



# York Downs Pharmacy

## Natural Insights for Well Being®

October 2010

### Survival of the Fittest

Nutrients improve stamina and blood fats in athletes amateur and pro

L-arginine and spirulina increased aerobic capacity, omega-3s improved professional football players' blood-fat profiles, and the Chicago Blackhawks take vitamin D.

Doctors in a fitness study said the capacity to exercise declines with age and that L-arginine helps blood vessels dilate to carry more blood. Sixteen avid male cyclists, aged 50 to 73, took 5.2 grams of L-arginine per day, or a placebo. After three weeks, while there was no change for placebo, the L-arginine group had increased aerobic capacity by 17 percent.

In a spirulina study, nine moderately trained male runners took 6 grams of antioxidant-rich spirulina per day, or a placebo. After four weeks, all ran on a treadmill for two hours at 70 to 75 percent of aerobic capacity, then at 95 percent until exhausted. Compared to placebo, the spirulina group ran 32 percent longer during the exhaustion phase and had far less of the oxidative stress that contributes to fatigue.

Researchers in an omega-3 study said recent research showed 82 percent of 233 retired National Football League players under age 50 had abnormal narrowing and blockages in arteries compared to the general population



of the same age. In this study, 36 active NFL players took 2,200 mg of docosahexaenoic and eicosapentaenoic acids plus 360 mg of other omega-3s per day, or a placebo. After two months, the omega-3 group had 26 percent more HDL, the good cholesterol, compared to 14 percent more for placebo, and total blood fats had decreased 8 percent compared to increasing 44 percent for placebo.

Dr John J Cannell, executive director of the Vitamin D Council, reports that since the fall of 2008, when some of the Chicago Blackhawks began taking 5,000 IU of vitamin D per day to treat deficiency, players have suffered fewer and less severe colds, flu, and repetitive-use injuries. In 2010, the team won the Stanley Cup championship.

**REFERENCE:** JOURNAL OF THE INTERNATIONAL SOCIETY OF SPORTS NUTRITION; 2010, VOL. 7, NO. 13, ELECTRONIC PREPUBLICATION

OCTOBER'S

### Healthy Insight Amino Acids Aid Athletes

Athletes can easily get sick because intense training decreases resistance to infection. Sixteen long-distance runners took 700 mg of cystine plus 280 mg of theanine per day, or a placebo, for seven days of pre-training and nine days of training, running 12 and 18 miles per day in these two periods, respectively. Although the benefit didn't last through the full training period, by the end of pre-training, compared to placebo, the cystine/thanine group had far fewer signs of inflammation and much better resistance. Researchers concluded cystine and theanine could help maintain stronger immune-system response during physical stress.

**REFERENCE:** JOURNAL OF THE INTERNATIONAL SOCIETY OF SPORTS NUTRITION; 2010, VOL. 7, NO. 23, ELECTRONIC PREPUBLICATION

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# More Gain, Less Pain

In athletes, nutrients help cut pain, normalize body function

Tart cherry juice reduced runners' muscle pain, ginger cut pain after exercise, and folic acid normalized blood vessel function in non-menstruating young women runners, in several new studies.

Doctors in a running study said endurance athletes often treat pain with non-steroidal anti-inflammatory drugs, which can have serious side effects. Researchers gave 54 healthy runners, 36 men and 18 women, average age 36, 11 ounces of antioxidant-rich, anti-inflammatory tart cherry juice twice per day, or a placebo, for seven days prior to and on the day of a 16-mile race. After the race, the tart cherry group reported one-third the pain scores of the placebo

group.

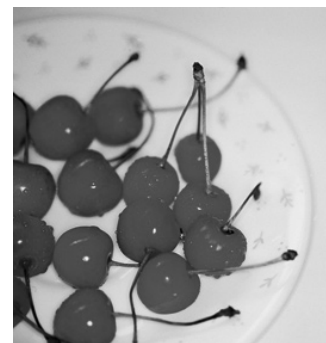
Researchers in a muscle pain study wanted to test the anti-inflammatory effects of ginger. Seventy-four people took 2 grams of raw or heated ginger per day, or a placebo, for 11 days. Participants then performed 18 elbow muscle-lengthening resistance exercises to induce pain and inflammation. Both ginger groups reported about 25 percent less pain than placebo 24 hours after exercise.

In a folic acid study, researchers said that young female athletes who do not eat enough to replace the energy they use during exercise can stop menstruating (amenorrhea), causing postmenopausal-like estrogen changes that raise chances for heart problems. Reduced blood vessel dilation and elasticity are early signs of these changes.

Ten women with amenorrhea

and reduced blood vessel function, and 10 without, who were college or recreational runners, aged 18 to 35, not on birth control pills, who ran at least 20 miles per week for the past year, took 10 mg of folic acid per day or a placebo. After four weeks, in the amenorrheic women who had taken folic acid, blood vessel function returned to normal.

**REFERENCE:** JOURNAL OF THE INTERNATIONAL SOCIETY OF SPORTS NUTRITION; 2010, VOL. 7, NO. 17, ELECTRONIC PREPUBLICATION



# Reducing Cancer

Vitamin K protected against non-Hodgkin's lymphoma, undernourished Chinese men who took beta-carotene, selenium, and vitamin E lived longer and had less gastric cancer, and ginger eased nausea from chemotherapy, several new studies reveal.



Doctors from the Mayo Clinic, Rochester, Minnesota, tested a new theory that vitamin K may protect against non-Hodgkin's lymphoma (n-HL). Researchers measured the diets and supplement use of 603 people newly diagnosed with n-HL, and of 1,007 cancer-free people of similar age and lifestyle. In the first finding of its kind, those who consumed the most vitamin K—more than 108 mcg per day—were 45 percent less likely to develop n-HL compared to those who consumed less than 39 mcg per day.

Researchers in a vitamin study said that residents of Linxian, China, are undernourished and have high rates of esophageal and gastric cancers. For seven years, 29,584 Linxian villagers, aged 40 to 69, took a combination of 50 mcg of selenium, 400 IU of vitamin E, and 15 mg of beta-carotene per day, or several other vitamin combinations.

Compared to all other groups two years later, those in the selenium-vitamin E-beta-carotene group were much less likely to have died from gastric or any other cancer, or from any cause. A full 10 years later, the selenium-vitamin E-beta-carotene group was still 11 percent less likely to have died from gastric cancer and 5 percent less likely to have died from any cause.

In a chemotherapy study, 644 cancer patients who had reported nausea after chemotherapy began taking ginger capsules or a placebo three days before their next treatment while continuing to take anti-nausea/anti-vomiting medicine. After the first day on ginger, while the placebo group still had intense nausea, those who took a 0.5 or 1 gram ginger capsule reported little or none.

**REFERENCE:** JOURNAL OF THE NATIONAL CANCER INSTITUTE; 2009, VOL. 101, NO. 7, 507-18, ELECTRONIC PREPUBLICATION

# Carefree Smiles

## Nutrients support healthy teeth and gums

People who drank green tea retained more teeth, vitamin B12 reduced canker sores, and omega-3s lowered oral bacteria and dental disease, in several new studies.

In a green tea study, researchers reviewed dental data from 25,078 men and women, aged 40 to 64. Those who drank one to five cups of green tea per day were 20 percent less likely to lose a tooth compared to those who didn't drink green tea. Previous studies have shown green tea catechins inhibit oral bacteria.

In an oral health study, 58 people with recurrent canker sores took 1,000 mcg of vitamin B12 per day, or a placebo. After five months, compared to placebo, the vitamin B12 group

had many fewer, and much shorter, canker sore outbreaks, and much less pain. After six months, compared to 32 percent for placebo, 74 percent in the vitamin B12 group had no outbreaks.

Researchers in a lab study found that omega-3 fatty acids reduced the anti-bacterial activity of many oral pathogens by 50 percent. Doctors used eicosapentaenoic, docosahexaenoic, and



alpha-linolenic acids.

In another dental study, doctors measured the amount of omega-3s in the diets of 55 people, average age 74. During five years of follow up, those who consumed the most docosahexaenoic acid (DHA) were 33 percent less likely to develop periodontal disease compared to those who consumed the least. Doctors said DHA has anti-inflammatory properties which curb bacteria that trigger inflammation which can destroy the bone structure supporting teeth.

In a study of 11,869 men and women, average age 50, those who rarely or never brushed their teeth were 70 percent more likely to have a heart attack or other cardiovascular event compared to those who brushed their teeth at least twice a day.

**REFERENCE:** PREVENTIVE MEDICINE; 2010, VOL. 50, No. 4, 173-9

# Healthy Kids

## Nutrients lower infection, improve sleep

In children, probiotics curbed infections in the first years of life and in the hospital, and melatonin improved sleep in epileptic kids, in several new studies.

In a probiotics study, 925 pregnant mothers carrying children prone to allergies took probiotics or a placebo four weeks before delivery. Their newborns got the same probiotics or placebo daily for six months after birth. During the first six months there were no significant differences between the children. Over two years of follow up, compared to placebo, kids who had taken probiotics were 7 percent less likely to have a respiratory infection and

5 percent less likely to have a middle-ear infection, and overall had fewer total infections.

In an infection study, doctors said that children admitted to the hospital, particularly the very young, often catch an unrelated infection. In this study, 742 hospitalized children, aged 1 to 18, took 1 billion colony-forming units of *Lactobacillus GG* per day during their stay, or a placebo. Overall compared to placebo, the probiotics group was about 66 percent less likely to develop a gastrointestinal tract or respiratory tract infection in the hospital.

In a sleep study, doctors measured sleep quality and melatonin levels in 23 children with hard-to-treat epilepsy and 14 with controlled epilepsy. All the children took melatonin at bedtime.

After three months, those with hard-to-treat epilepsy were much less likely to resist going to bed, fell asleep quicker, slept longer, woke up less during the night, had less sleep apnea, night walking, bed wetting, and teeth grinding, and were less sleepy during the day. Doctors also noted that the severity of seizures was significantly less.

**REFERENCE:** PEDIATRICS; 2010, VOL. 125, No. 5, 1171-7





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## Living Longer

Doctors believe certain nutrients help balance the immune inflammatory response and may have a link to longevity

People who took glucosamine or chondroitin outlived those who didn't, and those who took omega-3 fish oils also lived longer, a new study reveals.

Doctors in a lifespan study asked 77,673 men and women, aged 50 to 76, to record which vitamins and supplements they were taking during a 10-year tracking period. After five more years of follow up, researchers found that those who had taken glucosamine infrequently or for a short period of time were 8 percent less likely to have died from any cause compared to those



who had not taken glucosamine, and those who had taken glucosamine regularly were 17 percent less likely. For chondroitin, compared to non-users, low users were 12 percent less likely to have died and high users 17 percent less likely. For omega-3s, those who had taken high levels of fish oils were 17 percent less likely to have died compared to non-users.

**REFERENCE:** AMERICAN JOURNAL OF CLINICAL NUTRITION; 2010, VOL. 91, NO. 6, ELECTRONIC PREPUBLICATION

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