Nutri-Choice

Natural Insights for Well Being®

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Aging Strong

Nutrients support mature bodies

Leucine reduces muscle damage after exercise

Leucine is an essential amino acid the body needs to synthesize protein. After exercise, older adults see more muscle damage and recover more slowly than younger people. In this study, 45 physically active men and women, average age 70, with healthy body-mass index scores, and who could walk 12 miles in one session, took a placebo, or 25 grams of pea or whey protein, per day in divided doses.

Both plant-based proteins and animal-based proteins contain luceine, but plant-based proteins contain less. The daily study doses of pea protein contained 900 mg of leucine compared to 1,150 mg of leucine for whey protein.

After 10 days, participants took a 12-mile walking test. Doctors assessed muscle damage 24 hours later by measuring an enzyme, creatine kinase (CK), which increases under muscle strain. The whey protein group saw CK levels 41 percent lower than pea protein, and 47 percent lower than placebo.

Lutein, zeaxanthin preserve muscle and bone

The body's ability to fight oxidation decreases with age, which can lead to frailty; reduced muscle mass, strength, bone density, and physical function. Older adults may help preserve physical

strength and function by adding carotenoid antioxidants such as lutein and zeaxanthin to the diet. In this study of 4,513 independently living adults over age 50, doctors measured circulating levels of lutein and zeaxanthin, bone mass, and tests of strength and agility.

Over eight years of follow-up, participants who were non-frail at the start of the study, and who had begun with higher levels of lutein and zeaxanthin, were less likely to progress to frailty. To determine frailty, doctors used several measures, including walking speed, rising from a seated position, hand-grip strength, and bone mass at the heel of the foot.

For each increase of 100 nanomoles per liter of blood in lutein and zeaxanthin levels, chances were on average 15 and 35 percent less likely, respectively, for participants to progress to a higher category of frailty.

Reference: Experimental Gerontology; January 2023, Vol. 171, Article No. 112013

APRIL'S

Healthy Insight

Curcumin for Muscle

Curcumin reduced muscle fatigue, soreness, and inflammation after exercise training. In this study, 28 middle and high school male and female athletes, average age 17, took 1.5 grams of curcumin per day, or took no treatment.

After 12 weeks of daily exercise training, muscle fatigue and soreness scores decreased for curcumin while increasing for the no-treatment group compared to scores at the start of the training. Also, inflammatory factors creatine kinase and malondialdehyde decreased for curcumin while increasing in the no-treatment group.

Doctors said curcumin reduced muscle fatigue, soreness, and limited muscle damage and inflammation after exercise, and suggest using curcumin in regular training of adolescent athletes.

Reference: Frontiers in Nutrition; January 2023, Vol. 9, Article No. 1078108

This Issue

Mood

Vitamins B6, B12, C, and E help ease anxiety and depression

Vitamins B6 and B12

Vitamin B6 helps produce a molecule that relaxes the body and calms the mind, called gamma-aminobutyric acid (GABA). Vitamin B12 is essential for healthy brain and nervous system function. In this study, 478 participants, age 18 to 58, took a placebo, vitamin B6, or vitamin B12, daily with food for 30 days.

Doses in the study were approximately 50 times the U.S. recommended dietary allowance: 100 mg per day for vitamin B6, and 1,000 mcg per day for vitamin B12. Before and after the study, participants completed assessments of anxiety and depression, and took tests of visual processing and cognition.

Both the B6 and B12 groups saw significant decreases in anxiety, with the B6 group seeing lower generalized anxiety disorder and social anxiety scores. The B12 group saw lower separation anxiety scores. The placebo group saw no significant changes.

Vitamin B6 appears to increase GABA levels which improve the balance between excitatory and inhibitory nerve signals—helping the brain respond calmly to visual and sensory stimuli.

Vitamins C and E

Recent, large population studies suggest diet may play a role in depression, particularly when antioxidant levels are too low to overcome oxidative stress. In this review of 25 observational studies covering 91,966 participants, doctors compared levels of vitamins C and E in the diet and chances for depression.

Overall, those with lower levels of vitamin C in the diet were 28 percent more likely than those with higher vitamin C levels to have depression, consuming about 12 percent less daily vitamin C. For vitamin E, those with lower dietary levels were 16 percent more likely than those with higher vitamin E levels to have depression, consuming about 1 percent less daily vitamin E.

Reference: Human Psychopharmacology; 2022, Vol. 37, No. 6, e2582

Kidney

Nutrients support renal health

Youthful folate promotes lifelong kidney health

Healthy kidneys filter waste from the blood into the urine, including a small amount of protein, the most common being albumin. Elevated urinary albumin levels signal kidney damage. In this long-term study, doctors followed 4,038 American adults, aged 18 to 30, who entered the study without kidney dysfunction, measuring their diets several times during the 30 years from 1985 to 2015.

As levels of total folate in the diet increased, chances for developing chronic kidney disease (CKD) decreased. Those with lower folate levels were 31 to 61 percent more likely to develop CKD compared to those with the highest folate levels. Doctors concluded higher dietary folate during young adulthood reduced chances for developing chronic kidney disease later in life.

Minerals and other factors reduce kidney stone

A kidney stone is a hard deposit of minerals and salts that form inside the kidney, and dietary factors can reduce chances. In this study, doctors measured the diets of 411 people with a first-time symptomatic kidney stone and compared them to 384 people without a kidney stone.

Participants who consumed less fluids, and who had lower dietary calcium, potassium, caffeine, and phytate—an antioxidant in whole grains and nuts that promotes calcium absorption and urinary excretion—were more likely to have a first-time kidney stone.

Low calcium and potassium also predicted a second kidney stone. Doctors suggest those with a first-time kidney stone would be more likely to increase calcium and potassium to prevent a second one.

Reference: American Journal of Clinical Nutrition; 2022, Vol. 116, No. 2, 599-607

Pregnancy

Vitamin C, folic acid, and iodine support healthy birth

Mothers' vitamin C improves child lung health

Mothers who smoke during pregnancy increase the chances of impaired lung function in their children. In this study, 251 pregnant smokers took a placebo or 500 mg of vitamin C per day.

At age five, children of smoking moms who had taken vitamin C while pregnant had 17.2 percent higher average forced expiratory flow—the volume of air expelled by the lungs during an energetic exhalation, compared to kids whose moms had taken the placebo. Children of moms taking vitamin C were also 40 percent less likely to have developed wheezing at age five.

Discussing the findings, doctors said the growth phase of lung airways during childhood has not been widely studied, yet may be the most important of early-life factors that determine airway function and chances for maintaining healthy lungs throughout life.

Folic acid, iodine boost fertility

Taking multivitamins that contain folic acid and iodine before becoming pregnant increases fertility rates. In this study, doctors measured nutritional supplements in the diets of 908 women who had been attempting to conceive for at least one menstrual cycle.

Compared to women who had not taken supplements before becoming pregnant, those who had taken any nutritional supplement, such as a multivitamin, or who had taken folic acid or iodine, conceived about one menstrual cycle sooner, on average 8.5 cycles vs. 9.6 cycles.

Doctors said shortening the time to pregnancy can improve quality of life for couples attempting to conceive, and can reduce the costs and likelihood of invasive infertility treatments.

Reference: JAMA Pediatrics; 2023, Vol. 177, No. 1, 16-24

Women & Children

Omega-3s and NAC support reproductive and offspring health

Mothers' omega-3s nourish developing child

Omega-3 fatty acids are the most important for healthy pregnancy and development of the newborn child. In this study, 161 pregnant women answered questionnaires about dietary fats and omega-3 supplements. Doctors measured maternal levels during gestation and umbilical levels at delivery.

Four in ten of the women were taking omega-3 supplements, and had significantly higher levels of DHA compared to those not taking supplements. The omega-3s also penetrated the umbilical cord, which contained significantly higher levels of EPA and DHA.

Discussing the findings, doctors said many women do not consume enough fatty fish to support healthy omega-3 levels, and that supplementing with omega-3 fatty acids may boost maternal and infant health at a critical development stage.

NAC rebalances hormones in PCOS

Polycystic ovary syndrome (PCOS) produces abnormally high levels of the androgenous male sex hormones in women, including testosterone, which can reduce ovulation and fertility. One possible cause is insulin resistance, as elevated insulin triggers higher androgen levels. This review of 18 studies covered 2,185 participants with PCOS.

Women who supplemented with N-acetylcysteine (NAC) saw decreased testosterone levels and increased follicle-stimulating hormone (FSH) levels, which are often low in PCOS. FSH regulates reproductive development from puberty through the child-bearing years.

Doctors said NAC appears to increase cellular levels of antioxidants such as glutathione, helping prevent oxidation of lipids that support reproductive health.

Reference: Nutrients; 2023, Vol. 15, No. 1, 231

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Vitamin D for Chronic Pain

Pain-free aging

Vitamin D reduced chronic pain in older adults

Many older adults live with chronic pain as they age, most commonly in the lower back. In this study, doctors measured vitamin D in the diets of 950 adults aged at least 60. Participants reported the severity, frequency, and location of pain, with 55 percent reporting none, and 45 percent reporting mild to severe levels.

Over the five-year study period, those who got more vitamin D from diet were less likely to experience chronic pain than those who consumed less vitamin D. Doctors found that for each 40 IU increase in daily vitamin D, chances for chronic pain were 12 percent lower. Those who got more than 140.8 IU of vitamin D per day were 51 percent less likely to have chronic pain compared to those who got less than 74 IU of vitamin D per day.

Discussing the findings, doctors said that even a slight increase in daily dietary vitamin D could reduce chronic pain over five years.

Reference: Nutrients; September 2022, Vol. 14, No. 18, 3776

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.

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