



# Natural Insights for Well Being®

May 2018

## Better Bones and Joints

Nutrients ease pain in osteoarthritis, reverse osteopenia

### Curcumin, boswellic acid ease pain in osteoarthritis

Sometimes, combining two nutrients together can have a greater effect than a single nutrient alone. Here, doctors combined a curcuminoid complex from turmeric with a boswellic acid extract from Indian frankincense.

In this study, men and women with osteoarthritis, aged 40 to 70, took a placebo, a curcuminoid complex alone, or a combination of 350 mg of curcuminoids plus 150 mg of boswellic acid three times per day. After 12 weeks, while the placebo group had not improved, those taking curcumin alone or the curcumin-boswellic acid combination (Curamin®) scored better on physical function performance tests including morning stiffness, and limits to physical function. Only the curcumin-boswellic acid group reported improvement in joint pain.

### Tocotrienol, a form of vitamin E, rebuilds bone

Bone mass naturally thins with age, a condition called osteopenia, but drug treatments to slow bone loss have serious side effects. In this first study to test tocotrienol in osteopenia, 87 postmenopausal women with the condition took 400 IU of vitamin D



plus 500 mg of calcium per day, along with a placebo, 270 mg of delta tocotrienol plus 30 mg of gamma tocotrienol, or double the tocotrienols dose, per day.

After 12 weeks, while the placebo group had not changed, those taking either dose of tocotrienols saw a 100 percent increase in the ratio of a primary bone-forming biomarker to a bone-breakdown biomarker. Another ratio of bone breakdown to formation improved 18 percent for tocotrienol while deteriorating 28 percent for placebo.

Discussing the findings from this first-of-its-kind clinical trial, doctors said, unlike vitamin D which supports calcium in bone building, tocotrienols work directly with living bone-forming and bone-breakdown cells to create a balance that favors bone build-up.

REFERENCE: BMC COMPLEMENTARY AND ALTERNATIVE MEDICINE; 2018, VOL. 18, NO. 1, 7

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## Healthy Insight Memory and Mood

In this study 40 people, aged 50 to 90 who complained of mild memory loss, took 90 mg of an easily absorbable form of curcumin twice per day, or a placebo. After 18 months, while the placebo group had not changed, those taking curcumin improved by 28 percent on memory tests, and mood improved slightly.

In one of the most important findings for curcumin, compared to the start of the study, scans of the brain areas that control memory and emotion revealed fewer nerve-cell impairments—known as amyloid plaques and tau tangles—both of which are factors in Alzheimer's disease.

REFERENCE: AMERICAN JOURNAL OF GERIATRIC PSYCHIATRY; OCTOBER, 2017, PUBLISHED ONLINE

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# Chemotherapy Update

## Nutrients ease pain, nausea, and speed healing after treatment

### Omega-3s eased pain, sped healing of oral ulcers

Almost all who receive high-dose chemotherapy, and most of those with head and neck malignancies, develop the complication of oral ulcers, or mucositis. There are few treatment options. In this study, 60 men and women, aged 22 to 63, undergoing chemotherapy and developing grade-1 oral mucositis took



a placebo or 360 mg EPA plus 240 mg DHA from fish oil, per day. Doctors asked participants to avoid sour and spicy foods, and any remedies other than those prescribed by oncologists.

After 24 hours, those in the omega-3 group reported significantly less pain compared to placebo. After one week, while the placebo group had not improved, symptoms were significantly lower in those taking omega-3s, including less irritation of the oral cavity and throat. After two weeks, with little change for placebo, the omega-3 group had no signs of mucositis. Those taking omega-3 also reported better general health, quality of life, the ability to eat, sleep, speak, brush teeth, and that they were satisfied with the omega-3 treatment.

### Ginger reduced nausea

Earlier studies of nausea in pregnancy or after surgery found a ginger benefit, but results from prior chemotherapy-ginger studies were inconsistent. In this study, 51 people undergoing moderate to high-dose chemotherapy took a placebo or 300 mg of ginger extract four times per day with meals.

Over several chemotherapy cycles, while the placebo group did not improve, those taking ginger extract reported significantly better quality of life, including less nausea, vomiting, and fatigue.

**REFERENCE:** WOUNDS; DECEMBER, 2017, VOL. 29, NO. 12, 360-6

## Better Performance

### Quercetin and lemon verbena speed recovery after intense exercise

#### Quercetin boosted antioxidant defenses

Intense exercise increases oxidative damage. In this study, 14 men, average age 25.5 years, took a placebo or 500 mg of quercetin twice per day, for two weeks before and after an exercise designed to damage muscle. This was an “eccentric” exercise, meaning one that lengthens the muscle while it is under load. For example, a bicep curl enters the eccentric phase as the arm slowly lowers the dumbbell back down until the arm is fully straight.

Doctors measured levels of lipid peroxidation—oxidative damage—in red blood cells, and its byproduct, reactive oxygen species called TBARS. Compared to placebo, those taking quercetin had significantly lower levels of lipid peroxidation and TBARS.

Discussing the findings, doctors said

that consistently supplementing with quercetin before and after strenuous exercise makes red blood cells better able to recover from oxidative stress.

#### Lemon verbena reduced muscle damage

Exhaustive exercise can inflame and damage muscle, leading to fatigue and soreness. This study included 44 healthy men and women, aged 22 to 50, moderately active in sports, with normal to overweight body mass index scores, who ate no more than five portions of fruits and vegetables per day. Participants took a placebo or 400 mg of lemon verbena extract per day, beginning 10 days before and continuing five days after an exhaustive exercise day.

Compared to placebo, the lemon verbena group had less muscle damage

as measured by creatine kinase levels; more enzymatic protection from oxidative damage; recovered faster, had less loss of muscle strength, and less exercise-induced pain.

**REFERENCE:** NUTRITION RESEARCH; 2018, VOL. 50, 73-81



# Healthy Women

## Iron and cinnamon improve reproductive health

### Low iron linked to pregnancy depression

Evidence suggests low iron levels are linked to depression in the general population, but there are no pregnancy studies. Here, doctors reviewed the medical records of 142 women, aged 18 to 25, and beyond 20 weeks pregnant when tested for ferritin, a biomarker for iron stores.

Women deficient in iron had depression scores 29 percent higher than those with good iron levels, and these women were two-and-a-half times more likely to develop depression while pregnant. Doctors also compared other health factors including family history, lifestyle, physical activity, and socioeconomic status, and found that iron levels remained an independent factor in developing depression while

pregnant.

### Cinnamon improved PCOS

Polycystic ovary syndrome (PCOS) is a metabolic and reproductive condition that includes irregular periods and ovulation, a higher level of male—androgenic—hormones, unbalanced lipid profiles, and high blood pressure.

In this study, 84 overweight or obese women with PCOS, aged 20 to 38, took a placebo or three 500 mg capsules of cinnamon per day. After eight weeks, those taking cinnamon saw triglyceride levels decrease to 96.1 from 117.74 milligrams per deciliter of blood (mg/dL) compared to 124.62 from 131.76 for placebo.

Levels of LDL, the “bad” cholesterol, also significantly decreased for cinnamon while not changing for

placebo. HDL, the “good” cholesterol, increased for cinnamon while decreasing for placebo. Total antioxidant capacity improved by 9 percent for cinnamon, and a biomarker for oxidative stress decreased 8 percent.

REFERENCE: JOURNAL OF OBSTETRICS AND GYNAECOLOGY CANADA; 2017, S1701-2163, PUBLISHED ONLINE



MAY'S

## Ahead of the Curve

### Early-Stage Discoveries: Sea Buckthorn, Aloe Vera, L-Glutamine

Good results in the lab can lead to larger human trials. Here are some of the most promising recent findings.

#### Sea buckthorn protects heart, liver, immunity

Doctors reviewed four human studies and 11 animal studies on the effects of sea buckthorn. One study found sea buckthorn protected the liver against oxidized lipids; in another, the fruit, seeds, and peel protected against stress-induced suppression of natural immune killer white blood cells; and in five studies, sea buckthorn had heart-protective benefits. The unsaturated fatty acids, phytosterols, and vitamins A and E in sea buckthorn may produce these benefits.

#### Aloe vera boosts beneficial gut bacteria

Fructans and mucopolysaccharides in aloe vera stimulated the growth of common probiotics. In the lab, doctors used these aloe vera extracts to ferment several common probiotics in the lactobacillus and bifidobacterium families. On average overall, aloe vera fructans boosted these beneficial bacteria populations by two to three times, comparable to the fructooligosaccharides in inulin. In a separate test in human fecal bacteria, aloe fructans boosted the bifidobacterium population by 14 percent.

#### L-glutamine may slow liver disease

A high-sugar, Western-style diet can trigger non-alcoholic fatty liver disease. In the lab, doctors fed mice a high-fructose, high-fat diet or a healthy high-complex carbohydrate, low-fat diet. Some in each group got 2.1 grams of l-glutamine per kilogram of body weight. After eight weeks, those on the high-fructose diet without l-glutamine had significantly higher levels of liver inflammation, while those with l-glutamine had levels similar to those on the healthy diet.

REFERENCE: JOURNAL OF ETHNOPHARMACOLOGY; 2018, VOL. 213, 183-90

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## Help for Migraine

CoQ10 reduced chronic migraine, inflammation

### Circulatory or nerve?

Doctors don't know if migraine develops from problems in blood vessels, brain nerve cells, or both, but all agree the condition is inflammatory. Unlike regular occasional headache, when blood vessels constrict to cause pain, in chronic migraine, blood vessels dilate too much.

In this study, 45 non-menopausal women, aged 18 to 50 with episodic migraine took a placebo or 400 mg of CoQ10 per day while using standard migraine medication as needed.

After three months, compared to placebo, those taking CoQ10 reported significantly fewer migraines, with less severe pain and other symptoms, and resolving more quickly.

In those taking CoQ10, doctors also observed a decrease in two inflammatory factors—calcitonin gene-related peptide, or CGRP—which dilates peripheral and cerebral blood vessels and likely plays a key role in developing migraine; and tumor necrosis factor alpha (TNF $\alpha$ ), which can stimulate CGRP. Doctors said CoQ10 has anti-inflammatory properties that may provide the migraine benefit.

**REFERENCE:** NUTRITIONAL NEUROSCIENCE; JANUARY, 2018, No. 1421039, PUBLISHED ONLINE



## Your Good News!®

We're dedicated to discovering the benefits of good nutrition and healthy lifestyle, and hope this issue of Natural Insights for Well Being® informs and inspires you to take an active role in your health. Please ask us to assist you with any natural products you would like to know more about.

These articles provide nutritional information only and do not replace professional medical advice.

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