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## In The NEWS

### Life Extension Phytoestrogen Formula Protects Brain, Nervous System



At a recent scientific conference in Italy, independent researchers with no financial ties to Life Extension presented important new findings showing that Life Extension's phytoestrogen formula provides significant neuroprotection.<sup>1</sup>

The Italian researchers tested Life Extension's Natural Estrogen supplement to determine whether its phytoestrogen ingredients protect the central nervous system from toxic degeneration. The study focused on specific cells in the central nervous system that fuel neurodegenerative diseases by releasing large amounts of inflammatory cytokines. Phytoestrogens, which are plant-derived compounds found in nutrients like soy and licorice root, help cells of the central nervous system fight dangerous inflammation.

This study was performed on rats so that the supplement's specific effects could be documented by removing the animals' ovaries and performing a surgical biopsy of cells from their nervous systems, neither of which would be possible in a human clinical study of this type.

Adult female rats received standard food and orally administered Natural Estrogen. A similar group of animals that received standard food but no phytoestrogen formula served as a control group. The scientists then surgically removed cells from the central nervous systems of the test animals. The cells were exposed to an inflammation-provoking toxin, and levels of inflammatory and protective cytokines were measured over the course of 24 hours.

Exposure to the toxin increased levels of all the measured cytokines. Compared to cells in the control animals, cells of the supplemented rats had significantly lower levels of the pro-inflammatory cytokines tumor necrosis factor-alpha, interleukin beta, and interleukin-6, and higher levels of a neuroprotective compound known as transforming growth factor beta.

These exciting findings suggest that the phytoestrogen formulation used by many Life Extension members safely and effectively optimizes the health of the brain and nervous system by decreasing production of deadly inflammatory cytokines.

Editor's Note: This experiment utilized Life Extension's Natural Estrogen formula. Life Extension also offers a Natural Estrogen with Pomegranate Extract formula, which supplies the additional benefits of pomegranate extract, broccoli extract, and HMRlignan™.

—Elizabeth Wagner, ND

### High Blood Pressure Now Common in Teens



Elevated blood pressure is common among 14-year-olds in the United States, according to a newly released report. In addition, many teens are overweight and a substantial number have borderline high or high cholesterol.<sup>2</sup> High blood pressure, excess body weight, and high cholesterol are all independent risk factors for America's number-one killer, heart disease.

Scientists collected blood samples from and measured blood pressure, height, and weight in 1,717 eighth-grade students from 12 ethnically diverse schools in Texas, California, and North Carolina. Nearly one quarter of the teens had high blood pressure, and almost half were overweight or at risk of being overweight. Approximately 17% had borderline high total cholesterol and 4% had high total cholesterol.

These findings demonstrate that cardiovascular risk factors are prevalent not only among American adults, but also among teenagers. The study authors recommend that all adolescents (regardless of race or ethnicity) who are at risk for weight problems be screened for elevated blood pressure and blood lipid levels.

—Elizabeth Wagner, ND

## Folic Acid May Halt Cancer Progression



Supplementing with folic acid may prevent cancer progression and even contribute to disease regression, according to a new study.<sup>3</sup>

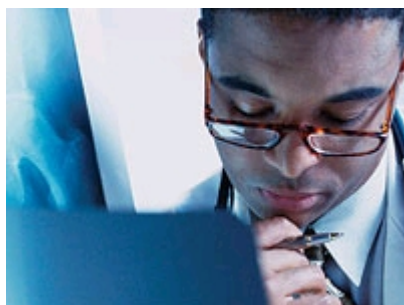
The study enrolled 43 patients with untreated laryngeal leukoplakia, a pre-cancerous condition of the larynx (an organ containing the vocal cords). The patients received 5 mg of folic acid three times daily for six months. The progression of each patient's condition was determined at the study's onset and every 30 days for the length of the investigation.

After six months, 12 patients (28%) experienced complete resolution of their condition, 19 patients (44%) had a 50% or greater reduction in the size of their pre-cancerous lesions, and 12 patients (28%) had no response to supplementation. None of the study participants experienced a progression in their condition.

Folic acid may thus represent a safe, effective therapy for reducing the progression of laryngeal leukoplakia and preventing the development of laryngeal cancer. Scientists believe folic acid promotes health by supporting DNA synthesis and repair.

—Elizabeth Wagner, ND

## Calcium, Vitamin D Supported for Bone Health



The Society for Women's Health Research recently convened a group of medical experts on Capitol Hill to discuss a highly publicized, federally funded study of the value of calcium and vitamin D supplements in preventing bone fractures in women over the age of 50.<sup>4</sup>

Initial media coverage of the *New England Journal of Medicines* report stated that calcium and vitamin D provide no benefit in preventing bone fractures, causing many to question widely held beliefs about the bone-protective effects of these nutrients. However, health experts say the media interpretation of the study results was misleading. In fact, the study investigators said the recommended daily intake of 1200 mg of calcium and 800 IU of vitamin D should remain unchanged.<sup>4,5</sup>

Phyllis Greenberger, president and CEO of the Society for Women's Health Research, noted, "The Women's Health Initiative's calcium and vitamin D supplemental trial showed that women over the age of 60 had a 21% reduction in risk for hip fracture. Women who took a full dose of calcium, as directed by the study, had a 29% decrease in risk."<sup>4</sup>

—Elizabeth Wagner, ND

## Omega-3 Fatty Acids Reduce Back, Neck Pain



Omega-3 fatty acids from fish oil may reduce the incidence of neck and back discomfort, decreasing the need for pain-relieving nonsteroidal anti-inflammatory medications (NSAIDs), according to a new study.<sup>6,7</sup>

While previous studies have found that omega-3s may relieve arthritis pain,<sup>6</sup> this is the first to examine their effects on persistent neck or back pain. The trial enrolled 125 patients who were using NSAIDs to reduce inflammation and relieve pain. They were given daily supplements of 2400 mg of omega-3 fatty acids for two weeks, followed by 1200 mg of omega-3 fatty acids for approximately two months. After two weeks, the volunteers were asked to stop using NSAIDs, and later they answered a questionnaire concerning their joint and spine pain, side effects,

and level of NSAID use.<sup>7</sup>

Fifty-nine percent of patients had discontinued their NSAID medications, and 60% reported lower overall pain levels since beginning omega-3 supplementation. Eighty percent said they were pleased with their improvement, and 88% said that they would continue to use omega-3 fatty acids.<sup>7</sup> The research team noted that as many as two thirds of NSAID users may be able to relieve their pain and inflammation by using omega-3 fatty acids instead of NSAIDs.<sup>7</sup>

—Elizabeth Wagner, ND

## Carotenoids Cut Diabetes Risk in Nonsmokers



A recent study shows that abundant intake of carotenoids may greatly decrease the risk of developing diabetes in nonsmokers by combating oxidative stress in the body.<sup>8</sup> Carotenoids are plant-derived antioxidants found in fruits and vegetables such as carrots, tomatoes, and spinach.

Researchers measured baseline serum levels of carotenoids in both nonsmokers and smokers, and observed their incidence of diabetes and insulin resistance over the next 15 years. Nonsmokers with higher levels of carotenoids in their blood at the study's onset were statistically less likely to develop diabetes or insulin resistance, which often precedes diabetes. By contrast, smokers with higher carotenoid levels at the study's onset did not enjoy the same reduction in diabetes risk.

The study results confirm the health benefits associated with a carotenoid-rich diet, and further suggest that smoking may increase the risk of developing diabetes.

—Robert Gaston

## Cinnamon Extract Promotes Healthy Blood Sugar Levels



A new study shows that daily supplementation with cinnamon extract helps to improve blood sugar levels in people with type II diabetes.<sup>9</sup>

Controlling blood sugar levels is a challenging but crucial aspect of diabetes management, as poorly managed blood sugar is associated with an increased risk for complications of the disease. When 79 patients with type II diabetes took aqueous cinnamon extract supplements three times daily for four months, their fasting blood sugar (glucose) levels dropped by an impressive 10.3%. Furthermore, people who had higher initial blood glucose levels benefited even more from cinnamon supplementation.

These exciting findings offer hope that cinnamon extract may benefit the millions of Americans who struggle with elevated blood sugar levels.

—Robert Gaston

## Oral Contraceptives Deplete CoQ10, Vitamin E



Women who use oral contraceptives have much lower serum levels of coenzyme Q10 and vitamin E than women who do not use the pill, according to a recent study.<sup>10</sup> These fat-soluble antioxidants support energy production and protect against free radical damage that may contribute to disease.

When blood samples from 15 women who were taking oral contraceptives were compared to samples from 40 women who were not, oral contraceptive users had 37% lower CoQ10 levels and 24% lower vitamin E (alpha tocopherol) levels.

This research suggests that supplementing with CoQ10 and vitamin E may help oral contraceptive users prevent deficiencies of crucial health-promoting antioxidants.

—Robert Gaston

## Osteoporosis Drug May Stabilize Advanced Prostate Cancer



Treatment with the prescription drug raloxifene (Evista®) may inhibit the growth of advanced prostate cancer, according to a recent pilot study.<sup>11</sup> Raloxifene is typically used to treat osteoporosis in postmenopausal women, and research suggests that it also suppresses prostate cancer growth by decreasing male hormone levels.

In the first part of the study, raloxifene markedly inhibited the growth of human prostate cancers that had been grafted into mice. In the second phase, 21 men with advanced prostate cancer resistant to hormonal and other treatments were given raloxifene at 60 mg per day. Four men withdrew from the study early, leaving 17 men for evaluation.

After two months of treatment, 12 men discontinued therapy but 5 men (28%) had achieved stable disease and continued therapy. Four of the five were treated for four months, and one continued for 17 months before discontinuing therapy. All discontinuations were due to progressive disease, as defined by rising levels of prostate-specific antigen (PSA), though no extra tumor growth was found. Most side effects of treatment were mild.

Raloxifene may thus be a promising therapeutic for potentially incurable prostate cancer.

—Laura J. Ninger, ELS

## Limone, Perillic Acid Counter Spread of Cancer



Two potent plant-derived compounds, limonene and perillic acid, may inhibit the spread (metastasis) of skin cancer to other organs or tissues, report scientists in India.<sup>12</sup> Both biochemicals occur naturally in the essential oils of certain plants; limonene is prevalent in citrus fruit oils, while perillic acid occurs in plants such as sage, peppermint, perilla, and cranberry.

This study utilized an animal model of malignant melanoma. The animals received 10 doses of either limonene or perillic acid, while a control group received no treatment. Limonene administration produced a dramatic 65% reduction in metastatic tumor nodules, while perillic acid therapy led to a 67% reduction in these nodules. Treatment with limonene or perillic acid also reduced levels of two biomarkers associated with poorer cancer prognosis.

These findings suggest that limonene and perillic acid may protect against the spread of the deadliest form of skin cancer.

—Elizabeth Wagner, ND

## Melatonin May Protect Against Breast Cancer



Melatonin may protect women against breast cancer, according to a recently published paper.<sup>13</sup> A hormone secreted by the pineal gland in the brain, melatonin helps regulate sleep-wake cycles and functions as a potent antioxidant.

In this study, scientists utilized laboratory animals with tumors made up of human breast cancer cells. The rats were then injected with blood samples from healthy women. These samples contained varying concentrations of melatonin, depending on the time of day they were collected.

When the rats were injected with blood samples that were low in melatonin, tumor growth increased. The low-melatonin blood samples were collected during the day or at night after bright light exposure. When scientists injected the animals with blood samples that were high in melatonin, tumor growth slowed significantly. The high-melatonin samples were collected at night after total darkness.

These findings suggest that higher blood levels of melatonin may protect women against breast cancer. Since melatonin levels can be suppressed by exposure to bright light at night, these results could explain the observation that women who work night shifts have an increased risk for breast cancer.

—Robert Gaston

## New York State Joins National Fight Against Childhood Obesity



In June, New York State Senate minority leader David A. Paterson announced his “Healthy Kids Initiative” focusing on the epidemic of childhood obesity that is sweeping his state and the nation.

“The statistics are staggering,” Paterson said. “Twenty-eight percent of high school students are overweight and one in five kindergarteners is obese.” The problem is particularly acute in low-income areas, which have seen a 400% increase in the percentage of abnormal-weight children. “Thirty-three percent of children aged 2-5 are overweight and one in four Head Start children is obese,” Paterson noted. “When are we going to get embarrassed about how many of our children are overweight?”

More and more children are contracting diseases such as diabetes and heart disease that are more commonly associated with adulthood, which contributes to the increased prevalence of these conditions as the population ages. Cases of diabetes, for example, have doubled in New York City over the last decade.

Citing a need for a cultural change and “inventive health care,” Paterson called for a partnership between conventional and alternative medicine in diagnosing, preventing, and treating obesity. He referenced successful initiatives in other states, such as Arkansas Gov. Mike Huckabee’s “Healthy Arkansas” campaign, which fosters healthy dietary and exercise choices as well as preventive health measures (Life Extension, December 2005).

Eric R. Braverman, MD, a member of the Life Extension Foundation’s Scientific Advisory Board, elaborated on the health and societal implications of childhood obesity: “Obesity spirals into diabetes, asthma, sleep disturbance, behavioral problems, learning disabilities, and depression. Prescriptions for child diabetics have doubled in the past four years, and many children are taking multiple medications for related conditions.”

Dr. Braverman stressed the need for allocating resources and applying existing medical knowledge to prevent obesity. “We have all the tests to find disease early,” Dr. Braverman said. “The barometer of how government functions and how we the people are doing is how healthy our children are.”

—Bruce Scali

## In Memoriam - Stuart Glassman



Dr. Stuart Glassman was a husband, father, and grandfather, as well as our friend and colleague at Life Extension. On April 11, 2006, at the age of 78, Stuart lost a hard-fought, 12-year battle against cancer.

Stuart maintained a successful dental practice on Long Island for 34 years, before he and his wife Teri later moved to Florida to enjoy their golden years. Diagnosed with melanoma and determined to fight his cancer with every resource available, Stuart became a Life Extension member and, with the assistance of the Foundation's advisory staff, he implemented an integrated approach to fight his cancer. This strategy included diet modification, nutritional supplementation, and surgery to remove the cancer.

Stuart relentlessly researched conventional, experimental, and alternative therapies to slow the progression of the deadly melanoma. He underwent a cutting-edge immunotherapy regimen offered at the Moffitt Cancer Center in Tampa, FL, taking a vaccine designed to boost immune response and thus kill cancer cells.

Stuart always attributed his 12-year survival to the vaccine therapy and to information provided by Life Extension. With the Foundation's help, he designed a comprehensive supplement regimen that he followed rigorously.

Impressed with Stuart's vast knowledge of cancer and nutraceuticals, Life Extension invited him to join its health advisory team. At 72 years young while battling melanoma, Stuart emerged from retirement to share his wealth of knowledge with other Life Extension members, and quickly became a valued employee.

Shortly after he began working for Life Extension, Stuart was diagnosed with prostate cancer. While a lesser man might have given up, Stuart fought even harder. He tirelessly researched the most current scientific literature to help himself and other members who were battling prostate cancer.

Stuart was an amazing, courageous man who never missed a day of work even when his cancer was progressing. Countless members developed a relationship with Stuart during his five years at Life Extension. Although they all knew what a caring, generous man he was, few knew just how ill he was, as Stuart never complained.

Stuart's intelligence, thirst for knowledge, wit, and contagious laugh put everyone he spoke with at ease. However, it will be his warm, generous spirit that will be missed most of all.

—Elizabeth Weinstock

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