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# Natural Insights for Well Being®

July 2010

## Staying Sharp

Omega-3 improved brain function in young boys and in adult men and women

The omega-3 DHA (docosahexaenoic acid) improved memory, vision and motor control in boys, enhanced mental function in adult men and women, and may help prevent Alzheimer's disease by regulating zinc in brain cells, three new studies reveal.

Doctors in a brain study said that earlier studies found DHA improves brain function, and wanted to see how DHA affects the cerebral cortex, the area of the brain involved in memory, attention, thought, language, and awareness. Thirty-three healthy boys, aged 8 to 10, took 400 mg or 1,200 mg of DHA per day, or a placebo, for eight weeks. Using an MRI, researchers scanned for brain activity as the boys played video games. Boys who took DHA had much more blood flow in the area of the brain for working memory, and in the vision-processing and motor-control centers. Researchers hope this research will help resolve brain-related problems such as attention-deficit hyperactivity disorder and depression, where DHA is often deficient.

In another brain study, doctors measured blood levels of DHA in 280 men and women, aged 35 to 54, who



were not taking fish oil or omega-3 supplements, and who had no major neuropsychiatric disorders. Researchers gave participants a 75-minute battery of mental tests and found that those with higher DHA levels performed better in nonverbal reasoning, mental flexibility, working memory, and vocabulary, compared to those with lower levels.

In another DHA study, researchers measured DHA in brain cells and found that as DHA levels fell, the level of zinc rose. Doctors said higher zinc levels can be toxic, causing cell death, a key feature of Alzheimer's disease, and believe that DHA helps keep brain-cell zinc levels in balance. This is the first study to find a direct link between DHA and zinc levels in brain cells.

REFERENCE: AMERICAN JOURNAL OF CLINICAL NUTRITION; 2010, VOL. 91, No. 4, 1060-7

JULY'S

## Healthy Insight Baking Rhubarb Ups Antioxidants

Food chemists in a nutrition study explained that the ruby-red color of rhubarb comes from a type of powerful antioxidant polyphenol called anthocyanin. Researchers blanched, baked, and stewed British rhubarb and found that baking for 20 minutes or slowly stewing the fruit dramatically increased anthocyanin levels compared to the raw rhubarb. The scientists believe that anthocyanin protects cells from oxidative damage and can block the enzymes that cancer cells need to grow, concluding that, "Our research has shown that British rhubarb is a potential source of pharmacological agents that may be used to develop new anti-cancer drugs."

REFERENCE: FOOD CHEMISTRY; 2010, VOL. 119, No. 2, 758-64

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# Healthy Bones

## Vitamin D strengthens bone in babies, girls, and older women

Vitamin D improved bone in developing babies, strengthened muscle and bone in girls, and improved muscle control in older women, several new studies reveal.

Doctors in a vitamin D study used a new high-resolution 3-D camera to view babies' bones in the womb. Researchers wanted to look for early signs of rickets, the abnormal widening and weakening at the end of long bones due to poor nutrition, and explained that babies depend on maternal stores of vitamin D to form healthy bone.

Researchers analyzed the diet and lifestyle of 424 women, aged 20 to 34, before and during pregnancy, and then

measured bone length and width in their babies. In babies whose moms had low vitamin D levels, abnormally wide bone appeared at 19 weeks and was still present at 34 weeks. As mothers' vitamin D levels rose, babies' bones developed more normally.

In a study of young girls, researchers said that adolescents form one-quarter of their adult bone mass between the ages of 12 and 15 and believe that having enough vitamin D during adolescence helps ensure higher bone mass in adulthood. Doctors measured vitamin D levels in 301 girls and found that those with good vitamin D levels had higher bone mineral content and stronger handgrip than girls with low levels.

In a muscle control study,

researchers measured vitamin D levels and walking speed in 739 women, aged at least 80. Nine in ten women were low in vitamin D. The women first walked at a normal pace, then at a fast pace. When scientists compared walking speed to vitamin D levels, they found that those with the highest levels of vitamin D walked fastest, signaling greater muscle control.

**REFERENCE:** JOURNAL OF BONE & MINERAL RESEARCH; 2010, VOL. 25, No. 1, 14-19



# Prenatal Health

## Nutrients helped ensure healthy mothers and babies

Pregnant women with good probiotics levels had healthier weight, less diabetes, and more normal-sized babies, and those who took Chlorella had better blood pressure and iron levels, in several new studies.



Doctors in a probiotics study said that moms who keep excess weight off while pregnant can avoid complications and have healthier babies. Researchers measured gut microorganism levels in 50 women in the 24th week of pregnancy. Those who had gained more weight than normal had fewer good bacteria and more bad bacteria. Women who avoided excess weight also had more folate and higher levels of HDL, the "good" cholesterol.

In another probiotics study, doctors said that women who maintain healthy weight are less likely to develop diabetes while pregnant or type 2 diabetes later, and their children are less likely to be obese or to develop diabetes as adults. In the study, 256 women in their third trimester of pregnancy were divided into three groups who got dietary counseling plus probiotics, dietary counseling plus placebo, or no counseling or probiotics.

The probiotics were *Lactobacillus rhamnosus* and *Bifidobacterium lactis*.

After the study, about 35 percent of the placebo and no-counseling groups had developed gestational diabetes, compared to 13 percent for the probiotics group. Women in the probiotics group were also much more likely to deliver normal-sized babies. Doctors said that larger birth size raises the chances of obesity later, and concluded that probiotics and dietary counseling may safely and cost-effectively reduce obesity and diabetes.

In a pregnancy study of 70 women, those who took 6 grams of Chlorella per day from the 12th to the 18th week of pregnancy had, by the third trimester, lower blood pressure, less edema, and better iron levels and kidney function than those who did not take Chlorella.

**REFERENCE:** BRITISH JOURNAL OF NUTRITION; 2010, MARCH, ELECTRONIC PREPUBLICATION

# Breast Health

## Everyday nutrients help women avoid cancer

In breast cancer, vitamin D, calcium, alpha- and beta-carotene, and vitamin supplements lowered the chances, several new studies reveal.



Doctors analyzed 21 studies on vitamin D and breast cancer and found that women who consumed the most vitamin D from diet and supplements were 9 percent less likely to have breast cancer than women who consumed the least. When researchers looked at levels of vitamin D reserves in the body, women with the highest levels were 45 percent less likely to have breast cancer than women with the lowest reserves. In analyzing 15 calcium studies, doctors found that women who consumed the most calcium were 19 percent less likely to have breast cancer compared to women who consumed the least.

In a carotenoid study, doctors measured the diets of 36,664 women and followed up for over nine years. While there was no link to overall chances of breast cancer, female smokers who consumed the most alpha- and beta-carotene

were 60 percent less likely to have hormone-sensitive breast cancer than women who consumed the least.

At the 101st Annual Meeting of the American Association for Cancer Research, April, 2010, in Washington, D.C., researchers reported that, compared to women who did not take vitamin supplements, women who did were 30 percent less likely to have breast cancer, and those who took calcium supplements were 40 percent less likely. The study involved 268 women with breast cancer and 457 healthy women. Women who took vitamins had greater capacity to repair damaged DNA than those who did not. The vitamins and calcium supplements were not high-dose, “So this is definitely one way to reduce risk,” doctors concluded.

**REFERENCE:** BREAST CANCER RESEARCH AND TREATMENT; 2009, OCTOBER, ELECTRONIC PREPUBLICATION

# Healthy Minds

## Nutrients reduced severe psychiatric disorders in youth and adults

Omega-3s helped reduce psychoses in youth and treat psychiatric disorders in adults, and SAME lowered aggressive behavior in schizophrenia, several new studies reveal.

In a psychiatric study, doctors said that omega-3s offer general health benefits without side effects and might also improve mental health. Researchers diagnosed 76 teens and young adults, aged 13 to 25, as likely to develop psychoses—disorders that include abnormal thinking, perception, delusions and hallucinations. Participants took 1,200 mg of omega-3s per day, or a placebo, stopping after 12 weeks. Forty weeks later, 27 percent of those in the placebo group had developed a psychosis compared

to 5 percent for omega-3s. Disorders in the omega-3 group progressed 82 percent more slowly than placebo, with participants reporting fewer symptoms and better mental functioning.

In an international review of omega-3 psychiatric studies, researchers found people in countries that consume less fish were 30 to 60 times more likely to have major depression, postpartum depression, and bipolar disorders compared to those in countries that eat more fish. In a related review, studies linked depression with diets low in omega-3s, and linked depression and schizophrenia with low blood levels of omega-3s. Researchers said omega-3s appear to enhance the effect of psychotropic medications.

In a SAME (S-adenosylmethionine) study, 18 people with chronic schizophrenia took 800 mg of SAME per day,

or a placebo. After eight weeks, while the placebo group had not improved, some in the SAME group showed less aggressive behavior, reporting better quality of life and fewer symptoms of depression. Two people who took SAME became more irritable. Researchers cautiously concluded that this short-term pilot study supports SAME in managing aggressive behavior in schizophrenia.

**REFERENCE:** ARCHIVES OF GENERAL PSYCHIATRY; 2010, VOL. 67, No. 2, 146-54





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## Rhubarb Red Raspberry Crumble

There's nothing quite like the tangy tartness of rhubarb. Enjoy this refreshing treat for breakfast, dessert, or as a snack, and please see page 1 for new research on how baking boosts anti-cancer antioxidants in rhubarb.

### **Crumble Ingredients:**

1/2 c oat flour  
1/2 c rolled oats  
1/2 c soy or organic butter  
1/2 c organic sugar

Plain yogurt, to serve

### **Filling Ingredients:**

1 lb rhubarb, cut into pieces  
1/2 c raspberries  
2 tbsp organic sugar  
2 tsp potato starch

**Directions:** To make the crumble, mix flour and oats in a bowl. Cut in butter, allowing large pieces to remain. Stir in 1/2 cup sugar. For the filling, in a bowl mix rhubarb, raspberries, 2 tbsp of sugar and potato starch then pour into 9-inch by 9-inch baking pan. Spoon the crumble over the filling and bake in a preheated oven at 375 degrees for 30-40 minutes. Let cool for 10 minutes and serve warm with yogurt.

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