

# NATURE'S BIN

Naturally

## Natural Insights for Well Being®

April 2012

### Help and Hope for Diabetes

Nutrients help manage and lower chances of type 2 diabetes

#### More vitamin D, less diabetes

Vitamin D may reduce the chances of type 2 diabetes, doctors said. In this review of 19 studies, people who got more than 500 IU of vitamin D per day were 13 percent less likely to develop type 2 diabetes compared to those who got less than 200 IU per day. People with the highest blood levels of vitamin D—more than 25 nanograms per milliliter of blood (ng/mL)—were 43 percent less likely to develop type 2 diabetes compared to those with levels below 14 ng/mL.

In two studies, people with insulin resistance—where the body does not efficiently use insulin to metabolize blood sugar—insulin sensitivity increased as vitamin D levels rose. Doctors believe the optimal range for vitamin D blood levels is between 20 and 60 ng/mL, and measurement tests are now readily available.

#### Garlic lowered blood sugar levels and improved blood fat profiles in type 2 diabetes

In this study, 60 type 2 diabetics continued to take 500 mg of the blood-sugar medication Metformin twice per day, along with a placebo or with 300 mg of garlic extract three times per day. After 24 weeks, the garlic group had



3.12 percent lower fasting blood sugar compared to 0.59 lower for placebo.

For blood fats, compared to placebo, the garlic group had 2 to 3 percent lower levels of total cholesterol, LDL—the “bad” cholesterol, and total fat levels, also called triglycerides. HDL, the “good” cholesterol, increased 6.72 percent for those who took garlic compared to those who took the placebo.

REFERENCE: EUROPEAN JOURNAL OF CLINICAL NUTRITION; 2011, VOL. 65, No. 9, 1005-15

APRIL'S

### Healthy Insight Brain Foods

Memory and mind depend on the essential nutrient choline to nourish brain cells. In this study, 1,391 people, aged 36 to 83, with normal cognitive function participated. Doctors measured choline in the diet for five years, waited two years, and then measured choline again for another four years. Those who got more choline in the later period had better verbal performance and visual memory. In a brain scan (MRI), those who had gotten more choline beginning in the earlier period had 44 percent fewer signs of damage to brain white matter, indicating better blood flow and lowering chances for Alzheimer's disease. Butter, egg yolk, cauliflower, flax and sesame seeds, lentils, oats, peanuts, and potatoes are rich in choline.

REFERENCE: AMERICAN JOURNAL OF CLINICAL NUTRITION; 2011, VOL. 94, No. 6, 1584-91

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# Starting Out Right

## Nutrients help kids develop language and improve endurance

### Kids whose moms took folic acid were more likely to develop normal speech

Doctors said folic acid may have other childhood benefits besides reducing neural tube birth defects. Researchers analyzed language development in 38,954 Norwegian boys and girls whose mothers did or did not take 400 mcg of folic acid per day, from four weeks before becoming pregnant to eight weeks afterward. Norway does not require manufacturers to fortify foods with folic acid.

Doctors measured severe language delay, which they defined as speaking only one word, or making only unintelligible sounds. In children whose moms did not take folic acid, 9 out of 1,000 had severe language delay. For

children whose moms did take folic acid, the rate of severe language delay was less than half, or 4 in 1,000.

### Multivitamin improved aerobic capacity and physical endurance

Researchers in this study gave 300 school kids, aged 7 to 10.5 years, 40 grams of chocolate malt beverage powder, with or without multivitamin-mineral fortification, or no treatment at all. The two malt powders had the same number of calories.

After four months, while the two other groups did not improve in any measure, the multivitamin group had large increases in aerobic capacity and whole-body endurance. To test

endurance, kids ran continuously between two points, 66 feet apart, at increasing speed. The multivitamin group also improved in blood levels of iron, vitamin C, and the active forms of vitamins B1, B2, B3, B6, B9, and B12.

**REFERENCE:** JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION; 2011, VOL. 306, NO. 14, 1566-73



# Healthy Kids

## Special nutrient needs in celiac disease and obesity

### Calcium, vitamins D and K in celiac disease

Children with celiac disease may have weak bones because they don't absorb fat-soluble vitamins such as vitamin D. In this study, 43 children,



aged 3 to 17, with celiac disease, agreed to follow a gluten free diet. At the start, 43 percent were low in vitamin D and 25 percent were low in vitamin K, with a direct link to lower bone mineral density (BMD) scores.

After one year, BMD scores had not changed. One-third of the children were still not getting enough vitamin K on the gluten free diet, and all the children were getting too little calcium and vitamin D. Study authors said children with celiac disease should supplement at least the recommended daily allowance for calcium, vitamin D, and vitamin K.

### Overweight kids deficient in vitamin D

Doctors in this study compared vitamin D levels in 411 obese kids, aged

6 to 16, to 87 normal-weight kids of the same age. Children told researchers about their daily diets including soda, juice, milk, fruit and vegetables, as well as how often they skipped breakfast. Half of the obese children were deficient in vitamin D compared to 22 percent for normal-weight kids, and 92 percent were low in vitamin D, compared to 68 percent for normal-weight kids. The more kids skipped breakfast, drank soda, and drank juice, the lower the levels of vitamin D.

Obese kids were also more likely to show signs of insulin resistance, and doctors said that while this study does not prove a cause-and-effect relationship, they suspect low vitamin D levels may play a role in developing type 2 diabetes.

**REFERENCE:** THE JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM; 2012, VOL. 97, NO. 1, 279-85

# Healthy Men

## Nutrients help ensure healthy heart factors

### Quercetin, cholesterol, and blood pressure

Quercetin is a plant-based antioxidant flavonoid common in red



grapes, green tea, and onions. This study had two 8-week phases in which 49 healthy men took 150 mg of quercetin per day, or a placebo, and then did the reverse. After the quercetin phase, levels of HDL, the “good” cholesterol, increased by 4.5 percent. Total circulating fat (triglyceride) levels also declined, and systolic blood pressure decreased by an average of 5.7 points (mmHg).

Researchers also measured changes in weight, waist circumference, and body mass index (BMI) scores and found that overall, waist size decreased after the men took quercetin. But not all men lost weight. Doctors found that only men with a specific variation of a fat-binding protein, apolipoprotein E 3/3, lost weight, waist size, and had better BMI.

### Omega-3s lower inflammation

Doctors in this study compared omega-3 levels to signs of inflammation in 1,395 healthy men, aged 42 to 60. Researchers found a direct link: as blood levels of omega-3s increased, signs of C-reactive protein, a sign of inflammation, decreased.

Two omega-3 fatty acids in particular had the strongest link: docosapentaenoic acid and docosahexaenoic acid (DPA/DHA). DPA, found in salmon and other fatty fish, is an intermediary between DHA and eicosapentaenoic acid (EPA). Researchers said that the omega-3s from fish oil appeared to be most closely linked to lower C-reactive protein levels.

**REFERENCE:** NUTRITION, METABOLISM AND CARDIOVASCULAR DISEASES; NOVEMBER, 2011, ELECTRONIC PREPUBLICATION

# Healthy Hearts

## Nutrients lower chances of stroke and reduce inflammation

### Women, antioxidants, and stroke

Doctors in this study measured total antioxidants in the diets of 36,715 women, aged at least 49, and followed up for 12 years. Researchers took into account age, education, smoking, body mass index score, physical activity, blood pressure, blood fats, diabetes, family heart history, aspirin, vitamins, total calories, alcohol, and coffee.

Women with no history of cardiovascular disease (CVD) who got the most antioxidants in the diet had 17 percent fewer strokes of any kind than women who got the least antioxidants. Among women with a history of CVD, those who got the most antioxidants were 45 percent less likely to have a hemorrhagic stroke compared to women who got the least antioxidants.

Commenting on the findings, doctors said previous studies that had found no link to stroke had measured individual antioxidants, while this study measured total antioxidant capacity (TAC) of all antioxidants in the diet.

### Vitamin C and heart failure

In this study, doctors measured vitamin C in the diets of 212 men and women, average age 61, about half of whom had moderate to severe heart failure—when the heart does not pump enough blood to the body. Doctors wanted to test for a link between vitamin C and signs of inflammation. Compared to those who got the most vitamin C, those with heart failure who got the least vitamin C were 2.4 times more likely to have high levels of high-sensitivity C-reactive protein (hs-CRP),

a sign of inflammation and a factor in heart disease. Doctors found that as the level of vitamin C increased, the level of hs-CRP decreased, and after a year of follow-up, those with the highest levels of vitamin C lived longer without a cardiac event.

**REFERENCE:** STROKE; 2012, VOL. 43, No. 2, 335-40







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APRIL'S  
**Recipe**  
**Smart Paté**

Enjoy this scrumptious dish as your main meal, a side dish, or for healthy snacking anytime, and please see page 1 for a new study that found those who ate more choline-rich foods had healthier brains and better memory.

**Ingredients:**

1 onion, peeled and sliced thin	1 c walnuts
1 clove garlic, peeled and minced	1/2 c hemp seed
1/4 pound mushrooms, sliced thin	1 tbsp tamari (natural soy sauce)
1/2 c butter	1 tsp salt
6 eggs, hard-boiled, peeled and quartered	1 tsp pepper

**Directions:** Over medium heat, sauté onion, garlic, and mushrooms in butter until soft, but not browned. Let cool. In a food processor, put hard boiled eggs, walnuts, and hemp seed. Pulse quickly about 5 times until minced. Add cooled onion-garlic-mushroom mixture, tamari, salt, and pepper. Process until smooth; the consistency of paté. Put into serving bowl, cover with plastic wrap, and refrigerate for at least two hours. Before serving, let paté sit for 30 minutes at room temperature. Serve with crackers or toast.

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