
EAT-RITE NEWS

May 2013

Fish Oil Increases Life Expectancy

Introduction: One of the major advances in nutritional medicine is the ability to produce a fish oil supplement that is highly concentrated form of long-chain omega-3 fatty acids and also free from lipid peroxides, heavy metals, environmental contaminants, and other harmful compounds. These “pharmaceutical grade” fish oil concentrates are so superior to earlier fish oil products that they are literally revolutionizing nutritional medicine because of the health benefits they produce by supplying clinical levels of the omega-3 fatty acids EPA and DHA.

New data: In addition to reducing the risk for heart disease, a higher intake of omega-3 fatty acids may also reduce other causes of death. A recent study sought to investigate the association of blood levels of EPA, DHA, and total omega-3 fatty acid levels with all-cause and cause-specific mortality among healthy older adults not receiving fish oil supplements. The study involved 2,692 U.S. adults aged 74 years (± 5 years) without prevalent coronary heart disease (CHD), stroke, or heart failure at the beginning of the study. These patients were followed for 30,829 person-years, during which time 1,625 deaths (of which 570 were cardiovascular) occurred, 359 fatal CHD and 371 nonfatal CHD events, and 130 fatal and 276 nonfatal strokes occurred. Analysis of the results indicated that higher plasma levels of all omega-3 fatty acid biomarkers were found to be associated with lower total mortality. Subjects with the highest levels of omega-3 fatty acids were found to live an average of 2.22 more years after age 65 than those in the lowest quintile. These results are quite significant and once again highlight the importance of ingesting 1,000 mg of EPA+DHA for general health and 3,000 EPA+DHA when even higher levels are required as in existing CVD, high triglycerides, or any of the other 60+ health conditions benefited by higher EPA+DHA supplementation.

Reference: Mozaffarian D, Lemaitre RN, King IB, et al. Plasma phospholipid long-chain ω -3 fatty acids and total and cause-specific mortality in older adults: A cohort study. *Ann Intern Med.* 2013 Apr 2;158(7):515-25.

Landmark Vitamin K2 Study – Major Effect On Bone Health Noted

Introduction: Vitamin K is required for the production of the bone protein osteocalcin – a key component in the matrix of bone. Osteocalcin’s role is to anchor calcium molecules and hold them in place within the bone. A deficiency of vitamin K leads to impaired bone health due to inadequate osteocalcin levels. Despite some studies showing that the lower the level of circulating vitamin K, the lower the bone density, more recent studies indicate that while low dietary vitamin K levels are linked to fractures due to osteoporosis, they do not appear to correlate to low BMD. Vitamin K prevents fractures probably by increasing the tensile strength of bone without affecting BMD.

New Data: In a major clinical trial, MK-7 supplementation at relatively low dosage levels (180 mcg per day) produced tremendous effects on improving bone health. In the study, 244 healthy postmenopausal women took either the MK-7 or a placebo for 3 years. Bone mineral density of lumbar spine, total hip, and femoral neck was measured by DXA; bone strength measures of the femoral neck were also calculated. Vertebral fracture assessment was performed by DXA and used as measure for vertebral fractures. Measurements occurred at baseline and after 1, 2, and 3 years of treatment. MK-7 intake significantly improved vitamin K status and active osteocalcin levels, and decreased the age-related decline in bone mineral concentration (BMC) and BMD at the lumbar spine and femoral neck. It did not increase either measure at the total hip. Bone strength was also favorably affected by MK-7 – a key determinant of fracture risk. Lastly, MK-7 significantly decreased the loss in vertebral height of the lower thoracic region at the mid-site of the vertebrae.

These results highlight the importance of MK-7 supplementation in post-menopausal women.

Comment: The new frontier of bone health is focusing on improving the collagen matrix of bone. This matrix composes about 40% of the mass of bone and is to our bone what 2X4s are to the frame of our house. In addition to MK-7, a special form of silica, BioSil, has also shown considerable benefits in improving bone health via improved collagen content. Health Bones Plus from Natural Factors provides MK-7, BioSil, and other bone critical nutrients.

Theracurmin Produces Exciting Results In Phase 1 Study In Pancreatic Cancer

Introduction: Curcumin is the yellow pigment of turmeric (*Curcuma longa*) – the chief ingredient in curry. Curcumin has demonstrated significant activity in many experimental and clinical studies, but its effects have been limited until now because of poor absorption. **Background Information:** The anticancer effects of curcumin has been demonstrated in preclinical studies at all steps of cancer formation: initiation, promotion, and progression. Although preliminary clinical evidence is quite encouraging, studies have shown that curcumin is poorly absorbed and rapidly metabolized and eliminated from the body. Dosages as high as 12 grams of curcumin have failed to significantly raise blood levels. Hence, the results have not been impressive or consistent.

Two studies have been conducted in patients with advanced pancreatic cancer given 8,000 mg curcumin daily. These studies showed some positive results. For example, in one study of 26 patients with advanced pancreatic cancer, 8,000 mg of curcumin produced clinically relevant biological activity in two patients. The failure to affect more patients in these studies is thought to be the result of poor absorption of curcumin. Fortunately, there now exists a new curcumin product with much greater bioavailability.

New Data: Theracurmin is a special advanced form of curcumin that is by far the most bioavailable form of curcumin and represents a major breakthrough in the use of curcumin to promote health. Theracurmin was given to 16 patients with advanced pancreatic cancer who were unresponsive to conventional chemotherapy. This Phase 1 study sought to determine safety and dosage parameters. The patients produced no significant adverse effects even at relatively high dosage levels (200 mg/day and 400mg/day as curcumin representing 2,000 and 4,000 mg Theracurmin, respectively).

Theracurmin was shown to produce significant increases in the blood concentrations of curcumin in a dose dependent fashion – the higher the dosage, the greater the increase in curcumin in the blood. Median plasma curcumin levels 2 hour after Theracurmin administration (representing peak levels) were:

- 324 ng/mL at Level 1 (Theracurmin containing 200 mg of curcumin)
- 440 ng/mL at Level 2 (Theracurmin containing 400 mg of curcumin)

These values were significantly higher than the median values (85 ng/ mL) achieved in the authors' previous study using 8 g of conventional curcumin.

The big finding from the study was that Theracurmin produced significant improvement of key Quality of Life (QOL) scores such as:

- Fatigue
- Functional improvement (emotional, role, cognitive, physical, and social functions)
- Diarrhea
- Appetite loss

In addition, the median survival time (MST) was 132 days and three patients (21%) survived more than 12 months. As a reminder, these patients were unresponsive to conventional cancer treatment and with such advanced cancer are generally regarded as terminal with an average survival time of less than 2 months, so these results are quite promising. Further studies are currently in progress with excellent preliminary results.

Phosphatidylserine Improves Memory And Symptoms Of ADHD

Phosphatidylserine, or PS for short, is the major fatty substance in the human brain where it plays a major role in determining the structure, integrity and function of the membranes in brain cells. Normally the brain cells can manufacture sufficient levels of its own phosphatidylserine, but there is evidence that insufficient production is common especially in people over the age of fifty and in children with attention-deficit hyperactivity disorder (ADHD)

Research is quite clear that low levels of PS can lead to depression and/or impaired mental function. Good results have been obtained in numerous double-blind studies with phosphatidylserine supplementation in improving mental function, mood, and behavior in elderly subjects. These benefits may extend to children or adults with ADHD as well.

Background information:

The membrane of brain cells is a major action center. It not only regulates what goes in and out of the nerve cell, it serves the role as transmitter and receiver of chemical messages that allow cells to talk to one another. PS is critical in the function of healthy brain cells.

Not only does PS affect the outer nerve cell membranes, it also becomes incorporated within the inner cell membranes thereby improving energy production within the brain cells. When the individual cells of the brain have more energy, the brain as a whole is energized, has more power, and functions better. As a result PS may help children with ADHD have more mental clarity and demonstrate improvements in memory and mental tasks.

New data: In a landmark study, 36 children, aged 4-14 years, who had not previously received any drug treatment related to ADHD, received placebo or 200 mg day of PS for 2 months in a randomized, double-blind study. The main outcome measures included: (i) ADHD symptoms; (ii) short-term auditory memory and working memory; and (iii) mental performance to visual stimuli. The results showed that PS supplementation produced significant improvements in all main outcome measures as well as inattention and impulsivity. PS was well-tolerated and showed no side effects.

These results are extremely promising and indicate that PS supplementation may offer a safe and effective alternative to conventional drug therapy.

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| 88.1 Guymon, | 88.3 Amarillo |
| 88.5 Vernon | 88.7 Borger |
| 90.3 Wheeler | 91.3 Red River, NM |
| 92.3 Farwell, TX | |
| 88.1 Canadian, | 88.3 Childress, |
| TX88.3 Elk City | 91.1 Plainview, |
| TX91.9 Pampa, | 91.9 Perryton, |
| TX91.9 Memphis, | 91.7 Hereford, |
| TX94.9 Tulia, TX | 106.1 Dumas, |

Be sure and tune in every Thursday at 5:00pm for the Eat-Rite Wellness Hour.