bottles, price each	11.95	8.96		
N					
00215	N-ACETYL-L-CYSTEINE - 600 mg, 60 caps	\$14.00	\$10.50		
	Buy 4 bottles, price each	13.50	10.13		
00168	NAPCA W/ALOE VERA - 8 fl oz	10.50	7.88		
	Buy 4 bottles, price each	9.61	7.21		
00066	NATTOKINASE - 60 softgels	24.98	18.74		
00891	NATURAL APPETITE CONTROL - 90 softgels	28.00	21.00		
	Buy 4 bottles, price each	25.20	18.90		
00984	NATURAL BP MANAGEMENT - 60 tablets	42.00	31.50		
	Buy 4 bottles, price each	37.80	28.35		
00913	NATURAL ESOPHAGUARD - 10 softgels	19.95	14.96		
	Buy 2 boxes, price each	19.00	14.25		
00712	NATURAL ESTROGEN w/POMEGRANATE EXTRACT - 60 caplets	38.00	28.50		
	Buy 4 bottles, price each	33.00	24.75		
01221	NATURAL FEMALE SUPPORT - 30 veg. caps	28.00	21.00		
	Buy 4 bottles, price each	24.00	18.00		

SUB-TOTAL OF COLUMN 12

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					
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		
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 veg. 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		
01602	NEURO-MAG™ THREONATE W/CALCIUM & VITAMIN D 205 grams - Lemon flavor Buy 4 bottles, price each	40.00 36.00	30.00 27.00		
01076	NEW FACE SOLUTION - 1.7 oz bottle Buy 4 bottles, price each	54.00 49.00	40.50 36.75		
00373	NO-FLUSH NIACIN - 800 mg, 100 caps Buy 4 bottles, price each	19.00 17.00	14.25 12.75		
01035	NUTRIM - 170 grams powder	25.95	19.46		
00523	N-ZIMES™ - 270 caps Buy 4 bottles, price each	23.90 22.00	17.93 16.50		
O					
01518	OMEGA-3 CHEWABLES - 60 softchews, 120 mg EPA/DHA Buy 4 pouches, price each	\$24.00 22.00	\$18.00 16.50		
01483	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) - 60 softgels Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
01482	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) - 120 softgels Buy 4 bottles, price each Buy 10 bottles, price each	32.00 28.00 24.90	24.00 21.00 18.68		
01484	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) - 120 enteric coated softgels Buy 4 bottles, price each Buy 10 bottles, price each	34.00 31.00 28.00	25.50 23.25 21.00		
01619	OMEGA 3 EPA/DHA w/SESAME LIGNANS & OLIVE FRUIT EXTRACT (SUPER) - 240 softgels Buy 4 bottles, price each Buy 10 bottles, price each	32.00 28.00 24.90	24.00 21.00 18.68		
01601	ONE-PER-DAY - 60 veg. tablets Buy 4 bottles, price each	22.00 20.00	16.50 15.00		
01328	ONLY TRACE MINERALS - 90 caps Buy 4 bottles, price each	15.00 12.50	11.25 9.38		
00915	OPTIZING® - 30 mg, 90 veg. caps Buy 4 bottles, price each	5.95 5.00	4.46 3.75		
01070	ORGANIC TOTAL BODY CLEANSE™ - 14-day supply	34.99	26.24		

SUB-TOTAL OF COLUMN 13

No.		Retail Each	Member Each	Qty	Total
P					
00107	PABA CAPS - 500 mg, 100 caps Buy 4 bottles, price each	\$15.42 13.59	\$11.57 10.19		
00073	PANCREATIN - 500 mg, 50 caps Buy 4 bottles, price each	13.22 12.12	9.92 9.09		
01323	PEAK ATP® WITH GLYCO-CARN® - 60 veg. caps Buy 4 bottles, price each	59.00 56.00	44.25 42.00		
00342	PECTA SOL-C® MODIFIED CITRUS PECTIN - 454 grams powder Buy 4 jars, price each	99.95 95.70	74.96 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 Buy 4 bottles, price each	29.95 27.00	22.46 20.25		
00368	PHOSPHATIDYLSERINE CAPS - 100 mg, 100 caps Buy 4 bottles, price each	54.00 48.00	40.50 36.00		
00614	PILL CUTTER/GRINDER	11.95	8.96		
00561	POLICOSANOL - 10 mg, 60 tablets Buy 6 bottles, price each	24.00 18.00	18.00 13.50		
01423	POMEGRANATE™ (FULL-SPECTRUM) - 30 softgels Buy 4 bottles, price each	24.00 21.00	18.00 15.75		
00956	POMEGRANATE EXTRACT - 30 veg. caps Buy 4 bottles, price each	19.50 17.55	14.63 13.16		
00957	POMEGRANATE JUICE CONCENTRATE - 16 oz. liquid Buy 4 bottles, price each	25.95 24.00	19.46 18.00		
00577	POTASSIUM IODIDE - 1 box, 14 tablets Buy 4 boxes, price each	6.95 5.25	5.21 3.94		
01500	PQQ CAPS W/BIO-PQQ™ - 10 mg, 30 veg. caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		
00302	PREGNENOLONE - 50 mg, 100 caps Buy 4 bottles, price each	24.00 19.00	18.00 14.25		
00700	PREGNENOLONE - 100 mg, 100 caps Buy 4 bottles, price each	26.00 22.50	19.50 16.88		
01373	PRELOX® NATURAL SEX FOR MEN® - 60 tablets Buy 4 bottles, price each	52.00 48.00	39.00 36.00		
00571	PRIMAL DEFENSE™ - 90 caplets Buy 4 bottles, price each	49.95 48.50	37.46 36.38		
01019	PRIMAL DEFENSE™ - 180 caplets	78.95	59.21		
01329	PROBIOTIC ALL-FLORA® - 60 veg. caps	25.95	19.46		
01326	PROBIOTIC ANTI-AGING™ - 90 veg. caps	30.95	23.21		
01324	PROBIOTIC CLEANSE™ - 90 veg. caps	29.95	22.46		
01322	PROBIOTIC COLON™ - 90 veg. caps	30.95	23.21		
00525	PROBOOST THYMIC PROTEIN A™ - 4 mcg, 30 packets Buy 4 boxes, price each	72.00 70.00	54.00 52.50		
00869	PRO FEM CREAM - 2 fl oz (Progesterone Cream) Buy 4 bottles, price each	32.00 29.00	24.00 21.75		
01020	PROGREENS® - 15 stick pack	22.50	16.88		
01072	PRO M INTERNAL DEODORIZER - 500 mg, 100 veg. caps Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
01695	PROSTATE FORMULA W/APRESFLEX™ STAND. LIGNANS (ULTRA NAT) 60 softgels Buy 4 bottles, price each Buy 12 bottles, price each	38.00 35.00 32.00	28.50 26.25 24.00		
01092	PROTEIN - VANILLA - (Enhanced Life Extension) -1000 grams powder Buy 4 bottles, price each	42.00 40.00	31.50 30.00		
01093	PROTEIN - CHOCOLATE - (Enhanced Life Extension) -1000 grams powder Buy 4 bottles, price each	42.00 40.00	31.50 30.00		

SUB-TOTAL OF COLUMN 14

No.		Retail Each	Member Each	Qty	Total
01094	PROTEIN - NATURAL - (Enhanced Life Extension) -1000 grams powder Buy 4 bottles, price each	\$42.00 40.00	\$31.50 30.00		
01095	PROTEIN - BERRY - (Enhanced Life Extension) -1000 grams powder Buy 4 bottles, price each	42.00 40.00	31.50 30.00		
00290	PROTEIN - VANILLA - (Designer Whey) 2 lbs powder Buy 4 bottles, price each	42.49 38.50	31.87 28.88		
00282	PROTEIN - CHOCOLATE - (Designer Whey) 2 lbs powder Buy 4 bottles, price each	42.49 38.50	31.87 28.88		
00283	PROTEIN - NATURAL - (Designer Whey) 2 lbs powder Buy 4 bottles, price each	42.49 38.50	31.87 28.88		
01508	PTEROPURE™ - 50 mg Pterostilbene 60 veg. caps Buy 4 bottles, price each	32.00 30.00	24.00 22.50		
01075	PURE PLANT PROTEIN - Natural Vanilla 450 grams powder Buy 4 jars, price each	36.00 33.00	27.00 24.75		
01209	PUMPKIN SEED EXTRACT (WATER-SOLUBLE) - 60 veg. caps Buy 4 bottles, price each	20.00 18.00	15.00 13.50		
01210	PUMPKIN SEED EXT w/SOY ISOFLAVONES (WATER-SOLUBLE) - 60 veg. caps Buy 4 bottles, price each	22.00 20.00	16.50 15.00		
01031	PYCNOGENOL® - 60 veg. caps	89.95	67.46		
01217	PYRIDOXAL 5'-PHOSPHATE - 100 mg, 60 veg. caps Buy 4 bottles, price each	22.00 19.80	16.50 14.85		
Q, R					
01309	QUERCETIN (OPTIMIZED) - 250 mg, 60 veg. caps Buy 4 bottles, price each	\$18.00 17.00	\$13.50 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 Buy 4 bottles, price each	19.95 18.67	14.96 14.00		
01448	REJUVENEX® BODY LOTION - 6 oz Buy 4 tubes, price each Buy 8 tubes, price each	24.00 19.80 17.00	18.00 14.85 12.75		
00918	REJUVENEX® FACTOR - 1.7 oz airless pump Buy 2 bottles, price each Buy 4 bottles, price each Buy 8 bottles, price each	65.00 60.00 55.00 49.91	48.75 45.00 41.25 37.43		
01220	REJUVENEX® (ULTRA) - 2 oz Buy 2 jars, price each Buy 4 jars, price each Buy 8 jars, price each	52.00 48.00 44.00 39.93	39.00 36.00 33.00 29.95		
00676	REJUVENIGHT (ULTRA) - 2 oz Buy 4 jars, price each	39.95 36.00	29.96 27.00		
00706	REJUVENIGHT w/PROGESTERONE (ULTRA) - 2 oz Buy 4 jars, price each	42.00 38.00	31.50 28.50		
01413	RESVERATROL W/PTEROSTILBENE - 20 mg, 60 veg. caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		
01410	RESVERATROL W/PTEROSTILBENE - 100 mg, 60 veg. caps Buy 4 bottles, price each	36.00 32.00	27.00 24.00		
01430	RESVERATROL w/SYNERGISTIC GRAPE-BERRY ACTIVES (OPTIMIZED) - 250 mg, 60 veg. caps Buy 4 bottles, price each	46.00 41.33	34.50 31.00		
00889	RHODIOLA EXTRACT - 250 mg, 60 veg. caps Buy 4 bottles, price each	11.75 10.58	8.81 7.94		
00972	(D) RIBOSE POWDER - 150 grams Buy 4 jars, price each	27.50 24.75	20.63 18.56		

SUB-TOTAL OF COLUMN 15

No.		Retail Each	Member Each	Qty	Total
01473	(D) RIBOSE TABLETS - 100 veg. tabs Buy 4 bottles, price each	\$32.00 28.00	\$24.00 21.00		
01208	R-LIPOIC ACID (SUPER) - 300 mg, 60 veg. caps Buy 4 bottles, price each	49.00 45.00	36.75 33.75		
00070	RNA CAPSULES - 500 mg, 100 caps Buy 4 bottles, price each	17.95 16.16	13.46 12.12		
00917	ROSMARINIC ACID EXTRACT - 60 veg. caps Buy 4 bottles, price each	59.00 53.00	44.25 39.75		
S					
01082	SACCHAROMYCES BOULARDII+MOS - 30 veg. caps	\$9.95	\$7.46		
01067	SACCHAROMYCES BOULARDII+MOS - 90 veg. caps	21.95	16.46		
01432	SAFFRON w/SATIREAL (OPTIMIZED) - 60 veg. caps Buy 4 bottles, price each	36.00 32.00	27.00 24.00		
*00573	SAMBU® GUARD - 175 ml	17.79	13.34		
00358	SAME (S-ADENOSYL-METHIONINE) - 200 mg, 20 enteric coated tablets Buy 8 boxes, price each	17.00 15.00	12.75 11.25		
00453	SAME (S-ADENOSYL-METHIONINE) - 200 mg, 50 enteric coated tablets Buy 4 bottles, price each	40.00 35.00	30.00 26.25		
00557	SAME (S-ADENOSYL-METHIONINE) - 400 mg, 20 enteric coated tablets Buy 6 boxes, price each	32.00 25.00	24.00 18.75		
01055	SAME (S-ADENOSYL-METHIONINE) - 400 mg, 50 enteric coated tablets Buy 4 bottles, price each	72.00 66.00	54.00 49.50		
01043	SEA-IODINE™ - 1000 mcg, 60 veg. caps Buy 4 bottles, price each	8.00 7.20	6.00 5.40		
00046	SELENIUM - 2 oz dropper bottle Buy 4 bottles, price each	9.95 9.45	7.46 7.09		
00567	SE-METHYL L-SELENOCYSTEINE - 200 mcg, 100 caps Buy 4 bottles, price each	12.00 11.00	9.00 8.25		
00318	SERRAFLAZYME - 100 tablets Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00011	SHAMPOO - 16 fl oz Buy 4 bottles, price each	6.00 4.75	4.50 3.56		
00284	SHARK LIVER OIL (NORWEGIAN) - 1000 mg, 30 softgels Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00184	SILYMARIN - 100 mg, 50 caps Buy 4 bottles, price each	9.25 8.25	6.94 6.19		
01502	SKIN RESTORING CERAMIDES w/LIPOWHEAT™ - 30 liquid caps Buy 4 bottles, price each	25.00 23.00	18.75 17.25		
00961	SODZYME® w/GLISODIN® AND WOLFBERRY - 90 veg. caps Buy 4 bottles, price each	28.00 24.00	21.00 18.00		
00657	SOLARSHIELD SUNGLASSES - 1 pair smoke color Buy 2 pairs, price each	12.99 11.50	9.74 8.63		
01097	SOY EXTRACT (ULTRA) - 150 veg. caps Buy 4 bottles, price each	87.00 78.00	65.25 58.50		
00286	SOY PROTEIN CONCENTRATE - 16 oz of powder Buy 4 jars, price each	12.00 10.63	9.00 7.97		
01099	STABILUM® 200 - 30 caps	30.00	22.50		
00432	STEVIA EXTRACT - 100 packets, 1 gram each Buy 4 boxes, price each	9.95 9.00	7.46 6.75		
00351	ST. JOHN'S WORT EXTRACT - 300 mg, 60 caps Buy 4 bottles, price each	10.98 10.00	8.24 7.50		
00327	ST. JOHN'S WORT EXTRACT (PLANETARY) - 600 mg, 60 tablets Buy 4 bottles, price each	16.75 13.85	12.56 10.39		

SUB-TOTAL OF COLUMN 16

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No.		Retail Each	Member Each	Qty	Total
S CONTINUED					
01476	STRONTIUM - 750 mg, 90 veg. caps Buy 4 bottles, price each	\$20.00 18.00	\$15.00 13.50		
00971	SUN PROTECTION SPRAY W/BETA GLUCAN - SPF30 - 6 oz Buy 4 bottles, price each	14.95 13.50	11.21 10.13		
00747	SUNGLASSES (OVERCAST POLARIZED) - gray color, large Buy 2 pairs, price each	27.00 21.00	20.25 15.75		
00748	SUNGLASSES (OVERCAST POLARIZED) - gray color, medium Buy 2 pairs, price each	27.00 21.00	20.25 15.75		
00758	SUPER ABSORBABLE SOY ISOFLAVONES - 60 caps Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
01381	SUPERCritical OMEGA 7™	56.95	42.71		
01348	SUPERCritical OREGANOFORCE™ - 30 softgels	31.95	23.96		
01408	SUPER SAW PALMETTO/NETTLE ROOT W/BETA-SITOSTEROL 60 softgels Buy 4 bottles, price each Buy 12 bottles, price each	28.00 26.00 24.00	21.00 19.50 18.00		
01407	SUPER SAW PALMETTO W/BETA-SITOSTEROL - 30 softgels Buy 12 bottles, price each	15.00 12.00	11.25 9.00		
00578	SUPER SELENIUM COMPLEX - 200 mcg, 100 caps Buy 4 bottles, price each Buy 12 bottles, price each	12.00 10.00 9.00	9.00 7.50 6.75		
00674	SYTRINOL™ - 60 softgels Buy 4 bottles, price each	32.00 28.00	24.00 21.00		
T					
TAL-SHI™ COSMETICS • For information please call 1-800-544-4440 or visit www.LifeExtension.com					
01062	TART CHERRY - 600 mg, 60 caps	\$18.95	\$14.21		
00199	TAURINE - 1000 mg, 50 caps Buy 4 bottles, price each	8.95 8.00	6.71 6.00		
00133	TAURINE POWDER - 300 grams Buy 4 bottles, price each	20.00 16.88	15.00 12.66		
01304	THEAFLAVIN STANDARDIZED EXTRACT - 30 veg. caps Buy 4 bottles, price each	18.00 16.00	13.50 12.00		
00555	(L) THEANINE - 100 mg, 60 caps Buy 4 bottles, price each	24.00 20.50	18.00 15.38		
01038	THERALAC PROBIOTICS - 30 caps	44.95	33.71		
00224	THYMIC IMMUNE FACTORS - 100 caps Buy 4 bottles, price each	18.00 14.00	13.50 10.50		
00668	THYROID FORMULA™ (METABOLIC ADVANTAGE) - 100 caps	21.95	16.46		
00349	TMG POWDER - 50 grams Buy 4 bottles, price each	14.00 11.00	10.50 8.25		
00359	TMG - 500 mg, 180 tablets Buy 4 bottles, price each	18.00 15.50	13.50 11.63		
00781	TOCOTRIENOLS WITH SESAME LIGNANS - 60 softgels Buy 4 bottles, price each	38.00 36.00	28.50 27.00		
01400	TOCOTRIENOLS (SUPER-ABSORBABLE) - 60 softgels Buy 4 bottles, price each	30.00 28.00	22.50 21.00		
01278	TOOTHPASTE - 4 oz (Mint) Buy 4 tubes, price each	9.50 8.67	7.13 6.50		
01274	TOTAL SUN PROTECTION CREAM W/BETA GLUCAN - 4 oz Buy 4 tubes, price each	28.00 25.20	21.00 18.90		
01468	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT - 60 veg. caps Buy 4 bottles, price each	24.00 22.00	18.00 16.50		

SUB-TOTAL OF COLUMN 17

No.		Retail Each	Member Each	Qty	Total
01469	TRIPLE ACTION CRUCIFEROUS VEGETABLE EXTRACT W/RESVERATROL -60 veg. caps Buy 4 bottles, price each	\$32.00 29.60	\$24.00 22.20		
00866	TRYPTOPURE® L-TRYPTOPHAN - 500 mg, 90 veg. caps Buy 4 bottles, price each	38.00 34.00	28.50 25.50		
01202	TRYPTOPURE® PLUS (OPTIMIZED) - 90 veg. caps Buy 4 bottles, price each	40.00 36.00	30.00 27.00		
01616	TWO-PER-DAY - 60 veg. tablets Buy 4 bottles, price each	10.50 9.50	7.88 7.13		
01615	TWO-PER-DAY - 120 veg. tablets Buy 4 bottles, price each	20.00 18.00	15.00 13.50		
01614	TWO-PER-DAY - 120 veg. caps Buy 4 bottles, price each	22.00 20.00	16.50 15.00		
00326	L-TYROSINE - 500 mg, 100 tablets Buy 4 bottles, price each	12.50 11.42	9.38 8.57		
U					
* 00310	UDO'S OIL 3-6-9 BLEND - 17 fl oz	\$27.79	\$20.84		
* 00311	UDO'S 3-6-9 OIL BLEND - 180 caps	34.79	26.09		
* 00322	UDO'S CHOICE® WHOLESOME FAST FOOD - 16 oz bottle	27.99	20.99		
01061	ULTIMATE FLORA ADVANCED IMMUNITY PROBIOTICS - 30 caps	29.99	22.49		
V					
00213	VANADYL SULFATE - 7.5 mg, 100 tablets Buy 4 bottles, price each	\$15.00 12.50	\$11.25 9.38		
00252	VELVET DEER ANTLER - 250 mg, 30 caps Buy 4 bottles, price each	36.00 34.00	27.00 25.50		
00408	VENOTONE - 60 caps Buy 4 bottles, price each	18.95 16.00	14.21 12.00		
01327	VINPOCETINE - 10 mg, 100 tablets Buy 4 bottles, price each	18.00 14.00	13.50 10.50		
01033	VISION OPTIMIZER - 90 caps	29.95	22.46		
01098	VITAL GREENS MIX - 319.5 grams powder Buy 4 jars, price each	48.00 44.00	36.00 33.00		
01219	VITAMIN A NUTRISORB - 0.6 fl oz	27.00	20.25		
00091	VITAMIN B1 CAPS - 500 mg, 100 caps Buy 4 bottles, price each	18.73 17.00	14.05 12.75		
00093	VITAMIN B2 CAPS - 100 mg, 100 caps Buy 4 bottles, price each	14.32 13.00	10.74 9.75		
00096	VITAMIN B3 NIACIN - 1000 mg, 100 caps Buy 4 bottles, price each	12.75 12.00	9.56 9.00		
00372	VITAMIN B3 NIACIN - 500 mg, 100 caps Buy 4 bottles, price each	7.65 6.65	5.74 4.99		
00098	VITAMIN B5 - 500 mg, 100 caps (Pantothenic Acid) Buy 4 bottles, price each	10.50 9.38	7.88 7.04		
00556	VITAMIN B6 - 250 mg, 100 caps Buy 4 bottles, price each	12.50 11.00	9.38 8.25		
00361	VITAMIN B12 - 500 mcg, 100 lozenges Buy 4 bottles, price each	8.75 7.25	6.56 5.44		
00927	VITAMIN C WITH DIHYDROQUERCETIN - 1000 mg, 250 tablets Buy 4 bottles, price each	25.50 23.25	19.13 17.44		
00084	VITAMIN C (BUFFERED) POWDER - 454.6 grams Buy 4 bottles, price each	23.95 22.00	17.96 16.50		
00864	VITAMIN D3 - 2000 IU, 1 fl oz Buy 4 bottles, price each	28.00 25.00	21.00 18.75		
00251	VITAMIN D3 - 1000 IU, 250 caps Buy 4 bottles, price each	12.50 11.25	9.38 8.44		

SUB-TOTAL OF COLUMN 18

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No.		Retail Each	Member Each	Qty	Total
00713	VITAMIN D3 - 5000 IU, 60 caps	\$11.00	\$8.25		
	Buy 4 bottles, price each	9.90	7.43		
01418	VITAMIN D3 - 7000 IU, 60 caps	14.00	10.50		
	Buy 4 bottles, price each	12.60	9.45		
01372	VITAMIN D3 w/SEA-IODINE™ - 5000 IU, 60 veg. caps	14.00	10.50		
	Buy 4 bottles, price each	12.50	9.38		
01472	VITAMINS D AND K w/SEA-IODINE™ - 60 veg. caps	24.00	18.00		
	Buy 4 bottles, price each	22.00	16.50		
00063	VITAMIN E (PURE NATURAL) - 400 IU, 100 caps	18.75	14.06		
	Buy 4 bottles, price each	17.25	12.94		
	Buy 10 bottles, price each	15.00	11.25		
01225	VITAMIN K2 (LOW-DOSE) - 45 mcg, 90 softgels	18.00	13.50		
	Buy 4 bottles, price each	16.00	12.00		
Z					
01585	ZEAXANTHIN W/LUTEIN & MESO-ZEAXANTHIN AND C3G (SUPER) - 60 softgels	\$22.00	\$16.50		
	Buy 4 bottles, price each	19.80	14.85		
01586	ZEAXANTHIN W/LUTEIN & MESO-ZEAXANTHIN PLUS ASTAXANTHIN AND C3G (SUPER) - 60 softgels	42.00	31.50		
	Buy 4 bottles, price each	38.00	28.50		
00061	ZINC LOZENGES - 75 lozenges	9.50	7.13		
	Buy 4 bottles, price each	6.75	5.06		
01051	ZYFLAMEND - 120 softgels	60.95	45.71		
01029	ZYFLAMEND EASYCAPS - 180 softgels	31.95	23.96		

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†Due to license restrictions, this product is not for sale to wholesalers outside of the USA or Canada.

††Can only be sold in the USA.

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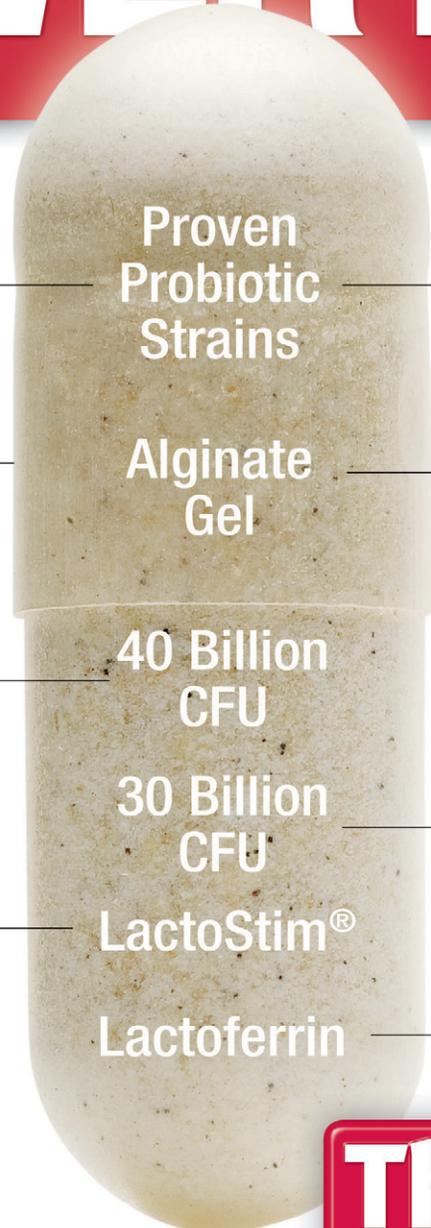
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30 Billion CFU

LactoStim®

Lactoferrin

Only **vegetable** (plant) source ingredients.

Patented gel provides **acid-proof live delivery** deep into gut tract (US Patents 7,122,370 & 7,229,818)

Guaranteed at 30 billion CFU through expiration.

Maintains proper level of "good" bacteria.

TherAlac, 30 capsules
Item# 01038
Retail price: \$44.95
Call for LEF Member Pricing

Call *Life Extension*® now to order TherAlac® and feel the benefits for yourself. TherAlac® is **guaranteed** through expiration and protected by 2 US patents.

Call 800-544-4440

TherAlac
Your Healthcare starts with Health.

TherAlac® is a registered trademark of Master Supplements.



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

Immune Support as Nature Intended

Nature provides an arsenal of herbs and mushrooms that can help support immune health and maintain well-being.*

The Immune System Is an Impressive Biological Defensive Strategy

The immune system is a network of cells and organs that serve to protect the body from a myriad of environmental stressors. It includes both physical barriers and cellular responses. There are several types of white blood cells or immune cells that travel through the bloodstream and tissues, surveying and responding when appropriate. Some of the first responders are natural killer cells and macrophages, cells that make up what is known as the innate immune system. If reinforcement is required, antibody-producing white blood cells called B cells and T cells are activated through a complex signaling cascade. Together the body's army of immune system cells executes one of the most impressive biological defensive strategies in nature.

The immune system plays a critical role in maintaining wellness. It is responsible for maintaining a healthy inflammation response and normal cell growth. And, during the cold-weather months when environmental stressors abound, a healthy immune system provides the key to maintaining respiratory tract health. Importantly, a healthy immune system is one that is neither over-stimulated nor under-stimulated.

Different Factors Can Contribute to Immune Imbalance

There are several factors that can contribute to immune imbalance. Topping the list are: too much stress, lack of sleep, excessive sugar consumption, inadequate fruit and vegetable consumption, and lack of exercise or excessive exercise.

A healthy lifestyle that includes stress-relieving techniques, regular moderate exercise, adequate restful sleep, and a whole-foods diet rich in fresh organically grown fruits and vegetables is fundamental to keeping the immune system balanced. Research suggests that you can further enhance the health of the immune system by "feeding" it select species of tonic mushrooms such as those featured in LifeShield Immunity.*



LifeShield® Immunity™ Immune System Defense*

LifeShield Immunity is formulated with select species of tonic mushrooms, including Reishi, to support the immune system, vitality, and overall wellness.* It combines species both revered traditionally and researched extensively for immune support.* LifeShield Mushroom formulas deliver tonic mushrooms' whole protective shield through the combination of mycelium, their extracellular compounds, fruiting bodies, and spores. The combination of these stages creates the activated LifeShield to promote your health and wellness.*

LifeShield Immunity 60 Vegetarian Capsules
Item #01314 Retail Price: ~~\$39.95~~ Member Price: \$29.96



Oregano Force™ Supports Optimal Immunity*

Oregano leaf is an aromatic Mediterranean herb with a distinguished history as a spice and as a healing plant. Used in ancient Greek medicine, oregano leaf was lauded for its ability to support respiratory, digestive, and immune system health.* Compounds in oregano known as phenolic antioxidants have a remarkable ability to support a healthy balance of microbes and to promote healthy respiratory function.* New Chapter's Oregano Force incorporates both supercritical and hydroethanolic extracts of organically grown oregano.

Oregano Force 30 Softgels
Item #01348 Retail Price: ~~\$31.95~~ Member Price \$23.96

**To order LifeShield® Immunity™ and Oregano Force™,
call 1-800-544-4440 or visit www.LifeExtension.com**

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

Choose Your Cleanse, Transform Your Health!



Cleansing – Beyond a Toxin Flush for True Balance

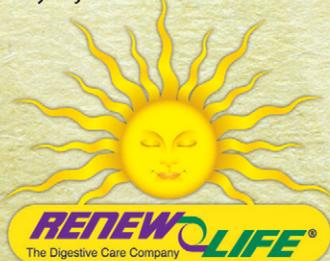
Every day our bodies fight off toxins taken in through food, the water supply, and our polluted air. The holiday season puts an added stress on our detox systems with the abundance of rich foods, festive drinks, and erratic eating patterns. By the New Year most of us are feeling the effects.

“Post-Holiday” Digestive Issues

- Fatigue and low energy
- Weight gain and bloating
- Sluggish, irregular bowels

Cleansing aids the body’s inherent seven channels of elimination—kidneys, liver, lungs, lymph system, blood, bowels, and skin—to promote a gentle, effective, and thorough toxin flush. Cleansing is also a beneficial step in restoring the GI tract’s vital microflora balance, the body’s center for immune, digestive, metabolic, and bacterial system balance.

ReNew Life’s specialized total body cleanses jumpstart any new or ongoing health plan to help rebalance digestion, colon health, and vitality—just in time for the New Year!*



Toxins’ Triple Threat – Choose Your Best Cleanse



Pure Support, Nothing Added

Organic Total Body Cleanse

Total body and bowel cleanse for the organic lifestyle

- Detoxifies, captures, and eliminates unwanted toxins*
- 20 organic cleansing herbs plus 3 organic fibers
- 14-day, 3-part cellular cleansing series

Item #01070 • Retail Price: \$34.99 • Member Price: \$26.24



Smart Ingredients, Powerful Results

CleanseSMART

Voted America’s #1 Cleanse for advanced colon and liver support

- Promotes colon and liver detox and bowel regularity*
- Dual-cleanse morning/evening herbal and antioxidant packs
- 30-day, 2 part deep and revitalizing internal cleanse

Item #01078 • Retail Price \$31.99 • Member Price \$23.99



Beat Bloating, Boost Energy

Flush & Be Fit

Award winning women’s detox, weight, and healthy energy system

- Helps flush fat toxins, reduces water retention, supports digestion*
- Cleansing herbs, probiotics, enzymes, and nutraceuticals
- 2-week supply includes morning flush pack, afternoon energy pack, evening cleanse pack

Item #01212 • Retail Price \$29.99 • Member Price \$22.49

LifeExtension®

To order any of these formulas, call 1-800-544-4440 or visit www.LifeExtension.com

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Restore
Cellular
Energy
with...

NEXT-GENERATION

CoQ10

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

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

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

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

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

Super Ubiquinol CoQ10 with Enhanced Mitochondrial Support™

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

References:

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



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



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



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

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

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LifeExtension® Magazine



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7 BUREAUCRATIC ASSAULT ON NEW CANCER THERAPIES

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