



Nutri-Choice

Natural Insights for Well Being®

June 2023

Diabetes Update

Nutrients reduce chances for and symptoms of type 2 diabetes

Vitamin D helps avoid condition

A new review of three clinical trials reveals supplementing with vitamin D reduces chances for developing type 2 diabetes in those with pre-diabetes. The studies covered 4,190 participants who took a placebo or either 20,000 IU of vitamin D weekly; 4,000 IU of vitamin D daily; or a synthetic vitamin D analog, eldcalcitol, at 0.75 mcg per day.

Compared to placebo, chances for diabetes decreased an average of 15 percent, for all of the vitamin D groups. Over three years of follow-up, those who maintained vitamin D levels of at least 50 nanograms per milliliter of blood (ng/mL) were 76 percent less likely to develop diabetes compared to those whose vitamin D levels were 20 to 29 ng/mL.

Vitamin D also increased chances of returning to normal glucose levels by 30 percent, which doctors said protected those with pre-diabetes from circulatory complications.

Leucine preserves muscle

Getting enough protein at each main meal helps preserve muscle mass in aging, with the amino acid leucine in particular a powerful muscle builder. In this study, 138 men and women with type 2 diabetes, aged at least 65,



reported the breakfast, lunch, and dinner they had eaten 24 hours before, on three separate occasions. None reached the recommended protein levels at breakfast, 59 percent did at lunch, and 32 percent did at dinner.

Doctors said older adults should consume 25 to 30 grams of protein at main meals, including at least 2,500 to 2,800 mg of leucine at each one. No participants got sufficient leucine at breakfast, 29 percent did at lunch, and 13 percent did at dinner.

Even healthy adults see muscle mass decline with age, with chances increasing for those with type 2 diabetes. Studies consistently show protein directly influences muscle mass, strength, and function. This is the first study to measure protein at all three main daily meals.

REFERENCE: ANNALS OF INTERNAL MEDICINE; 2023, VOL. 176, NO. 3, 355-63

JUNE'S

Healthy Insight Omega-3s for Covid

People with higher levels of omega-3 fatty acids had better health outcomes for Covid-19. This study included 110,584 people hospitalized with or having died from the virus, and 26,595 who had ever tested positive. Overall, those with the highest omega-3 levels were 21 percent less likely to test positive and 26 percent less likely to be hospitalized, compared to those with the lowest levels.

Doctors said the findings match the Omega-3 Index, where levels lower than 4 percent increase chances, and levels higher than 8 percent reduce chances of dying from heart or circulatory diseases.

REFERENCE: AMERICAN JOURNAL OF CLINICAL NUTRITION; 2023, VOL. 117, NO. 2, 357-63

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Lipids

Green tea and ginger improve lipid profiles

Green tea rebalanced fats and sugars

This review of 55 green tea trials covered 4,874 participants, aged 18 to 69, in studies lasting two to 48 weeks. Doctors measured fats and blood sugar levels.

For triglycerides, studies more than 12 weeks showed green tea extract significantly reduced triglycerides in men and women. For total cholesterol, green tea reduced levels an average of 7.62 mg per deciliter of blood (mg/dL) overall, with stronger benefits in those overweight, obese, or with elevated cholesterol levels.

For low-density lipoprotein (LDL), 34 of the 55 studies averaged a decline of 5.8 mg/dL, with greater effects in

those overweight, obese, and without diabetes. For high-density lipoprotein (HDL)—the good cholesterol—the average increase was 1.85 mg/dL, with better results in studies lasting more than 12 weeks.

Fasting blood sugar improved an average of 30.1 mg/dL in 44 studies, and long-term average blood glucose levels declined 1.7 percent overall. Green tea extract was most effective up to 1,000 mg per day.

Ginger, total cholesterol and triglycerides

Ginger helps regulate lipids according to findings from a review of placebo-controlled studies conducted between 2010 and 2022. Overall, ginger

reduced total cholesterol levels by 0.44 mg/dL, and triglycerides by 0.61 mg/dL.

Ginger also decreased triglycerides more efficiently in those with obesity and diabetes. Remarking on the findings, doctors said ginger effectively lowers lipid levels in the general population, and may be particularly useful for those with diabetes.

REFERENCE: CLINICAL NUTRITION; 2023, VOL. 9, ARTICLE No. 1084455



Women

Pycnogenol and probiotics improve female health

Pycnogenol increases hair density

During and after menopause, hormonal changes shrink hair follicles, thinning and reducing hair. In this study, 76 menopausal women took a placebo or 50 mg of Pycnogenol® three



times per day.

After two months, women taking Pycnogenol saw hair density increase 30 percent per square centimeter of scalp. After six months, hair density had increased 23 percent. Blood microcirculation to the scalp also increased, with a measure of scalp skin blood flow improving 21 percent at two months, and 44 percent at six months.

The ability of the scalp to retain water, measured as trans-epidermal water loss, also increased for Pycnogenol. The placebo group did not improve in any of these measures.

Probiotics improve vaginal microbiota

A balanced microbiome in the vagina is important for reproductive health, but can become imbalanced

as lactic acid decreases and harmful bacteria multiply, leading to bacterial vaginosis. In this study, 76 women of reproductive age with imbalanced vaginal microbiota took a placebo or a multi-strain probiotic once per day.

After 12 weeks, twice as many taking probiotics vs. placebo saw the vaginal microbiome normalize. Doctors used the Nugent score, which had improved from a range of 4-6 to 3 or lower, signaling normal vaginal microbiota. The probiotics group also reported less vaginal discharge, urinary pain and burning, while these measures increased for placebo.

In the lab, doctors confirmed an increase in beneficial vaginal lactobacilli and a decrease in harmful bacteria.

REFERENCE: HEALTH SCIENCE REPORTS; 2023, VOL. 6, No. 1, E1045

Eye

Riboflavin and astaxanthin preserve eye health

Riboflavin preserves vision

The outer layer of the eye is the cornea, a clear sheath covering the iris and pupil and focusing light on the lens. The cornea can thin, bulging into an irregular cone shape, blurring vision, in a condition called keratoconus (KC). In this study, doctors measured levels of riboflavin in 100 people with KC and

200 without.

Those with KC had riboflavin levels of 84 micrograms per liter of blood (mcg/L) compared to 183.6 mcg/L in the healthy volunteers.

Discussing the findings, doctors explained riboflavin is an essential component of two coenzymes linked to energy production, cellular function, and growth and development. These findings suggest supplementing with riboflavin may help preserve the cornea and prevent KC.

Astaxanthin eases screen stress

As global work in front of a video display terminal (VDT) has increased, so has eye strain. In this study, 60 healthy adults, aged 20 to 64, with a

history of VDT eye fatigue, took a placebo or 9 mg of astaxanthin per day.

After six weeks, those taking astaxanthin reported improved visual acuity while the placebo group had not changed. In those over 40, astaxanthin protected visual acuity of the dominant eye. Levels of oxidative stress were also lower, with fewer reactive oxygen species (ROS) in circulation.

Doctors explained astaxanthin has antioxidant effects, and can cross the blood-brain barrier. These two factors suggest astaxanthin may assist in reducing tension in the ciliary muscle of the eye that adjusts the shape of the lens to focus vision.

REFERENCE: JOURNAL OF CATARACT AND REFRACTIVE SURGERY; FEBRUARY 2023, ARTICLE NO. 1160



Sleep

Vitamin E and holy basil improve sleep

Vitamin E relieved insomnia in post-menopause

Insomnia is one of the most common conditions during and after menopause. In this study, 160 postmenopausal women with chronic insomnia took a placebo or 400 IU of vitamin E mixed tocopherols per day. Doctors used the Pittsburgh Sleep Quality Index (PSQI) to measure changes in sleep, including factors such as difficulty falling and staying asleep, disturbances, daytime dysfunction, and need for sleep medication.

After one month, sleep quality had improved by 80 percent for vitamin E compared to placebo. Those taking vitamin E also reduced their use of sedatives from 30 percent to 15 percent, while the placebo group did not change.

Doctors said the findings

demonstrate vitamin E is an excellent alternative treatment for chronic insomnia that improves sleep quality and reduces sedative drug use.

Holy basil improved sleep, reduced stress

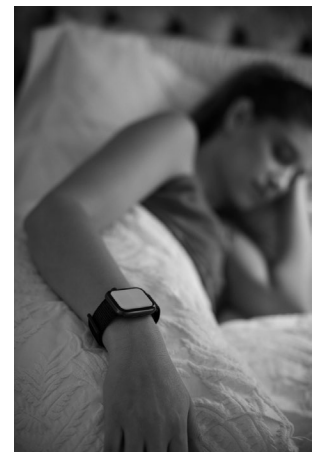
In Ayurvedic medicine, holy basil is called “the elixir of life.” In this study, 100 participants aged 18 to 65 who were experiencing stress took a placebo or 125 mg of holy basil twice per day.

After eight weeks, self-reported perceptions of stress decreased 37 percent for holy basil compared to 19 percent for placebo. For insomnia, those taking holy basil saw insomnia scores decrease 48 percent compared to 27 percent for placebo. Over the course of the study, sleep efficiency—falling and staying asleep—increased 3.4 percent

for holy basil while not changing for placebo.

Levels of cortisol, the hormone that increases under stress, were significantly lower in hair samples for holy basil compared to placebo.

REFERENCE: NUTRIENTS; 2023, VOL. 15, NO. 5, 1187



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Better Mood

Vitamin K linked to positive feelings

Earlier trials that compared vitamins in the diet to symptoms of depression have had inconsistent findings. In this study, doctors measured vitamin K in the diets of 11,687 adults, aged at least 18, who entered the National Health and Nutrition Examination Survey (NHANES) between 2013 and 2018. On day one, participants recalled what foods and vitamins they had consumed during the previous 24 hours, then answered a nine-item Patient Health Questionnaire that assessed depressive symptoms.

Those who consumed the highest levels of vitamin K were 32 percent less likely to report depressive symptoms compared to those who got the least

vitamin K. The median amount of daily vitamin K was 128.7 mcg for those in the highest group compared to 98.1 mcg for those in the lowest group.

Doctors said the strong inverse relationship between vitamin K and depressive symptoms suggests that supplementing with vitamin K may help prevent and treat depression.

REFERENCE: FRONTIERS IN NUTRITION; 2023, VOL. 10, NO. 1102109



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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