



Natural Insights for Well Being®

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Good Digestion

Everyday nutrients promote gastrointestinal health

Vitamin D protects against cancer

People eating the refined diet typical of developed countries may have greater chances for colorectal cancer, with low levels of vitamin D raising chances further. As this study revealed, Black populations in the U.S. are more likely than any other domestic racial or ethnic group to have these issues, and are also more likely to be low in vitamin D.

In this study, doctors gave food questionnaires every two years to 49,534 Black women between 1995 and 2017, predicting vitamin D scores, and then measuring chances for developing colorectal cancer.

Overall during the 22-year follow-up, women with the lowest vitamin D scores were 41 percent more likely to have developed colorectal cancer compared to those with the highest vitamin D scores.

Probiotics reduce infectious diarrhea

Hospitals typically use antibiotics, which weaken the microbiome and raise chances for infection such as *Clostridioides difficile* (C. diff). Symptoms include disabling diarrhea, and can be more severe. This study had a unique twist that enabled doctors to compare hospital infection rates



with antibiotics alone and after adding probiotics.

Two Montreal hospitals merged, with the larger hospital using probiotics together with antibiotics as standard treatment. The smaller, 335-bed community hospital used antibiotics alone, and hospital-acquired C. diff was common in this facility.

After the merger, at the smaller hospital, doctors began giving a 50-billion colony-forming-unit combination of *L. acidophilus*, *L. casei*, and *L. rhamnosus*, per day to all adults taking antibiotics for two or more days. Compared to the prior 12 months without probiotics, rates of hospital-wide C. diff were 39 percent lower after probiotics. Protection was even greater in those taking multiple antibiotics, with probiotics reducing C. diff more than 50 percent.

REFERENCE: CANCER, EPIDEMIOLOGY, BIOMARKERS & PREVENTION; 2021, 1055-9965.EPI-21-0675

FEBRUARY'S

Healthy Insight Green Tea for Flu

Researchers reviewed eight green tea extract studies, covering 5,048 participants, and found on average overall, those who regularly consumed green tea extracts were 33 percent less likely to contract the flu compared to placebo.

Green tea contains catechins and its constituent, epigallocatechin-gallate (EGCG), the active ingredients. A 3.5-ounce brewed cup of green tea typically contains 100 to 150 mg of catechins, and about 80 mg of EGCG. Doctors say gargling with 100 to 280 mg of catechins per day may prevent flu. The European Food Safety Authority says to maintain healthy live function, EGCG levels should be below 800 mg per day.

REFERENCE: MOLECULES; 2021, Vol. 26, No. 13, 4014

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Diabetes Update

Nutrients reduced inflammatory factors and pain in type 2 diabetes

Vitamins D, E, and resveratrol

Vitamins D, delta-tocotrienol E, and resveratrol have cholesterol-reducing, anti-inflammatory, and antioxidant effects, which doctors tested, separately and together, on metabolic markers in type 2 diabetes. In the first phase of the study, 120 participants took a placebo, or individually 10,000 IU of vitamin D, 500 mg of delta-tocotrienol, or 500 mg of resveratrol, half after breakfast, and half after dinner. In the second phase, 56 participants took a placebo or all three nutrients together, also twice per day.

All nutrients, separately or together, lowered fasting glucose an average of 11 percent. Those taking the nutrient combination saw long-term average glucose levels decline 10 percent; fasting insulin and insulin resistance decline

9 and 20 percent, respectively; and inflammatory factors high-sensitivity C-reactive protein and malondialdehyde down 23 and 20 percent, respectively.

Vitamin K2 reduced neuropathy

There are two reasons people typically get nerve damage in the extremities, called peripheral neuropathy: diabetes and vitamin B12 deficiency, both common in the U.S. In this study, adults with peripheral neuropathy, 36 with type 2 diabetes, and 28 with B12 deficiency, took a placebo or 100 mcg of vitamin K2 twice per day.

After eight weeks, the vitamin K2 group self-assessed symptom scores of pain, tingling, burning, prickling, numbness, weakness, and general fatigue declined to 3-4 from 8-9 on a scale of

1-10, regardless of whether participants had diabetes or B12 deficiency. Four weeks after stopping vitamin K2, symptom scores averaged 2.

REFERENCE: JOURNAL OF DIABETES AND CLINICAL STUDIES; 2021, VOL. 5, No. 1, 1-16



Exercise

Hesperidin and curcumin boosted performance and recovery

Hesperidin increased antioxidant capacity

The antioxidant hesperidin comes from oranges. In this study, 40 amateur cyclists, aged 18 to 55, with healthy weight, took a placebo or 500 mg of hesperidin per day over a period of eight weeks, during which they completed



five cycling tests of sustainable and maximum power. Before each of the five tests, participants ate the same breakfast of measured carbohydrates, proteins, and lipids.

While there was no improvement for placebo, those taking hesperidin saw an increase of 3.2 percent in sustainable threshold power—the level of force that can be steadily maintained—and a 2.7 percent increase in maximum power to exhaustion. During recovery, superoxide dismutase (SOD) levels increased, raising antioxidant capacity, and markers for oxidative stress and inflammation decreased.

Curcumin reduced muscle damage, inflammation

Exhausting, unusual exercise can damage muscle, and lead to delayed

soreness, weakness, and inflammation. Many earlier studies have found curcumin reduced inflammation. In this review of five studies covering 98 sedentary but healthy young men and women, participants took a placebo or 180 to 400 mg of curcumin per day, for two days to four weeks.

The acute exercises included free weights, leg presses, maximum jump height, and a cycling challenge. Compared to placebo, curcumin reduced levels of inflammatory factors creatine kinase, ammonia, interleukin-6 and -8, and tumor necrosis factor alpha; and increased maximum contraction power and range of motion. The curcumin group also reported less fatigue compared to placebo.

REFERENCE: ANTIOXIDANTS; 2021, VOL. 10, No. 3, 432, PUBLISHED ONLINE

Women

Nutrients improve pregnancy and perimenopause

Pre- and probiotics reduced nausea in pregnancy

Elevated levels of estrogen and progesterone in pregnancy alter the microbiome, and may cause nausea, vomiting, and other gut symptoms in 85 percent of expectant mothers. In this study, 32 pregnant women took 200 mg of inulin plus a combination of 10



probiotics in 10 billion colony-forming-units per day, for six days, then stopping for two days.

The women answered questionnaires each 24 hours during treatment, reporting significant improvements in daily nausea, vomiting, constipation, and overall quality of life.

Probiotics produce free bile acids, which promote healthy digestion and metabolism, levels of which were initially low, and directly linked to high vomiting scores. Doctors said, “Regulating bile acid may explain the benefits of probiotics in gastrointestinal function during early pregnancy.”

Ashwagandha improved perimenopause symptoms

As women approach menopause, symptoms such as hot flashes and night

sweats, along with changes in mood and anxiety, can develop. In this study, 91 perimenopausal women, aged 45 to 55, took a placebo or 300 mg of ashwagandha twice per day.

After eight weeks, women taking ashwagandha reported greater improvements compared to placebo in symptoms on the standard menopause rating scale, including sleep problems, depressed mood, irritability, anxiety, fatigue, and bladder, joint and muscle discomfort. The number of hot flashes per week also declined, and estradiol levels were restored to normal in women taking the ashwagandha.

Doctors said ashwagandha was safe and effective in reducing mild to moderate symptoms in perimenopause, and recommend it as a treatment option.

REFERENCE: NUTRIENTS; 2021, VOL. 13, No. 11, 3931

FEBRUARY'S

Ahead of the Curve

Early-Stage Discoveries: Amino Acids, Probiotics, Krill Oil

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

Amino acids linked to brain health

Low-protein diets have a link to poor brain function. In the lab, mice on a low-protein diet had accelerated brain impairment, effects that reversed after supplementing with seven amino acids: leucine, phenylalanine, lysine, isoleucine, histidine, valine, and tryptophan. To find out how, doctors measured gene-level changes that revealed lower levels of kynurenine, an inflammatory factor that amino acids kept from entering the brain, preventing immune cells from attacking neurons. Amino acids also reduced neuronal death and increased neuronal connectivity.

Probiotics reduce social disorders

Gut microbes appear to contribute to neurological disorders. Doctors discovered in mice, hyperactivity is controlled by genetics, but social behavior is regulated by the gut microbiome. In the lab, *L. reuteri* restored normal social behavior, but did not affect hyperactivity. Researchers then gave a gut metabolite that had been increased by *L. reuteri* to asocial mice, which improved asocial behavior. “In my wildest dreams, I could not have imagined gut microbes could modulate behavior and brain function, but here we are,” doctors said.

Krill oil reduced inflammation in fatty tissue and liver

Obesity triggers chronic inflammation in fat tissue and in the liver. In the lab, mice had a high-fat diet with or without krill oil for 28 weeks. Levels of the omega-3 fatty acids EPA and DHA increased in all tissues in the krill oil group, with the highest concentrations in the liver. Krill oil also activated a shift towards smaller fat cells in white adipose tissue; reduced concentrations of the omega-6 arachidonic acid, and suppressed inflammatory pathways in the liver.

REFERENCE: SCIENCE ADVANCES; 2021, VOL. 7, No. 43, ABD5046



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Calm

L-theanine relaxed healthy adults

Stress-hormone cortisol levels decreased

Humans use the stress response to survive threats, and to help achieve challenging goals, but chronic stress can have negative health effects. In this study, 15 healthy adults reporting moderate levels of stress took a placebo or a single 200 mg dose of L-theanine, pausing for a week, then switching supplement and placebo groups.

To induce stress, doctors gave a mental math test before, and 45 minutes after, the supplement. Blood pressure and heart rate increased during the math test, with participants reporting greater levels of stress and anxiety. Three hours after taking L-theanine, alpha power brain wave activity—typical

of relaxation, meditation, and deep sleep—increased in the frontal region of the brain. Researchers also saw salivary cortisol levels decrease following the math test in the L-theanine group, suggesting reduced stress.

Doctors pointed out the study took place during the Covid-19 pandemic, which negatively affected worldwide population physical and mental health.

REFERENCE: NEUROLOGY AND THERAPY, 2021, VOL. 10, 1061-78



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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