

Whole In The Wall

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Natural Insights for Well Being®

November

Stress & Cognition

Nutrients aid coping and memory

Green tea, rhodiola, magnesium, and B vitamins

This combination of nutrients effectively reduced social stress in 100 moderately stressed adults, aged 18 to 50. Participants took a placebo, or some combination of 150 mg magnesium, 700 mcg vitamin B6, 100 mcg B1, 1 mcg B12, 125 mg green tea, and 225 mg rhodiola.

Doctors fitted heart rate, blood pressure, and salivary cortisol response monitors to participants who rested for 15 minutes before taking the nutrients. After another 30-minute rest, doctors administered the Trier Social Stress Test, asking participants to prepare a five-minute presentation as part of an imagined job interview.

Describing the results, doctors said, “The combination promoted a relaxed, focused state—indexed by EEG [electroencephalogram]—reduced stress perception, and increased energetic arousal in anticipation and in the immediate recovery from stress exposure.” Up to seven hours later, participants continued to report feeling less stress, negative mood, and anxiety.

L-theanine improved memory, processing speed

Green and black teas contain the amino acid L-theanine, which may affect mood hormones such as serotonin



and dopamine. In this study, 50 healthy adults, average age 58, took a placebo or a single 100.6 mg dose of L-theanine per day for 12 weeks.

Doctors measured reaction time to working memory attention tasks before the first dose, after one dose, and after 12 weeks. While there were no improvements for placebo, after a single dose of L-theanine, reaction time to working memory attention tasks decreased, the number of correct answers increased, and omission errors decreased. The effects remained constant over the 12-week trial.

Doctors noted participants were not allowed to take supplements or medications that might affect cognitive functions, but could consume polyphenol-containing beverages such as green, black, and oolong teas.

Reference: Nutritional Neuroscience; 2021, 1909204, Published Online

NOVEMBER'S

Healthy Insight Reducing UTI

Symptoms in urinary tract infections (UTI) and in non-infectious bladder disorders include painful, frequent urination. In this study, 65 adults reporting recurring symptoms within the past year took 150 mg of Pycnogenol® or 400 mg of cranberry extract per day.

After two months, the number of urinary symptoms decreased 62 percent for Pycnogenol vs. 45 percent for cranberry. The entire Pycnogenol group was infection free, compared to 35 percent for cranberry, and to 45 percent at the start of the study. Most (91 percent) taking Pycnogenol were symptom free vs. 80 percent for cranberry. Oxidative stress also decreased in the Pycnogenol group.

Reference: Evidence-Based Complementary and Alternative Medicine; 2021, Vol. 2021, Article ID 9976299

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Women

Fenugreek and vitamin D promote reproductive health

Fenugreek increased libido in healthy women

Fenugreek contains many of the B-complex vitamins, soluble and insoluble fibers, and iron. In this study, 48 healthy menstruating women, aged 20 to 48, took a placebo or 250 mg of fenugreek twice per day. Doctors used the Menopause Rating Scale (MRS) to assess symptoms in three areas: hot flashes, heart, sleep, muscle and joint symptoms; mood, irritability, anxiety, and fatigue; and reproductive difficulties including libido, activity, and satisfaction, and urinary and vaginal symptoms.

After 43 days, those taking fenugreek saw a 40.38 percent improvement in MRS scores compared to 16 percent for placebo, covering all three symptom areas. Individual symptom scores revealed 41.7 percent

of those taking fenugreek had fewer sexual problems compared to 18.18 percent for placebo. Estradiol, total and free testosterone also increased for those taking fenugreek.

Vitamin D reduced painful menses

Vitamin D may ease menstrual pain. In this study, doctors measured vitamin D levels in 116 healthy women, aged 18 to 32, with regular menstrual cycles. Participants took a placebo or 50,000 IU of vitamin D once per week. After eight weeks, vitamin D levels increased to 37 from 20 nanograms per milliliter of blood (ng/mL) in the vitamin D group, with no change for placebo. While there was little change for placebo, pain intensity declined steadily through eight weeks for vitamin D. Painful days fell by 50 percent, to

one day from two at the start of the study, requiring less pain medication. Headache and diarrhea also decreased for vitamin D.

Reference: Clinical Phytoscience; 2021, Vol. 7, Article No. 63



Better Circulation

Flavonoids and green tea improve circulatory health

Flavonoids reduced stroke

Most stroke is ischemic, meaning a blood clot blocks a vessel to the brain. Fatty deposits lining vessel walls are the main cause. In this study, doctors followed 55,169 adults, aged 52 to 60,



with no history of ischemic stroke, and an average of 496 mg of flavonoids per day in the diet.

During 21 years of follow-up, those who got the most flavonoids, flavonols, and flavanol oligo-polymers were 10 to 18 percent less likely to have had an ischemic stroke.

Doctors adjusted for factors including demographics and lifestyle, and found that a total flavonoid intake of about 500 mg per day significantly decreased chances for ischemic stroke.

Green tea for diabetic neuropathy

Long-term high blood sugar in diabetes damages nerves throughout the body, often affecting feet and legs

first, followed by hands and arms. In this study, 194 people with the condition, known as diabetic peripheral neuropathy, took a placebo or a daily green tea extract.

At four weeks, pain scores, nerve function, and the ability to feel sensations in the limbs were similar in both groups. Beginning at week eight, those taking green tea saw improved pain scores, nerve function, and ability to feel sensations in the peripheries compared to placebo. These improvements in pain, nerve, and sensations in the limbs continued to increase through the end of the 16-week study.

Reference: American Journal of Clinical Nutrition; 2021, Vol. 114, No. 1, 348-57

Optimal Exercise

Beta-alanine and fish oil improved performance

Beta-alanine boosted World Tour cyclists

Beta-alanine helps form the amino acid carnosine, which supports muscle endurance in high-intensity exercise. In this study, 12 elite World Cup cyclists in training took a placebo or 20 grams of beta-alanine per day for seven days.

Before and after beta-alanine, doctors measured muscle power



under training loads in a 10-minute time trial. Compared to placebo, the beta-alanine group saw a 6.21 percent increase in average power, a 2.16 percent increase in travel distance, and a 4.85 percent increase in total work, with no difference in cadence or rotations.

Doctors said beta-alanine usually takes several weeks to increase muscle carnosine, and this study proves short-term, high-dose beta-alanine can increase carnosine more quickly, increasing high-intensity cycling capacity and providing a competitive advantage to elite World Tour cyclists.

Fish oil improves exercise recovery

Earlier studies found fish oil reduced exercise muscle damage after

eight weeks. Here, doctors tested fish oil for four weeks in 22 untrained men who took a placebo or 600 mg EPA plus 260 mg DHA per day, within 30 minutes after breakfast, and before exercise.

Using a dumbbell, the men performed 60 elbow-straightening extensions, designed to cause soreness, swelling, and limit range-of-motion. Range of motion decreased immediately in both groups, stayed reduced for three days for placebo, and returned to normal after two days for fish oil. Range of motion was also greater for fish oil, increasing 76.5 percent vs. 53.1 percent for placebo. Creatine kinase, a marker for muscle damage, increased for placebo but not fish oil.

Reference: *Nutrients*; 2021, Vol. 13, No. 8, 2543

NOVEMBER'S

Ahead of the Curve

Early-Stage Discoveries: Ashwagandha, SAME, Beta-Sitosterol

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

Ashwagandha and lung cancer

Ashwagandha is an annual evergreen that contains powerful phytochemicals. Traditional medicine has used ashwagandha to treat neurological disorders. Here, doctors wanted to test the ability of ashwagandha to limit the growth and spread of lung cancer cells, and to trigger programmed cell death, called apoptosis.

In the lab, doctors prepared water- and alcohol-extracts of ashwagandha, using a stain to see DNA damage in lung cancer cells. The alcohol extract killed lung cancer cells, showed significant anti-blood-vessel-forming activity, and decreased cancer cell spread.

SAME may treat traumatic brain injury

The journal *Military Medicine* reports over 400,000 service members have sustained traumatic brain injury, with lingering symptoms including headache, fatigue, irritability, cognitive problems, depression, insomnia, and chronic pain.

Here, doctors reviewed preclinical and clinical literature evaluating the role SAME plays in cognition. Evidence suggests SAME may reduce cognitive complaints without side effects, and decrease chances for dementia. The nutrient appears to work, doctors believe, by generating energy at a cellular level, helping serve the increased energy demands of the injured brain.

Beta-sitosterol reduced anxiety

Safely reducing anxiety through drugs is a challenge because the same brain circuits are related to memory, awareness, and other functions that handle danger. In the lab, mice given beta-sitosterol had less anxiety than those not receiving beta-sitosterol, without any of the side effects typical of anti-anxiety drugs.

Doctors then combined beta-sitosterol with fluoxetine (Prozac®), which reduced anxiety at lower dosages than when the two are given separately. Beta-sitosterol may reduce the activity of certain genes activated under stress, doctors believe.

Reference: *Phytomedicine*; 2021, Vol. 90, 153639

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Thursday: 10 a.m. - 6 p.m.
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Better Vision

Flavonoids improve outcomes in AMD

Quercetin and the catechins

One type of age-related macular degeneration (AMD) produces new, leaky blood vessels under the macula and retina of the eye, quickly distorting or destroying vision in the center of the field of vision. In this study, 494 participants with this “wet” form of AMD got standard anti-blood-vessel-growth therapy for 12 months. Doctors validated flavonoids in the diet using a food-frequency questionnaire.

Those who got the least of three types of flavonoids in the diet; quercetin, epigallocatechin, and epigallocatechin-gallate, had significantly worse vision than those who got the most of these flavonoids. The low-flavonoid group was also twice as likely to have leaky blood

vessels and fluid beneath the macula and retina.

Discussing the findings, doctors said in addition to having general antioxidant and anti-inflammatory effects, quercetin and the catechins may inhibit abnormal blood-vessel-forming activity in the eye, may slow the progression of wet AMD, and help preserve the central field of vision.

Reference: European Journal of Nutrition; 2021, s00394-021-02582-4



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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