

# NATURE'S FOOD PATCH Market & Café® CLEARWATER • *Downtown* DUNEDIN

## Natural Insights for Well Being®

March 2023

### Healthy Pregnancy

Nutrients promote mom's health before and after birth

#### Vitamin D cuts inflammation

Women of any age, but particularly those of childbearing age, can have a bacterial imbalance in the vagina with too little lactobacillus, a condition called bacterial vaginosis (BV), which can cause poor birth outcomes. In this review of 14 studies covering 4,793 pregnancies, women who were deficient in vitamin D anytime during gestation were 54 percent more likely to develop BV compared to women with good vitamin D levels.

During the first trimester, those who were deficient in vitamin D were 122 percent more likely than those with healthy levels of vitamin D to develop BV. Among different races, Black women were 56 percent more likely to develop BV anytime during pregnancy, which doctors suggested may be due to darker skin pigmentation reducing vitamin D synthesis from sunshine.

#### Anti-inflammatory diet reduces postpartum depression

Doctors have recently been considering the relationship between inflammatory diets and mental health, employing the Dietary Inflammatory Index (DII). In this study, using a food-frequency questionnaire, doctors measured the diets of 293 women who were exclusively breastfeeding for six



months or less.

Overall, 60.1 percent of the women exhibited symptoms of depression, and had average DII scores suggesting an inflammatory diet. Women with the least-inflammatory diets were less likely to have depressive symptoms. In a second phase of the study, participants transitioned to an anti-inflammatory diet, which reduced postpartum depression symptoms by nearly 50 percent.

The inflammatory diets typically included red meats, saturated- and trans-fats, refined carbohydrates, soft drinks, and highly processed foods. The anti-inflammatory diets typically consisted of beta-carotene, fiber, garlic, ginger, magnesium, omega-3 fish oils, polyphenols, turmeric, zinc, and other minerals.

Discussing the findings, doctors said food directly impacts brain-nerve transmitters, hormones, inflammatory cytokines, and gut microbiota, all of which can influence sleep, mood, and behavior-signaling pathways.

REFERENCE: FRONTIERS IN NUTRITION; NOVEMBER, 2022, ARTICLE NO. 16592

MARCH'S

### Healthy Insight Elderberry for Gut

Elderberry increased beneficial gut microbiome diversity during and after supplementation. In this study, 30 healthy men and women, aged 18 to 50, began taking 300 mg of elderberry extract twice per day, preceded and followed by a three-week period where doctors gathered gut microbiome samples.

Elderberry immediately and significantly increased microbiome diversity, with these changes persisting through the three-week period after taking elderberry. Doctors were particularly interested in a beneficial bacteria present in the gut of healthy people, Akkermansia spp, which has links to leanness, healthy weight, and reduced chances for type 2 diabetes, and which increased significantly after elderberry.

REFERENCE: JOURNAL OF PERSONALIZED MEDICINE; SEPTEMBER, 2022, ARTICLE NO. 12091479

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# Immunity & Autoimmunity

## Nutrients ease long-Covid and multiple sclerosis symptoms

### L-arginine, vitamin C reduce long-Covid

Symptoms of long-Covid include fatigue, and problems with physical performance and muscle strength. In this study, 46 men and women attending a post-acute Covid outpatient clinic had been diagnosed with long-Covid and persistent fatigue for an average of 254 days. Participants took a placebo or 1.66 grams of L-arginine plus 500 mg of vitamin C per day.

After 28 days, only 8.7 percent of those in the L-arginine/vitamin C group reported fatigue compared to 80.1 percent for placebo. The supplement group also walked 98.4 feet farther in a 6-minute walk test compared to the distance walked at the start of the study, with no change for placebo, and had

7.5 pounds greater hand-grip strength compared to 2.2 pounds for placebo. Vessel flexibility also increased by 14.3 percent for L-arginine/vitamin C compared to 9.4 percent for placebo.

### Omega-3s improve MS symptoms

Multiple sclerosis (MS) is an autoimmune disorder where the immune system attacks the central nervous system, causing a wide range of symptoms. In this review of 13 MS studies covering 1,353 participants, doctors measured omega-3 fatty acids in the diet and compared them to symptom severity.

Overall, those with higher levels of the omega-3 DHA had significantly fewer symptoms of muscle weakness,

numbness, loss of balance, uncontrolled movements, tremors, speech and vision difficulties, and loss of memory.

As DHA levels increased, energy-regulating gene expression increased, and inflammatory gene expression decreased, suggesting raising DHA levels may decrease symptoms of MS.

REFERENCE: NUTRIENTS; 2022, VOL. 14, No. 23, ARTICLE No. 4984



# Circulation

## Vitamin D and omega-3 improve vessel health

### Vitamin D reduces heart and circulatory issues in OA

Because vitamin D helps maintain bone calcium levels, it might also have broader health effects in osteoarthritis (OA). Doctors in this study evaluated vitamin D levels in 4,570 people with



OA who had participated in the long-term National Health and Nutritional Examination Survey study.

Those whose vitamin D levels reached or exceeded 75 nanomoles per liter of blood (nmol/L), or 30 nanograms per milliliter (ng/ml), were less likely to have died from any cause except cancer, including all heart and circulatory issues, compared to those with lower normal levels, and to the 65 percent in the study who were low or deficient in vitamin D.

### Optimal omega-3 dose for lowering BP

There is consistent evidence that omega-3 fatty acids, especially DHA and EPA, support lowering elevated

blood pressure (BP). But studies to date have not identified an ideal dosage range. To answer the question, doctors reviewed 71 placebo-controlled BP trials covering 4,973 men and women, aged 18 to 86, some of whom had high BP and/or imbalanced lipids.

Overall, daily doses between 2 and 3 grams of omega-3 fish oil reduced systolic BP by an average of 2.61 mmHg, and diastolic BP by 1.64 mmHg. Doses above 3 grams per day did not lower BP further in those with normal BP, but those who were elderly, or those who had high blood pressure, or imbalanced lipids, saw a greater BP-lowering response to higher doses of omega-3s.

REFERENCE: NUTRIENTS; 2022, VOL. 14, No. 21, ARTICLE No. 4629

# Muscle & Bone

## Turmeric and probiotics support muscle and bone health

### Turmeric reduces muscle pain after exercise

Intense exercise can damage muscle and cause soreness. In this study, 30 recreationally active participants, average age 28, took a placebo or 250 mg of turmeric extract per day for 28 days before performing a series of weightlifting squat exercises designed to



induce muscle damage on day 29.

Participants continued to take the placebo or turmeric through the 33rd day, when doctors measured changes in pain intensity compared to 96 hours earlier, immediately after the squat exercise.

The turmeric group saw significantly less pain compared to placebo, and had lower levels of lactate dehydrogenase, an enzyme that signals muscle tissue damage. Those taking turmeric also reported less fatigue and better mood than placebo.

### Probiotics boost low bone mineral density

In the first phase of this study, 68 older women with low bone mineral density took a daily placebo or

*Lactobacillus reuteri*, with those taking the probiotic gaining bone density. In the second phase, 20 of the women with the best or worst response to the probiotic continued to take *L. reuteri*.

After one year, women who had responded best to probiotics had significantly greater total bone mineral density at the tibia compared to the poor responders. Good responders also had lower levels of the inflammatory factor, high-sensitivity C-reactive protein; more beneficial gut bacteria, and better microbiome balance.

Discussing the findings, doctors said *L. reuteri* may promote bone formation by favorably influencing gut microbiota.

**REFERENCE:** EVIDENCE-BASED COMPLEMENTARY AND ALTERNATIVE MEDICINE; 2022, ARTICLE ID 9110414

# Mind & Body

## Nutrients support healthy cognition and metabolism

### B-vitamin multi-nutrient improves attention

Modern Western diets have insufficient essential nutrients including vitamins B, C, D, and E, leading to poor long-term health. In this study, 141 men and women, average age 53, with diets that were either optimal or suboptimal, took a placebo or a daily supplement containing vitamins B1, B2, and B12, bacopa monnieri, and ginkgo biloba extract.

After 12 weeks, doctors evaluated cognition and mood, expecting to find a benefit in those with suboptimal diets who received the supplement. Instead, only those with the optimal diets saw improvements in attention-performance tests of reaction time, immediate and delayed recognition, and working memory.

Doctors believe the additional nutrients in optimal diets enhance metabolism of nutritional supplements, particularly the B vitamins.

### Flavonoids reduce metabolic fatty liver disease

Excess fat in the liver due to an imbalanced diet can lead to metabolic-associated fatty liver disease (MAFLD), formerly known as non-alcoholic fatty liver disease. In this study doctors evaluated 4,431 participants from the long-term National Health and Nutritional Examination Survey, 41.9 percent of whom had MAFLD.

Overall, those with the lowest levels of flavonoids in the diet were more likely to have MAFLD; but higher levels of two flavonoids in particular—anthocyanidin and isoflavone—

reduced chances for MAFLD most. Those with higher flavonoid levels were also more likely to have lower levels of triglycerides, higher HDL, healthier body-mass index scores, lower levels of the liver-damage-signaling enzyme ALT, and lower levels of the inflammatory factor, high-sensitivity C-reactive protein.

**REFERENCE:** NUTRIENTS; NOVEMBER, 2022, VOL. 14, No. 23, 5079





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## Muscle

Amino acids help preserve lean muscle mass

### Countering the effects of strict bedrest and inactivity

Exercise and activity help maintain muscle tone, but muscles can atrophy during strict bedrest—as in acute illness—and after prolonged disuse. In this study, 16 medically and psychologically healthy women, aged 25 to 40, who were participating in an outer-space simulation study, volunteered for 60 days of strict bedrest designed to induce muscle atrophy.

The women controlled their diets for 20 days before beginning a diet with normal or high protein levels; either .5 grams or .75 grams of protein per pound of body weight per day, respectively, as they began the 60-day

strict bedrest period. The supplement in the high-protein diet included .07 grams per pound per day of the branched-chain amino acids (BCAA) leucine, valine, and isoleucine in a ratio of 2:1:1.

After 60 days, the high-protein BCAA group had slowed the loss of lean muscle mass by 42 percent compared to those on the normal protein diet.

REFERENCE: FRONTIERS OF NUTRITION; NOVEMBER 2022, ARTICLE No. 976818



## 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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