



# Natural Insights for Well Being®

February 2021

## Less Pain

Nutrients ease diabetic and arthritic pain

### Nutrients reduce diabetic nerve pain

Chronic high blood sugar in diabetes damages nerves throughout the body, causing pain. This study followed 85 men and women, average age 63, with long-term type 2 diabetes, taking metformin, and with nerve damage in the extremities, body organs, and systems.

Participants took a placebo or a combination of 10 mg of superoxide dismutase, 570 mg of alpha-lipoic acid, 300 mg of acetyl-L-carnitine, and 250 mcg of vitamin B12 per day.

After 12 months, while there were no changes for placebo, those taking the nutritional supplement combination showed improvement in nerve function, including greater ability to perceive vibration in the extremities, and fewer episodes of intense pain. Circulating levels of vitamin B12 had also increased, and participants reported better overall quality of life.

Function in the part of the nervous system, called parasympathetic, that controls the body at rest and during digestion, deteriorated in the placebo group, while remaining stable for those taking the supplement combination.

### Fish oil relieved osteoarthritis pain

In this study, 134 participants with



knee, lower back, and shoulder pain from osteoarthritis (OA), aged 50 to 80, overweight or obese, and sedentary, took a placebo; 160 mg of curcumin alone; 2,000 mg of DHA plus 400 mg of EPA, or curcumin plus DHA/EPA together.

After 16 weeks, those taking omega-3 fish oil had reduced OA-specific pain compared to placebo or curcumin. Flexibility and elasticity of the smallest vessels also improved, increasing blood flow. The fish oil group saw pain scores decrease 42 percent, and improvements in the ability to exercise, climb stairs, and in joint strength and sleep quality. Better overall mood and a sense of total health accompanied these physical improvements.

Doctors believe fish oil improved blood supply to oxygen-deprived tissues, restoring nutrients to affected joints and reducing pain.

REFERENCE: NUTRIENTS; 2020, VOL. 12, No. 11, E3254

FEBRUARY'S

## Healthy Insight Cranberry for Overactive Bladder

Overactive bladder is not a disease, but a non-infectious condition manifesting as the urge to urinate frequently day and night. In this study, 60 women with overactive bladder, at least age 18, took a placebo or 500 mg of dried cranberry powder per day. After 24 weeks, compared to placebo, the cranberry group had reduced daily urinary episodes by 16.4 percent, urgent episodes by 57.3 percent, and the subjective perception of the condition by 39.7 percent. The average urinary volume per episode did not differ from the placebo group.

The results for cranberry compared favorably with prescription drug treatments for overactive bladder.

REFERENCE: JOURNAL OF UROLOGY; SEPTEMBER, 2020, No. 1384, PUBLISHED ONLINE

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# Gut Health

## Nutrients promote regularity, reduce chances of disease

### Pre- and probiotics improve regularity in cerebral palsy

Those with cerebral palsy (CP) have weakened muscles and impaired movement. Chronic constipation manifests in three out of four. In this study, 37 children with CP and chronic constipation took a placebo, 100 million colony-forming units of lactobacillus reuteri alone, 4 grams of inulin alone, or these pro- and probiotics together.

After 28 days, with no change for



placebo, both pre- and probiotic groups had better regularity, less painful bowel movements, and less fecal mass in the rectum. Stool consistency improved for prebiotics, and probiotics increased stool acidity—a lower pH level—due to probiotic antimicrobial effects, which inhibited pathogens from adhering to intestinal linings.

### Nutrients may reduce colorectal cancer

A healthy diet can reduce chances for colorectal cancer (CRC). This master analysis covered 80 systemic reviews and meta-analyses of clinical trials, excluding those at high risk for CRC, and observational studies of diet and medicinal factors, worldwide between 1980 and 2019.

Medicinal factors included acetaminophen, aspirin, NSAIDs, and statins; and dietary factors included alcohol, coffee, dairy, fiber, fish, fruits, meat, supplements, tea, vegetables, and vitamins.

Overall findings: magnesium of at least 255 mg per day reduced chances for CRC by 23 percent compared to low magnesium levels; folic acid lowered chances up to 15 percent; dairy up to 19 percent compared to no dairy; and soy up to 15 percent compared to no soy. Red and processed meats raised CRC chances up to 14 percent, and high alcohol use also raised chances.

Doctors said the findings are preliminary due to differences in study design.

REFERENCE: NUTRIENTS; 2020, VOL. 12, No. 10, 2971

# Vision

## Nutrients promote eye development, reduce disease symptoms

### Lutein, zeaxanthin during pregnancy boost vision in offspring at age three

The dark green and orange-colored fruits and vegetables contain the carotenoids lutein and zeaxanthin, and mothers' higher levels during pregnancy meant better eyesight in their offspring. In this study, doctors measured lutein and zeaxanthin levels during pregnancy, and at delivery, then followed up with the children at age three.

Kids whose mothers had higher levels of either lutein or zeaxanthin during pregnancy were 37 to 38 percent less likely to have poor visual acuity at age three compared to kids whose mothers had lower levels of these two carotenoids.

The results remained significant even after doctors adjusted for whether mothers breastfed their babies, or

differences in the children's diets of fruits and vegetables.

### CoQ10 improves retinal health

People can lose vision from several conditions affecting the retina of the eye, including loss of blood flow to the optic nerve. In this study, doctors gave 48 people with one of several retinal blood vessel diseases 100 mg of CoQ10 per day, then followed up for an average of 43 months.

Using a standard measurement, called the Visual Field Index (VFI), doctors ranked annual changes in the percentage of the field of vision available to participants, with a score of 100 percent representing a perfect age-adjusted visual field.

Overall, all participants who took CoQ10 improved in measurements of VFI at least 9.3 percent per year, and as

much as 22 percent per year, depending on the blood vessel disease affecting the retina. VFI scores decreased when one participant discontinued CoQ10, and increased after resuming CoQ10.

REFERENCE: NUTRIENTS; VOL. 12, No. 2, 10.3390/NU12020274



# Child Development

## Nutrients predict cognitive development, reduce autism symptoms

### Vitamin D in mothers improves child cognition

Vitamin D plays a critical role in how embryonic cells develop and become specialized brain cells. In this study, doctors measured vitamin D levels in 1,503 healthy women during their second trimester, and followed up with IQ tests of their children at age four to six.

Each increase in mothers' vitamin D level of 10 nanograms per milliliter of blood was linked to a 1.17 higher Full Scale IQ point score; a 1.17 higher Verbal IQ point score; and a 1.03 higher Nonverbal IQ point score, regardless of the race of the parents.

Commenting on the findings, doctors believe that adding vitamin D to prenatal nutrition may be especially

relevant for Black and dark-skinned women whose greater melanin pigment inhibits vitamin D production, making them more likely to be deficient. Doctors recommend widespread prenatal vitamin D testing.

### Probiotics reduced autism symptoms

Growing evidence of a connection between gut, brain, and nervous system, has launched the new field of psychobiotics. Doctors believe probiotics may influence brain activity, improving behavior in children with autism spectrum disorder.

In this study, 63 preschoolers, average age 4.2 years, with or without gastrointestinal (GI) symptoms, took a placebo or a comprehensive probiotic

combination, at a dose of 900 billion bacteria per day for the first month, then 450 billion per day for five more months. Kids with and without GI symptoms saw clinically significant improvements in mood, feelings of well-being, sleep, and digestion. Doctors believe probiotics may stimulate the serotonin system to enhance brain-nervous system communication.

**REFERENCE:** JOURNAL OF NUTRITION; NOVEMBER, 2020, NXAA309, PUBLISHED ONLINE



FEBRUARY'S

## Ahead of the Curve

### Early-Stage Discoveries: Melatonin, Nicotinamide, Ginger Extract

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

#### Melatonin helped treat Covid-19

Doctors used artificial intelligence to determine functional similarities between a number of diseases and Covid-19, then identified 34 drugs that could be repurposed as treatments for the virus.

To test further for this potential, doctors analyzed data from patients at the Cleveland Clinic, and found that melatonin was likely to be the most effective. Among all people tested for the virus, those who took melatonin were 28 percent less likely to test positive. Among African Americans, the figure jumped to 52 percent.

#### Nicotinamide for vision

Inflammation helps heal, but a hyperactive inflammatory response in certain cells can trigger scar tissue. When the retina of the eye is damaged due to aging, diabetes, or injury, cells in the thin membrane that supports the retina can develop aggressive, scarring characteristics.

In the lab, doctors introduced nicotinamide into a cell culture containing these aggressive retinal membrane cells. Nicotinamide inhibited the invasive wound-healing activity, and began to reverse the development of membranes associated with scar tissue. Doctors believe nicotinamide may slow development of eye disease.

#### Ginger extract relieved nerve pain

Damaged nerves sometimes overact with a painful response to a light touch or friction (mechanical) or a drop of cold water on the skin (thermal). In the lab, ginger extract relieved mechanical and thermal pain in mice given a dose of 6 mg of ginger extract per ounce of body weight, with a rapid and long-lasting effect. Ginger also reduced inflammation in spinal nerve cell samples. Doctors believe ginger extract is a potential treatment for managing nerve pain.

**REFERENCE:** PUBLIC LIBRARY OF SCIENCE—BIOLOGY; JULY, 2020, PMC7350981



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# Preserving Muscle

## Vitamin C may maintain mature muscle mass

### Men and women do not get enough

“Vitamin C helps defend body cells and tissues from potentially harmful free radical substances which, unopposed, can contribute to destruction of muscle, speeding up age-related decline,” doctors said. Here, doctors calculated skeletal muscle mass and vitamin C levels in 13,000 people, aged 42 to 82. Half the women, and 60 percent of the men were not consuming enough vitamin C.

In those with sufficient levels of vitamin C, fat-free mass as a percentage of total body mass was 1.6 percent higher in men and 3.4 percent higher in women, compared to those insufficient in vitamin C. Also, BMI fat-free mass

scores were 2.0 percent higher in men and 3.9 percent higher in women, comparing those sufficient in vitamin C to those who were insufficient. “To our knowledge, this is the first study assessing the relation of dietary and circulating vitamin C with loss of skeletal muscle mass,” doctors said.

**REFERENCE:** JOURNAL OF NUTRITION; 2020, Vol. 150, No. 10, 2789-98



## 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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