

# HOLLY HILL HEALTH FOODS

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## Natural Insights for Well Being®

February 2018

### Bone

Nutrients ease osteoarthritis, reduce fracture

#### Pycnogenol absorbs into synovial fluid

Synovial fluid lubricates and cushions joints, protecting them from friction and wear. Earlier studies found Pycnogenol® reduced pain in osteoarthritis, but this is the first study to reveal a possible mechanism of action.

In this study, 33 people with severe osteoarthritis scheduled for knee replacement surgery took 200 mg of Pycnogenol per day or no supplements for three weeks prior to surgery. Doctors found the type of polyphenols in Pycnogenol present in samples of synovial fluid in the Pycnogenol group but not in the non-supplement group.

Discussing the findings, doctors said this is the first evidence that polyphenols distribute to the synovial fluid of those with osteoarthritis, and may help explain the action of Pycnogenol.

#### Magnesium reduces fracture

Evidence has been mounting that magnesium increases bone mineral density, but until now studies linking magnesium and chances of fracture have been inconclusive.

In this study, doctors measured magnesium in the diets of 3,765 people, average age 61, over a follow-up period of eight years. Those who got the most magnesium on average from food and supplements—398 mg per day for men,



373 mg per day for women—were 53 and 62 percent, respectively, less likely to have developed a bone fracture compared to men and women who got the least magnesium in the diet.

Based on these findings, and because magnesium is both safe and affordable, doctors suggest public health officials consider recommending taking magnesium supplements as a preventative against bone fracture in the general population.

REFERENCE: NUTRIENTS; 2017, VOL. 9, No. 5, 443

FEBRUARY'S

### Healthy Insight Vitamin D Eases Pain in Rheumatoid Arthritis

People with rheumatoid arthritis (RA) often have nerve pain. In this study, doctors measured vitamin D levels in 93 people with RA and found that those whose vitamin D levels fell below 20 nanograms per milliliter of blood (ng/mL) had nearly six times the level of nerve pain as those whose vitamin D levels were at least 30 ng/mL. Because of the direct link between low vitamin D levels and nerve pain, doctors suggested those with RA have their vitamin D levels checked, and when low, to supplement with vitamin D.

REFERENCE: INTERNATIONAL JOURNAL OF RHEUMATIC DISEASES; 2017, 1756-185X.13160, PUBLISHED ONLINE

### This Issue

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# Mom's Mood

## Nutrients ease depressive symptoms during, after pregnancy

### Probiotics postpartum

In this study, 380 women between 14 and 16 weeks pregnant began taking *Lactobacillus rhamnosus* or a placebo daily through six months after giving birth. Doctors asked the women to report their symptoms of depression and anxiety by recalling when their child was one to two months old.

Compared to placebo, women taking the probiotics reported significantly fewer symptoms of postpartum depression, and had lower anxiety scores on standard depression and anxiety tests. Moms whose babies had colic reported higher depression and anxiety scores than mothers of non-colicky babies, but probiotics still significantly reduced both depression and anxiety in these women.

Commenting on the findings, doctors said, "The results are astonishing—that one capsule containing *Lactobacillus rhamnosus* could have such an important effect."

### Prenatal omega-3s

Prenatal depression is common in pregnant women, with effects in both the mothers and their children. In this study, doctors measured omega-3 levels in 16 healthy pregnant women and 17 pregnant women with prenatal depression.

Overall, women with prenatal depression had lower levels of omega-3s, and a higher ratio of omega-6 to omega-3, compared to the healthy pregnant women. Looking more closely, women with prenatal depression had

lower levels of the omega-3s EPA and DHA, and higher levels of a sign of inflammation.

Doctors said the brain is rich in omega-3s which regulate biological processes that directly affect mood and cognitive function, and that these findings support the connection between omega-3 fatty acids and healthy mood in pregnancy.

REFERENCE: JOURNAL OF EBIOMEDICINE; OCTOBER, 2017, VOL. 24, 159-65



# Better Metabolism

## Nutrients improve metabolic efficiency

### Capsaicinoids boost metabolic rate

At rest, the body burns about 60 percent of total calories per day. Doctors thought if they could increase the resting metabolic rate, participants would lose more weight.

In this study, 40 men and women took a placebo or 2 mg of capsaicinoids per day while doctors remotely measured energy expenditure and heart rate at rest through a tracking device at one, two, and three hours.

After five months, while the placebo group had not changed, those taking capsaicin had an increased metabolic rate equal to burning an extra 116 calories per day, and losing one pound of fat over 30 days. There were no differences in heart rate in either group.

### Vitamin C improves metabolic measures

In this study, doctors measured vitamin C levels in 369 adults age 50 and found most fell below the adequate level of 50 micromoles of vitamin C per liter of blood.

Those with higher vitamin C levels tended to have lower weight, body mass index scores, triglycerides, long-term average blood sugar levels, and smaller waist size. Doctors also found a direct link: as vitamin C levels increased, signs of mild cognitive impairment decreased.

Even though participants got an average of 110 mg of vitamin C per day—which should have provided adequate vitamin C levels—many participants had inadequate levels, possibly due to factors such as chronic health conditions.

Commenting on the findings, doctors said that consuming more fruits, vegetables, and vitamin C supplements in particular is important for people in this age group.

REFERENCE: ADVANCES IN NUTRITION; 2017, VOL. 8, NO. 5, PUBLISHED ONLINE



# Better Performance

## Nutrients increased athletic performance capacity and muscle strength

### Ginkgo biloba, endurance and cognition

Ginkgo biloba leaves contain flavonoids and polyphenolic compounds that may enhance physical and cognitive performance. In this study, 18 healthy,



physically active young men took a placebo or 160 mg of ginkgo biloba per day for six weeks.

Before and after the supplement period, the men performed a graduated cycling test that measured maximum oxygen capacity. Both groups saw an increase in oxygen capacity between the two test periods, but the ginkgo biloba group increased 6 percent compared to 1 percent for placebo. The ginkgo group also saw an increase in antioxidant capacity, and an increase in a protein that influences a number of brain functions, including stimulating growth of new neurons and synapses—nerves and nerve-signaling pathways.

### Creatine increased strength

In this study, 17 male high school canoeists maintained their basic training

program and diet while adding 5 grams of creatine monohydrate powder plus 5 grams of dextrose powder, dissolved in water four times per day with meals and before bed.

Before taking creatine and after six days of the supplement, the canoeists took a bench rowing test. After creatine, maximum upper body strength increased and fatigue recovery time decreased.

Doctors were particularly interested in a muscle function known as post-activation potentiation, or PAP, which means that the force of a muscle increases after it contracts. PAP recovery times decreased after taking creatine.

Discussing the findings, doctors said creatine effectively increases muscle efficiency and develops muscle strength.

REFERENCE: NUTRIENTS; 2017, VOL. 9, NO. 8, 803

FEBRUARY'S

## Ahead of the Curve

### Early-Stage Discoveries: Nicotinamide, Resveratrol, and Glucosamine

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

#### Nicotinamide and melanoma

In the lab, nicotinamide reduced the spread of cancerous skin (melanoma) cells, and increased programmed cell death of melanoma cells. Also, cellular lab studies found nicotinamide enhanced DNA repair, reduced immune suppression from ultraviolet light, and increased anti-inflammatory effects on the skin. DNA damage, reduced immune response, and inflammation are factors in developing melanomas. In another lab study, nicotinamide inhibited the ability of melanoma cells to establish blood vessels similar to non-malignant cells, slowing spread of the cancer.

#### Resveratrol reduces endometriosis

Endometriosis reproduces tissue that normally lines the uterus outside the uterus. With each menstrual cycle, the external endometrial tissue thickens, breaks down, and bleeds, but because it has no way to exit the body, becomes trapped, irritating surrounding tissue and causing pain and can lead to infertility. In the lab, resveratrol decreased the number and size of endometrial implants, suppressed the spread of endometrial tissue, reduced new blood vessel formation, and decreased inflammation.

#### Glucosamine reduced seizures

When nerves (neurons) in the hippocampus area of the brain become overexcited, seizures, including epilepsy, may develop. Glucose is the major fuel for neurons, and it controls a protein that regulates neural excitability.

The higher the protein level, the less excitable the neuron. Doctors thought that glucosamine might play a role in increasing neural protein levels. In the lab, glucosamine increased levels of the calming protein, which significantly reduced the sudden bursts of electrical activity associated with seizures.

REFERENCE: PHOTODERMATOLOGY, PHOTOIMMUNOLOGY & PHOTOMEDICINE; AUGUST, 2017, PUBLISHED ONLINE

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## Healthy Circulation

### Folic acid reduced chances of stroke in those with high blood pressure

#### **Benefit greatest in those who also had high blood sugar or diabetes**

Earlier studies found folic acid protected against a first stroke, but this is one of the first studies of folic acid and stroke in those with diabetes.

The study covered 20,327 men and women with high blood pressure, with or without diabetes, and no history of adverse heart or circulatory events. About half took 10 mg of the blood pressure medication enalapril, with or without 800 mcg of folic acid per day.

Over the 4.5 years of follow-up, those with high fasting blood sugar levels—at or above 126 mg per deciliter

of blood (mg/dL)—or those who had diabetes, were twice as likely as those with low fasting blood sugar levels of 90 mg/dL to have had a stroke.

Folic acid reduced chances of stroke across a wide range of fasting blood sugar levels, but the reduction was greatest in those with high fasting blood sugar.

**REFERENCE:** AMERICAN JOURNAL OF CLINICAL NUTRITION; JANUARY, 2017, 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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