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Women

Nutrients reduce anemia and low-weight births

NAD+ protects against anemia

Nicotinamide adenine dinucleotide (NAD+) protects against heart and circulatory conditions, and doctors have noted that anemia is a factor in these conditions. In this study, doctors measured NAD+ levels in 727 women, average age 43 years.

Overall, women with the lowest levels of NAD+ were more than seven times as likely to have anemia compared to women with the highest levels: less than 27.6 micrometers compared to at least 34.5 micrometers of NAD+; or 19.7 percent anemic vs. 2.7 percent, respectively.

Doctors used hemoglobin—red blood cells—as the measure of anemia, with the low-NAD+ group scoring at or below 130.1 grams per liter of blood (g/L), and the high-NAD+ group scoring at or above 139.8 g/L. The study revealed two types of anemia: small red blood cells, and too few red blood cells, both of which declined as NAD+ levels increased.

Multivitamin-mineral reduced low-weight births

About one in every six children worldwide is born weighing less than 5 lb. 8 oz. This six-year study followed 96,341 Botswanan women, 22 percent with HIV, who began taking nutritional supplements before the 24th week of



pregnancy. One group took iron alone, another took folic acid alone, a third took these two together, and a fourth added a multivitamin-mineral. The multi-nutrient included vitamins A, C, D, E, B1, B2, B3, B6 and B12, plus copper, iodine, selenium, and zinc.

Overall, low birth weights decreased from a high of 16.92 percent for folic acid alone, to 12.7 percent for iron alone, to 11.46 percent for folic acid plus iron. Women in the multivitamin-mineral group had 10.48 percent low-weight births, as well as fewer preterm births and caesarean deliveries compared to all other groups. Women with HIV had the greatest rate of improvement from folic acid alone through the combined multivitamin-mineral treatment.

REFERENCE: JOURNAL OF CELLULAR AND MOLECULAR MEDICINE; 2022, VOL. 26, No. 9, 2698-705

NOVEMBER'S

Healthy Insight Vitamin E for PCOS

Women with imbalanced reproductive hormones, such as too much androgen, may develop polycystic ovary syndrome (PCOS), which interferes with ovulation and fertility. Many with PCOS, especially those who are overweight, can also develop insulin resistance and type 2 diabetes.

In this review of 12 vitamin E-PCOS studies, participants who took vitamin E saw declines in insulin resistance, triglycerides, and LDL cholesterol levels; increases in follicle-stimulating hormone (FSH), and decreases in luteinizing hormone (LH). Low FSH levels contribute to poor egg development, and high LH levels stimulate androgen production. Doctors concluded vitamin E can improve metabolic and hormonal factors in women with PCOS.

REFERENCE: SCIENTIFIC REPORTS; 2022, VOL. 12, No. 1

This Issue

LUTEIN, ZEAXANTHIN, OMEGA-3, AND VITAMIN D PRESERVE EYE HEALTH	2
WHEY PROTEIN AND PROBIOTICS IMPROVED BODY FACTORS	2
NUTRIENTS BOOSTED EXERCISE PERFORMANCE AND RECOVERY	3
EARLY-STAGE DISCOVERIES IN NUTRITION	3
MAGNESIUM IMPROVED QUALITY OF LIFE IN COPD	4

Eye

Lutein, zeaxanthin, omega-3, and vitamin D preserve eye health

Lutein, zeaxanthin, and omega-3 reduce AMD

In 1992 through 2001, the first Age-Related Eye Disease Study (AREDS) tested if an antioxidant combination could reduce chances for age-related macular degeneration (AMD).

In a second phase begun in 2006 (AREDS2), doctors added macular carotenoids; 10 mg of lutein and 2 mg of zeaxanthin, plus omega-3 fish oil, to the original antioxidant formula, giving it to some participants while keeping others on the original formula.

In 2011, after five years of AREDS2 data, the lutein-zeaxanthin formula had reduced the progression of AMD by 26 percent compared to the original formula. Doctors then gave all participants the macular carotenoids. In 2016, those who had taken lutein-

zeaxanthin for the entire 10 years had an additional 20 percent lower chance of progressing to late-stage AMD.

Vitamin D reduces dry eye

The surface of the eye needs continuous lubrication, which comes from the regular flow of tears from tear ducts. Too few tears can dry the eye surface, cause discomfort, inflammation, and eventually damage the eye surface.

In this study, 100 people with dry eye and vitamin D deficiency—less than 20 nanograms per milliliter of blood—took artificial tears alone or with a daily vitamin D supplement.

After eight weeks, while the artificial tears only group had not improved, those who added vitamin D saw greater tear production, and more

time for tears to dry after a complete eye-blink—a test called “tear film break-up time.”

REFERENCE: JAMA OPHTHALMOLOGY; 2022, VOL. 140, No. 7, 692-8



Metabolism

Why protein and probiotics improved body factors

What is metabolic syndrome?

Metabolic syndrome is a cluster of some or all of these symptoms: elevated blood pressure or sugar; excess abdominal fat; imbalanced cholesterol or triglycerides, with links to overweight and inactivity.



Why protein lowered blood sugar

In this study, 18 people with type 2 diabetes took a placebo beverage or one with a premixed 15 gram dose of whey protein, three times per day, 10 minutes before meals.

After seven days, while the placebo group had not changed, blood sugar levels reverted to normal for an additional two hours per day in those taking whey protein; an 8.3 percent increase in normal levels. Over 24 hours, blood sugar concentrations ran 0.6 micromoles per liter of blood lower for whey protein than placebo.

Probiotic reduced body fat

In this study, 100 overweight participants took a placebo or 20 billion

colony forming units of lactobacillus plantarum per day. By week six, the probiotics group had begun losing weight, and by 12 weeks, had lost an average 1.9 pounds of body weight, and 0.3 inches of waist circumference.

After 12 weeks, abdominal fat around the organs, known as visceral fat, had decreased by 1.86 square inches for probiotics, while the placebo group had not improved in any of these measures.

Insulin levels and insulin resistance decreased for probiotics, as did leptin, the hormone that regulates fat storage and controls hunger, meaning the probiotics group had become more sensitive to leptin. The placebo group increased in all these measures.

REFERENCE: BMJ OPEN DIABETES RESEARCH & CARE; 2022, VOL. 10, NO. 3

Muscle

Nutrients boosted performance and recovery

Royal jelly and CoQ10 improve exercise

In this first controlled study of royal jelly and exercise, 20 elite-level swimmers took a placebo or 400 mg of royal jelly plus 60 mg of CoQ10 per day. Participants took a high-intensity interval swimming exercise test before and after the 10-day treatment period.

Swimmers taking royal jelly and



CoQ10 completed the swimming test faster than placebo, and faster than before treatment. Using a standard swimming-performance scale developed by the International Swimming Federation, total performance scores increased to 623 from 594.6 for royal jelly-CoQ10 while moving to 588.6 from 588.2 for placebo.

Discussing the findings, doctors said royal jelly and CoQ10 contain medium-chain fatty acids, amino acids, proteins, flavonoids, and phenolic compounds that reduced oxidative stress and muscle damage through their enzymatic and antioxidant actions.

Quercetin eased muscle stiffness

After age 50, muscle mass and function begin a gradual annual

decline, with symptoms including chronic stiffness, in a condition called sarcopenia. In this study, 48 adult men and women, aged 50 to 74, took low-intensity resistance training along with a placebo, or 200 mg or 500 mg of quercetin per day. The exercise routine targeted the thigh muscles.

After 24 weeks, muscle mass and lean body mass were similar in all three groups, but stiffness in the thigh—the vastus lateralis, the largest muscle of the quadriceps—was significantly less for either dose of quercetin compared to placebo. Doctors concluded low-dose quercetin in low-intensity resistance training effectively reduces muscle stiffness.

REFERENCE: JISSN; 2022, VOL. 19, NO. 1, ARTICLE NO. 2086015

NOVEMBER'S

Ahead of the Curve

Early-Stage Discoveries: Magnesium, SAME, Amino Acids, Tocotrienols, Carotene

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

Magnesium and cancer

Doctors have discovered immune T-cells must be activated by magnesium in order to attack pathogens and tumors. A protein molecule called LFA-1 operates on a specific tumor-attacking T-cell—CD8+—helping it sense and respond to magnesium.

An oncologist from the University of Lausanne, Switzerland, commented, “This study reported an unexpected magnesium-sensing mechanism allowing T-cells to be activated properly.”

Study doctors said, “Magnesium is a critical catalyzer of the specific CD8+ T-cell function, taking center stage now in infection and cancer-directed immunity.”

SAME, betaine, taurine, and BCAA regulate lipids

In type 2 diabetes and non-alcoholic fatty liver disease, fat accumulates in the liver and insulin resistance increases. In the lab, doctors pretreated liver cells with SAME, betaine, taurine, and branched-chain amino acids (BCAA) for 24 hours before exposing the cells to high glucose and palmitic acid to stimulate high sugar-high fat environments.

The nutrient combination acted on genes involved in fat- and glucose metabolism, improving cellular lipid handling, inhibiting triglycerides, and rebalancing glucose levels, which doctors said may prevent metabolic syndrome.

Tocotrienols and carotene protect lung health

One of the side effects after Covid infection is the rapid progression of lung-scarring pulmonary fibrosis (PF), with mild to severe symptoms. In the lab, doctors gave rats with PF a placebo, or tocotrienol or carotene, separately or together.

After 28 days, both tocotrienol and carotene groups had improved lung function, with lower levels of lung fibrosis factors, and restored anti-inflammatory and antioxidant status. Doctors concluded there is a potential for tocotrienol and carotene to treat and help prevent pulmonary fibrosis.

REFERENCE: CELL; 2022, VOL. 185, NO. 4, 585-602

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COPD Update

Magnesium improved quality of life

Better daily activities and body factors

The body needs magnesium for energy, to transport potassium and calcium to tissues, and to help muscles contract and relax. This study measured magnesium in the diets of 61 men, aged 40 to 70, who had been diagnosed with chronic obstructive pulmonary disease (COPD) for one to seven years.

Overall, compared to those with lower levels, men who consumed more than 188.08 mg of magnesium per day had higher scores in the Health-Related Quality of Life Survey of physical, social, and psychological domains. The men also took the St. George's respiratory questionnaire, with the high magnesium group reporting

less frequent and severe symptoms, including daily activities that limit lung capacity. Men with good magnesium levels also had higher body mass index scores, more muscle mass, and greater arm circumference.

Doctors concluded higher dietary magnesium improved quality of life and nutritional status in those with COPD.

REFERENCE: CLINICAL NUTRITION RESEARCH; 2022, VOL. 11, NO. 1, 62-73



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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