

# Whole In The Wall

## Herb Shoppe

# Natural Insights for Well Being®

September

## Kids

### Moms' folic acid, and kids' inulin, boost mental and physical health

#### Mothers' folic acid improves child cognition

In this follow-up to a study of seven-year-olds we reported previously, boys and girls whose mothers took folic acid during the second and third trimesters of pregnancy, compared to those whose moms took a placebo, by age 11, scored higher on cognitive processing speed tests, and 11-year-old girls scored higher on tests of verbal comprehension.

The study included healthy pregnant women, aged 18 to 35, with a single-child pregnancy, who had taken 400 mcg of folic acid in the first trimester and continued to take folic acid, or a placebo, until the end of pregnancy.

The original reason for the study was to find benefits beyond taking folic acid in the first trimester to prevent neural tube birth defects. Doctors explained, "Emerging evidence shows the period of rapid growth of the fetal brain later in pregnancy is particularly sensitive to maternal folate concentrations. Our follow-up study proves folic acid supports the developing myelin sheathing that protects nerve fibers and facilitates neural communication."

#### Inulin balances infant microbiome

Evidence is increasing that



populating the gut with good bacteria after birth has a long-term programming effect on health and immunity. In this study, 149 infants under four months old received a placebo formula or a prebiotic mixture of inulin oligosaccharides.

After six months, the prebiotic group showed higher total bifidobacterium counts, and higher proportions of bifidobacterium to total bacteria, compared to placebo. Stools in the prebiotic group were also softer, suggesting prebiotics had a beneficial effect on total daily amounts of crying. Infections also resolved more quickly in the prebiotic group.

Discussing the results, doctors said inulin oligosaccharides were well-tolerated and beneficial to infant gut microbiota, and that the shorter duration of infections, in particular, suggest a possible interaction between healthy gut flora and immunity.

Reference: BMC Medicine; 2021, Article No. 73, Published Online

SEPTEMBER'S

## Healthy Insight Kids Deficient in Nutrients

This study measured nutrient levels in 9,848 children, aged one to six years, and found several common deficiencies. For vitamin D, 80 to 90 percent were not getting enough; for omega-3 DHA, 98 percent fell short. For vitamin E, 69 percent didn't get enough, and more than 7 percent were anemic from low iron. Levels were also low for calcium, choline, fiber, potassium, and vitamin B6 in a significant percentage of the children.

"The early years between the ages of one and six are a period of rapid physical, social, and cognitive growth, and a nutritionally adequate diet is an important factor for optimum development," doctors said.

Reference: Nutrients; 2021, Vol. 13, No. 3, 827

### This Issue

Zinc, selenium, and CoQ10 support healthy aging	2
Vitamins improved metabolic factors	2
Multivitamins, fish oil, and vitamin C improve circulation	3
Vitamin B12, folate, lutein, and zeaxanthin aid cognition	3
Vitamin K improved chances of surviving Covid-19	4

# Extending Life

## Zinc, selenium, and CoQ10 support healthy aging

### Zinc and selenium linked to anemia

Being low in iron is not the only cause of anemia. In this study, doctors measured zinc, selenium, and iron levels in 285 nursing home residents. Although fewer than 2 percent were low or deficient in iron, 31.6 percent had a anemia.

Doctors discovered 71.9 percent of participants were deficient in zinc, and 38.3 percent were deficient in selenium. Those who were deficient in zinc were nearly five times as likely to have anemia as those with sufficient zinc. Those low in selenium were also more likely to have anemia, but low zinc was a much more important factor.

This is the first study to link zinc

with hemoglobin—the protein in red blood cells that carries oxygen from, and carbon dioxide back to, the lungs—showing even when iron is not deficient, low levels of zinc increase chances for anemia.

### Selenium, CoQ10 improve heart factors

When blood clots form and break down, the body produces higher levels of a protein called D-dimer. In this study, 213 participants with greater chances for heart and circulatory problems took a placebo or 200 mcg of selenium yeast plus 200 mg of CoQ10 per day.

While there were no differences in D-dimer levels between the groups at the beginning, after four years, those

taking selenium plus CoQ10 had 22 mg of D-dimer per liter of blood (mg/L) compared to 34 mg/L for placebo. Among those with high D-dimer levels, those taking selenium plus CoQ10 were less likely to have died from heart or circulatory conditions.

Reference: *Nutrients*; 2021, Vol. 13, No. 4, 1072



## Metabolics

### Vitamins improved metabolic factors

#### Delta tocotrienols lowered A1C and inflammation

There are many forms of vitamin E, with increasing clinical evidence of their health benefits. In this study, 110 people with type 2 diabetes took a placebo or 250 mg of delta-tocotrienol

vitamin E per day, while continuing on oral hypoglycemic medications, diabetic diets, and regular exercise.

After 24 weeks, long-term average blood sugar—A1C—decreased to 7.8 from 8.3 percent while remaining elevated for placebo. Fasting blood sugar levels, insulin levels, and signs of insulin resistance also fell for the delta-tocotrienol group.

Doctors measured several chronic inflammation factors: high-sensitivity C-reactive protein, Interleukin-6, and tumor necrosis factor-alpha all decreased significantly. Signs of oxidative stress also fell by 9 percent for vitamin E while not changing for placebo.

The delta-tocotrienol group also saw lipids improve, with triglycerides, total cholesterol, and LDL—the “bad” cholesterol—levels declining significantly, with little change in these factors for placebo.

#### Nicotinamide and prediabetes

Nicotinamide mononucleotide (NMN) is part of the B-vitamin family, and stimulates nicotinamide adenine dinucleotide (NAD) in the body. NAD exists in all living cells and is central to healthy metabolism. In this study, 25 postmenopausal women, aged 55 to 75, with prediabetes and who were overweight or obese, took a placebo or 250 mg of nicotinamide mononucleotide per day.

After 10 weeks, those taking NMN saw a significant increase in circulating NAD levels. The NMN group also became more sensitive to insulin, increasing the glucose disposal rate—metabolism—by 25 percent, an improvement doctors said was similar to what they would expect to see after a 10 percent weight loss.

Reference: *Phytotherapy Research*; 2021, ptr.7113, Published Online



# Circulation

## Multivitamins, fish oil, and vitamin C improve circulation, heart health

### Multivitamins, fish oil, reduced heart and circulatory events

Doctors analyzed findings from a long-term study covering 69,990 participants, aged 45 and older, who periodically filled out food, supplement, and lifestyle questionnaires.



Over the 10-year follow-up period, overall, obesity increased to 35.2 from 26.9 percent, and heart and circulatory disease increased to 29.2 from 15.6 percent. Those who regularly took a multivitamin-mineral or fish oil were 19 and 11 percent, respectively, less likely to develop heart or circulatory disease, and were less likely to be obese. Those who took calcium were also less likely to be obese.

Those who combined taking multivitamin-minerals over the long-term along with a healthy diet were least likely to develop heart or circulatory problems, or to be obese.

### Vitamin C reduced exercise blood pressure

In this study, 24 people with type 2

diabetes, average age 53, took a placebo or 1,000 mg of vitamin C per day for six weeks, stopped for six weeks, then switched groups for six weeks. After each six-week study phase, everyone took a 20-minute cycling test at 33 percent of peak oxygen consumption. Doctors measured blood pressure and other factors before and after exercise.

During the vitamin C phases, systolic blood pressure was lower at every time except immediately after exercise, and nitric oxide (NO) levels were higher at all times. NO helps blood vessels relax and dilate. A sign of oxidative stress, MDA, was also lower at all points, as well. None of these improvements appeared during the placebo phases.

Reference: *Nutrients*; 2021, Vol. 13, No. 3, 944

# Cognition

## Vitamin B12, folate, lutein, and zeaxanthin aid cognition

### Vitamin B12 and folate have cognitive benefits

Evidence is increasing that those over age 50 should take a vitamin B12 supplement. In this study, doctors measured nutrients and gave a battery of cognitive tests to 1,408 participants, average age 57.

Overall, those with high levels of vitamin B12 and folate had better global cognitive test scores, and those who were deficient in vitamin B12 had lower cognitive test scores. Doctors also measured methylmalonic acid (MMA), high levels of which indicated vitamin B12 deficiency.

Discussing the findings, doctors said, "More attention should be given to identification and treatment of vitamin B12 deficiency in this population."

Separately, the U.S. National Institutes of Health said low levels of vitamin B12 have a link to anemia, and recommend adults over 50 take a B12 supplement.

### Lutein, zeaxanthin reduce amyloid plaques, and slow AD progress

This study followed 927 older adults who were free of Alzheimer's disease (AD) at the start of a seven-year follow-up period. Overall, those who got the most total carotenoids, including lutein and zeaxanthin, consumed an average 24.8 mg per day, and those who got the least consumed 6.7 mg per day.

In those who died during the study, AD development was less advanced in those who got more carotenoids. Lutein and zeaxanthin in particular were

beneficial for global brain condition, and for improving AD factors including reducing plaque severity, and protein tau tangles density and severity. Overall, higher intakes of total carotenoids reduced chances of developing AD.

Reference: *The American Journal of Clinical Nutrition*; 2021, Vol. 113, No. 1, 179-86



# Whole In The Wall Herb Shoppe

771 Gold Hill Place S (next to City Market)  
Woodland Park, CO 80863  
Phone: (719) 687-6084  
Website: wholeinthewallherbshoppe.com

## Store Hours:

Monday: 10 a.m. - 6 p.m.  
Tuesday: 10 a.m. - 6 p.m.  
Wednesday: 10 a.m. - 6 p.m.  
Thursday: 10 a.m. - 6 p.m.  
Friday: 10 a.m. - 6 p.m.  
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Sunday: 12 p.m. - 5 p.m.

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## Vitamin K and Covid-19 The nutrient increased survival rates

We are beginning to gather consistent evidence of nutritional factors that improve chances of surviving Covid-19. In this study, doctors compared vitamin K status in 138 patients with Covid-19 to 138 similar healthy people.

Doctors can't directly measure vitamin K in the body, so instead, they measure Matrix Gla Protein (MGP), which increases in body tissues when vitamin K levels are low.

In two important comparisons, MGP levels were higher—meaning vitamin K levels were lower—in those who died from Covid-19 compared to those who had survived; and MGP levels were also higher in those with Covid-19 compared to the group of 138 similar,

but healthy, people. Discussing the findings, doctors said Covid-19 primarily attacks the body by degrading elastic fibers in the lung. When vitamin K is low, signs of damage to these lung fibers increase, suggesting a direct link between good vitamin K levels and better chances of surviving Covid-19.

Reference: Nutrients; 2021, Vol. 13, No. 6, 1985



## 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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