

# HOLLY HILL HEALTH FOODS

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## Natural Insights for Well Being®

January 2019

### Probiotics Progress

Two new studies reveal probiotics' wide-ranging health benefits

#### Less inflammation, insulin resistance

People with type 2 diabetes may develop a bacterial imbalance in the gut that can allow a type of toxin, LPS endotoxin, to leak into the bloodstream, creating systemic inflammation. In this study, 61 adults with type 2 diabetes took a placebo or combined several probiotic strains of lactobacillus and bifidobacterium for a total of five-billion colony-forming-units per day.

After six months, while the placebo group had not changed, those taking probiotics saw a nearly 70 percent decrease in circulating endotoxin levels compared to the start of the study. Also, several signs of inflammation: tumor necrosis factor alpha, interleukin-6, and C-reactive protein, declined between 53 and 77 percent.

The probiotics group also saw a 38 percent drop in glucose and insulin levels, and a 64 percent decrease in insulin resistance (HOMA-IR). Triglycerides declined 48 percent, total cholesterol dropped 19 percent, and the ratio of HDL, the "good" cholesterol, to total cholesterol, increased.

Doctors said the significant improvements in insulin resistance, inflammation, and lipid profiles in type 2 diabetes suggest multi-strain probiotics may be an effective anti-diabetes therapy.



#### Less stress, better memory

Recent studies suggest gut and brain health are connected. In this study, 51 adults with moderate stress scores, average age 32, took a placebo or lactobacillus plantarum P8 at a dose of 20-billion colony-forming-units per day.

After four weeks, while there was no change for placebo, the probiotics group had reduced levels of stress and anxiety. After 12 weeks, levels of inflammatory factors interferon gamma and tumor necrosis factor alpha were lower for probiotics. Also for probiotics, women saw improvements in social emotional cognition while men saw improvements in verbal learning and memory.

Doctors said harmful bacteria in the gut can increase inflammation which they believe can effect cognitive function, and that probiotics can reduce this inflammation.

REFERENCE: CLINICAL NUTRITION JOURNAL; 2018, 31351-7; PUBLISHED ONLINE

JANUARY'S

### Healthy Insight

#### Probiotics Reduce Antibiotics Use

People often insist on antibiotics for viral illnesses such as colds, flu, and respiratory infections, for which antibiotics are ineffective. A growing body of evidence suggests probiotics can effectively treat such infections. Doctors reviewed 12 clinical trials that treated infants and children for respiratory, digestive tract, and ear infections and found lactobacillus and bifidobacterium reduced the need for antibiotics by 29 percent. In another group of five of the most rigorous studies, probiotics reduced the call for antibiotics by 53 percent. Studies lasted from four days to nine months.

REFERENCE: EUROPEAN JOURNAL OF PUBLIC HEALTH; 2018, CKY185, PUBLISHED ONLINE

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# Muscle

## Nutrients reduce muscle damage, promote growth

### Carotenoids improve recovery

Recovering quickly from strenuous exercise helps people optimize an active lifestyle. In this study, 20 male and female runners, ages 22 to 54, took a placebo or an 11 mg combination of the tomato-based carotenoids lycopene, phytoene, and phytofluene, with dinner for four weeks before taking a two-hour, high intensity running test designed to damage muscles.

After the test, carotenoid levels were 73 percent higher for those taking carotenoids. While both the placebo and carotenoid groups saw similar levels of inflammation, oxidative stress, and muscle soreness, signs of muscle injury were lower for carotenoids. To determine this, doctors measured myoglobin, a protein that signals muscle injury, and found lower myoglobin levels in the carotenoid group.

Doctors said the modest dose and short duration of the study suggest that carotenoids and tomato phytonutrients can help optimize muscle recovery after exercise.

### Krill oil stimulates growth

Resistance exercise helps build lean muscle mass. In this study, 21 healthy resistance-trained men, aged 18 to 30, took a placebo or 3 grams of krill oil containing 240 mg DHA and 393 mg EPA, plus a small amount of astaxanthin, per day.

During the eight-week study period, participants alternated high-weight, low-repetition strength exercises with low-weight, high-repetition endurance exercises. Doctors took a comprehensive metabolic panel, a complete blood count, and a urine analysis to determine that krill oil stimulated an

enzyme protein (mammalian target of rapamycin, or mTOR) that promotes cellular energy transfer and that contributed to the average gain of three pounds of lean muscle mass in the krill oil group.

REFERENCE: HUMANKINETICS; 2018, VOL. 28, No. 3, 266-73



## Live Long, Live Strong

### Nutrients increase lifespan, strength in elders

#### Live longer with vitamin C

People in low- and middle-income countries often have low levels of



vitamin C, which doctors believe may increase chances for disease. In what may be the first study of its kind, doctors measured vitamin C levels in 948 men and women, aged 53 to 84, in Linxian, China.

After an average of 16 years of follow-up, compared to those with the lowest levels, those with the highest levels of vitamin C were 25 percent less likely to have died from any cause. Good vitamin C levels reduced chances of dying from stroke or cancer by 28 percent, and by 35 percent for heart disease. Those with normal levels of vitamin C—at or above 28 micromoles per liter of blood—were 23 percent less likely to have died prematurely, and 38 percent less likely to have died from heart disease.

#### Astaxanthin, tocotrienol, zinc increase strength, endurance

Muscles lose mass and strength with age. In this study, 42 people, aged 65 to 82, took a placebo or 12 mg of astaxanthin, 10 mg of tocotrienol vitamin E, plus 6 mg of zinc per day for four months. During the first three months, participants took an exercise training program lasting 40 to 60 minutes per day, three times per week.

Over the four-month study, while muscle strength did not improve for placebo, those in the supplement group saw a 14 percent increase in muscle strength. The supplement group also saw a 40 percent increase in endurance and an 8 percent increase in mobility.

REFERENCE: JOURNAL OF EPIDEMIOLOGY & COMMUNITY HEALTH; 2018, 210809; PUBLISHED ONLINE

# Healthy Weight

## Vitamin D aids healthy weight, reduces chances of breast cancer

### Mothers' low D promotes overweight kids

Babies whose mothers are low in vitamin D while pregnant are more likely to have a higher body mass index (BMI) score and excess fat around the



waist by age four to six years.

In this study, doctors measured vitamin D levels in 370 pregnant women at week 14, and found average levels were 18.5 nanograms per milliliter of blood (ng/mL), with about two thirds of the women below 20 ng/mL, meaning they were deficient. By ages four to six years, children whose mothers' vitamin D levels were at or below 15 ng/mL had higher BMI scores and an average .34 inches larger waist circumference compared to children of mothers with higher levels of vitamin D.

Discussing the findings, doctors said even though the increase in abdominal fat may not seem like much, when projected across the entire lifespan may increase chances for health issues later in life.

### Vitamin D and breast cancer

Some earlier studies on vitamin D and breast cancer have had inconsistent results. In this study, doctors measured vitamin D levels in 627 Brazilian women, aged 45 to 75, 209 of whom had breast cancer and 418 similar women who did not.

Women with breast cancer were 43 percent more likely to be obese and 13 percent more likely to have insufficient levels of vitamin D, or to be deficient. Doctors said similar studies found women with higher vitamin D levels were more likely to survive, and that women with breast cancer should try to restore vitamin D levels to the normal range.

**REFERENCE:** PEDIATRIC OBESITY; 2018, VOL. 13, No. 8, 467-75

# Mind & Mood

## Green coffee bean improved cognition, omega-3s boosted mood

### Green coffee bean shortened mental response time

How quickly the brain processes information slows with age, which can affect other cognitive functions. In this study, 38 healthy adults took a placebo or 300 mg of chlorogenic acid from green coffee bean per day.

After 16 weeks, participants in the green coffee bean group were able to activate physical movements more quickly, and had better attention and memory, compared to placebo. Doctors also found higher levels of two proteins, apolipoprotein A1 and transthyretin, whose decline signals the early stages of impaired cognition.

The findings support a previous six-month pilot where green coffee bean improved cognitive function, especially in the prefrontal cortex, the area of the

frontal brain lobe involved in planning complex tasks, expressing personality, making decisions, and interacting socially.

### Omega-3s ease elder depression

Depression is fairly common in older adults, yet only 10 percent of older Americans reporting symptoms receive treatment. This review of six clinical trials covered 4,605 men and women, average age 77, some with symptoms of mild to moderate depression, others in a state of mental well-being. Participants took a placebo or an average of 1,300 mg of omega-3 polyunsaturated fatty acids per day, in studies lasting from several weeks to several months.

Overall, those in the well-being group saw no significant effects on

mood from taking omega-3s. In participants with mild to moderate depression, doctors found a large, positive effect on mood for omega-3s compared to placebo. Doctors said depression may reflect an inflammatory chemical imbalance in the brain, and that omega-3s are anti-inflammatory.

**REFERENCE:** NUTRIENTS; 2018, VOL. 10, No. 10, 1337; PUBLISHED ONLINE



Holly Hill Health Foods  
1200 Welsh Road  
North Wales, PA 19454  
**(215) 361-7770**  
[www.hollyhillvitamins.com](http://www.hollyhillvitamins.com)

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## Healthy Gut

### Fiber improved digestion

#### Healthier microbiome and elimination

Fiber in the diet stimulates the growth of good bacteria in the gut, such as the probiotic bifidobacteria, but most Americans do not get enough daily fiber. In this study, 51 healthy adults with inadequate fiber in the diet took a placebo or 15 grams or 25 grams of resistant maltodextrin fiber (Fibersol®-2) per day, in alternating phases.

After three weeks, while there was no change during the placebo phase, those taking the 25-gram dose of fiber saw a 38 percent increase in fecal bifidobacteria probiotic counts. Participants in the high dose group also saw an average increase of 29 grams in the weight of waste compared to the

start of the study.

Discussing the findings, doctors said either dose of fiber was safe and brought participants above the daily requirement for fiber in the diet, and that adding resistant maltodextrin fiber to the diet appears to have significant health benefits.

**REFERENCE:** NUTRITION RESEARCH; 2018, VOL. 60, 33-42



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## 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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