

Natural Insights for Well Being®

December 2023

Diabetes Update

Nutrients improve metabolism and reduce symptoms

L-carnitine improves lipids

This is the first review of the effects of L-carnitine on lipid profiles in adults. The analysis covered 222 clinical lipids trials of men and women aged 26 to 53, with doses of L-carnitine ranging from 540 to 2,400 mg per day.

In those 50 years or younger, at doses above 2,000 mg per day, L-carnitine lowered total cholesterol by 1.05 mg per deciliter of blood (mg/ dL); triglycerides by 2.51 mg/dL, with greater effects in those with metabolic disorders; LDL cholesterol by 4.81 mg/ dL; and increased HDL cholesterol by 0.66 mg/dL.

Doctors said L-carnitine facilitates efficient breakdown of fats to produce energy, and restricts fatty acids in the bloodstream, reducing their conversion to triglycerides. L-carnitine also decreases the activity of enzymes that generate cholesterol, and has antioxidant, anti-inflammatory properties.

"Based on the results, L-carnitine significantly reduced total cholesterol, triglycerides, and LDL cholesterol, and increased HDL cholesterol," doctors concluded.

Alpha-lipoic acid reduces nerve pain

Those with diabetes can have nerve



pain and numbness, called diabetic polyneuropathy (DPN). This review of 10 random-controlled trials covered 1,242 participants with DPN, average ages 47 to 61, and dosages of alphalipoic acid (ALA) from 600 to 1,800 mg per day. Long-term average blood sugar levels ranged from 7.4 to 8.85 percent, and about half the participants were using insulin.

Over follow-up periods from 10 to 15 years, ALA reduced DPN frequency and severity of nerve pain, burning, prickling, and numbness, with greater improvements as dosages increased. Those taking ALA were better able to detect vibration, skin temperature, and pin pricks, and ankle reflexes improved. Compared to placebo, those taking ALA reported greater satisfaction with the treatment, and whose satisfaction increased along with higher doses of ALA.

REFERENCE: FRONTIERS IN NUTRITION; 2023, Vol. 10, **ARTICLE NO. 1214734**

DECEMBER'S

Healthy Insight **Omega-3 for Lungs**

Inflammation can impair lung function. The anti-inflmmatory properties of omega-3 fatty acids may help. In this study, doctors measured omega-3 fatty acid levels in 15,063 healthy adults during a 10-year followup period. Each 1 percent increase of DHA in total fatty acids preserved lung capacity of 1.4 milliliters per year, measured as forced, exhaled breath volume in one second, and decreased chances for inhaled and exhaled airway obstruction by 7 percent.

"With omega-3 fatty acids, especially DHA, we're starting to turn a corner in nutritional research, moving toward individualized, precision dietary recommendations for treating chronic lung disease," doctors said.

REFERENCE: AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE; JUNE 2023, ARTICLE NO.

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Mind & Mood

Probiotics reduce stress, boost cognition and mood

Stress and cognition improve with probiotics

Doctors wanted to test the effects of probiotics on stress. In this study, 128 men and women, aged 21 to 52, reporting moderate levels of stress, took a placebo or lactobacillus plantarum at 10 billion colony-forming units per day.

After 12 weeks, both groups reported less perceived stress, and had lower cortisol levels on awakening. While the placebo group did not improve, or declined in several measures, those taking probiotics processed rapid information faster, had better numeric working- and short-term memory, word recall, learned associated pairs, and recall of work tasks.

Also compared to placebo, several measures of mood improved for

probiotics, as did sleep quality, with sleep disturbances declining from 55 percent of participants to 29 percent by week 12.

Multi-strain probiotic improves mood

Do probiotics improve mood, anxiety, and minor depression? This study included 70 healthy men and women, average age 31, average height 5'7", and average body mass index scores of 24.6. All self-reported symptoms of minor depression, anxiety, and low mood. Participants took a placebo or a multi-strain probiotic of lactobacillus -fermentum, -plantarum, and -rhamnosus, and bifidobacterium longum, each at 1 billion colony-forming units per day.

Three standard depression and anxiety tests at two, four and six weeks during treatment, and again three weeks after treatment showed all scores for the state and trait of anxiety, hopelessness, aggression, and rumination were lower after probiotics, with no change for placebo. Serotonin levels increased at six and nine weeks for probiotics.

REFERENCE: NUTRIENTS; 2023, Vol. 15, No. 15, ARTICLE No. 15153466



Less Pain

Nutrients reduce pain in menses and after exercise

Turmeric-boswellia-sesame for menses

Muscles and vessels in the uterus can contract during menstruation, causing lower abdominal cramping. Doctors sought an herbal treatment without the side effects of standard



medications. Turmeric and boswellia serrata have shown significant antiinflammatory effects in chronic conditions such as rheumatoid arthritis. Sesame has long been used for menstrual irregularities.

In this study, 60 women, aged 18 to 35, with moderate to severe menstrual cramping, took a placebo or a single dose of turmeric, boswellia, and sesame oil when cramping reached a severity of 5 or more on a scale of 0 to 10.

Over the next six hours, doctors evaluated changes in pain intensity every 30 minutes. On average, at each 30-minute interval, pain relief was 12.6 times greater for the nutrient group vs. placebo. After six hours, pain relief had increased 20.19 times for the turmeric-boswellia-sesame group compared to placebo.

Collagen reduced pain in active adults

Adults that remain active through middle age can experience increasing levels of chronic pain, limiting physical activity and eventually affecting mental health. In this study, 86 active men and women took a placebo, or 10 grams or 20 grams of collagen peptides per day.

After six months, those in the low-dose group reported improvement in activities of daily living. Pain decreased among those who exercised more than three hours per week. Also in the low-dose group, mental component scores improved at six and nine months. Women in the 20 gram collagen group saw improvements in physical function after six and nine months.

REFERENCE: JOURNAL OF CLINICAL NUTRITION; 2023, Vol. 12, No. 12, 3968

Immunity & Longevity

Vitamin C for Covid, vitamin D for heart health

Vitamin C levels low in Covid hospital cases

Vitamin C is essential for immune cell function. In this study, doctors measured vitamin C levels in 70 individuals hospitalized for Covid, on the first and fifth days.

Compared to a healthy group of participants from the general population, three times as many patients



were very low in vitamin C and had the most severe or critical Covid cases. All 70 participants were low in vitamin C, although symptoms were less severe in those with moderately low levels vs. very low vitamin C levels. Between the first and fifth hospital days, vitamin C levels declined further.

Discussing the findings, doctors said Covid increases the need for vitamin C in immune cells, and that increasing vitamin C during the early phases of Covid may prevent severe illness and hospitalization.

Vitamin D protects heart health

Recent studies have revealed evidence of a vitamin D receptor in the

heart and circulatory system, suggesting a role in cardiovascular health. In this study, doctors measured vitamin D levels in 174 elderly men and 975 postmenopausal women and compared to hospitalizations for heart failure or causes of mortality.

Over the six-year follow-up period, 59.1 percent of those hospitalized for heart failure had vitamin D levels below 20 nanograms per milliliter of blood, or 50 nanomoles per liter. Vitamin D levels were also lower in those who had died during the follow-up period compared to those who survived.

Doctors concluded the findings suggest a role for vitamin D in protecting heart and circulatory health, and in increasing longevity.

REFERENCE: NUTRIENTS; 2023, VOL. 15, No. 16, 3653

Heart & Circulation

Vitamin D for heart, probiotics for lipids

Vitamin D reduces A-fib

Interruptions to the normal cycle of electrical impulses in the heart result in irregular heart rhythms, called atrial fibrillation, or A-fib. Chances increase with age. In this study, doctors followed 2,495 generally healthy participants, including men at least age 60, and women aged at least 65. Participants took a placebo, 1,600 or 3,200 IU of vitamin D per day. None started the study with heart disease, circulatory disease, or cancer.

After five years of follow-up, compared to placebo, those in the low-dose vitamin D group were 27 percent less likely to have developed A-fib, and were 32 percent less likely in the high-dose vitamin D group. Even though study participants began with relatively high vitamin D levels, supplementing

with vitamin D significantly reduced chances for A-fib, doctors concluded.

Probiotics improve lipid balance

Recent evidence suggests regulating the gut microbiome may reduce chances for heart and circulatory disease. In this study, doctors measured vessel circulatory function in 130 men and women with metabolic syndrome and gave a placebo or lactobacillus paracasei at 10 billion colony-forming units per day.

After 12 weeks, the probiotics group saw vessels relax and become more flexible by 3.13 percent compared to the start of the study, and by an average of 4.83 percent compared to placebo. Lipid profiles also improved, with levels of very low-

density lipoprotein decreasing by 0.16 micromole per liter (mmol/L), and triglycerides by 0.43 mmol/L, which doctors said accounted for 5 percent of the improvement in vessel function.

REFERENCE: AMERICAN HEART JOURNAL; 2023, Vol. 264, 177-82



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Vitamin E and HPV

Good vitamin E levels reduce chances for the condition

Protection increases as vitamin E levels rise

Doctors wanted to know if vitamin E could influence genital and oral human papilloma virus (HPV) infection. This study covered 5,809 men and women, aged 18 to 59 with higher, neutral, or lower chances for HPV.

Among those with the greatest chances for HPV, compared to those who got less than 7.77 IU or 5.18 mg of vitamin E per day, those who got more than 16.23 IU or 10.82 mg per day were 28 percent less likely to develop HPV. Overall, for every 1.5 IU or 1 mg increase in dietary vitamin E per day, chances for HPV decreased 1 percent.

Discussing the findings, doctors said, "Our study demonstrated an inverse, linear relationship between dietary vitamin E and overall high- and low-risk HPV, offering a preventive effect on genital infection in both men and women."

REFERENCE: NUTRIENTS; 2023, VOL. 15, NO. 17, 3825



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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