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IN THE NEWS

Memantine Found Effective Against Alzheimer's

The journal *Clinical Drug Investigation* recently reported that memantine is a cost-effective treatment for Alzheimer's disease.

In July 2001, *Life Extension* reported that German doctors were using memantine successfully to treat Alzheimer's patients, and expressed frustration with the FDA's slowness in approving the medication.¹ In October 2003, the FDA finally approved memantine for the treatment of moderate to severe Alzheimer's disease. Memantine is marketed in the US by Forest Laboratories under the trade name Namenda™.

Memantine is an N-methyl- D-aspartate (NMDA) receptor antagonist that is neuroprotective by blocking glutamate, which can cause overstimulation of the nerves and become toxic to the nervous system. Memantine may benefit individuals with Alzheimer's disease by improving cognition and overall functioning.

According to the *Clinical Drug Investigation* study, the costs of treating patients with moderate to severe Alzheimer's disease with memantine are more than offset by the overall savings in patient care.² A mathematical simulation estimated the cost implications of using memantine relative to no drug therapy over the course of five years in Alzheimer's patients in Finland.

As expected, the initial cost of memantine therapy was greater than that of no therapy. As the study progressed, however, treatment with memantine reduced the costs of patient care by helping patients remain at home longer, thus delaying their need for care at a hospital or nursing home. Memantine therapy was associated with approximately four extra months of independence, one additional month of residence in the community, and a cost reduction over placebo of \$2,050 per patient over five years (based on 2001 costs).

Alzheimer's is the leading cause of dementia in the elderly, affecting 4 million Americans.

—Elizabeth Wagner, ND



References

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Curcumin Analogs Have Anti-Cancer Effects



Scientists at Emory University in Atlanta have synthesized several chemical compounds based on curcumin that demonstrate extremely promising anti-cancer activity in the laboratory.

Curcumin, a bioactive compound present in turmeric, is known to exhibit powerful anti-cancer, anti-inflammatory, and antioxidant properties, and is believed to reduce the risk of cancer, heart disease, and Alzheimer's disease. In laboratory tests performed at the National Cancer Institute, at least nine of more than a dozen laboratory-created curcumin analogs showed "a moderate degree of anti-cancer activity," according to the Emory researchers.* Three of the new curcumin derivatives "exhibited a high degree of cytotoxicity," inhibiting tumor cell growth better than the commonly used chemotherapy drug cisplatin.

In laboratory tests at Emory, eight of the new compounds exhibited "a high degree" of anti-cancer activity, including effectiveness at preventing or interfering with angiogenesis, the process by which tumors supply themselves with nutrients that fuel further growth. Anti-angiogenic activity is of special interest to oncologists, as eliminating the vessels that supply blood to a tumor effectively

strangles the tumor while preventing damage to surrounding tissues.

Of the numerous potentially effective synthetic compounds, one deemed especially promising was tested on live mice bred to serve as human breast cancer models. The chemical was well tolerated by the rodents and effectively reduced the size of their tumors. Researchers believe that this curcumin analog may be a candidate for development as a new anti-cancer drug.

—Dale Kiefer

Reference

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Vitamin E-CoQ10 Combo Reduces Inflammation

Inflammation is common to many of today's most prevalent health disorders, including heart disease, cancer, autoimmune disease, and diabetes. In a recent study, the combination of supplemental vitamin E and coenzyme Q10 (CoQ10) had the effect of reducing inflammatory status in baboons.*

The baboons were maintained on a baseline diet low in fat and cholesterol for three months, then were placed on a high-fat, high-cholesterol diet for seven weeks. Blood levels of C-reactive protein, an important marker for inflammation in the body and a significant predictor of cardiovascular disease risk, were measured before and after the high-fat, high-cholesterol diet. The baboons' serum C-reactive protein levels were unchanged after the high-fat, high-cholesterol diet challenge.

Next, the baboons were supplemented with the antioxidant vitamin E for two weeks. Serum C-reactive protein levels dropped significantly following vitamin E supplementation. CoQ10 was then added to the baboons' supplementation, producing even greater reductions in inflammatory status as measured by C-reactive levels.

Vitamin E and CoQ10 may be powerful partners in reducing inflammatory status and thus in modulating the risk of numerous health conditions associated with inflammation and oxidative stress. Through their activity in reducing C-reactive protein, vitamin E and CoQ10 may help promote health and freedom from illnesses ranging from heart disease to diabetes.

—Elizabeth Wagner, ND

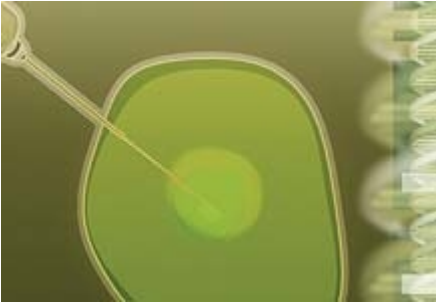
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* Wang XL, Rainwater DL, Mahaney MC, Stocker R. Cosupplementation with vitamin E and coenzyme Q10 reduces circulating markers of inflammation in baboons. *Am J Clin Nutr.* 2004 Sep;80(3):649-55.

Vote "Yes" To Fund Stem Cell Research In California

Stem cell research could lead to the reversal of aging and cures for diabetes, Parkinson's disease, multiple sclerosis, spinal cord injuries, Alzheimer's disease, AIDS and other diseases and conditions. The problem is that—for political reasons—stem cell research has been limited severely in the U.S. by federal restrictions. The government's reactionary position on stem cell

research has also made it difficult for private companies to raise money for research on this revolutionary breakthrough.



Proposition 71 – The California Stem Cell and Cures Initiative is designed to close this funding gap, so that medical researchers can conduct lifesaving stem cell research in California. Prop 71 authorizes low-interest, tax-free state bonds that will provide an average of \$295 million per year over a 10-year period for stem cell research. It specifically authorizes the funding of embryonic stem cell research, including cells derived from cloned embryos, which could lead to young cells, tissues and organs being transplanted into aging people without rejection by their immune systems. (For a greater understanding of the enormous potential of this technology, see the cover stories in the June 2000 and March 2002 issues of *Life Extension Magazine*)

If Prop 71 passes on election day, it will not only provide for extensive funding of lifesaving stem cell research in California, it will also encourage other states to fund this type of research, will put pressure on the federal government to lift its restrictions on stem cell research, will encourage venture capitalists to fund companies doing this research, and will encourage other countries to fund the research. It will be a major step forward in our quest for longer, healthier lives.

How You Can Help To Pass Prop 71

There are several ways you can help to pass Prop 71:

1. You can join the California Stem Cell Research and Cures Coalition (www.YesOn71.com) free of charge, so that you can be listed as a supporter for the initiative. As a member of the coalition, you'll receive campaign updates to inform you about important developments. Organizations and businesses can also join the coalition.
2. You can make financial contributions to the California Stem Cell Research and Cures Coalition on their web site, by regular mail to: 11271 Ventura Blvd., #509, Studio City, CA 91604; by phone (818) 905-8008; and by fax (818) 905-8018.
3. If you are a resident of voting age in California, you should **vote "YES" on Prop 71** on election day. If you are not a California resident, you should urge all your relatives and friends who live in California to vote for Prop 71.
4. You should inform other organizations and companies about the desirability of supporting the passage of Prop 71.

It is imperative that you take action to support the passage of The California Stem Cell and Cures Initiative (Prop 71). Your life and the lives of your loved ones are at stake.

IN THE NEWS

Supplemental Melatonin Lowers Blood Pressure

If you have a heart attack, it is more likely to occur in winter, at the beginning of the week, and in the early morning.^{1,2} A deposit of arterial plaque is likely to break off, travel to your right coronary artery, and block blood flow.^{3,4} If you are under the age of 65 and this is your first heart attack, you have an 85% chance of dying from it. There is a 50-50 chance that you had no previous symptoms of heart disease.

One indication that you are headed for a heart attack is high blood pressure. Many people ignore this condition when it is diagnosed, writing it off to high salt intake or stress. But high blood pressure has little to do with salt or stress.



Heart attacks most often occur when blood flow is most constricted—about 6 a.m.⁵ This is also when levels of the sleep hormone melatonin drop precipitously and those of the stress hormone cortisol increase. Melatonin interacts with blood vessels through receptor sites on the coronary arteries.⁶ Researchers recently discovered that if men take melatonin before bedtime, their blood pressure may decrease as much as if they were taking an antihypertensive drug.⁷ The participants in the study took 2.5 mg of melatonin for three weeks. Melatonin also increased their quality and quantity of sleep.

Other beneficial effects of melatonin that were not measured in the study include enhanced memory, increased growth hormone levels, and decreased cortisol levels.

—Terri Mitchell

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Fish Oil Helps Relieve Lupus Symptoms



A recent study found that fish oil rich in omega-3 fatty acids is helpful in relieving the symptoms of lupus.*

Lupus is a chronic inflammatory disorder that can manifest with symptoms such as fatigue, joint pain, fever, skin eruptions, neurological changes, and kidney problems.

Fish oil rich in the omega-3 fatty acids EPA and DHA is known for its anti-inflammatory activity and beneficial effects in treating rheumatoid arthritis and other inflammatory conditions. Copper is an essential trace element that plays a role in collagen synthesis. Both fish oil and copper have demonstrated therapeutic effects in rat studies of lupus.

In this double-blind, placebo-controlled trial, 52 individuals with lupus were assigned to four treatment groups. One group received 3 grams of fish oil and 3 mg of copper, one group received 3 grams of fish oil only, one group received 3 mg of copper only, and the final group received placebo only. Disease activity was measured using the Systemic Lupus Activity Measure (SLAM-R) and blood samples, with measurements taken at baseline, 6, 12, and 24 weeks.

At the end of the trial, a significant decline in SLAM-R scores was seen in patients taking the fish oil. No significant effect on SLAM-R scores was observed in the patients supplementing with copper. The study concluded that dietary supplementation with fish oil may be beneficial in managing the symptoms of lupus. Copper supplements, however, do not appear to offer symptomatic relief for individuals with lupus.

Reference

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Health Freedom Celebration Honors Life Extension

Life Extension Foundation founder William Faloon was among the honorees at the Celebration of Freedom, a two-day gathering held September 3-4 in Big Sky, MT. Organized by the Washington, DC-based law firm of Emord & Associates, PC, the event honors those who fight for the cause of health freedom in America.

Throughout the weekend, awards were bestowed on researchers, journalists, politicians, and physicians who fight for the right to inform the public about the benefits of nutrients and dietary supplements. One such honor, the Guardian of the Constitution Award, was given to the Life Extension Foundation in recognition of its efforts to further the cause of health freedom. Other award winners included legendary First Amendment warriors Durk Pearson, Sandy Shaw, and Dr. Julian M. Whitaker. Another honor, the James Lind Scientific Achievement Award, recognized such stellar scientists and researchers as Bruce N. Ames, PhD, Denham Harmon, MD, PhD, and Life Extension's William Faloon.

According to program organizer Jonathan W. Emord, the event was a success. "We designed it to be inspiring, uplifting, and moving," he said. "But I didn't expect it to overwhelm people like it did. During some of the speeches, people were crying." Ultimately, Emord and his colleagues believe that government-created obstacles that attempt to separate health care consumers from honest health care information are doomed to failure. "While the government may succeed in individual cases, these policies are destined for the trash heap of history," he said. "I think we're in a state of unlimited progress, because I'm an optimist and because we're committed to fighting for this indefinitely."

—Jon VanZile



From left to right: Julian M. Whitaker, MD; Kyl L. Smith, DC; Richard A. Passwater, PhD; Robert I-San Lin, PhD, CNS, FACN; Michael John Glade, PhD, CNS, FACN; Joel D. Wallach, ND, DVM; Luke Bucci, PhD, CCN; Durk Pearson and Sandy Shaw; Roy Upton; Hon. Berkley Bedell; and Charles B. Simone, MD, MMS.

RECIPIENTS OF THE JAMES LIND SCIENTIFIC ACHIEVEMENT AWARD

To Honor Scientists and Researchers Whose Brilliant Discoveries
Have Paved the Way to Greater Health and Longevity

- Bruce N. Ames, PhD
- The Hon. Berkley W. Bedell
- Robert I-San Lin, PhD, CNS, FACN

- James M. Blum, PhD
- John A. Borneman III, RPh
- Luke Bucci, PhD, CCN
- William E. Connor, MD
- Mary G. Enig, PhD, FACN
- William Faloon
- Michael John Glade, PhD, NS, FACN
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- Ralph W. Moss, PhD
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